# Joint Occupational Health & Safety Committee Foundation Course - Facilitator Guide

# Module: Investigation of Accidents & Incidents

This course was developed by:

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## DISCLAIMER

This instructional guide has been developed by Certification Services, Worker & Employer Services division of WorkSafeBC.

The material is designed for use by Joint Health and Safety Committees. WorkSafeBC is not responsible for the results or interpretations when the material is presented through other sources.

If there is any conflict between information in this material and the current *Workers Compensation Act*, *Occupational Health and Safety Regulation* and related policies, the Act, the Regulation and policies shall take precedence.

# Guideline

This guide looks at concepts and methods to develop and conduct an accident and/or incident investigation process at a workplace. Various sample forms, checklists and other documents are included.

It is important to remember that these samples are only one approach. Employers, Joint Health and Safety Committees and Worker Representatives can use any method or format that works for their workplace.

Another method and additional training on accident investigation is available on supervisingforsafety.com under incident analysis. This is a free e-learning course designed for supervisors but suitable for Joint OH&S Committee Members. The course contains videos, interactive exercises and additional OH&S topics. It is recommended that anyone planning on teaching this module become familiar with the above course material.

# Module at a Glance

| |
|---|
| **Introduction**<br>• Investigation Concepts<br>• Regulations |
| **Investigation Concepts**<br>• What to Investigate<br>• What the Result Must Be<br>• Accident Causation |
| **Investigation Procedure**<br>• Visit the Scene<br>• Interviews<br>• Evaluation<br>• Report Writing<br>• Follow-up |
| **Role of the Committee**<br>• Membership<br>• Duties & Functions<br>• Committee Terms of Reference |
| **Review and Summary** |
| **Appendix** |

## Notes to Facilitator

1. Encourage participants to ask questions and engage in discussions. The total time required to facilitate this module will vary according to the number of examples provided, the depth of the discussions and the number of participants. This module will take approximately 6.5 hrs to complete if all exercises and case studies are used.

2. In this module, the “Act” refers to the *Workers Compensation Act* and the “Regulation” or “OHSR” refers to the Occupational Health and Safety Regulation.

3. This module was designed to be facilitated using the WorkSafeBC publication called *“Investigation of Accidents and Incidents Workbook”* available on WorkSafeBC’s website.

4. Periodic updates to this module facilitator guide will be made and posted on WorkSafeBC’s website. However, if you wish to update the statistics in this module independently, you may do so by going to the worksafebc.com website to obtain the most current “Injuries and Claims Information”.

5. Review emergency evacuation procedures and housekeeping matters with the participants before proceeding with the main presentation.

# Appendices:

- Answer Key
- Accident Scene Sketches
- Accident/Incident Investigation Check List
- Sample Accident/Incident Investigation Report
- Blank Accident/Incident Investigation Report
- Optional Accident Investigation Workshop

# Components

The facilitator should encourage active participation in the participant-oriented workshop. It begins with a brief review of the key points of the accident investigation and reports requirements, and the general process of accident investigation.

An optional accident scenario with role-play and analysis is included with this guide. The accident investigation report will focus on the identification of causes through an analysis of the facts and what should be included in any recommendations for corrective actions.

Let the participants know that participating in investigations is one of the prescribed duties of a joint H&S committee member. The requirements are in both the Act (Section 130) and the OH&S reg. 3.12(4). OHSR Part 3.12(4) is specific to an investigation of a refusal to carry out unsafe work.

# Introduction

## Show Slide # 1


**Explain**: In this module, we will be discussing the investigation of accidents & incidents and the role of committee members or worker representative's in maintaining a safe and healthy workplace.

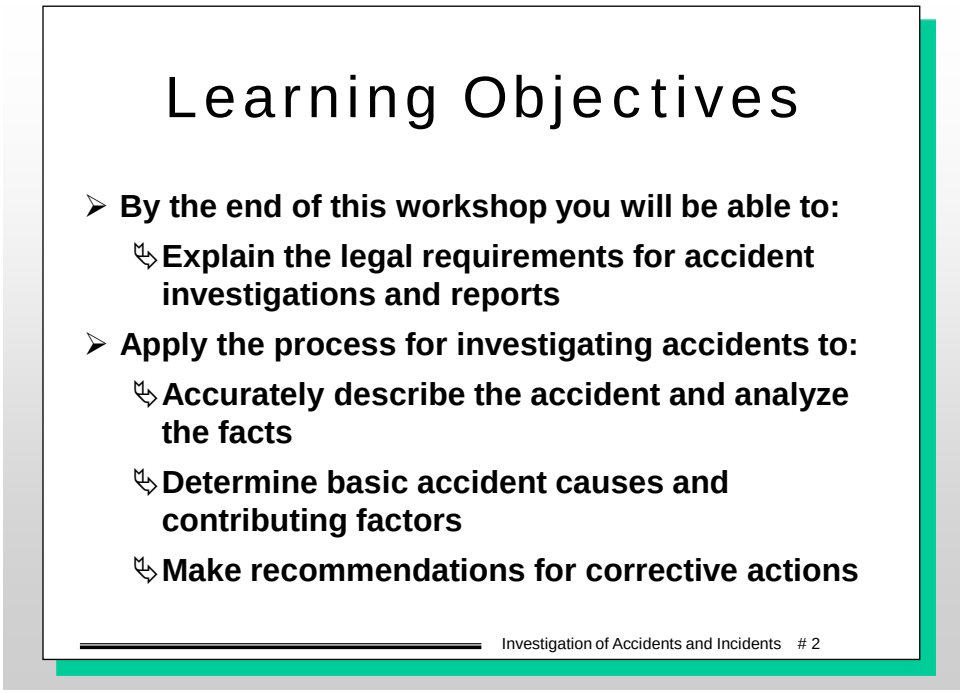
If these investigations are conducted, further workplace accidents can be prevented, and the number of workers injured and killed on the job can be reduced.

# Objectives and Agenda

**Ask** participants to state their expectations for this module.

Record participant expectations on a flipchart and review them at the end of the module.

## Show Slide # 2

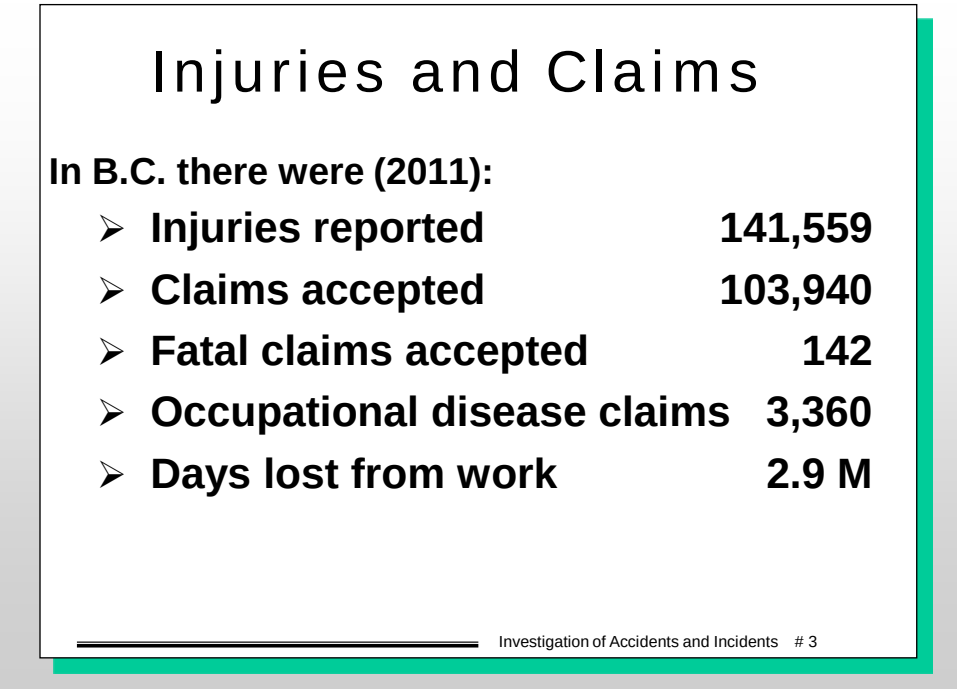



**Explain** the learning objectives of this module. Note how they match with participants' expectations. Encourage the class to actively take part in discussions, ask questions and make notes. Let the participants know that it is OK to take pictures of each other's flip charts during the breaks with their cell phones or camera.

**Ask** how many in the class have participated in or have conducted an accident investigation. Take note of their responses as the information may become important when you start assigning roles in the case study exercises. You do not want one group with all the experienced participants in it.

Although the number of occupational injuries and diseases in B.C. has consistently declined in the past 5 years, serious injuries have not declined.

## Show Slide # 3




- Review statistics on these two slides.
- Ask participants to list some of the reasons why they think injuries and diseases occur in the workplace
- Record answers on the flipchart

**Explain** that a serious injury is any injury that can reasonably be expected at the time of the incident to endanger life or cause permanent injury. Serious injuries include both traumatic injuries that are life threatening or that result in a loss of consciousness, and incidents such as chemical exposures, heat stress, and cold stress which are likely to result in a life threatening condition or cause permanent injury or significant physical impairment.

**Ask**, if a person is in a position that would allow him / her to prevent a workplace injury or occupational disease, do you think that person has a moral responsibility to do so?

## Note general consensus of participants

Before we proceed with this module, we should establish some basic definitions. (page 5 of the workbook)

**Ask,** what is an "Accident"?

## Show Slide # 4

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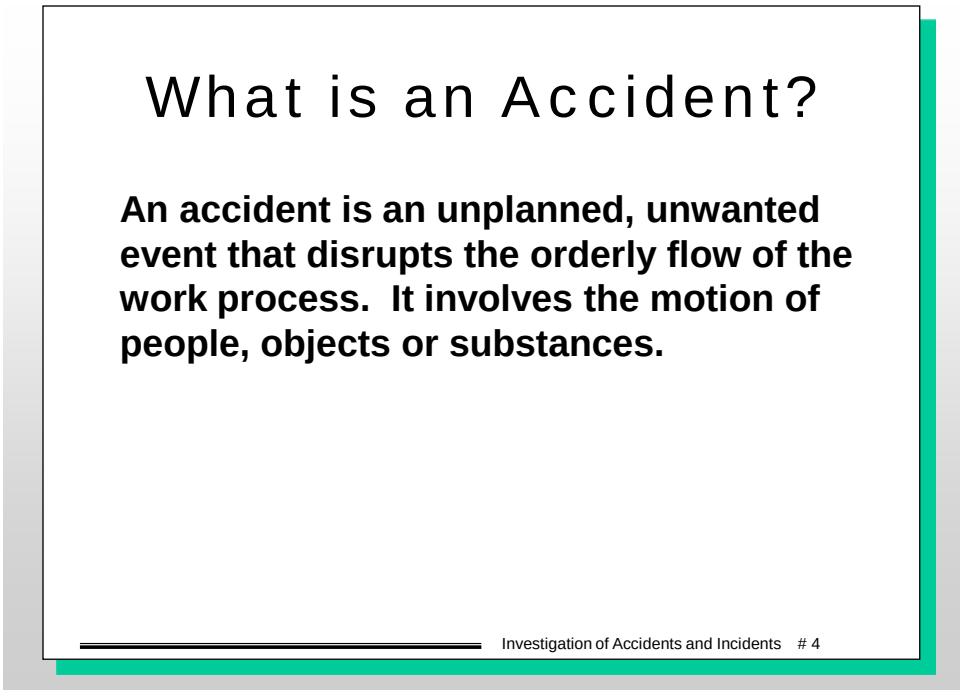


**Answers**: An accident is an unplanned, unwanted event that disrupts the orderly flow of the work process. It involves the motion of people, objects or substances.

**Ask,** what is an “Incident”?

## Show Slide: # 5

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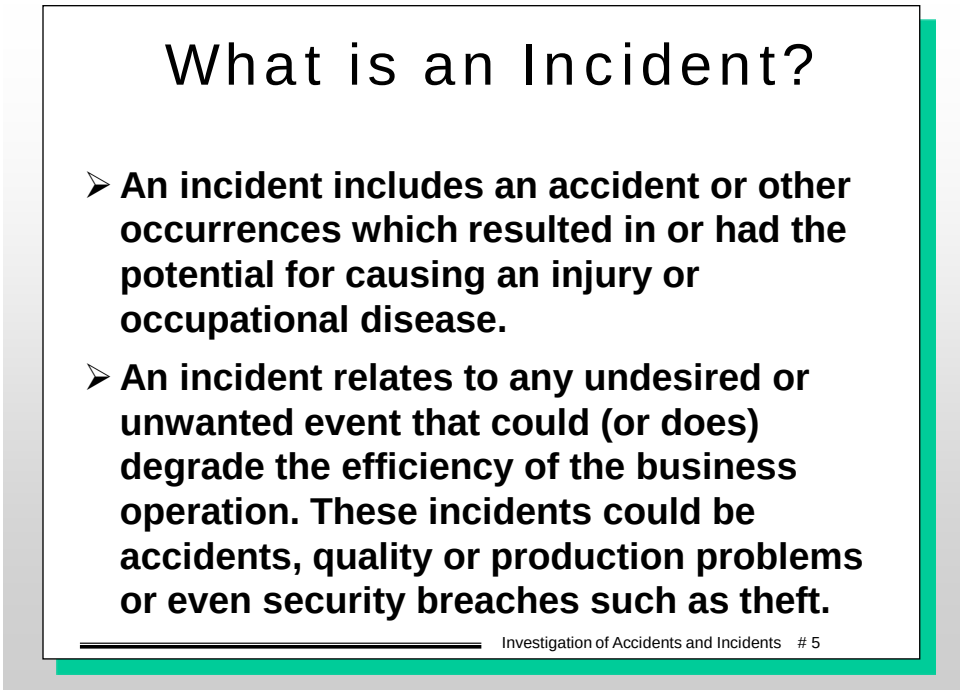
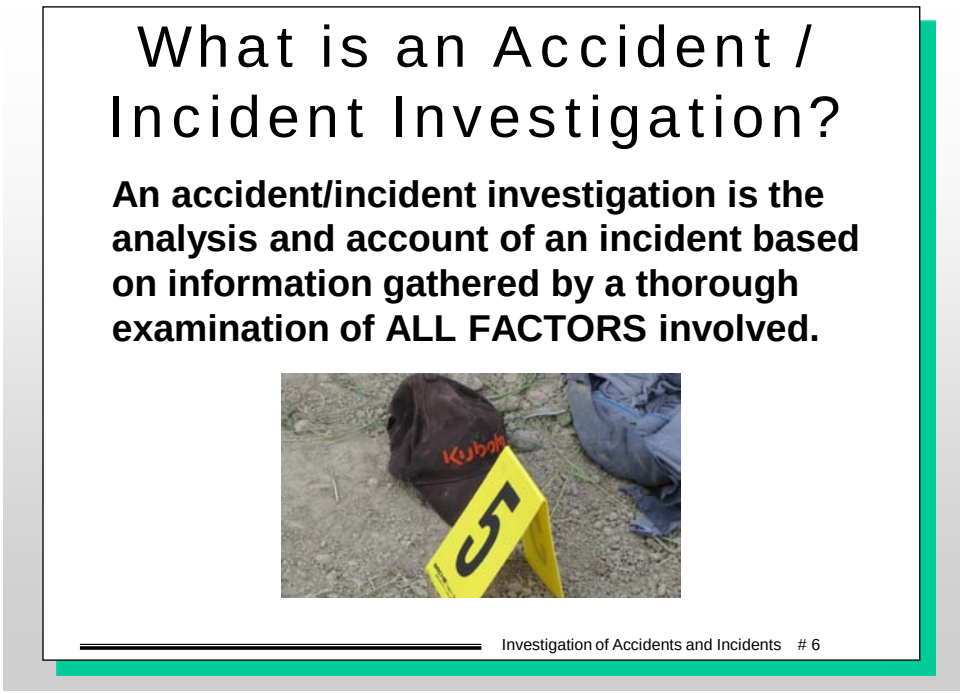



**Answer:** An incident includes an accident or other occurrences which resulted in or had the potential for causing an injury or occupational disease.

An incident relates to any undesired or unwanted event that could (or does) degrade the efficiency of the business operation. These incidents could be accidents, quality or production problems or even security breaches such as theft.

**Ask,** what is an Accident/Incident Investigation?

## Show Slide # 6




**Answer:** An accident/incident investigation is the analysis and account of an incident based on information gathered by a thorough examination of ALL FACTORS involved.

## Distribute the Workbook

"Investigation of Accidents and Incidents Workbook"

**Note:** Page references in this module refer to the"Investigation of Accidents and Incidents Workbook". Encourage the participants to make notes in their workbook for future reference.

# Investigation Concepts

**Ask,** why do we investigate accidents/incidents?

Using a flipchart record participants answers for review at the end of this module.

**State the following:**

Remember these three basic facts:

- Accidents/incidents are caused.
- Accidents/incidents can be prevented if the causes are eliminated.
- Unless the causes are eliminated, the same accidents/ incidents will happen again.

Usually there are four or five root causes or factors that contribute to an incident. Often there are even more. Your task is to identify as many causes as possible after this training course and to establish the **root causes** of an accident /incident.

## Exercise # 1

Divide the participants into small groups and ask each group to choose a spokesperson. Get the groups to brainstorm and answer the following questions. Post group answers at the front of the room. The spokesperson for each group explains the list to the other participants in the room.

- What can management do to prevent the incident from recurring?
- What can the supervisor do to prevent recurrence?
- What can the worker do?

## Regulations

**Ask** participants to turn to page 7 of the Workbook.

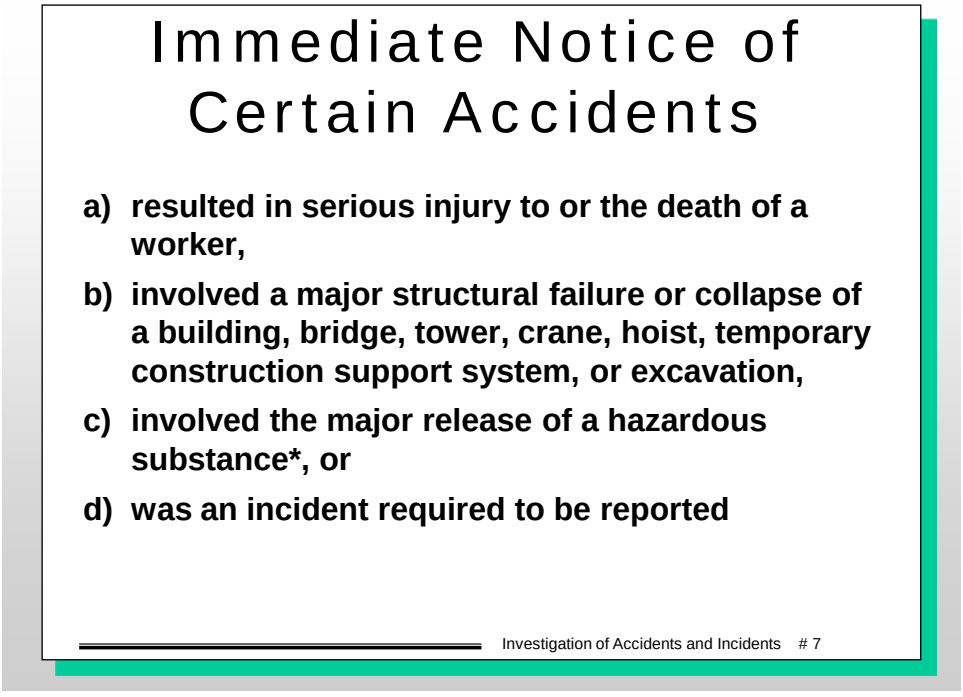
The regulatory requirements for conducting accident investigations are contained in the *Workers Compensation Act* Part 3, Division 10 and WorkSafeBC Occupational Health and Safety Regulation Part 3.4.

These regulatory requirements are outlined on pages 7 to 10.

Some notes on intent and interpretation are included. Remember that these are the minimum standards. Your procedures may go beyond these requirements.

## Division 10 - Accident Reporting and Investigation

**Show Slide # 7**



## *Immediate Notice of Certain Accidents*

*172(1) An employer must immediately notify the board of any accident that*

*(a) resulted in serious injury to or the death of a worker,*

*(b) involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation,*

*(c) involved the major release of a hazardous substance*, or*

*(d) was an incident required to be reported.*

*A major release of a hazardous substance does not only mean a considerable quantity, or the peculiar nature of the release, such as a gas or volatile liquid, but, more importantly, the seriousness of the risk to the health of workers. Factors which determine the seriousness of the risk include the degree of preparedness of the employer to respond to the release, the necessity of working in close proximity to the release, the atmospheric conditions at the time of the release and the nature of the substance.

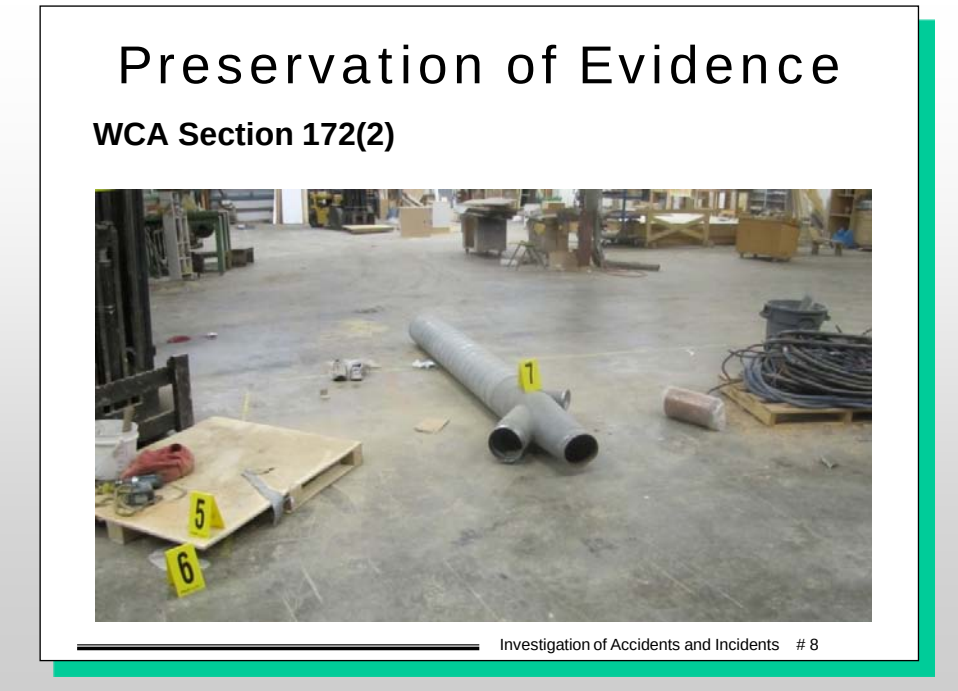
**Explain** that, as a general guideline, a report would be expected when:

1) The incident resulted in an injury which required immediate medical attention beyond the level of service (scope of practice or level of training) provided by a first aid attendant, or injuries to several workers which require first aid.

2) The incident resulted in a situation of continuing danger to workers, as when the release of a chemical cannot be readily or quickly cleaned up.

## Preservation of Evidence Investigation Process

## Show Slide # 8




**Review** Section 172(2) of the Act on page 8 of the workbook with participants, elaborate on the key points and give relevant examples regarding the preservation of evidence.

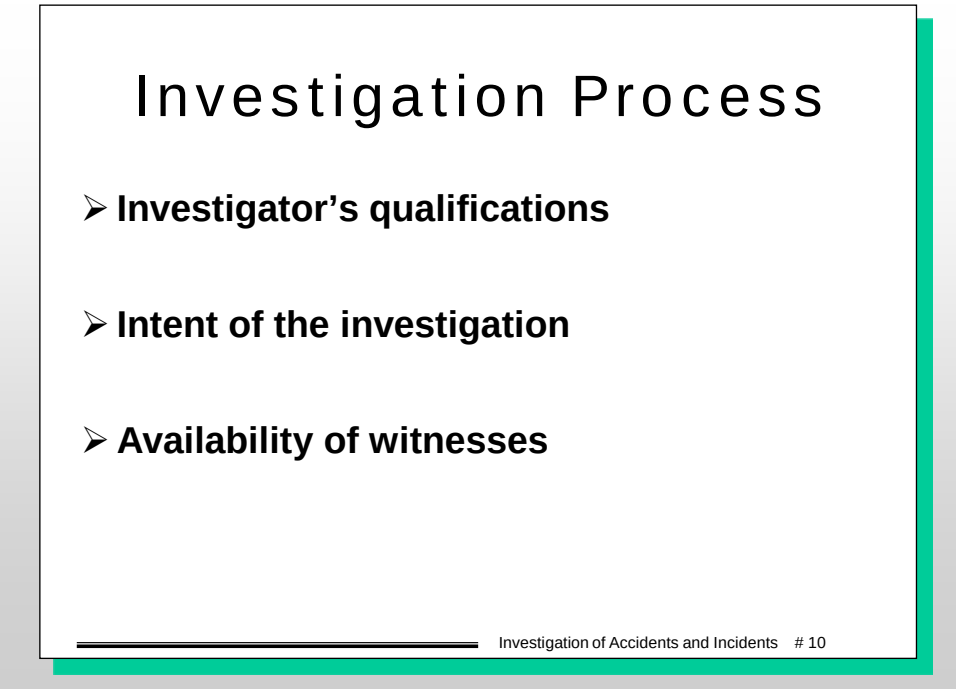
*Preservation of evidence*
*172 (2) Except as otherwise directed by an officer of the board or a peace officer, a person must not disturb the scene of an accident that is reportable under subsection (1) except so far as is necessary to*
*(a) attend to persons injured or killed,*
*(b) prevent further injuries or death, or*
*(c) protect property that is endangered as a result of the accident.*

## Show Slide # 9


- **Review** Section 173 of the Act on page 8 of the workbook with participants.
- * Medical treatment means treatment given by a medical practitioner.
- ** Incidents required by regulation to be investigated include incidents of violence in the workplace.
- **Elaborate** on the points by giving examples from the participants industry. Try to use examples that have been recently highlighted in the media.

## Investigation Process

## Show Slide # 10



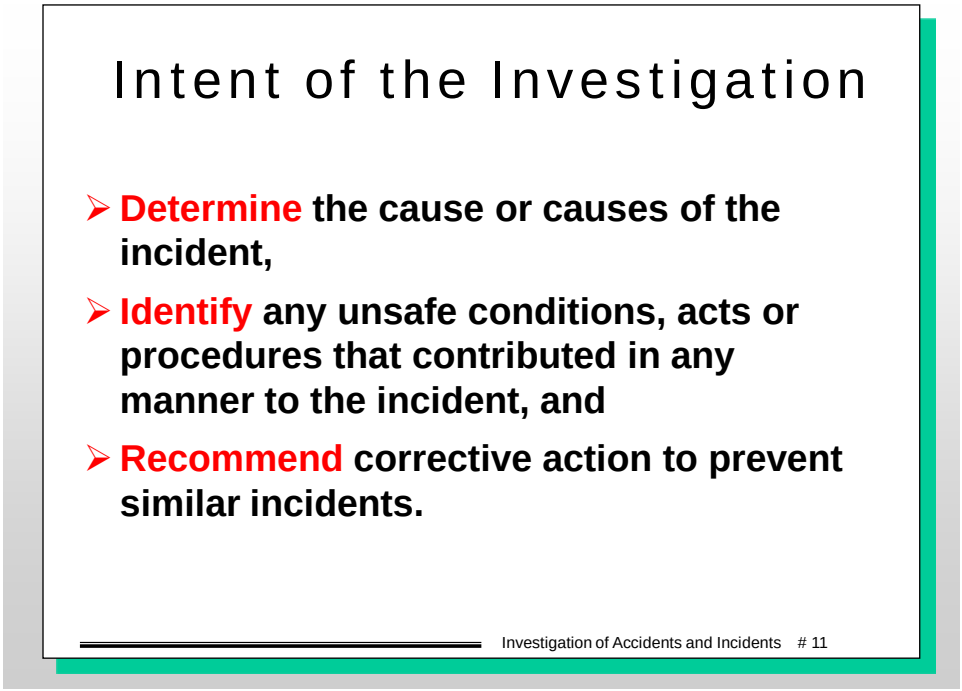

**Ask** participants what kind of qualifications an investigator needs?

Using a flipchart record participants answers for review at the end of this module.

After the participants have come up with a list, go over slide # 11 with the material on page 9 of the Workbook. Concentrate on the Intent of the investigation and provide examples.

## Intent of the Investigation

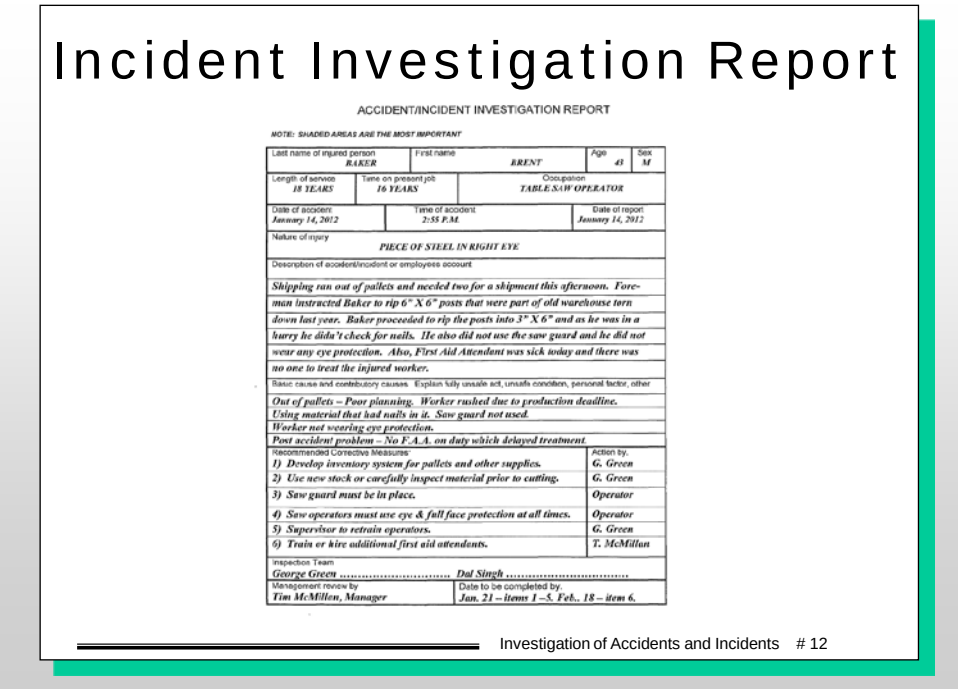
## Show Slide # 11




- **Elaborate** on the points by giving examples from the participants industry. Try to use examples that have been recently highlighted in the media.

## Incident Investigation Report

## Show Slide # 12




Go through the requirements of WCA 175(1) and 176(1), and OHSR part 3.4. Refer the participants to pages 9 and 10 of the workbook.

A completed and blank sample incident report is in the Appendix (pages 32 and 33 of the workbook)

### 3.4 Incident investigation reports

(1) An employer must ensure that an incident investigation report required by Division 10 of Part 3 of the *Workers Compensation Act* contains

(a) the place, date and time of the incident,
(b) the names and job titles of persons injured in the incident,
(c) the names of witnesses,
(d) a brief description of the incident,
(e) a statement of the sequence of events which preceded the incident,
(f) identification of any unsafe conditions, acts or procedures which contributed in any manner to the incident,
(g) recommended corrective actions to prevent similar incidents, and
(h) the names of the persons who investigated the incident.

## Investigation Concepts

In this section of the course, we are going to discuss some of the basic concepts and theories of incident investigations (pages 11 and 12 of the workbook).

- *Before we proceed, consider the fact that an accident/incident cannot be investigated unless it is known that one has occurred.*

**Ask,** What are some of reasons why accidents/incidents are not reported and how would you ensure that they are reported?

Using a flipchart, record participant answers. Encourage suggestions and discuss them. Go over the list of "reasons why accidents/incidents are not reported" with the participants and add any that you feel are missing.

At the end of the above exercise, refer the participants to page 24 of their workbook and compare answers.

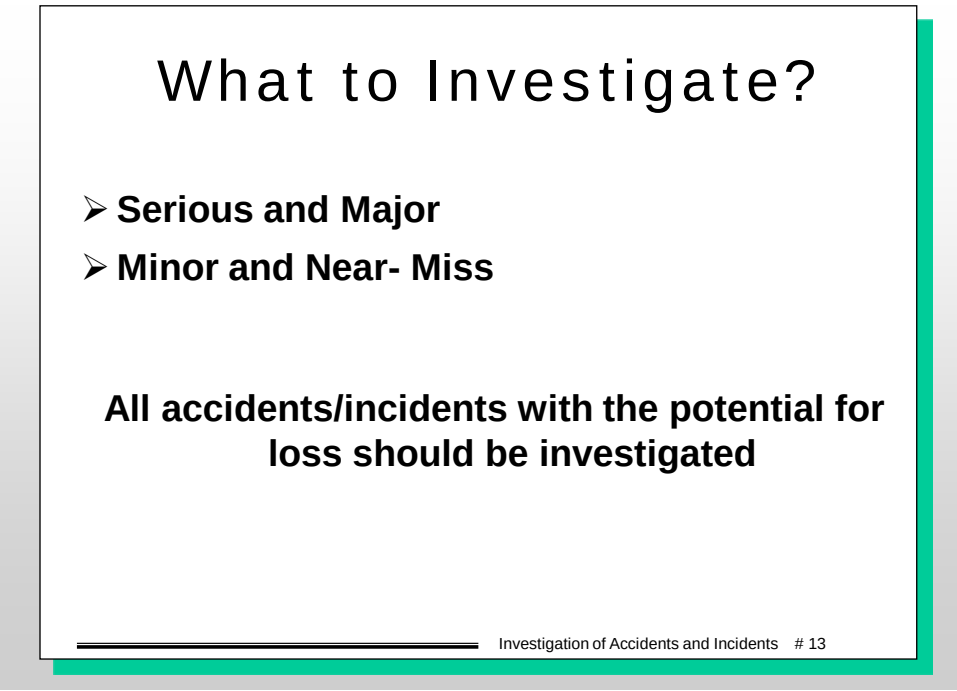
Reasons for not reporting are important as a lot of incidents that should be reported are not reported or are under reported.

Reasons why accidents/incidents may not be reported could include:

- *not wanting to spoil safety record*
- *not wanting to go to first aid*
- *afraid workers will "kid" them*
- *afraid of medical treatment*
- *doesn't like "red tape" involved with filling out forms*
- *afraid foreman will "get mad"*
- *not wanting to be central person in an incident investigation*
- *not wanting to lose time.*

## What to Investigate?

## Show Slide # 13




Types of accidents/incidents to investigate:

## Serious and Major

- These are usually investigated automatically.

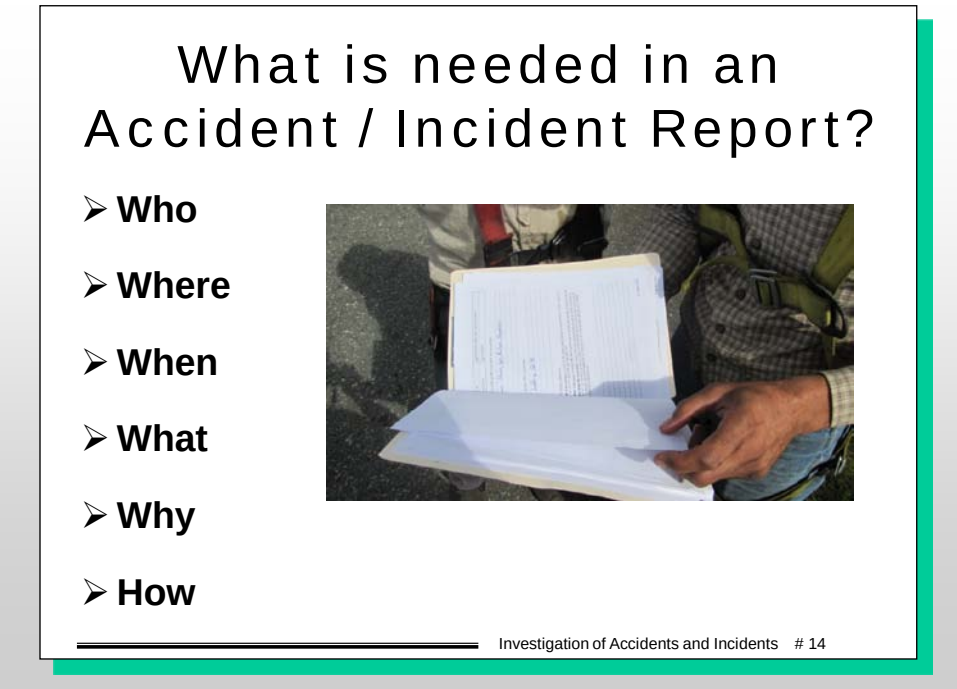
## Minor and Near-Miss

- Indicators that point to a condition or practice that, if allowed to continue, could cause serious injury or equipment damage.

Investigations of serious accidents often reveal earlier incidents of a similar nature that have been dismissed as insignificant.

**All accidents/incidents with the potential for loss should be investigated.**

## Show Slide # 14

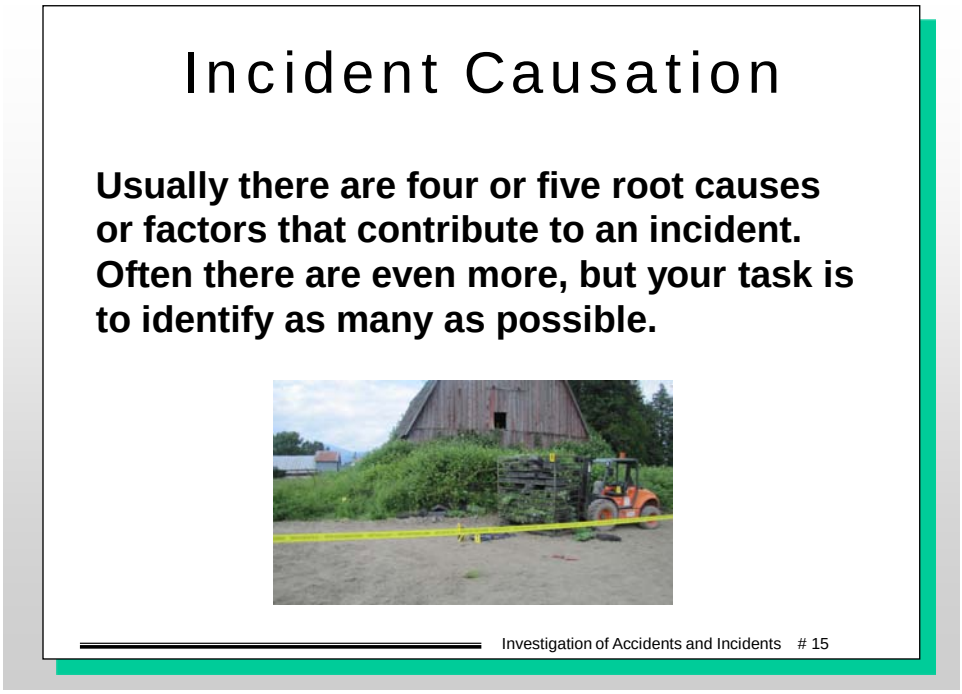



**Review** the bullets on Slide #14 and provide examples.

- **WHO** was involved or injured? Were there witnesses?
- **WHERE** did the accident/incident happen? (Name of department, machine, location etc.).
- **WHEN** did the accident/incident occur? (Date, exact time of day, shift).
- **WHAT** were the immediate and basic causes? (Conditions, acts, procedures, equipment).
- **WHY** was the unsafe act or condition permitted? (Lack of training, supervision, rule enforcement, maintenance).
- **HOW** can a similar accident/incident be prevented? (Must be specific).

# Incident Causation

## Show Slide # 15




## Exercise # 2

Divide the participants into small groups and ask each group to choose a spokesperson. Get the groups to brainstorm and answer the following questions, have them record their answers on a flip chart. Post group answers at the front of the room. The spokesperson for each group explains their list to the other participants in the room.

**Ask**, what are some contributing factors to an Accidents and/or Incidents?

When considering contributing factors, ask yourself the following questions at the same time.

- What can management do to prevent the incident from recurring?
- What can the supervisor do to prevent recurrence?
- What can the worker do?

# Case Study # 1

**Ask** participants to turn to page 15 of the Workbook.

**Explain** that most incidents are the result of several causes happening in sequence and in combination.

**Ask** participants to read through the case study on page 15 of the workbook and while reading the story (below), ask them to IDENTIFY and UNDERLINE the various causes which contributed to the incident.

**Ask** them to be prepared to discuss the case study.
*Allow 5 to 10 minutes for participants to read through this case study and identify and underline the contributing factors.*

It all started in the afternoon. Bill had a violent argument with a co-worker shortly before quitting time, which almost came to blows. Bill left the plant still angry and emotionally upset. He stopped off at a bar for a drink and stayed longer than he had intended. Leaving the bar in an intoxicated state, Bill arrived home late for supper, which precipitated an argument with his wife. Stomping out of the house without supper, Bill returned to the bar and spent the rest of the evening there. Finally leaving the bar, he realized he had better sober up before returning home and decided to drive out to a highway restaurant to get something to eat.

Outside, snow and freezing rain had been falling. The highway, which had not yet been sanded, was slick with ice and snow. Oblivious to hazards, Bill drove too fast for the road conditions. Rounding a sharp curve, he was blinded by the high beam lights of an oncoming car. Bill slammed on his brakes. That did it. His car went into a skid and crashed into a guardrail. The car sustained extensive damage. Bill, fortunately, received only minor cuts and bruises.

**Note:** Answer key is in Appendix 1 of the workbook

Responses to the preceding case study could include the following:

| | |
|---|---|
| • *argument with co-worker*<br>• *emotionally upset*<br>• *goes to bar*<br>• *drinks alcohol*<br>• *stays longer/intoxicated*<br>• *late for supper*<br>• *argument with wife*<br>• *goes back to bar*<br>• *no supper*<br>• *more booze* | • *more upset*<br>• *drives intoxicated*<br>• *deteriorated weather*<br>• *slick roads*<br>• *unsanded roads*<br>• *speeds*<br>• *curve in road*<br>• *high beam*<br>• *over-reaction*<br>• *braked hard* |

By identifying and listing all possible contributing factors, no matter how trivial, the investigating team can isolate the factors most useful to them.

The breakdown of the multiple causes of this case study could be as follows:

***Unsafe Acts***

- *braking too abruptly*
- *driving too fast for road conditions*

***Personal Factors***

- *his alcoholic state*
- *his emotional state of mind (arguments with co-worker and with wife)*

***Unsafe Environment or Conditions***

- *the icy road conditions*
- *the glare of oncoming headlights*
- *the sharp curve in the road*

***Unsafe Act by another Person***

- *failure of oncoming driver to dim his lights*

***Deficiency for which Others are Responsible***

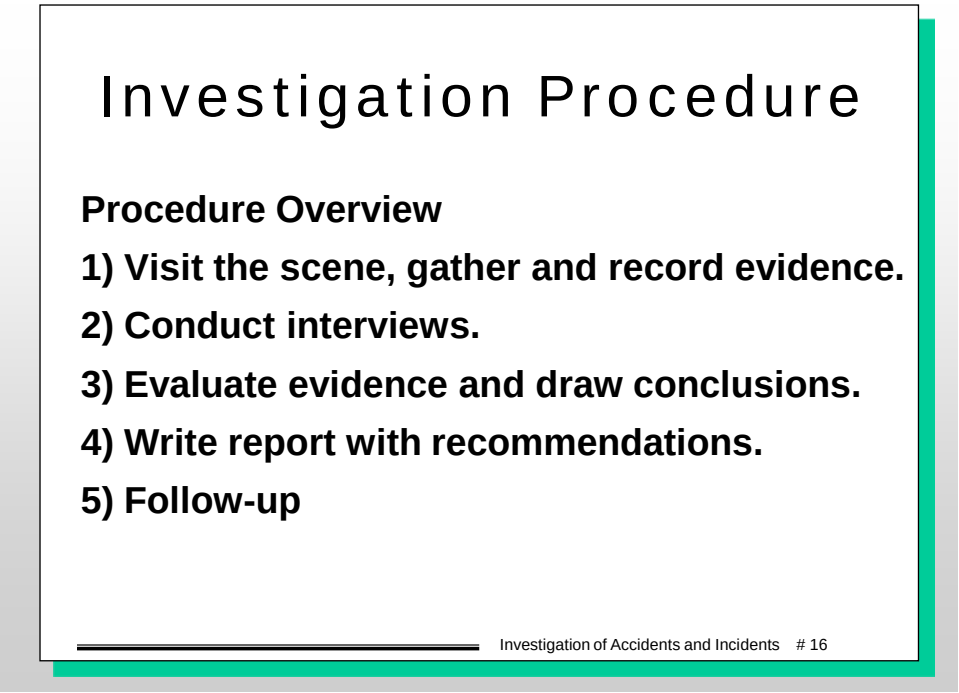
- *failure to sand the road*

## Investigation Procedures

**Explain** that this portion of the module deals with investigation procedures, which will include the following items:

## Show Slide # 16

**Review** each point on the slide in general terms.




Let the participants know that we will go over each of the points in detail in the next few slides and in their workbook. This section of the course starts on page 16 of the workbook.

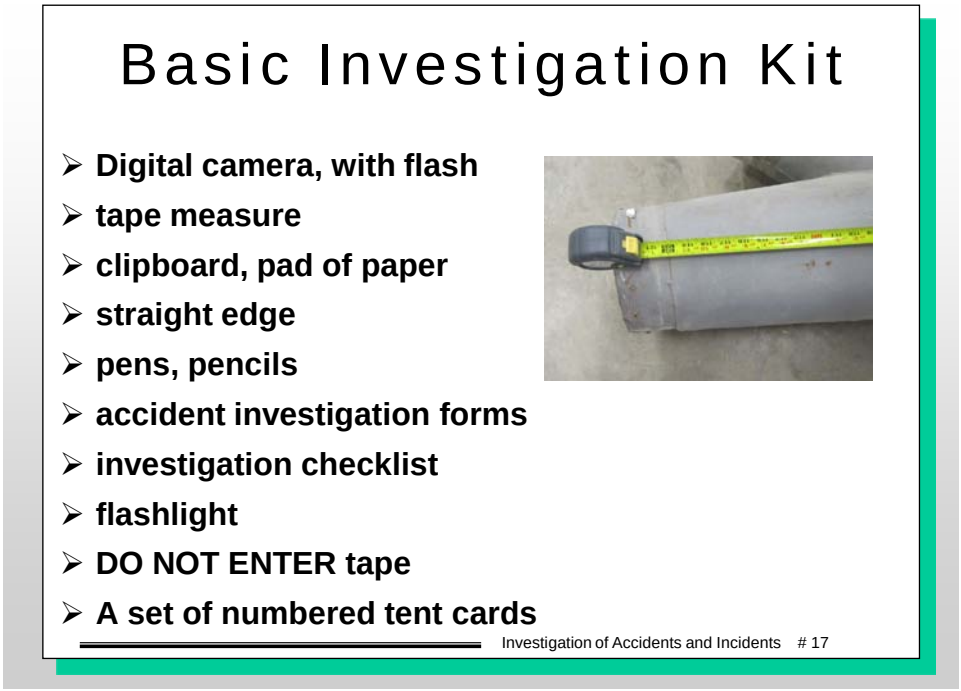
**Remind** participants that, to become proficient at conducting investigations, they will need to apply the skills acquired during this module on every accident and incident that occurs at the workplace.

To practice, there is a Case Study at the end of this section that will give them an opportunity to apply some of the information that will be covered.
(**NOTE:** this is an optional exercise depending on the length of the module).

## Basic Investigation Kit

## Show Slide # 17

**Review** each point on the slide.




**Ask** the participants if anything was left out of the list that that they think should be included in an Investigation Kit.

You may get the following as answers:

- *Water proof paper*
- *Voice or audio recorder*
- *Video camera*

**Remind** the participants that the list contains the basics and that they are free to add to their own investigation kits and it may be a good idea to make it industry specific. For example, if they are dealing with cranes they may want to invest in getting some wire gauges and a wind meter. All the above items should be stored in a sturdy bag that is easy to transport.

## Visit the Accident Scene
## Show Slide # 18


**Review** the following points on the slide.

- Secure the scene to minimize the risk of any further injury.

While approaching the accident scene, analyze the situation and take suitable action to prevent further deterioration.

- Ensure the injured are cared for.

Make sure that the injured workers are properly cared for before starting the investigation.

- Keep the accident scene as undisturbed as possible.

- Make an accurate record of the accident scene.

Photographs of the accident scene should be taken, drawings made and measurements checked for reference in future discussions.

This refers to *Workers Compensation Act* Part 3, division 10, Section 172(2) (page #8 of Workbook) for WorkSafeBC purposes as well as your own procedures.

- Identify and interview all witnesses separately and individually as soon as possible.

Interviewing skills will be reviewed in the next section.

- Record all information accurately.

- Start the incident investigation report.

The basic information such as dates and times can be filled in on the incident investigation report at this point.

- It's a good idea to do a rough drawing in the field then go back to the office and design a computer drawing – be sure to keep a copy of your original drawing in case it goes to court.

**Ask** participants to turn to pages 27 to 30 of their workbook.

**Review** the Sample Accident Scene Sketches with them.

**Ask** participants to turn to page 31 of the workbook for a copy of an Accident/Incident Investigation Check List.

**Remind** them that it is only a sample; their employers may have their own list. You may have or you may want to develop your own list.

**Ask** if anyone has any questions.

## Interviews

## Show Slide # 19


One of the main methods of gathering information in an incident investigation is interviews with people who were at the accident scene. Interviews should also be conducted with anyone who can give relevant information, even if they were not present. An example would be the supervisor who gave instructions at the start of the shift or a trainer who instructed the worker, even months earlier.

The following are suggested techniques for conducting interviews (page 18 of the Workbook).

- Put the witness at ease.
  - A hostile or defensive witness can hinder the investigation and may adversely affect other persons involved.

- Reassure each witness of the investigation's main purpose.

The investigation is to find the causes so they can be eliminated to prevent recurrence, not to pin blame. Responsibilities maybe pointed out, but this is only to assist in preventing the same contributing factors that led to the incident in the first place

- Ask the witness to relate his or her account of the incident.

- Listen closely and carefully, and do not interrupt at this time.

This gives the individual a chance to formulate the story in their own mind and gives you a preview of what they know.

- Do not take notes during this initial dissertation as it distracts the witness.

- Do not use a tape recorder.

- Have the witness relate their story again and this time takes notes.

Ask questions to fill in the gaps.

- Do not take your notes in a secretive manner. Allow the individual to see your notes.

- Ask further specific questions if required.

- Avoid questions that lead the witness or imply answers.

- Go over your notes to ensure the witness agrees with your interpretation of their story.

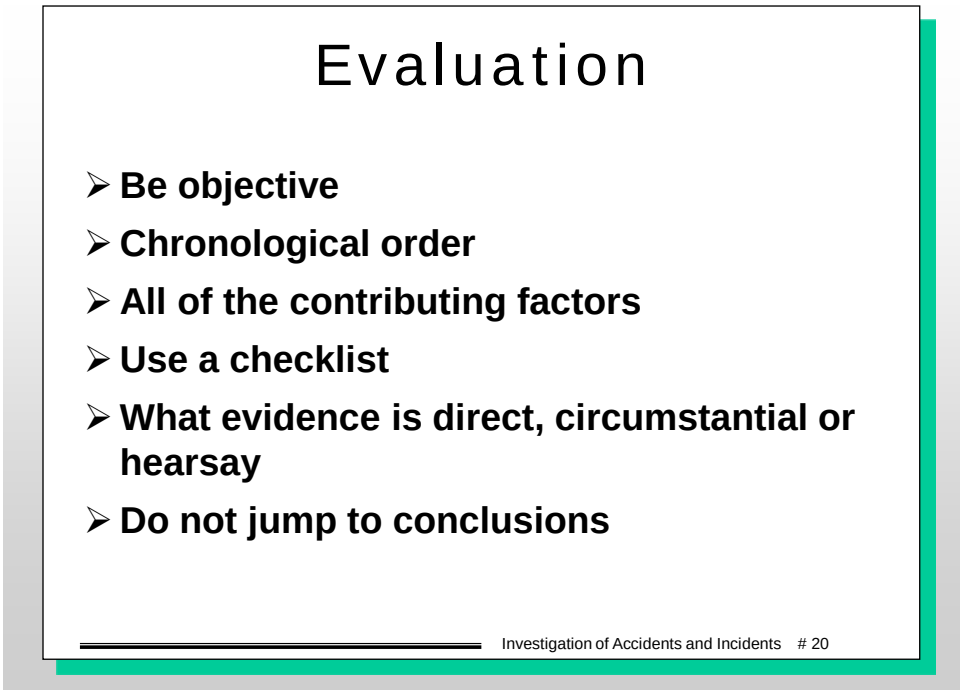
- Ask the witness for their suggestions as to how the accident could have been avoided.

- Encourage the witness to contact you a later date should they think of something else.

- Be sure to thank individuals for their assistance.

## Evaluation

## Show Slide # 20




We are now at the stage of evaluating the evidence you have gathered and are prepared to draw conclusions based on that evidence. (Page 19)

**Review** each point on the slide and remind them to:

- Be objective – don't start with a fixed opinion.
- Set out the events in chronological order.
- Be sure to consider all of the contributing factors.
- Use a checklist to ensure that you have covered all of the areas.
- Consider what evidence is direct, circumstantial or hearsay**.**

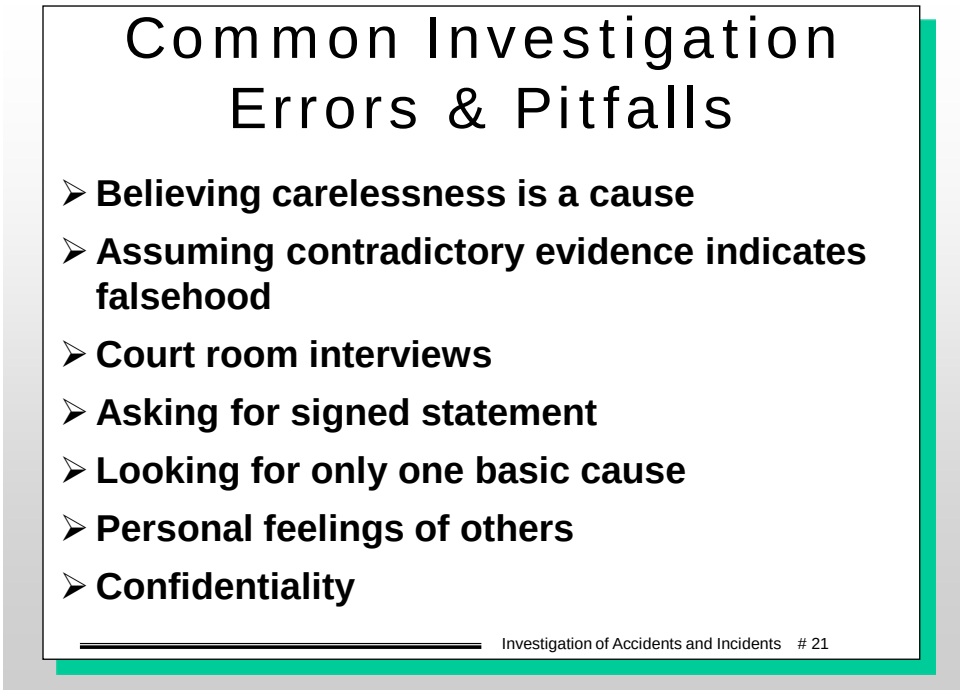
**Explain** the meaning of each of the terms.

- *Direct* – one of your witnesses saw it happen;
- *Circumstantial* – indirect evidence- establishing a conclusion by inference from known facts;
- *Hearsay* – someone hears something said by someone else.

- Do not draw conclusions on the first basic cause found.

## Common Investigation Errors and Pitfalls

## Show Slide # 21

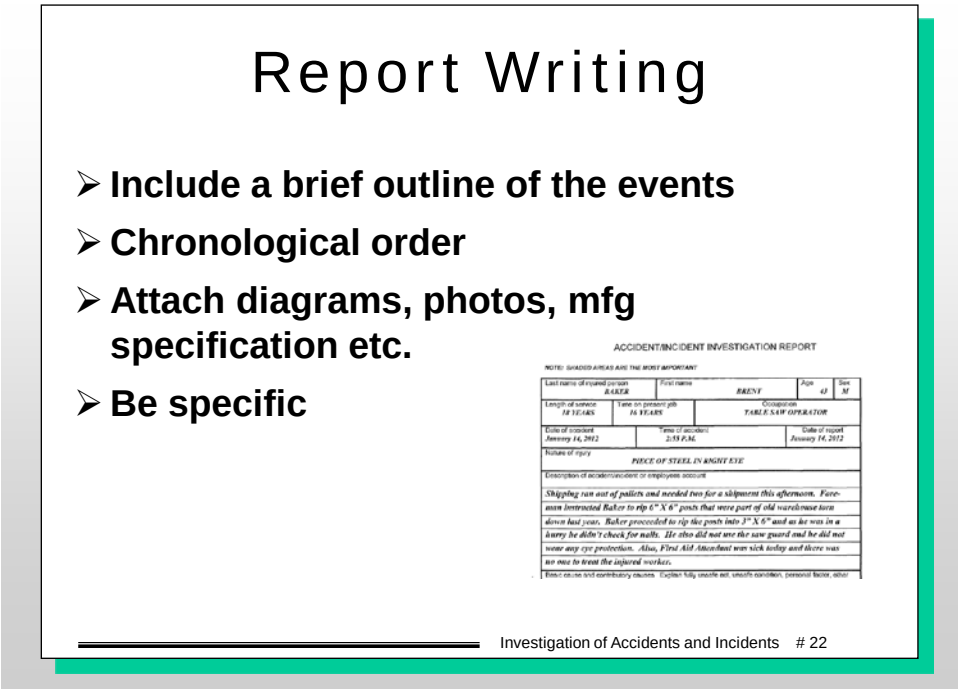



The following are common errors and pitfalls that arise in the incident investigation process: Elaborate on each point,

- Believing carelessness is a cause of accidents/incidents.
- Assuming contradictory evidence indicates falsehood.
- Conducting interviews as if in a courtroom.
- Asking for a signed statement from witnesses.
- Looking for only one basic cause.
- Forgetting about the personal feelings of others.
- Failing to keep information confidential.

## Report Writing

## Show Slide # 22




Now we are at the point where the report can be written. There are a few points that should be kept in mind for writing this report (page 20).

- Include a brief outline of the events leading up to and including the accident/incident.
- Describe the events in chronological order.
- Be specific – include dates, times, places, people involved, conditions, acts etc.
- Attach diagrams, photos, manufacturer's specifications etc.

**Facilitator Note:** It would be helpful to have some sample investigation reports of different styles to show the participants at this point. It is important to stress the point that there is more than one way to write an accident/incident report.

What is important is that the final report contains all the information to make corrective actions so that the accident/incident will not occur again.

Recommendations should treat the basic causes of the accident, not the symptoms.

For example, a worker not wearing a hardhat is struck on the head; the problem is not that he wasn't wearing a hardhat the problem is WHY he wasn't wearing one.

Recommendations should also address all of the contributing factors.

A point to remember is that the report should contain enough details to provide readers with as much – if not more – information than they would have obtained if they had witnessed the accident/incident themselves.

*See Appendix 4 - Sample Accident/Incident Investigation Report.*

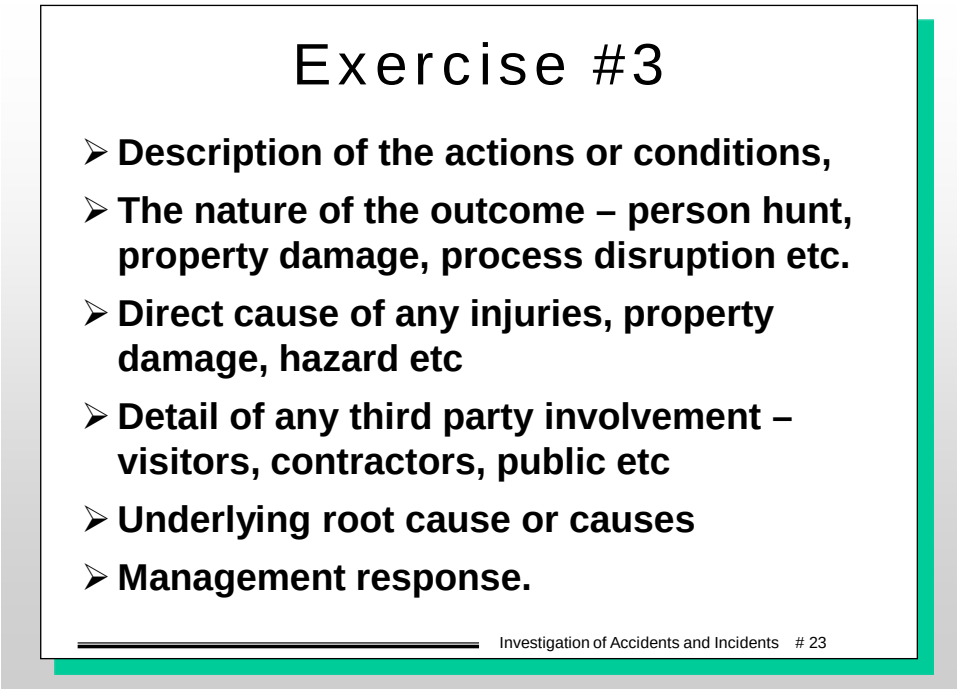
*See Appendix 5 - Blank Accident/Incident Investigation Report Form.* This one is commonly used in BC.

## Exercise # 3

**Ask** participants to turn to page 32 of the Workbook.

**Explain** that you will give participants 5 minutes to read through the sample accident investigation report. At the end of 5 minutes tell them to be prepared to discuss the report.

## Show Slide # 23




**Ask** the participants if the report includes the following details

- Description of the actions or conditions, which led directly to the accident/incident
- The nature of the outcome – a person is hurt, property damage, process disruption etc.
- Direct cause of any injuries, property damage, hazard etc
- Detail of any third party involvement – visitors, contractors, public etc
- Underlying root cause or causes
- Management response.

## Follow-up

## Show Slide # 24 & # 25

**Review** the points on the two slides**. Elaborate** on each point

### Follow-up

- **Delegate the recommendations for corrective action**
- **Establish a system of follow-up to ensure corrective action took place**
- **Publicize the results of the investigation**

Investigation of Accidents and Incidents # 24

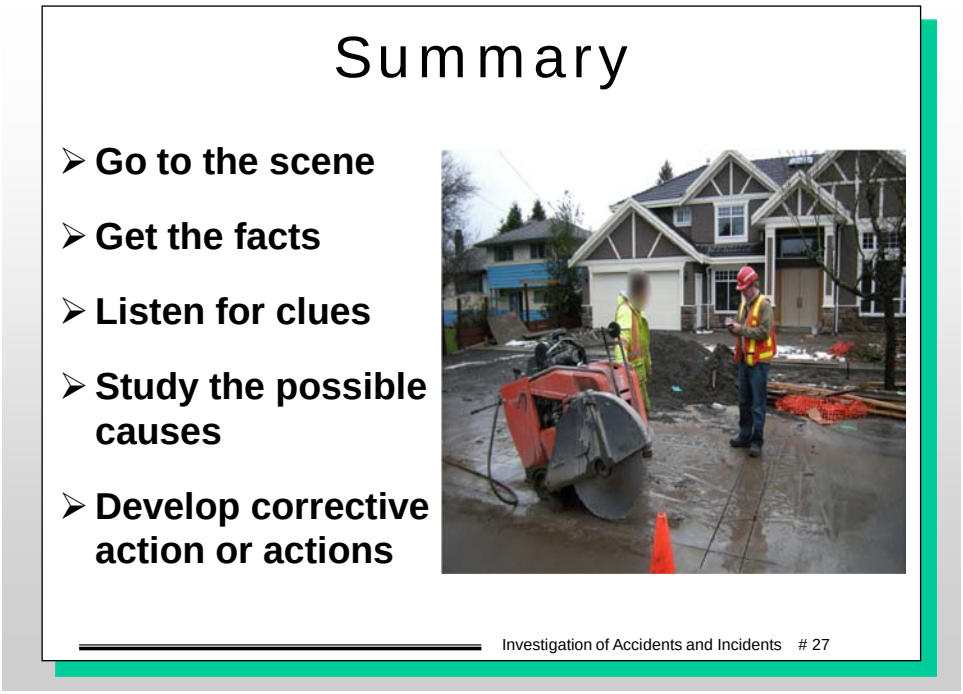
### Follow-up (cont.)

- **Ensure that copies of the report are sent through the usual routings**
- **Post the action taken as well as any non-action and the reasons**
- **Confirm that the action taken has cured the problem.**

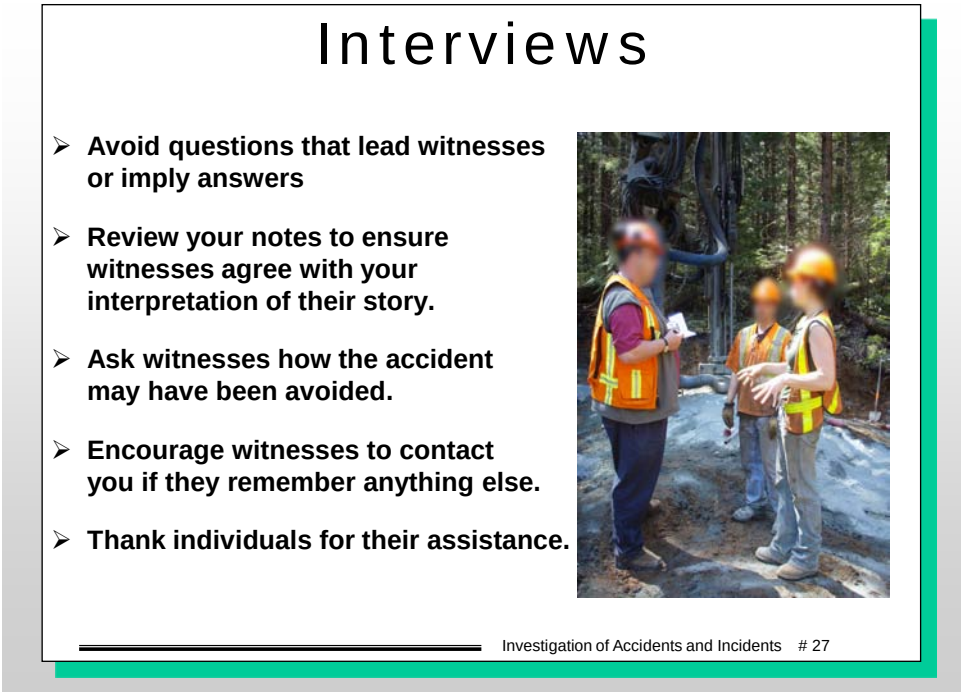
Investigation of Accidents and Incidents # 25

**Summarize** the training module or conduct a “hands on workshop”.

**Show Slide # 26**




Slide # 27 is the last slide for the training course if you are not conducting a workshop. **Show Slide # 27**, summarize conducting interviews.



# Appendices:

- Answer Key
- Accident Scene Sketches
- Accident/Incident Investigation Check List
- Sample Accident/Incident Investigation Report
- Blank Accident/Incident Investigation Report
- Optional Accident Investigation Workshop

## Facilitator Note:

If you have chosen to conduct a ”hands on workshop”, create a workshop that will be meaningful to the participants, for example, an office accident for a group of office workers, construction accident for construction workers etc.

There is a paper based case study included with this module for you to work with if you wish. The participant’s workbook does not include the case study provided for the workshop. If you chose to conduct the case study workshop provided, you will have to print out copies of the handouts and all the role playing instructions that are found on the following pages of this facilitator guide.

Access to parts of the *Workers Compensation Act* (WCA) and the *Occupational Health and Safety Regulation* are required for this workshop.

# Optional Accident Investigation Workshop

# Safety Scenario

## Purpose

This workshop is designed to provide participants with an opportunity to review and apply their knowledge about sections 172 to 177 of the *Workers Compensation Act* and sections 3.3(d)&(e) and 3.4 of the Occupational Health and Safety Regulation.

## Learning Objectives

Upon successful completion of this workshop, participants will be able to:

- Explain the legal requirements for accident investigations and reports
- Apply the process for investigating accidents/incidents to:
    - Accurately describe the accident and analyze the facts
    - Determine basic accident causes and contributing factors
    - Make recommendations for corrective actions

## Target Audience

- British Columbia workers and employers

## Training Pre-requisites

The prerequisite for this workshop is a basic understanding of the Accident Investigations and Reports regulatory requirements.

## Components

The facilitator will coach this participant-directed workshop. It begins with a brief review of the key points of the Accident Investigation and Reports requirements, and the general process of accident investigation.

An accident scenario is provided for analysis. Also, an interview role-play will be conducted. The accident investigation report will focus on the identification of causes and recommendations for corrective actions.

Questions and class participation should always be encouraged.

## Slides

1. Learning Objectives
2. Workshop Agenda
3. Case Study Activities
4. Determine Causes and Make Recommendations

## Accident Sketch and Photos (slides)

5. Before the Accident
6. Accident Scene
7. Broken Joist
8. Break Point
9. Date & Initial
10. Joists Nailed in Position

## Handouts

1. Review Activity – Topics List
2. Brief Accident Description (including worksheet)
3. Photographs and Sketch
4. Detailed Accident Description (including worksheet)
5. Role Play Card #1 – Interviewer (including interviewer's note page)
6. Role Play Card #2 – Interviewee (foreman)
7. Role Play Card #3 – Interviewee (injured worker)
8. Role Play Worksheet – Observer (1 or 2 depending on group size)
9. Accident Investigation Form

## Facilitator's Reference

- A thorough knowledge of the module, Investigation of Accidents and Incidents module is required. Refer to *Investigation of Accidents and Incidents Facilitator Guide and the Reference Guide and Workbook*.

- Review the excerpts from WCA Division 10, and the OH&S Regulation, Part 3, section 3.4 is essential to assist participants in this workshop. (For this workshop, participants may use pages 7 to 10 of their Workbook or the facilitator can copy and distribute the excerpts found in this guide).

Answer keys to:

- Suggested Review Topics (Handout #1)
- Brief Accident Description Worksheet (Handout #2)
- Detailed Accident Description Worksheet (Handout #4)
- Some Common Pitfalls of Accident Investigation (Handout #8)
- Causes and Recommendations

## Required Equipment

- Presentation equipment
- Flip chart and markers
- Masking tape/push pins

# Workshop at a Glance

**Introduction**

- Objectives and Agenda

---

**Small Group Review Activity**

- Notice of Accidents to WorkSafeBC
- Incidents That Must Be Investigated
- Investigation Process
- Incident Investigation Report

---

**Workshop Case Study**

- Prepare to Investigate
- Gather Information and Make Observations
- Gather More Information Through Interviews
- Determine Causes and Make Recommendations
- Write the Report

---

**Summary**

- Review and Summary
- Participant questions and concerns

# Introduction

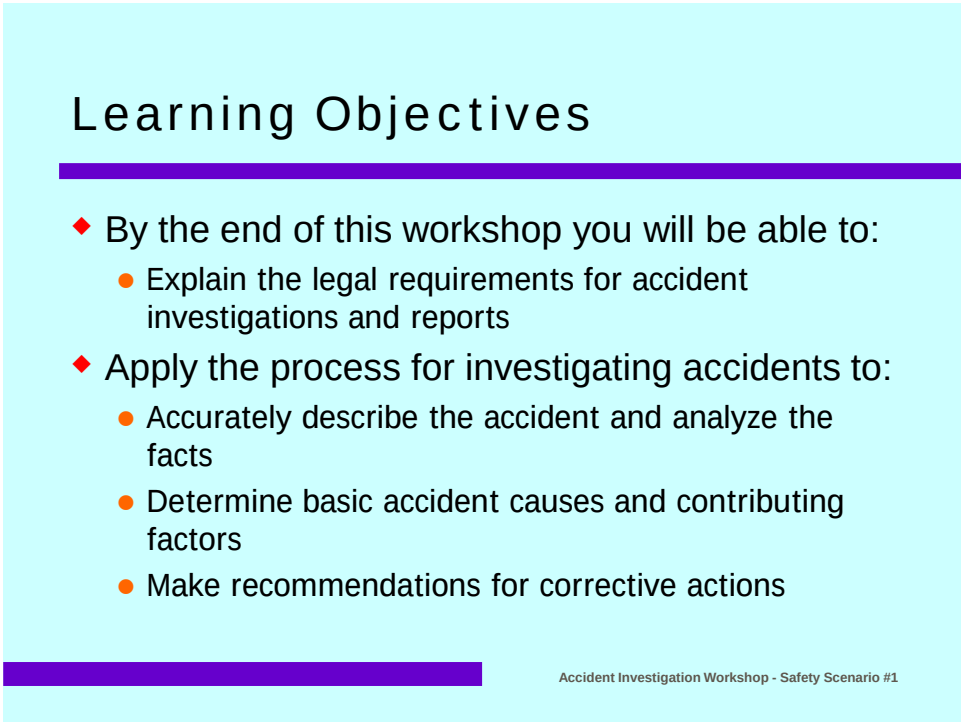
## Objectives and Agenda

***Directions:***

1. Introduce the purpose of the workshop
2. Display Slide #1 – Learning Objectives
3. Explain the learning objectives of the workshop
4. Display Slide #2 – Workshop Agenda
5. Review the items on the workshop agenda

# Learning Objectives

***Show Slide #1 Learning Objectives***

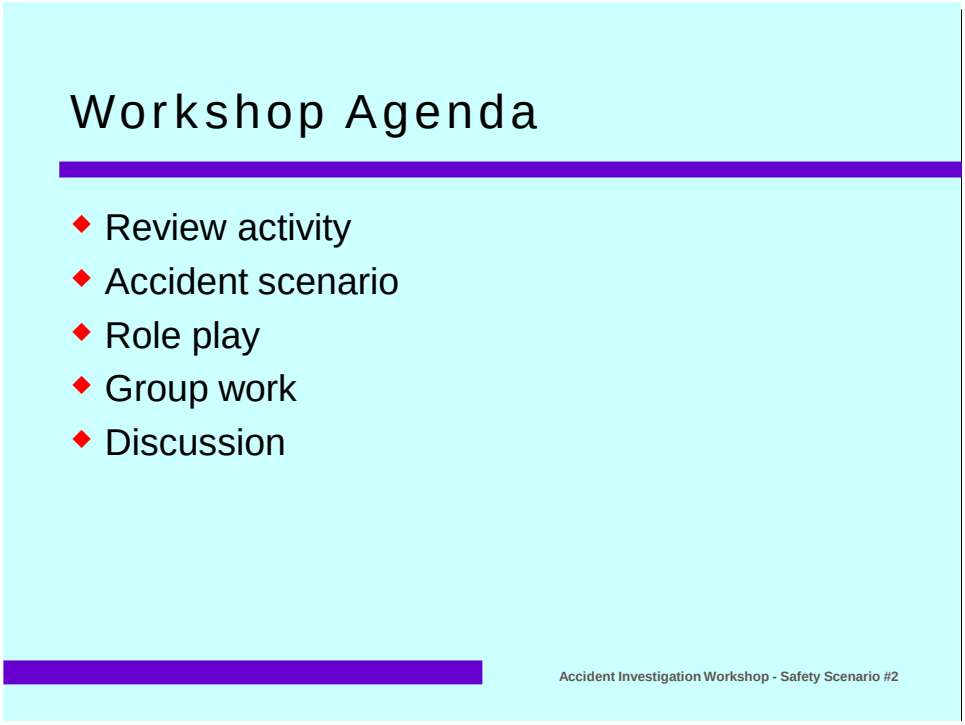



- State the learning objectives as listed on the overhead

    - One way to reduce workplace injuries is to conduct proper reporting and investigation of accidents or any incidents which have a potential for causing injury or illness to a worker.

# Workshop Agenda

***Show Slide #2 Workshop Agenda***




- Point out the components of the workshop.
- Encourage participants to note questions and comments throughout the workshop.
- Active participation promotes learning.

***Transition***

- What are the legal requirements of accident investigation and reporting?
- Participants are encouraged to familiarize themselves with Sections 172 to 177 of the *Workers Compensation Act* and Sections 3.3 to 3.4 of the Occupational Health and Safety Regulation (pages 7 to 10 of the Workbook) during the workshop, as an “open book” review quiz follows The review quiz is the 6 “Topics List” questions on page 60 of this Facilitator Guide.

# Small Group review Activity

***Directions:***

1. Distribute Handout #1 – Review Activity – Topics List (quiz questions).
2. Explain the rules for the review activity – see instructions below.
3. Run the activity.
4. Facilitate a quiz on the answers to all the questions.
5. Debrief the activity and ask participants to relate accident investigation requirements to their workplace experiences.

***Instructions:***

1. Divide the class into teams.
2. Using Handout #1 Review Activity – Topics List, assign each team one or two of the six topics.
3. Explain that at the end of the activity, teams will be quizzed on answers to **all 6 questions**.
4. Ask the teams to retire to a convenient space in the room and spend 5 minutes answering their question(s) and devising a strategy for collecting the answers to the other questions from the **other participants**.
5. After 5 minutes, announce the beginning of the answer collection period. Ask the teams to canvass all participants and collect the answers they need.
6. After 5 minutes, call time and check if every team has got answers to all six questions.
7. Call on teams to produce answers to each of the 6 questions.
8. Elaborate on answers as necessary.

***Transition:***

- Explain that participants will now be applying their knowledge about accident investigation and reporting to a case study.

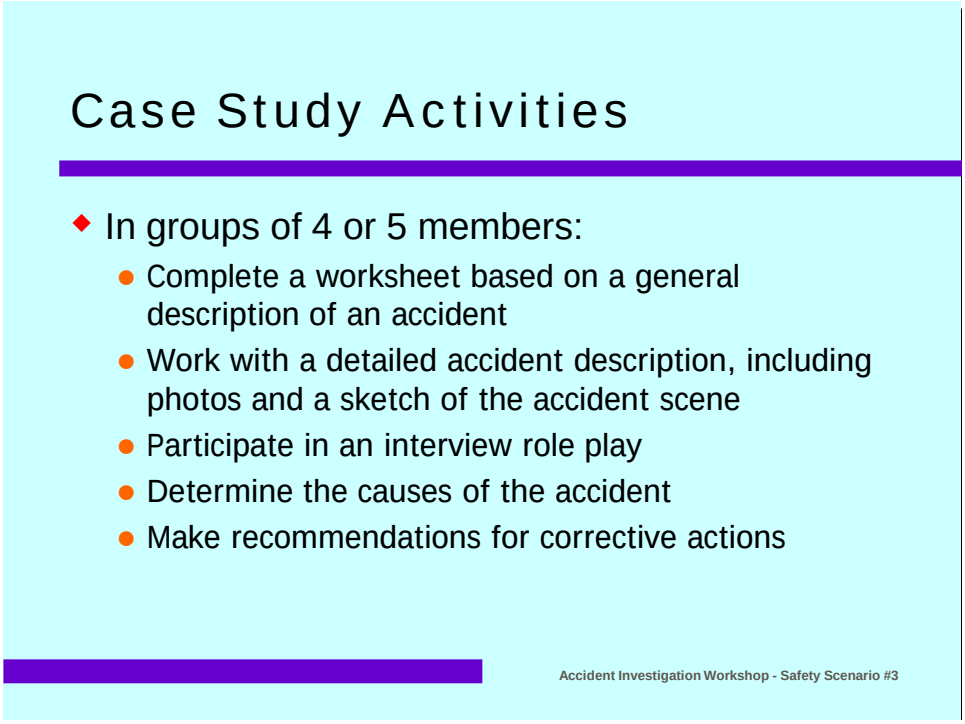
# Workshop Case Study

## Prepare to Investigate

***Directions:***

1. Display Transparency #3 – Case Study Activities.
2. State the purpose of the workshop (apply the investigation process) and explain the case study activities.
3. Divide the participants into groups of 4.
4. Distribute Handout #2 – Brief Accident Description, including the Brief Accident Description Worksheet.
5. Ask participants to read Handout #2 and answer the questions on the Worksheet individually.
6. Ask participants to discuss the answers in their small group.
7. Encourage participants to share their group's answers with the entire class.

***Show Slide #3 Case Study Activities***




## Gather Information and Make Observations

***Directions:***

**1.** Distribute Handout #3 – Photographs and Sketch, showing the accident scene and Handout #4 – Detailed Accident Description, including the Worksheet.

**2.** Ask groups to read the detailed accident description, review the photos and the sketch, and answer the questions, as a group, on the Worksheet.

**3.** Encourage the groups to share their observations and answers.

- Elaborate on the answers reported by the groups.
- Use the sketch and photo slides to illustrate or discuss where necessary.

## Gather More Information through Interviews

***Directions:***

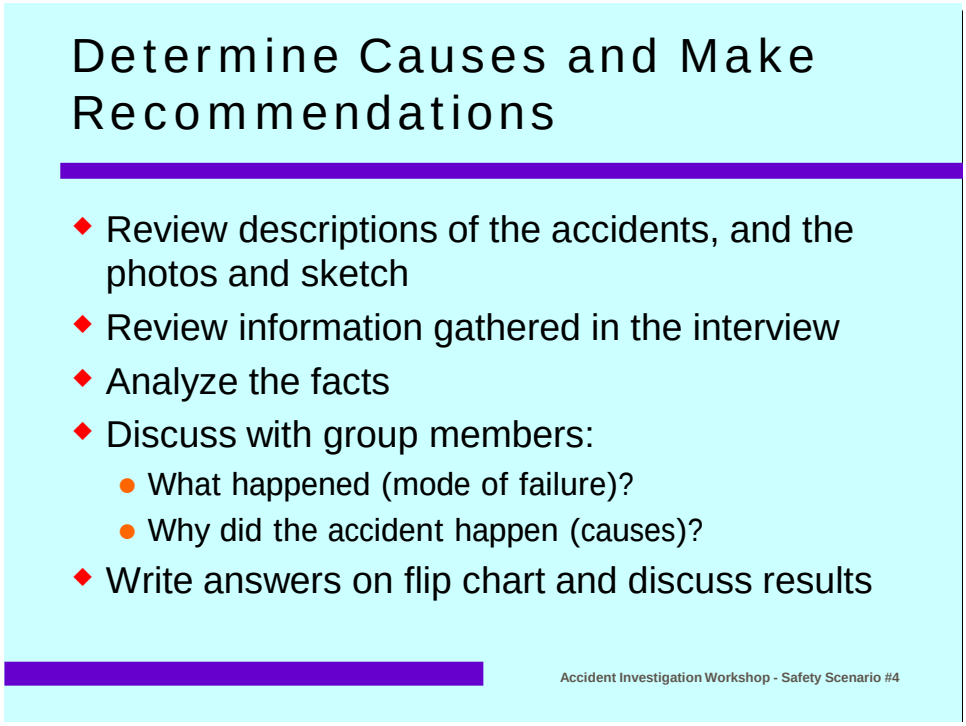
1. Distribute Handouts #5 to #8 (Role Play Cards).
2. Explain that this activity is an interview role play.
3. Ask the four members of each group to choose a role, to read their role cards and to plan their roles.
4. Run the role play.
5. Ask each group to give a brief (2 minute) report to the others about the information they gathered in the interviews, indicating the causes of the accident.
6. Debrief the role play by asking the Observer(s) in each group to give a couple of comments on the interviews.
7. Debrief the activity, adding comments where appropriate. Solicit common pitfalls of investigation interviewing from the groups.

## Determine Causes and Make Recommendations

***Directions:***

1. Display Transparency #4 – Determine Causes and make recommendations.
2. Ask participants to continue working in groups.
3. Ask each group to follow the instructions on the slide.
4. Monitor group work.
5. Ask participants from the different groups to name all the causes of the accident. List these on a flip chart.
6. Comment on answers. Elaborate where necessary.
7. Ask groups to suggest corrective measures to prevent re-occurrence. Discuss options.

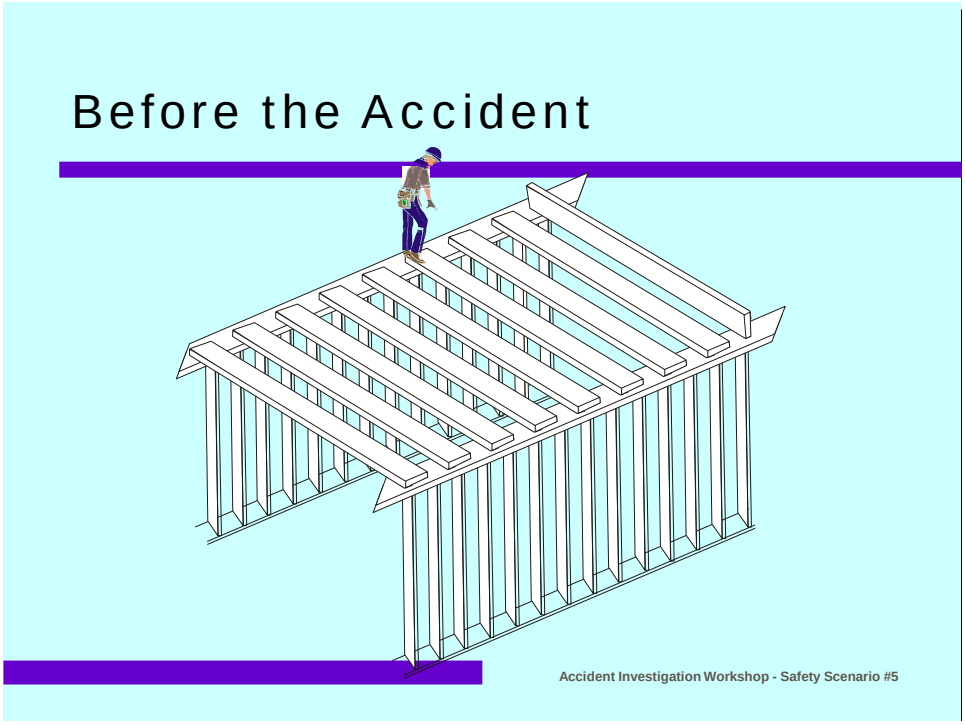
***Show Slide #4***
***Determine Causes and Make Recommendations***




***Accident Sketch and Photographs are on the following pages***

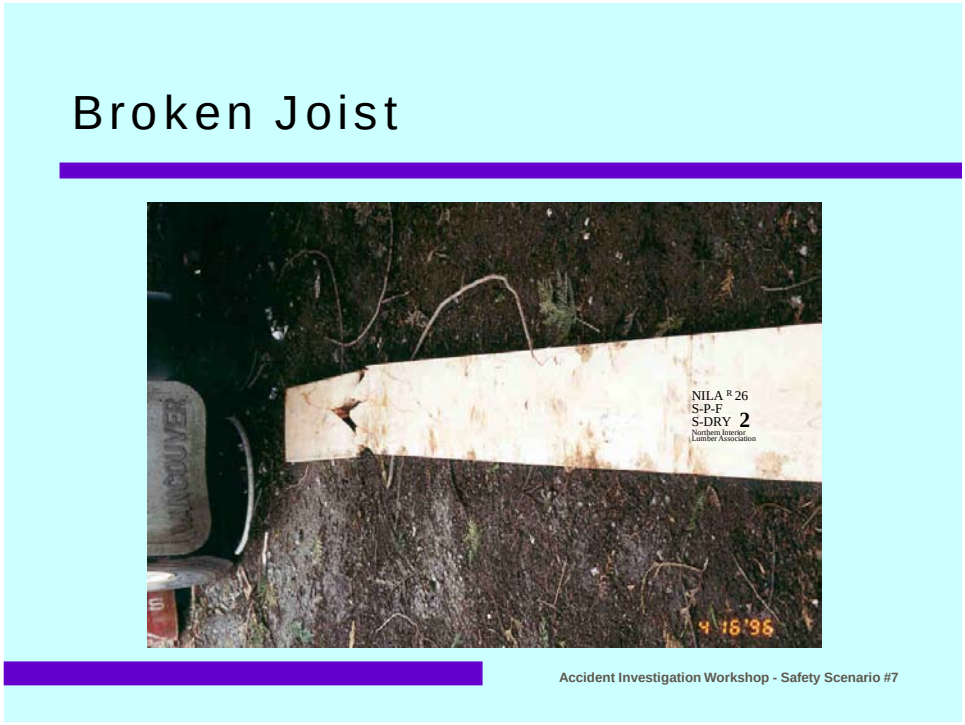
- ***(Slides 5 to 10).***

## Slide #5 - Before the Accident

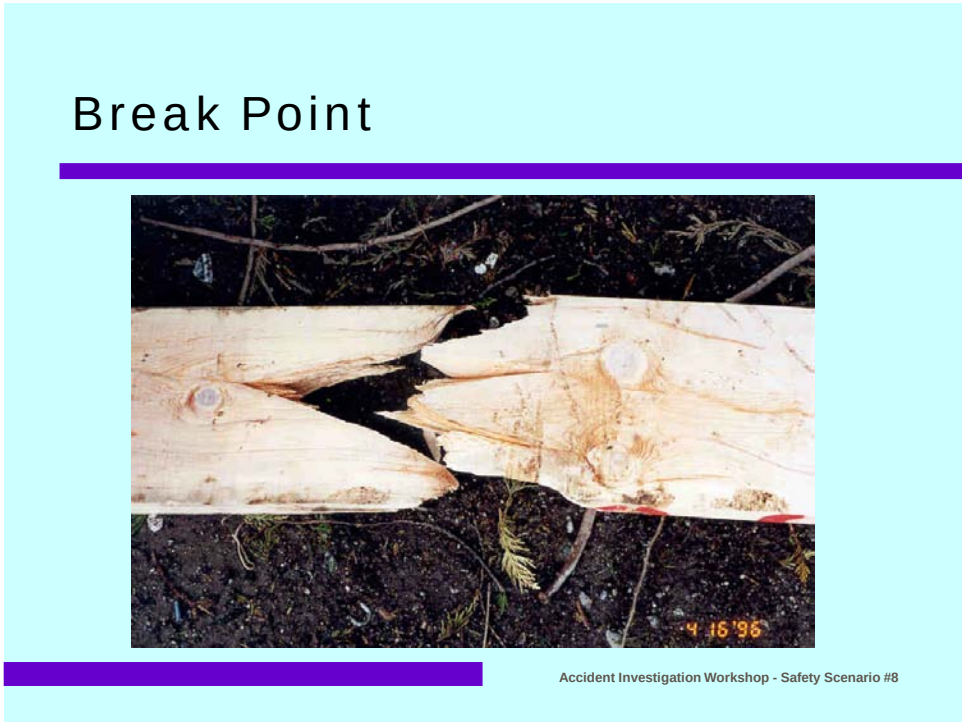



## Slide #6 - Accident Scene

## Slide # 7 - Broken Joist

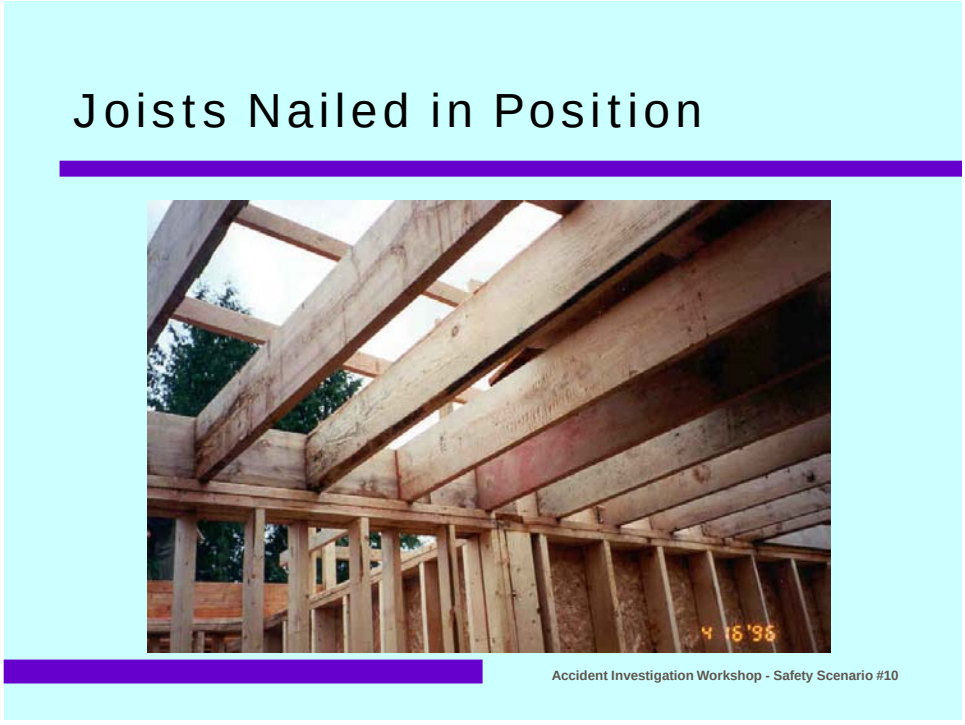



## Slide # 8 - Break Point



## Slide # 9 - Date & Initial


## Slide # 10 - Joists Nailed in Position



# Write the Report

## *Directions*

1. Ask participants to suggest which of the causes they will include in the accident report. Indicate these with a tick mark.

2. Underline the causes from the list that were not chosen for the report, if any. Ask why these causes were not included.

3. Explain that all causes need to be included in the report – even if the causes may put people responsible (e.g. supervisors) in a bad light. Only when causes are identified and addressed can accidents be prevented from happening again.

4. Distribute Handout #9 – Accident Investigation Form.

5. Ask participants to complete individually the following categories in the form:
   - Description of the Incident
   - Accident Causes
   - Preventative Actions

6. Ask 1 or 2 individuals to read out their write-up. Make comments where appropriate.

7. Remind participants of the importance of entering the injury in the First Aid Record.

## Summary

***Directions:***

1. Emphasize the importance of applying a proper investigation and reporting process. Note that participants have worked through a specific example, but the process of preparing, gathering information, analyzing, and reporting is applicable across all incidents.

2. Answer any questions and address concerns.

3. Post the WorkSafeBC Prevention Information Line and website address for prevention resources:
   - 1-888-621-SAFE (7233) or (604) 276-3100
   - www.WorkSafeBC.com

4. Post the contact number for accident reporting to WorkSafeBC:
   - **Monday – Friday, 8:30 a.m. to 4:30 p.m.**
   - Toll-free in Canada 1 888 621-SAFE (7233)
   - **After Office Hours (Richmond)**
   - Toll Free 1 866 WCB-HELP (922-4357)

5. **Summarize:**
   Accident/Incident Investigation and Reporting is a key element of the OH&S program in the workplace as specified in section 3.3(e) of the OH&S Regulation. Even if a company is not required to have a formal OH&S program, the employer still must ensure incident reporting and investigation is carried out.

6. **State:**
   Section 177 of the WC Act makes it very clear that employers must not by any means seek to discourage, impede, or dissuade a worker or a dependent of the worker from reporting to the WorkSafeBC any injury or illness whether or not it is compensable.

# Safety Scenario Participant Handouts

1. Review Activity – Topics List
2. Brief Accident Description (including worksheet)
3. Photographs and Sketch
4. Detailed Accident Description (including worksheet)
5. Role Play Card #1 – Interviewer (Including Interviewer's Note Page)
6. Role Play Card #2 – Interviewee (Foreman)
7. Role Play Card #3 – Interviewee (Injured Worker)
8. Role Play Worksheet – Observer (1 or 2 depending on group size)
9. Accident Investigation Form

## Facilitator Note:

Access to the Occupational Health and Safety Regulation is required for this workshop.

## Available on-line:

http://www2.worksafebc.com/Publications/OHSRegulation/Home.asp

# Review Activity – Topics List – Handout #1

1. What types of accidents must employers immediately report to the Board? *Workers Compensation Act. Section 172(1)*
2. Name the types of accidents or incidents for which employers must immediately initiate an investigation. *Workers Compensation Act. Section 173(1)*
3. What are the requirements for not disturbing the scene of the accident and the exceptions to the rule? *Workers Compensation Act. Section 172(2)*
4. What are the objectives of an investigation? *Workers Compensation Act. Section 174(2)*
5. Who is responsible for preparing the incident/accident report and where is it distributed? *Workers Compensation Act. Section 175*
6. What are the contents required in an incident/accident report? *OH&S Regulation. Section 3.4*

# Brief Accident Description – Handout #2

*The accident took place on a construction site. The crew was working on a multi-residential project, framing a 3-storey condominium.*

*Lewis Framing is an unregistered company sub-contracted by the principal contractor, Complex Inc., to provide labour only.*

*John Norman was the site superintendant for Complex Inc. Steve Little was Complex's First Aid Attendant on site.*

*The worker, Joe Smith, was seriously injured on the job. He was employed by Lewis Framing and was preparing to nail joists in place on the second floor level. While walking along the top of the wall, he inadvertently stepped on a joist, which broke, causing him to fall to the floor below.*

*He hit his head hard enough to cause a concussion and was disoriented after the fall. A substantial cut on his head was bleeding.*

## Brief Accident Description Worksheet (handout #2)

1. Imagine that you were the site superintendent. On behalf of the principal contractor, what would you do right away after the accident happened?

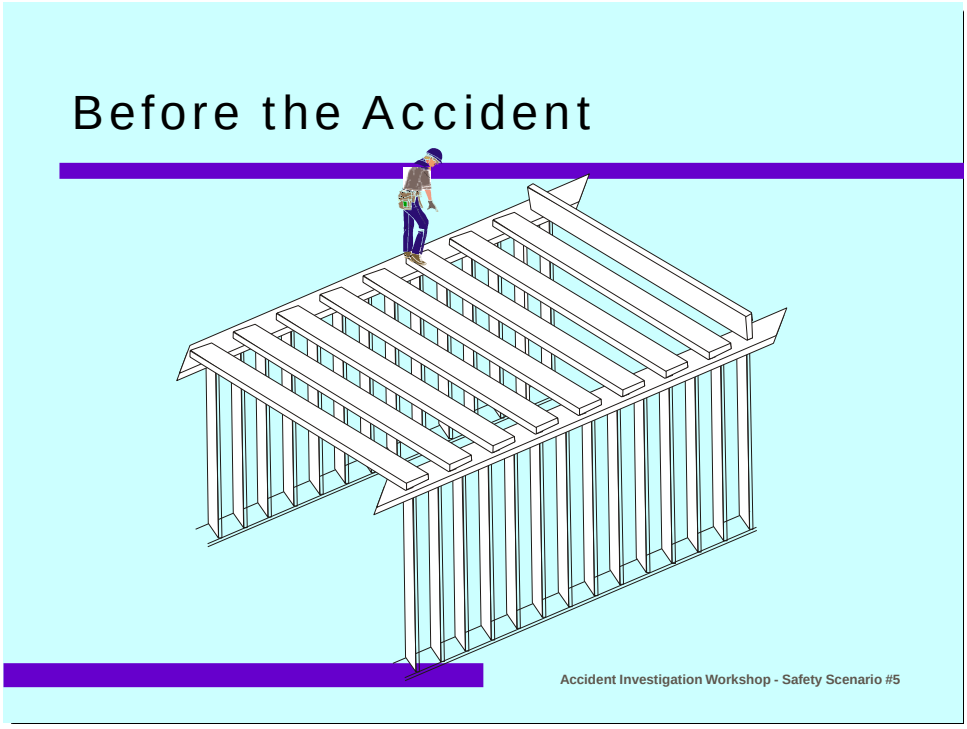
2. Is it necessary to report this incident to the WCB? Why?

3. Which individual will conduct the investigation?

4. What tools would initially be useful to use in this investigation?

# Photographs and Sketch – Handout #3

## Before the Accident



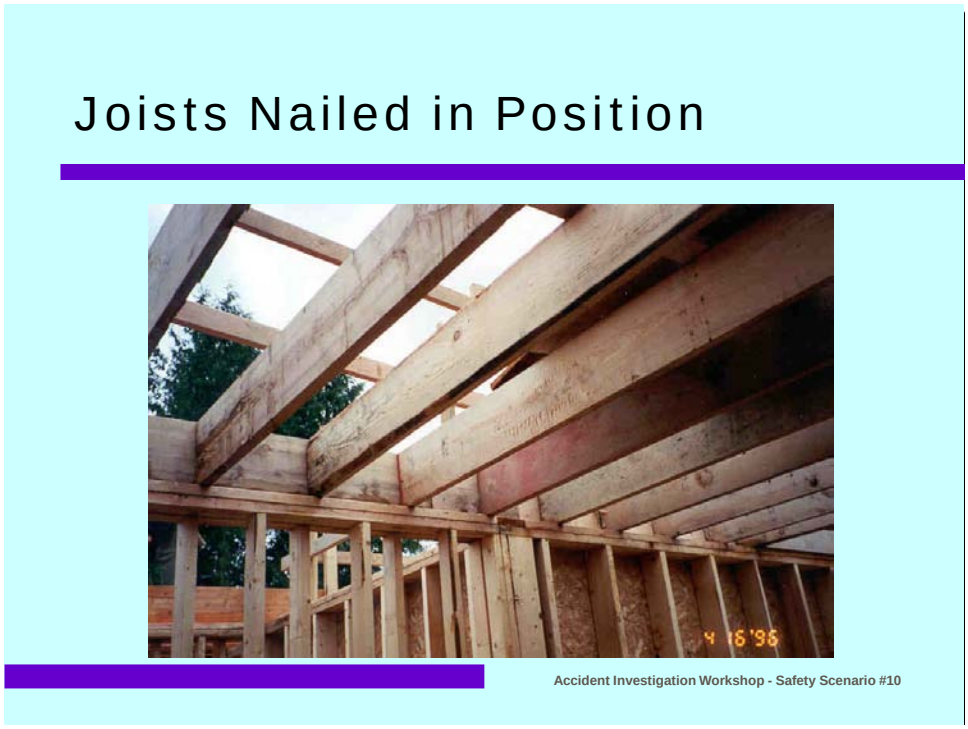

## Accident Scene

## Broken Joist


## Break Point

## Date & Initial


## Joists Nailed in Position



# Detailed Accident Description – Handout #4

*Joe Smith, a 23 year old Journeyman Carpenter, was the worker injured in the fall. The accident took place at 1:45 pm on a sunny day with light winds and a temperature of +10 degrees Celsius.*

*Joe was employed by Lewis Framing and Pete Jones was his foreman on the job.*

*A crew of five framers was on site at the time of the accident. They were framing a 3-storey multi-family condominium project and were placing floor joists on the second level. The floor joists had been laid on the walls and spread out in preparation for nailing.*

*While walking along the top plate of the wall, Joe reportedly stepped on a floor joist that was lying flat across the walls.*

*The joist broke abruptly 12 inches from the wall causing him to fall 9 feet to the floor below. He landed on his head and suffered a severe concussion. The joist fell close to where he landed.*

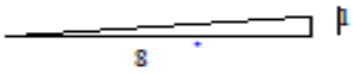
*The broken 2 x 10 inch joist was 12 feet long and was grade stamped S-P-F No. 2 and Better. At the location of the break in the joist, the grain of the wood sloped abruptly toward two large knots.*

***Background***

*In the past, Smith's work habits have been considered sloppy at times, resulting in previous injuries.*

**Note**

"S-P-F" stands for Spruce – Pine – Fir. Grading rules for "No.2 & Better" specify that for joists and planks, the slope of grain must not exceed 1" in 8".



## Detailed Accident Description Worksheet (handout #4)

- Review the photographs and the sketch and make observations.
- Read the detailed description of the accident and the brief description again.

With your group members answer the following questions:

1. Who are the people on the site? What is each person's role?

| People | Role |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |

2. What do you see in the photographs and sketch?

3. What were the implications of the time of the accident? Why was the weather a factor to consider?

4. What lumber planking guidelines are relevant to this accident? See OH&S Regulation Part 13

5. From the statements in the Accident Descriptions what information is pertinent to determine the cause of the accident?

6. Should you preserve any evidence, and, if so, what and how might you do that?

# Role Play Card #1 – Interviewer – Handout #5 (Site Superintendent)

- As the Site Superintendent for the principal contractor, you, John Norman, are investigating the Joe Smith accident.
- You are conducting investigation interviews with people who were on site and observed the accident.
- Introduce yourself and gather as much information as you can from (a) the foreman and (b) the injured worker.

Ask the following questions to determine the cause of the accident:

1. Interviewee's name, address, telephone number, qualifications and experience, etc.
2. What happened?
3. Where were you at the time of the accident?
4. Immediately before the accident, did you notice anything on site that you consider unsafe?
5. How could this accident be prevented from happening again?

Some additional considerations:

6. What framing experience does Lewis Framing have?
7. What was their experience?
8. Was Joe Smith competent at the time of the incident? (physical, emotional, and mental health)
9. Was the joist safe to step on?

## Interviewer's Notes:

Use the back of this page if you require more space for notes.

# Role Play Card #2 – Interviewee – Handout #6 (Foreman)

- This is an investigation into the fall accident of Joe Smith. As Smith's foreman, you will be asked for a statement of what happened that day.
- As Lewis Framing is not registered with WCB, they are, in effect, on the payroll of the principal contractor.
- You were not responsible for purchasing the lumber. It was purchased by Complex Inc.

Answer the interviewer's questions to the best of your ability. Some of the things that the interviewer will ask you include:

1. Your name, address, telephone number, qualifications, and experience, etc.
2. What happened?
3. Why did the joist break? Should Joe Smith have stepped on the joist?
4. Who else witnessed the accident?
5. Where were you at the time of the accident?
6. Describe the work habits of the worker. Was Joe Smith a good worker? Was he competent at the time of the accident?
7. Do you normally inspect joists for defects? Was the lumber good enough to be used as scaffold planks?
8. Did you talk about rules and procedures that your workers should follow?
9. How could this accident be prevented from happening again?

# Role Play Card #3 – Interviewee – Handout #7 (Injured Worker)

- This is an investigation into the fall accident of Joe Smith.
- You will be playing the role of the injured worker being interviewed at the first possible opportunity after treatment.

Answer the interviewer's questions to the best of your ability. Some of the things that the interviewer will ask you include:

1. Your name, address, telephone number, qualifications, and experience, etc.
2. What were you doing at the time of the accident?
3. How were you feeling at the time? Were there any distractions? (Remember you had just returned from lunch and a beer).
4. How did you get to the top plate of the wall and how did you plan to nail joists in place? Did you discuss the rules and procedures regarding working at heights or fall prevention with your supervisor or foreman?
5. Can you explain why you fell?
6. Were there other witnesses to the incident?
7. How could this accident be prevented from happening again?

# Role Play Worksheet – Observer – Handout #8

During the role-play between the interviewer and each of the interviewees, listen and observe the interview.

Use the checklist below to determine if the interview was conducted properly. Be prepared to share your observations with the rest of the group.

**When talking to the Foreman/Injured Worker, did the interviewer do the following?**

| | Foreman | | Injured Worker | |
|---|---|---|---|---|
| | YES | NO | YES | NO |
| Introduce him/herself? | | | | |
| Put the person – the interviewee – at ease? | | | | |
| State the purpose of the interview? | | | | |
| While asking for an account from the person, listen attentively? | | | | |
| Take notes and ask for clarifications when necessary? | | | | |
| Review the notes with the person? | | | | |
| Check the interpretation? | | | | |
| Ask for suggestions to prevent reoccurrence? | | | | |
| Thank the person for their assistance? | | | | |

**Handout #9 - Accident Investigation Form 52E40 is at the end of this facilitator guide**

# Safety Scenario Facilitator Reference

## Answer Key to Handouts:

1. **Review Activity – Topics List (quiz)**

2. **Brief Accident Description (including worksheet)**

3. **Detailed Accident Description (including worksheet)**

4. **Role Play Worksheet – Observer (some common pitfalls of accident investigation)**

## And to:

## Group Work - Causes and Recommendations

# Answer Key – Suggested Review Topics (Quiz)

**1.** What types of accidents must employers immediately report to the Board? (Workers Compensation Act. Section 172(1).

Any accident that:

- Resulted in serious injury to or death of a worker
- Involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation
- Involved the major release of a hazardous substance
- Was an incident required by regulation to be reported

**2.** Name the types of accidents or incidents that employers must immediately initiate an investigation. (Workers Compensation Act. Section 173(1).

Any accident or other incident that:

- Is required to be reported by Section 172
- Resulted in injury to a worker requiring medical treatment
- Did not involve injury to a worker, or involved only minor injury not requiring medical treatment, but had a potential for causing serious injury to a worker
- Was an accident required by regulation to be investigated

**3.** What are the requirements for not disturbing the scene of the accident and exceptions to the rule? (Workers Compensation Act. Section 172(2).

Except as otherwise directed by an officer of the board or a peace officer, a person must not disturb the scene of the accident except so far as is necessary to:

- Attend to the person injured or killed
- Prevent further injuries or death
- Protect property that is endangered as a result of the accident

**4.** What are the objectives of an investigation? Workers Compensation Act. Section 174(2).

- Determine the cause or causes of the accident/incident.
- Identify any unsafe conditions, acts or procedures that contributed in any manner to the incident.
- Recommend corrective action to prevent similar incidents, if unsafe conditions, acts or procedures are identified.

**5.** Who is responsible for preparing the incident/accident report and where is it distributed? (Workers Compensation Act. Section 175)

- An employer must ensure that an incident investigation report is prepared in accordance with the OH&S Regulation.
- The employer must provide a copy of the incident investigation report to the joint committee or worker representative, as applicable, and the WCB.

**6.** What are the contents required in an incident/accident report? (OH&S Regulation. Section 3.4)

- Place, date and time of the incident
- Name(s) and job title(s) of person(s) injured
- Name(s) of witness(es)
- A brief description of the incident
- A statement of the sequence of events which preceded the incident
- Identification of any unsafe conditions, acts or procedures contributing to the incident
- Recommended corrective actions
- Supporting materials (diagrams, photos, equipment specs. etc.)
- Name(s) of the person(s) who investigated the incident

# Answer Key – Brief Accident Description Worksheet

**1.** Imagine that you were the site superintendent. On behalf of the principal contractor, what would you do right away after the accident happened?

- Call the first aid attendant
- Check the condition of the injured worker
- Attend to the injured worker
- Secure the site
- Protect property that is endangered
- Identify witnesses

**2.** Is it necessary to report this incident to WorkSafeBC? Why?

- Yes
- The accident resulted in a serious injury

**3.** Which individual will conduct the investigation?

- The principal contractor's superintendent (John Norman) or his designate (e.g. the first aid attendant, Steve Little)

**4.** What tools would initially be useful to use in this investigation?

- Camera and film
- Pencil/pen and notepad
- Tape measure
- Warning Tape

# Answer Key – Detailed Accident Description Worksheet

**1.** Who are the people on the site? What is each person's role?

| People | Role |
|---|---|
| Joe Smith | Injured Worker |
| John Norman | Site Superintendent for Complex Inc. |
| Pete Jones | Foreman for Lewis Framing |
| Steve Little | Complex's First Aid Attendant |
| Other crew members | |

**2.** What do you see in the photographs and sketch?

- Worker stepping on flat joist
- The accident scene showing the position of the injured worker on the floor below
- Close-up view of the broken joist
- Location of break near one end of the broken joist
- Knots on either side of the break
- Abrupt slope of the wood grain at the fracture location
- Investigator's initials and date on evidence – the broken joist
- Joists as installed after the accident

**3.** What were the implications of the time of the accident? Why was the weather a factor to consider?

- Time – shortly after lunch and beer
- Weather could be ruled out as a factor as it was a mild sunny day with light wind

**4.** What lumber planking guidelines are relevant to this accident?
See OH&S Regulation Part 13, Section 13.2: Standards

- In designing and installing a work platform, appropriate safety factors and minimum rated loads must be used in the materials and method of installation, in accordance with *WCB Standard WPL 1, Design, Construction and Use of Wood Frame Scaffolds, 2004*,

**5.** From the statements in the Accident Descriptions what information is pertinent to determine the causes of the accident?

- The weather and temperature were fine and could not have contributed to the accident.
- John reportedly stepped on a floor joist.
- The joist was 12 feet long, graded “S-P-F No. 2 and Better”.

The requirements of WCB Standard: WPL 1-2004 Design, Construction and Use of Wood Frame Scaffolds, (part 4), specifies that the lumber used to construct scaffolding must be graded Number 2 or better Douglas fir-larch, hemlock-fir, spruce-pine-fir or coast-Sitka-spruce. And WCB Standard: WPL 1-2004 (part 7 – Lumber planks) specifies a maximum span of 3 m (10 ft) if "No. 2 and Better – Joists and Planks" are used as a scaffold plank (and the planks need to be doubled). Part 7, section 2 specifies that the lumber must be handpicked for minimal knots and straight grain to ensure that it is suitable for use as a scaffold plank. Part 7, section 3 (a) specifies that each lumber scaffold plank must be visually inspected for defects before each installation and not used if found to be defective.

**6.** Should you preserve any evidence, and, if so, what and how might you do that?

- Yes, the broken joist
- Put the date and your initials on the joist for future identification and for indicating when it was examined and by whom.

# Answer Key –

# Some Common Pitfalls of Accident Investigation

1. Belief that carelessness is a cause of accidents
2. Search restricted to a single cause
3. Interviews conducted in a courtroom manner
4. Insistence on signed statements
5. Assumption that contradictions indicate lies
6. Disregard for personal emotions and confidentiality

# Answer Key –

# Causes and Recommendations

**1.** What happened (mode of failure)?

- Worker stepped on joist
- Joist broke
- Worker and joist fell 9 feet to the floor below

**2.** Why did the accident happen (cause of failure)?

- Reliance on joist to serve as a scaffold plank over a span of 12 feet
- Joist defective – large knots and abrupt slope of the wood grain at the fracture location
- Joist defects not detected on site by visual inspection of wood (lack of due diligence)
- Poor supervision (allowing workers to walk on top plate and apparent lack of rules and procedures for working at heights or fall prevention)
- Incompetence of injured worker – sloppy work habits, beer at lunch

**3.** Recommendations

- Develop and enforce safe work procedures for fall prevention while working at heights
- Educate workers regarding scaffold plank regulatory requirements
- Improve site inspection of graded lumber

## Division 10 — Accident Reporting and Investigation

### Immediate notice of certain accidents

**172** (1) An employer must immediately notify the Board of the occurrence of any accident that

(a) resulted in serious injury to or the death of a worker,

(b) involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation,

(c) involved the major release of a hazardous substance, or

(d) was an incident required by regulation to be reported.

(2) Except as otherwise directed by an officer of the Board or a peace officer, a person must not disturb the scene of an accident that is reportable under subsection (1) except so far as is necessary to

(a) attend to persons injured or killed,

(b) prevent further injuries or death, or

(c) protect property that is endangered as a result of the accident.

### Incidents that must be investigated

**173** (1) An employer must immediately undertake an investigation into the cause of any accident or other incident that

(a) is required to be reported by section 172,

(b) resulted in injury to a worker requiring medical treatment,

(c) did not involve injury to a worker, or involved only minor injury not requiring medical treatment, but had a potential for causing serious injury to a worker, or

(d) was an incident required by regulation to be investigated.

(2) Subsection (1) does not apply in the case of a vehicle accident occurring on a public street or highway.

### Investigation process

**174** (1) An investigation required under this Division must be carried out by persons knowledgeable about the type of work involved and, if they are reasonably available, with the participation of the employer or a representative of the employer and a worker representative.

(2) As far as possible, the investigation must

(a) determine the cause or causes of the incident,

(b) identify any unsafe conditions, acts or procedures that contributed in any manner to the incident, and

(c) if unsafe conditions, acts or procedures are identified, recommend corrective action to prevent similar incidents.

(3) The employer must make every reasonable effort to have available for interview by a person conducting the investigation, or by an officer, all witnesses to the incident and any other persons whose presence might be necessary for a proper investigation of the incident.

(4) The employer must record the names, addresses and telephone numbers of persons referred to in subsection (3).

### Incident investigation report

**175** (1) As part of an investigation required by this Division, an employer must ensure that an incident investigation report is prepared in accordance with the regulations.

(2) The employer must provide a copy of the incident investigation report to

(a) the joint committee or worker representative, as applicable, and

(b) the Board.

### Follow-up action and report

**176** (1) Following an investigation under this Division, the employer must without undue delay undertake any corrective action required to prevent recurrence of similar incidents.

(2) As soon as is reasonably practicable, the employer must prepare a report of the action taken under subsection (1) and

(a) provide the report to the joint committee or worker representative, as applicable, or

(b) if there is no joint committee or worker representative, post the report at the workplace.

### Employer or supervisor must not attempt to prevent reporting

**177** An employer or supervisor must not, by agreement, threat, promise, inducement, persuasion or any other means, seek to discourage, impede or dissuade a worker of the employer, or a dependant of the worker, from reporting to the Board

(a) an injury or allegation of injury, whether or not the injury occurred or is compensable under Part 1,

(b) an illness, whether or not the illness exists or is an occupational disease compensable under Part 1,

(c) a death, whether or not the death is compensable under Part 1, or

(d) a hazardous condition or allegation of hazardous condition in any work to which this Part applies.

## OCCUPATIONAL HEALTH AND SAFETY PROGRAMS

### OHSR Part 3.3 Contents of program

The occupational health and safety program must be designed to prevent injuries and occupational diseases, and without limiting the generality of the foregoing, the program must include

(a) a statement of the employer's aims and the responsibilities of the employer, supervisors and workers,

(b) provision for the regular inspection of premises, equipment, work methods and work practices, at appropriate intervals, to ensure that prompt action is undertaken to correct any hazardous conditions found,

(c) appropriate written instructions, available for reference by all workers, to supplement this Occupational Health and Safety Regulation,

(d) provision for holding periodic management meetings for the purpose of reviewing health and safety activities and incident trends, and for the determination of necessary courses of action,

(e) provision for the prompt investigation of incidents to determine the action necessary to prevent their recurrence,

(f) the maintenance of records and statistics, including reports of inspections and incident investigations, with provision for making this information available to the joint committee or worker health and safety representative, as applicable and, upon request, to an officer, the union representing the workers at the workplace or, if there is no union, the workers at the workplace, and

(g) provision by the employer for the instruction and supervision of workers in the safe performance of their work.

**OHSR Part 3.4 Incident investigation reports**

(1) An employer must ensure that an incident investigation report required by Division 10 of Part 3 of the *Workers Compensation Act* contains

(a) the place, date and time of the incident,

(b) the names and job titles of persons injured in the incident,

(c) the names of witnesses,

(d) a brief description of the incident,

(e) a statement of the sequence of events which preceded the incident,

(f) identification of any unsafe conditions, acts or procedures which contributed in any manner to the incident,

(g) recommended corrective actions to prevent similar incidents, and

(h) the names of the persons who investigated the incident.

## WCB Standard: WPL 1-2004 Design, Construction and Use of Wood Frame Scaffolds



### 1. Scope

This Standard applies to the design, construction, use, and maintenance of job constructed wood frame scaffolds.
This Standard does not cover shore or lean-to scaffolds.

### 2. Definitions

*"building tie"* means a connection between a standing scaffold and a permanent structure;

*"double-pole scaffold"* means a scaffold with both ends of the bearers supported by connections to posts or uprights;

*"guardrail"* means a guard consisting of a top rail 102 cm to 112 cm (40 in to 44 in) above the work surface, and an intermediate rail located approximately midway between the underside of the top rail and the top of the toeboard, if one is provided, or the work surface if no toeboard is provided;

*"heavy duty"* means intended to support both workers and stored or stacked materials, such as bricks and masonry;

*"light duty"* means intended to support workers, their personal hand tools and material for immediate use only;

*"running scaffold"* means a double-pole scaffold comprised of 2 or more bays;

*"scaffold or scaffolding"* means any temporary work platform and its supporting structure used for supporting workers, or materials, or both;

*"single-pole scaffold"* means a scaffold with the outer ends of the bearers supported on ledgers secured to a single row of posts or uprights, and the inner ends of the bearers supported on or in a wall;

*"toeboard"* means a guard with a top at least 10 cm (4 in) above the floor or platform, and the space between the bottom of the toeboard and the floor or platform not exceeding 13 mm (1/2 in);

*"work platform"* means an elevated or suspended temporary work base for workers.

### 3. Responsibilities

1. Employers must ensure that scaffolds used by their workers are in safe condition, regardless of who erected the scaffolds.
2. A scaffold must be erected, altered and dismantled by, or under the direct supervision of, qualified workers.
3. A scaffold must be inspected daily before use and after any modification.
4. A damaged scaffold component must not be used until it has been effectively repaired.

### 4. Lumber for structural components

1. Unless otherwise specified in this Standard, lumber used to construct scaffolding must be graded Number 2 or better Douglas fir-larch, hemlock-fir, spruce-pine-fir or coast-Sitka-spruce.
2. All lumber must be graded and marked to the National Lumber Grades Authority Standard Grading Rules for Canadian Lumber or other grading rules acceptable to the board.

### 5. Scaffold stability

1. A scaffold must be erected with vertical members plumb and ledgers and bearers level.
2. The lower end of the vertical support of a scaffold must be supported by firm and adequately sized foundations or sills.
3. The poles, legs and uprights of a scaffold must be securely and rigidly braced to prevent swaying and displacement.
4. A scaffold must be effectively guyed or secured to a building or structure if the height of the scaffold exceeds 3 times its minimum base dimension.
5. If building ties or guys are used

   (a) the first level of ties or guys must be placed at a height not exceeding 3 times the scaffold minimum base dimension, and additional building ties or guys placed at vertical intervals not exceeding 6 m (20 ft), and

   (b) building ties or guys must be placed at longitudinal intervals of every third bay or 6.4 m (21 ft), whichever is less, and at each end of the scaffold.

6. Each building tie must be capable of resisting a working load of 4 kN (900 lbs), applied horizontally and perpendicular to the structure, or a proportionately equivalent load where ties are spaced closer together or guying is employed.

7. If a scaffold is enclosed by a tarp or other cover for protection against climatic conditions, bracing for the scaffold must be installed in accordance with the instructions of a professional engineer to meet design criteria for wind or other weather induced loads that may be imposed.

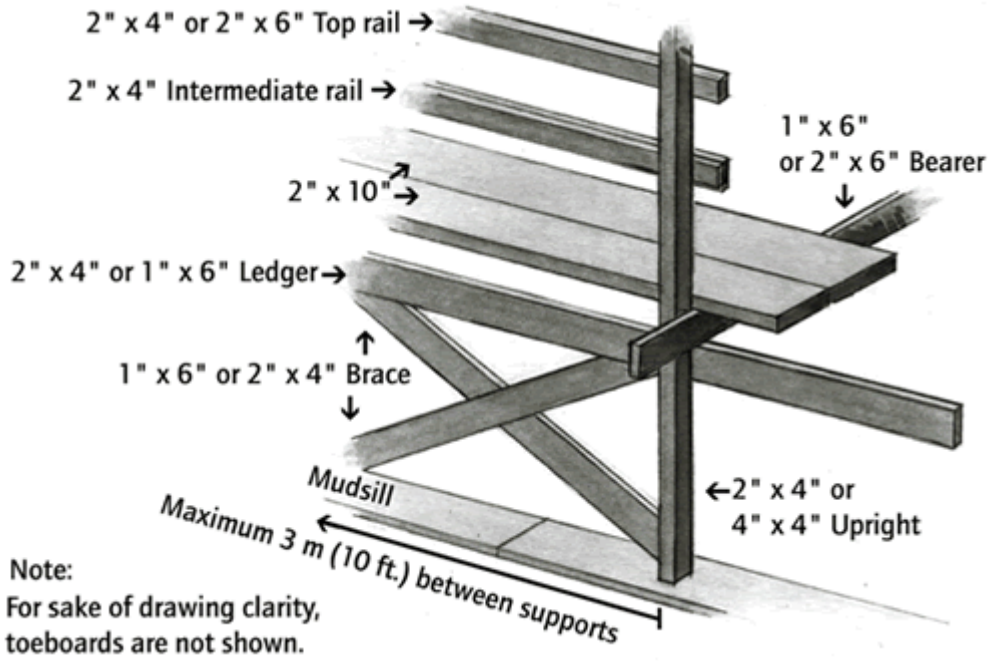
**Note:** For the purpose of compliance with subsection (2), if changing weather conditions may cause freezing or thawing of the ground or other surface supporting a scaffold, adequate precautions need to be taken to ensure the continued suitability of the supporting surface. For compliance with subsection (6), *CSA Standard CAN/CSA-S269.2-M87, Access Scaffolding for Construction Purposes*, provides some examples of typical details for building ties.

### 6. Guardrails and toeboards

1. Except as provided by subsections (2) and (5), a work platform 3 m (10 ft) or more above grade or floor level must have guardrails on all open sides and ends.
2. If an edge of the work platform is adjacent to a structure that provides equivalent protection to guardrails, then guardrails may be omitted on that edge and there may be an open space between the work platform and the structure of up to 30 cm (12 in).
3. Toeboards must be provided if there is a danger from tools, materials, equipment and debris falling off the edge of the work surface, or there is a danger of slipping off the work surface due to the environment or work practices being used.
4. If material is stacked or stored on a platform or walkway, or near a floor opening, toeboards must be increased in height or solid or mesh panels of appropriate height must be installed to prevent the material from falling.
5. Subsections (1) and (3) do not apply to a walkway or a platform that is on a performance stage or scenic unit and will be visible to the audience during a rehearsal or performance, provided that effective measures are taken to protect performers and other workers from injury.

Dimensions for guardrails are shown in Tables 1 and 2. Sample guardrails are shown in Figure 1.

Figure 1 - Single Pole Wood Scaffold (Light Duty)




## 7. Lumber planks

1. Except as provided elsewhere in this Standard, solid wood scaffold planks used as work platforms must be cut from Douglas fir-larch, hemlock-fir, spruce-pine-fir or coast-Sitka-spruce species, and

   (a) for a maximum span of 3 m (10 ft), must be

   (i) graded "Select Structural - Scaffold Plank" not less than 38 mm x 235 mm (2 in x 10 in nominal),

   (ii) graded "Select Structural - Joists and Planks" not less than 38 mm x 235 mm (2 in x 10 in nominal),

   (iii) graded "No. 2 and Better - Joists and Planks", not less than 48 mm x 251 mm (2 in x 10 in rough sawn), or

   (iv) graded "No. 2 and Better - Joists and Planks", not less than 38 mm x 235 mm (2 in x 10 in nominal), provided the planks are doubled (one on top of the other), or

(b) for a maximum span of 1.8 m (6 ft) and light-duty work only, must be graded "No. 2 and Better - Joists and Planks", not less than 38 mm x 235 mm (2 in x 10 in nominal).

2. Any lumber graded in accordance with subsection (1)(a)(ii), (iii), (iv), or (b) must be hand picked for minimal knots and straight grain to ensure that it is suitable for use as a scaffold plank.
3. Each lumber scaffold plank must

   (a) be visually inspected for defects before each installation and not used if found to be defective,

   (b) except as noted in subsection 1(b), be supported at intervals not exceeding 3 m (10 ft) for lightduty activity and 2.1 m (7 ft) for heavyduty activity,

   (c) have its ends extend not less than 15 cm (6 in) and not more than 30 cm (12 in) beyond the supporting member, and

   (d) for light duty activity, support no more than one worker unless it is connected to the adjoining plank.
4. (4) A work platform must

   (a) consist of lumber or manufactured scaffold planks placed side by side to provide a work surface with a minimum nominal width of 50 cm (20 in), except that a nominal 30 cm (12 in) wide work platform is acceptable for use with ladder jacks, and

   (b) as far as possible, completely cover the area between front and rear vertical supports or the rear guardrail, and in no case leave more than one opening in the work platform area, and the opening must be no greater than 25 cm (10 in) in width.

**8. Manufactured planks**

1. A manufactured scaffold plank must meet the requirements of

   (a) *CSA Standard CAN/CSA S269.2-M87, Access Scaffolding for Construction Purposes*,

   (b) *ANSI Standard A10.8-1988, American National Standard for Construction and Demolition Operations - Scaffolding - Safety Requirements*,

   (c) *ANSI Standard A14.7-1991, Safety Requirements for Mobile Ladder Stands and Mobile Ladder Stand Platforms*,

(d) *CSA Standard CAN3-Z271-M84, Safety Code for Suspended Powered Platforms*, or

(e) the written requirements of a professional engineer.

2. A manufactured scaffold plank must be used in accordance with the manufacturer's instructions and limitations, except as provided in subsection (3).
3. A scaffold plank fabricated at the jobsite must be made to a design certified by a professional engineer to meet the requirements of *CSA Standard CAN/CSA-S269.2 M-87, Access Scaffolding for Construction Purposes*, and a copy of the design must be available on site.

**9. Securing planks**

Each lumber and manufactured scaffold plank installed for use must be secured against dislodgement.

**10. Sloping platforms**

A work platform which slopes from one end to the other must be

(a) sloped not more than 1 vertical to 5 horizontal, and

(b) fitted with cleats on its upper surface, at not more than 40 cm (16 in) intervals or other equally effective measures must be used to ensure adequate footing for workers using the platform.

**11. Access to scaffolds**

1. Access to otherwise inaccessible working levels of a scaffold up to 9 m (30 ft) above a floor or grade must be provided by a vertical or portable ladder, or stairway, attached to the scaffold.

2. Access to otherwise inaccessible working levels of a scaffold over 9 m (30 ft) above a floor or grade must be provided by

   (a) a stairway erected for the full height of the scaffold,

   (b) a temporary passenger hoist approved for use under the *Elevating Devices Safety Regulation*,

   (c) an attached vertical ladder, with rest platforms at least every 9 m (30 ft) which are fully guarded except at the ladder location, or
3. A worker must not climb scaffold members between landings.

## 12. Vertical ladders

1. A vertical ladder providing access to working levels of a scaffold must

   (a) be adequately fastened to the scaffold,

   (b) be configured so that its siderails extend approximately 1 m (3 ft) above the working level,

   (c) have rungs spaced at 30 cm (12 in) on centre, and

   (d) have a clear space of at least 15 cm (6 in) behind each rung.
2. A ladder attached to a scaffold must be positioned so that its use will not cause the scaffold to become unstable.

## 13. Spacing of components

The horizontal spacing between uprights, guardrail posts and bearers in a wood scaffold must not exceed

(a) 3 m (10 ft) for a light duty scaffold, and

(b) 2 m (7 ft) for a heavy duty scaffold.

## 14. Bracing of uprights

Adjacent uprights must be connected with horizontal runners (ledgers and bearers) to ensure that the unbraced vertical length of an upright does not exceed 2.4 m (8 ft).

## 15. Cross bracing

A scaffold must be adequately supported in two directions by a system of diagonal cross braces secured to the uprights as close to the ledgers as possible.

## 16. Single-pole components

Components of a light duty single-pole wood scaffold must have minimum nominal dimensions conforming to Table 1 and grade and species in accordance with section 4.

## 17. Double-pole components

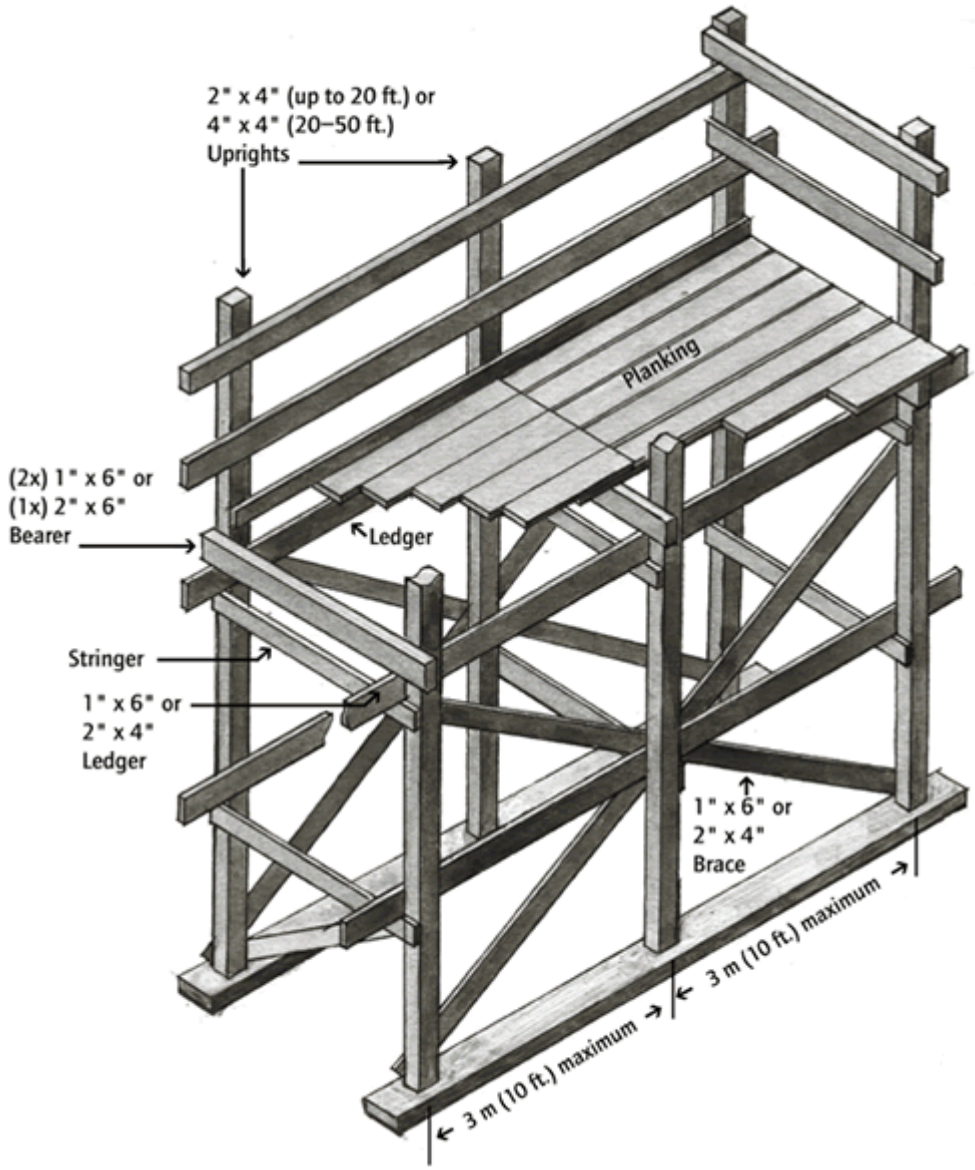
Components of a double-pole wood scaffold must have minimum nominal dimensions conforming to Table 2 and grade and species in accordance with section 4.

A sample sketch of a light duty double pole scaffold is shown in Figure 2.

| Table 1: Single-pole scaffolds | | |
|---|---|---|
| **Component** | | **Nominal dimensions (inches)[1]** |
| Uprights | - up to 6 m (20 ft) | 2 x 4 |
| | - 6 m to 15 m (20 ft to 50 ft) | 4 x 4 |
| Bearers | - 90 cm (3 ft) maximum span | 1 x 6 |
| | - 1.5 m (5 ft) maximum span | 2 x 6 |
| Ledgers | | 1 x 6 or 2 x 4 |
| Braces | | 1 x 6 or 2 x 4 |
| Wall scabs and bearer blocks | | 2 x 6 |
| Guardrails (top rail) | | 2 x 4 (up to 2.4 m (8 ft) span)<br>2 x 6 (2.4 m - 3 m (8 ft - 10 ft) span) |
| Guardrails (intermediate rail) | | 2 x 4 |
| Toeboards | | 1 x 4 |
| Scaffold planks | | As required by section 7 or 8 |

| Table 2: Double-pole scaffolds | | | |
|---|---|---|---|
| | | Nominal dimensions (inches)[1] | |
| Component | | Light duty | Heavy duty |
| Uprights | - up to 6 m (20 ft) | 2 x 4 | 2 x 6 |
| | - 6 m to 15 m (20 ft to 50 ft) | 4 x 4 | 4 x 6 |
| Bearers | - 1.5 m (5 ft) max. span | 2 - 1 x 6 or<br>1 - 2 x 6 | 2 - 2 x 6 or<br>1 - 2 x 10 |
| Ledgers | | 1 x 6 or 2 x 4 | 1 x 6 or 2 x 4 |
| Braces | | 1 x 6 or 2 x 4 | 1 x 6 or 2 x 4 |
| Guardrails (top rail) | | 2 x 4 (up to 2.4 m (8 ft) span)<br>2 x 6 (2.4 m - 3 m (8 ft - 10 ft) span) | 2 x 4 |
| Guardrails (intermediate rail) | | 2 x 4 | 2 x 4 |
| Toeboards | | 1 x 4 | 1 x 4 |
| Scaffold planks | | As required by section 7 or 8 | As required by section 7 or 8 |

[1] In Tables 1 and 2 dimensions are nominal sizes for surfaced dry lumber and have actual dimensions in millimetres as follows: 2 x 4 is 38 mm x 89 mm, 4 x 4 is 89 mm x 89 mm, 4 x 6 is 89 mm x 140 mm, 1 x 6 is 19 mm x 140 mm, 2 x 6 is 38 mm x 140 mm and 2 x 10 is 38 mm x 235 mm.




## 18. Extension of uprights

1. A wood upright may only be extended using a butt joint, strengthened by two wooden splice plates not less than 1.2 m (4 ft) long.
2. The splice plates for wood uprights must have a minimum thickness of 38 mm (2 in nominal) and must have the same width as the spliced members.
3. The combined cross-sectional area of the splice plates must be at least that of the vertical upright member.

## 19. Laminated uprights

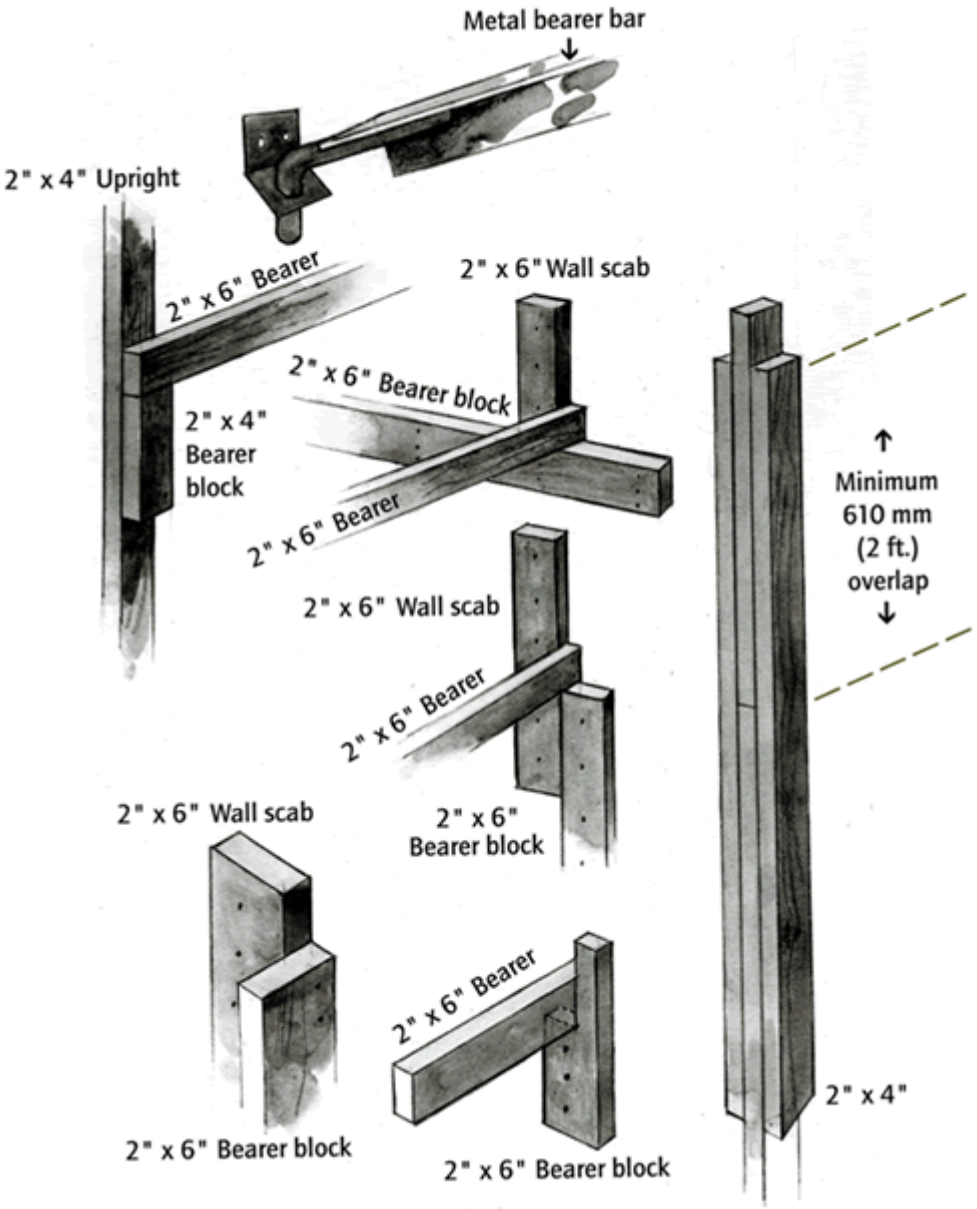
When wood uprights are fabricated by the lamination of two or more pieces of material to obtain the required cross-sectional dimensions, the distance between joints must be at least 1.2 m (4 ft). A sample laminated upright is shown in Figure 3.

## 20. Bearer supports

1. The inner ends of bearers on single-pole scaffolds must be supported by bearer blocks, and securely fastened to wall scabs.
2. Manufactured bearer supports must be of a design acceptable to the board, and be secured to solid wall materials.
3. Bearer hooks which engage holes in the wall sheathing must be adequately supported by stiffeners secured to wood studs or blocking.

Note: Sample bearer connections are shown in Figure 3.

Figure 3 - Bearer Connections At Wall and Laminated Upright, Single Pole Scaffold



WORK SAFE BC
WORKING TO MAKE A DIFFERENCE

# INCIDENT INVESTIGATION REPORT

***Worker and Employer Services Division***

This form is provided to employers for the purpose of documenting the employer's investigation into a workplace incident Please attach a separate sheet if necessary.

| Employer name | Employer number |
|---|---|
| Employer head office address | |

**Incident occurred** *ref: s. 3.4(a) Occupational Health and Safety Regulation (OHS Regulation)*

| Address where incident occurred *(including nearest city)* | |
|---|---|
| Date *yyyy mm dd* | Time a m ☐ p m ☐ |

**Injured person(s)** *ref: s 3.4(b) OHS Regulation*

| Last name | First name | Job title | Age | Length of experience with this employer | Length of experience at this task/job |
|---|---|---|---|---|---|
| 1) | | | | | |
| 2) | | | | | |

**Nature of injury/injuries**

| |
|---|
| 1) |
| 2) |

**Witnesses** *ref: s. 174(4) WCA and s. 3.4(c) OHS Regulation*

| Last name | First name | Address | Telephone |
|---|---|---|---|
| 1) | | | ( ) |
| 2) | | | ( ) |
| 3) | | | ( ) |

**Incident description** *ref: s. 3.4(d)–(e) OHS Regulation*

| Briefly describe what happened, including the sequence of events preceding the incident |
|---|
| |

**Statement of causes** *ref: s. 174(2)(a)–(b) WCA and s. 3.4(f) OHS Regulation*

| List any unsafe conditions, acts, or procedures that in any manner contributed to the incident. |
|---|
| |

**Recommendations** *ref: s. 174(2)(c) WCA and s. 3.4(g) OHS Regulation*

| Identify any corrective actions that have been taken and any recommended actions to prevent similar incidents. | | |
|---|---|---|
| **Recommended corrective action** | **Action by whom** | **Action by date** |
| 1) | | |
| 2) | | |
| 3) | | |
| 4) | | |

**Persons conducting investigation** *ref: s 3 4(h) OHS Regulation*

| Name | Signature | Type of representative | | | Date |
|---|---|---|---|---|---|
| | | Employer ☐ | Worker ☐ | Other ☐ | |
| | | Employer ☐ | Worker ☐ | Other ☐ | |
| | | Employer ☐ | Worker ☐ | Other ☐ | |

For additional information on WorkSafeBC (Workers' Compensation Board of B C ) and on the requirements for incident investigations, please refer to WorkSafeBC's web site. WorkSafeBC.com

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PO Box 5350 Stn Terminal
Vancouver BC V6B 5L5

Fax number: 604 276-3247

**Telephone information**

**Call centre:** 604 276-3100 or toll free within B.C. 1 888 621-SAFE (7233)

**After hours health and safety emergency:** 604 273-7711 or toll free 1 866 922-4357 (WCB-HELP)

## A GUIDE TO INCIDENT INVESTIGATION

Use this guide in conjunction with the requirements of the *Workers Compensation Act* (*WCA*), Part 3 Division 10, and the Occupational Health and Safety Regulation (OHS Regulation), section 3 4

### When is an investigation required?

Employers are required to immediately undertake an investigation into any accident or other incident that

- Is required to be reported under section 172 of the *Workers Compensation Act*, or
- Resulted in injury requiring medical treatment, or
- Did not involve injury to a worker or involve a minor injury that did not require medical treatment but had the potential for causing serious injury, or
- Was an incident required by regulation to be investigated

### Who should conduct the investigation?

- Incidents must be investigated by people knowledgeable about the type of work involved at the time of the incident.
- If reasonably available, investigations must be carried out with the participation of one employer representative and one worker representative.

### What is the purpose of an investigation?

The purpose of an investigation is to determine the cause or causes of the incident, to identify any unsafe conditions, acts, or procedures that contributed to the incident, and to recommend corrective action to prevent similar incidents.

### Who receives copies of the report?

Incident investigation reports required by the *WCA* must be provided to the joint health and safety committee or worker representative as applicable, and to WorkSafeBC

### What follow-up action is required after an incident investigation?

After an investigation, the employer must without undue delay undertake any corrective action required to prevent recurrence of similar incidents and must prepare a report of the action taken The report must be provided to the joint health and safety committee or worker representative as applicable The follow-up report does not have to be provided to WorkSafeBC unless requested by a WorkSafeBC officer.

### What information should be included in the investigation report?

An incident investigation report should answer the **WHO, WHERE, WHEN, WHAT, WHY, and HOW** questions with regard to the incident.

**WHO** Employer, injured person(s), other person(s) involved in the incident, witnesses, and persons carrying out the investigation

**WHERE** Place, location where incident occurred

**WHEN** Date and time of the incident

**WHAT** A brief description of the incident, including the sequence of events that preceded the incident

*Before the incident occurred.*

- What were the events that led up to the incident?
- What process(es) was/were occurring immediately prior to the incident?
- What was/were the worker(s) doing immediately prior to the incident?
- What was the last event before the incident occurred?

*At the time of the incident·*

- What happened at the time of the incident?
- What process(es) was/were occurring at the time of the incident?
- What was/were the worker(s) doing at the time of the incident?

- What hazard(s) was/were the worker(s) exposed to?
- What hazards may have contributed to the incident occurring?
- What hazards did the worker(s) encounter?
- What personal factors may have contributed to the incident occurring?

*Other information:*

- Other observations
- Other related information

**WHY** From the answers to "what," identify any unsafe conditions, acts, or procedures that in any manner contributed to the incident. Why did the unsafe conditions, acts, or procedures occur? Why were the personal factors not identified and/or addressed before the incident occurred?

**HOW** An investigation report should recommend corrective actions to prevent similar incidents from occurring. Once it is known why an incident occurred, determine how to prevent recurrence. For example

- Improve workplace inspection and maintenance programs
- Repair or replace equipment/building
- Install safeguards
- Establish or revise safe work procedures
- Train/retrain person(s)
- Improve supervision

**Additional information for determining why an incident happened**

To determine the most probable cause(s) of an incident, consider all details of the investigation, including witness statements and, where possible, the injured worker's statement.

Determine if the incident was due to an unsafe act, an unsafe condition, unsafe or inadequate procedures, or a combination of these. Consider whether the accepted/current procedures adequately address safety concerns associated with the activity that was taking place when the incident happened Consider training, supervision, equipment controls, safeguards, and lock-out.

**Unsafe acts** — An unsafe act is a specific action or lack of action by an individual that is under the individual's control Examples of unsafe acts include. knowingly not following established rules, knowingly not following established procedures, knowingly disregarding a hazard, willful misconduct, abusing equipment, knowingly using equipment incorrectly, choosing not to use personal protective equipment, and not locking out when required Generally, violating a safety rule, not following a safe work procedure, or disregarding a hazard are considered unsafe acts

**Unsafe conditions** — Examples include poor housekeeping, congested areas, deficient equipment, equipment lacking safeguarding or having ineffective safeguarding, lack of personal protective equipment, poor visibility, poor weather conditions, and lack of or inadequate training Inadequate training should be considered an unsafe condition as opposed to a deficiency in skill or ability (personal factors).

**Inadequate procedures** — Indications that procedures are inadequate include.

- Procedures are not available in written form
- Procedures do not identify inherent hazards
- Procedures do not identify hazard control methods
- Procedures do not identify safeguards that must be in place
- Procedures do not address pre-operation inspection requirements
- Procedures do not address lock-out requirements
- Procedures direct improper use of equipment or tools

**Personal factors** — A personal factor is a deficiency in skill or ability, a physical condition, or a mental attitude It is a factor inherent in an individual at the time of the incident. Examples include work fatigue due to manual exertion, distress due to emotional problems, the influence of alcohol or drugs, or illness A condition causing an allergic reaction in some but not most workers should be considered a personal factor, not an unsafe condition.

# DISCLAIMER

This instructional guide has been developed by Certification Services, Worker & Employer Services division of WorkSafeBC.

The material is designed for use by Joint Health and Safety Committees. WorkSafeBC is not responsible for the results or interpretations when the material is presented through other sources.

If there is any conflict between information in this material and the current *Workers Compensation Act*, *Occupational Health and Safety Regulation* and related policies, the Act, the Regulation and policies shall take precedence.

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