Reference Guide for Employer Incident Investigations

WorkSafeBC

Purpose of this guide

This guide is intended for those who conduct or participate in workplace incident investigations: employers, joint health and safety committee members, worker representatives, and others.

For more information

Visit worksafebc.com or call the WorkSafeBC Prevention Information Line at 604.276.3100 or toll-free at 1.888.621.7233.

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About this guide

Whether you are an employer, a joint health and safety committee member, or an employer or worker representative, this guide is designed to help you effectively prepare to investigate an incident at your workplace. However, keep in mind that this guide is an introduction to the topic, and that you may need training in incident investigations to deal with complex incidents.

While the information in this guide reflects current regulatory requirements, these requirements may change over time. As an employer, you need to ensure you stay up to date with current legislation and policies on employer incident investigations in British Columbia.

If you identify any conflict between information found in this guide and that found in the current *Workers Compensation Act*, Occupational Health and Safety Regulation, or related policies, you should defer to the legislation and policies.

For more information, you can consult the Act, Regulation, and policies at worksafebc.com. You can find a list of key resources related to incident investigation and reporting in the Resources section at the end of this guide. For a glossary of terms used in this guide, see Appendix 1.

Understanding incident investigations

Why conduct an incident investigation?

As an employer, you're legally required to investigate certain incidents, including those that caused or could have caused serious injury, illness, or death. Taking a systematic approach to investigating an incident will help you determine what happened, why the incident occurred, and how to prevent similar incidents from occurring in future. The results of the incident investigation will usually let you identify the corrective action or actions that should be taken to eliminate the unsafe conditions, acts, or procedures that contributed to the incident.

Investigating incidents and taking steps to prevent similar incidents shows your commitment to workplace safety. It is a key means of keeping your workers healthy and safe, sparing your business the human cost of injury and illness, and lowering the financial costs associated with a higher rate of claims and absenteeism.

Accident or incident?

The words "accident" and "incident" are sometimes used interchangeably, but from a WorkSafeBC perspective, they have distinct meanings.

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.

In workplaces, the word "accident" is most commonly used to describe an event associated with someone being injured. However, within the context of British Columbia's workers' compensation system, the definition of an accident includes a "willful and intentional act (not being the act of the worker)."

An incident is also an event, but one that includes an accident or other occurrence which resulted in or had the potential for causing an injury or occupational disease (section 1.1 of the Regulation). Therefore, the term incident includes "close-call" or "near-miss" events, implying that if things had played out a little bit differently, someone could have been badly hurt at work.

What is an incident investigation?

An incident investigation is the account and analysis of an incident, based on information gathered by a thorough examination of all factors involved. As an employer, you have a legal duty to conduct incident investigations for particular types of incidents, in accordance with the Act, Regulation, and policies.

Legal requirements

The legal requirements for incident investigations are established in the Act, Part 21 and Part 24 of the Regulation, and associated policies. The legislation includes the following:

- Key definitions
- Requirements for immediate notification of WorkSafeBC
- A two-step investigation process (preliminary and full), with timelines
- Required content and distribution for four kinds of reports
- Rules regarding the preservation of the scene
- Participation by employer or representative of employer and worker representative

You must meet these minimum requirements. You may also adopt additional practices that increase the effectiveness of your incident investigation process. For more information on how to understand your legal requirements, see the OHS Guidelines for Part 2, Division 10 of the *Workers Compensation Act*.

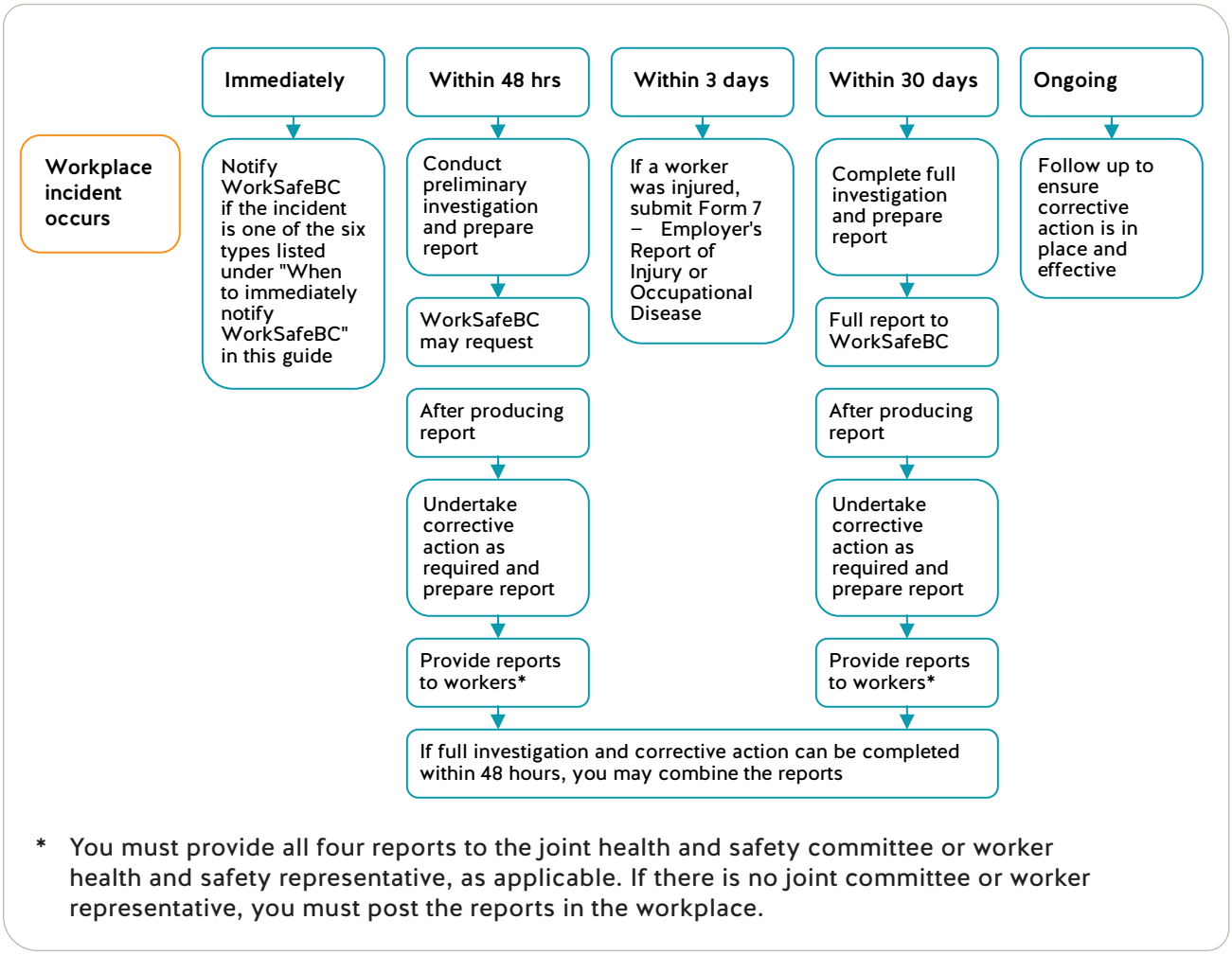
You can find relevant legislation, regulation, policy, and guidelines on worksafebc.com. Key sections of the Act related to incident reporting and investigation are listed in the Resources section at the end of this guide.

Investigation and reporting steps overview

The following timeline provides a summary of incident investigation and reporting obligations. This is not an exhaustive list of your obligations as an employer. For example, when a worker or workers are injured in an incident, you'll have additional requirements to provide first aid and transportation for the injured worker or workers.

What to do following a workplace incident

Figure 1: Summary of incident investigation and reporting requirements



* You must provide all four reports to the joint health and safety committee or worker health and safety representative, as applicable. If there is no joint committee or worker representative, you must post the reports in the workplace.

Note: WorkSafeBC requires receipt of the Employer's Report of Injury or Occupational Disease (Form 7) for adjudication and management of the injured worker claim or claims. The employer's incident investigation report summarizes the incident investigation for the purpose of preventing a recurrence. As an employer, you're obligated to submit these separate forms and reports when required by the Act.

When to immediately notify WorkSafeBC

Under the Act, you are required to immediately notify WorkSafeBC of certain workplace incidents, even if no injuries occurred. The criteria for notification include the following:

- Serious injury to or death of a worker
- Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation
- Major release of a hazardous substance

- Fire or explosion that had a potential for causing serious injury
- Blasting incident causing personal injury
- Dangerous incident involving explosives (even if no one was hurt)

Serious injury

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 traumatic injuries, such as fractures of the arms or legs, major cuts, burns, and crush injuries. More information on serious injuries can be found in WorkSafeBC's OHS Guideline G-P2-68-1, WorkSafeBC Notification of Serious Injuries.

Major release

A major release of a hazardous substance refers to the quantity and nature of the release, as well as the extent of its risk to worker health. OHS Policy P2-68-1 provides additional guidance around what constitutes a major release of a hazardous substance.

Blasting and blasting explosives

Blasting incidents causing personal injury to a worker or other person must be reported. A "dangerous incident," as described by OHS Guideline G21.3, may include problems with particular products, such as repeated or suspicious misfires or premature detonations. This guideline also provides information about investigating and reporting requirements for blasting incidents.

You can notify WorkSafeBC by calling the Prevention Emergency Line at 604.276.3301 or 1.888.621.7233 during regular business hours or 1.866.922.4357 on evenings, weekends, and holidays.

When to investigate an incident

As an employer, you must investigate the following incidents:

- An incident requiring immediate notification (see page 4)
- A workplace injury requiring medical treatment
- An incident with the potential for causing serious injury
- A diving incident

Injuries requiring medical treatment

You are required to investigate workplace injuries requiring medical treatment. "Medical treatment" means treatment by a physician or other registered medical practitioner. Medical treatment usually involves treatment above and beyond that provided by your workplace first aid attendant or attendants. For information on investigating musculoskeletal injuries (MSIs) requiring medical treatment, see Appendix 6.

Incidents with potential (close calls)

An incident with the potential for causing serious injury is sometimes called a close call, or a near miss. These incidents often point to a condition or practice that, if allowed to continue, could cause significant injury or equipment damage.

Your investigation of serious incidents will often reveal the occurrence of earlier, similar incidents that involved less serious injuries or property damage, but were ignored or deemed unimportant. When you properly investigate minor or close-call incidents, you are able to identify corrective action and prevent more serious incidents from ever occurring.

If you are unsure about whether or not to investigate an incident, ask yourself: "Could someone have been badly hurt if things had played out a little bit differently?" If the answer is "Yes," then you'll need to investigate the incident.

Diving incidents

You must conduct an investigation if any of the following occurs during a diving operation:

- Injury or death
- Convulsions or serious impairment of consciousness during or after a dive
- Decompression illness
- Lung over-pressurization
- Any serious mishap, even though the diver escapes actual injury, or a series of events which render equipment or procedures suspect, before, during, or after the diving operation

When is an investigation under the Act not required?

- In case of a minor injury treated by the first aid attendant that:
  - Did not require medical treatment
  - Had no potential for causing serious injury to a worker
- In the event of a vehicle accident occurring on a public street or highway.
- Where the employer is federally regulated.

Other employer investigations

An employer is required to investigate certain types of incidents, events and activities, as set out in the OH&S Regulation and Prevention Policy, even though these may not be incidents that are required by the Act to be investigated.

Details on other employer investigation requirements are found in the applicable regulation and policy. Examples include but are not limited to the following:

- Reports of unsafe conditions (section 3.10 of the Occupational Health and Safety Regulation)
- Refusal of unsafe work (section 3.12 of the Regulation)
- Improper activity or behaviour (section 4.26 of the Regulation)
- Indoor air quality (section 4.79 of the Regulation)
- Workplace bullying and harassment (OHS policy P2-21-2)

When to prepare and submit a report

For all of the incidents described on pages 4–6, you will need to conduct your investigation under the Act (Part 2, Division 10) and take action in a manner that allows you to complete four reports. You must complete these four reports in order, as follows, and within the timelines specified in the Act:

1. A preliminary investigation
2. Interim corrective action
3. A full investigation
4. Corrective action following the full investigation

1. When a workplace incident requires investigation, you must immediately conduct a preliminary investigation.

   The purpose of the preliminary investigation is to identify unsafe conditions, acts, or procedures, as far as possible, in order to ensure that work can be done safely during the interim period between the incident and the conclusion of the full investigation.

   You must complete the preliminary investigation report within 48 hours. You'll need to provide a copy of the report to the joint health and safety committee (or worker health and safety representative, if applicable). If there is no joint committee or worker representative, you must post the report at the workplace. Don't send this report to WorkSafeBC unless an officer asks for it.

2. At the end of the preliminary investigation, and to address its findings, you must produce an interim corrective action report.

   During the interim period — that is, until you've completed the full investigation — you must take all actions reasonably necessary to prevent a recurrence. If you are only able to identify some unsafe conditions, acts, or procedures that significantly contributed to the incident, or the general factors that contributed to it, your interim corrective action may include a full or partial shutdown of the worksite, the removal of equipment, or the reassignment of workers.

   As soon as practicable, you will need to share this report with the same parties cited in the preliminary investigation report described above. If you've completed all interim corrective action items by the time you've written the preliminary report, you can combine the preliminary investigation report and the interim corrective action report and submit them both together as a single document.

3. You must conduct the full investigation as soon as you've completed the preliminary investigation.

   In the full investigation, you will need to determine the cause or causes of the incident. "Determining the cause or causes" means analyzing the facts associated with the incident to identify its underlying factors. This includes the underlying factors that made the unsafe conditions, acts, or procedures possible and identifying health and safety deficiencies in your occupational health and safety program or other management system.

You must send the full investigation report to WorkSafeBC within 30 days. If you identify any factors outside your control that may delay your ability to complete the full investigation report, WorkSafeBC may grant an extension. Once you complete this report, you must share it with all parties as you would do with the preliminary investigation report (described on page 7).

For less complex incident investigations, you might be able to complete the full investigation within 48 hours. If you do meet these timelines, you can combine the full investigation report with both the preliminary investigation report and interim corrective action report. However, even if you complete the full investigation within 48 hours, you must still submit this combined report to WorkSafeBC.

4. You are required to complete a full corrective action report as the last step of the incident investigation process. This report documents the completion of all corrective actions you've identified in either the preliminary or full investigation.

   If you were able to complete all of the corrective actions while compiling the full investigation report, then you can combine these two reports. If you completed all of the corrective actions within 48 hours, you can also combine the full corrective action report with the preliminary investigation report and interim corrective action report.

   Whether you've produced a single or combined report, you must provide this report to the joint committee or worker safety representative. If you do not have such a committee or representative, you must post the reports at the workplace. Before posting, be sure you are compliant with the *Personal Information Protection Act* (PIPA). (Refer to page 28 for more information about personal information protection.) For more information about how to produce this report, see OHS Guideline G-P2-72-1.

Claims for compensation

In order to start a compensation claim for a work-related injury or disease, you (as the employer), the injured worker, or the treating physician must provide a report of a work-related injury or illness to WorkSafeBC. Notifying WorkSafeBC's Prevention Information Line or submitting an incident investigation report will not initiate a claim for compensation.

You must report a work-related injury or occupational disease to WorkSafeBC by submitting an Employer's Report of Injury or Occupational Disease (Form 7) within three days of injury. For more information on reporting an injury or illness to initiate a claim, visit worksafebc.com.

Similarly, a submitted Form 7 does not constitute an employer incident investigation report (EIIR), because a Form 7 does not require the same information as an EIIR.

Preparing to respond to an incident

As an employer, you'll need to prepare your workplace to respond correctly to an incident. This preparation requires you to identify the people who might investigate an incident and provide them with sufficient training, so that they understand what they need to do and why they are doing it.

Roles and responsibilities

Workplace safety is a shared responsibility. You, your supervisors, and your employees each have a role to play in incident investigations.

Participating in an incident investigation

1. Your role as the employer

When an incident occurs, you must do as follows:

- Notify WorkSafeBC of the incident as required (see pages 4–5).
- Conduct a preliminary investigation to identify any unsafe conditions, acts, or procedures that significantly contributed to the incident.
- Undertake a full investigation to determine the cause or causes of the incident.
- Identify and implement corrective actions necessary to prevent the recurrence of similar incidents.
- Ensure the incident investigation is carried out by persons knowledgeable about the type of work involved.
- Ensure the incident investigation includes your participation (or that of your representative) and a worker representative, if reasonably available.
- Prepare and distribute the required reports.

2. The role of your workers

Depending on the size of your workplace, your workers may be represented by a joint committee of both worker and employer representatives, or by a worker health and safety representative. (More information on joint committees and worker representatives is set out in Part 2, Division 5 of the Act. For the purposes of this document, you can assume "the worker representative" or "the worker's role in the incident investigation" refers to the joint committee worker representative or worker health and safety representative, as applicable.)

When incidents occur, the joint committee's duties include participating in incident investigations and ensuring investigations are carried out as required. Participation includes viewing the scene of the incident with the persons carrying out the investigation. Participation also includes providing advice to the persons carrying out the investigation with respect to the investigatory methods, the scope of the investigation, or any other aspect of the investigation.

3. The role of other parties in your workplace

In some workplaces, other workplace parties may be responsible for occupational health and safety. This may include the property owner, prime contractor, or other employers working at the workplace. As well, there may be other people whose participation might be necessary for a proper investigation of the incident. This may include workers who were on shift before the incident, someone who maintained equipment involved in the incident, or a third-party consultant specializing in this type of incident.

The employer must make reasonable efforts to identify people whose presence might be necessary for a proper and thorough investigation of the incident.

Occupational health and safety programs

Incident investigation is a key component of an occupational health and safety (OHS) program. A properly implemented OHS program can help make your workplace safer and more productive by reducing injuries and the associated costs of disability and lost working hours.

If you have a workforce of 50 or more workers, or a workforce or 20 or more workers in a moderate- to high-risk industry, you're required to have a formal OHS program. If you're considered a "smaller employer" (i.e., fewer than 20 employees), you'll need to maintain a less formal program based on monthly meetings with workers to discuss workplace health and safety.

OHS programs can provide a number of benefits. These benefits include helping you to control occupational health and safety risks, improving your OHS performance, and providing a means of communicating with your workers regarding your firm's health and safety policies and commitments. An OHS program can also help you to clarify roles, responsibilities, and accountability for tasks, including investigating incidents and implementing corrective actions.

You can find the following information on OHS programs at worksafebc.com:

- OHS Regulation Part 3, section 3, Content of (OHS) Program
- OHS Policy P2-31-1 Joint Committees — When a Committee is Required
- OHS Guideline G3.1 Occupational Health and Safety Program
- OHS Guideline G3.2 "Less Formal" Occupational Health and Safety (OHS) Programs

Incident investigations training

In order to provide completed incident investigations, you must ensure you provide training to the people who perform the investigations. The training associated with performing incident investigations is like training in anything else: a person must receive initial training and then take part in refresher training to maintain his or her competency. Training by itself is not enough; it requires practice to reinforce the skills and knowledge necessary to effectively complete investigations.

The investigators you assign to conduct investigations should receive training in investigation techniques that include the following:

- Gathering information
- Interviewing
- Collecting samples
- Analyzing information
- Identifying contributing factors
- Identifying immediate, direct causes and associated, underlying causes
- Developing recommendations
- Writing reports

The training should also include enough information and directions so that investigators know what is expected of them during the investigation process.

Here are the key points investigators should keep in mind:

- Be impartial, and keep an open mind about the cause or causes of the incident.
- Never jump to conclusions before analyzing all of the information.
- Understand that an incident is usually associated with multiple causes.
- Be aware of the need to protect confidential, medical, or other personal information.

In order to conduct an effective investigation, investigators should do as follows:

- Be familiar with work processes, the people who work in the workplace, and workplace practices and procedures.
- Have prior knowledge of OHS legislation, standards, codes of practice, manufacturers' specifications, and other key sources of information.
- Know the layout of the workplace.
- Be objective and honest.
- Possess the necessary investigation skills, as previously discussed.

Preparing an investigation kit

You should have a ready-to-use investigation kit prepared and available in advance. The kit should contain the following items:

- A digital camera with flash (and extra batteries)
- A tape measure and ruler
- A clipboard and pad of paper
- Pens, pencils, and erasers
- An incident investigation template and incident checklist (for a sample checklist, see Appendix 2)
- A flashlight (and extra batteries)
- Plastic bags and containers for samples
- Labels and markers for identifying equipment and labeling samples
- "Do not enter" tape
- Disposable gloves and other personal protective equipment

Taking notes

In order to keep your information well organized, you should keep your investigation notes in a notebook throughout the investigation process. Notes should be neat and detailed, yet concise. They should answer the "who, what, when, where, why, and how" of an incident. Good notes will help you recall facts that are useful for later analysis to determine underlying causes.

Notes should include the following:

- Dates and times
- Names and addresses
- Information from interviews
- Observations
- Actions taken by you and others
- A description of the site and its environmental conditions
- Reference to photos, if any are taken
- Measurements
- Sketches and diagrams, and information about evidence gathered

Responding to an incident

When an incident has occurred, you must take immediate action to tend to anyone injured in the incident and eliminate any clear and present hazards. As the employer, you are then required to conduct a preliminary investigation to identify and correct any unsafe conditions, acts, or procedures that significantly contributed to the incident. Immediately after completing the preliminary investigation, you must then conduct a full investigation to analyze the facts and circumstances of the incident in order to identify the underlying factors that led to the incident. This will enable you to determine the cause or causes of the incident to prevent the recurrence of similar incidents.

The six steps to be taken after the incident are as follows:

1. Immediately respond to the incident, tend to the injured, secure the scene to minimize the risk of any further injury, and preserve it for further investigation.
2. Gather information by observing the scene, interviewing interested parties, and taking notes.
3. Establish the sequence of events that describes what happened.
4. Analyze the events to determine any unsafe conditions, acts, or procedures.
5. Determine and implement the necessary corrective action or actions.
6. Write the required incident investigation and corrective action reports, sharing copies as necessary.

Step 1: Immediately respond to the incident

Immediately after the incident, take the following steps:

- Eliminate any clear and present hazards, and make the area safe for anyone responding to or investgating the incident.
- Care for anyone injured in the incident. Provide appropriate first aid and transportation.
- Secure the incident scene.
- Notify the proper authorities as required (WorkSafeBC, police, Provincial Emergency Program, etc.).
- Do not disturb the scene until the appropriate authority allows you to do so.

When securing the incident scene, remember not to disturb the scene except to do as follows:

- Attend to anyone who was killed or injured.
- Prevent further injuries or death.
- Protect property that is endangered as a result of the incident.
- Comply with specific directions from a WorkSafeBC officer or a peace officer (the police).

For more information on responding to serious injuries and other critical incidents, see Appendix 3.

Step 2: Gather information

In each stage of the investigation, both preliminary and full, you must collect and record key information. Immediately following an incident, however, it's often difficult to remain calm and focused on this task. That's why it's important to be prepared and maintain such items as a checklist or blank form in your kit to help you organize your thoughts and your inquiries.

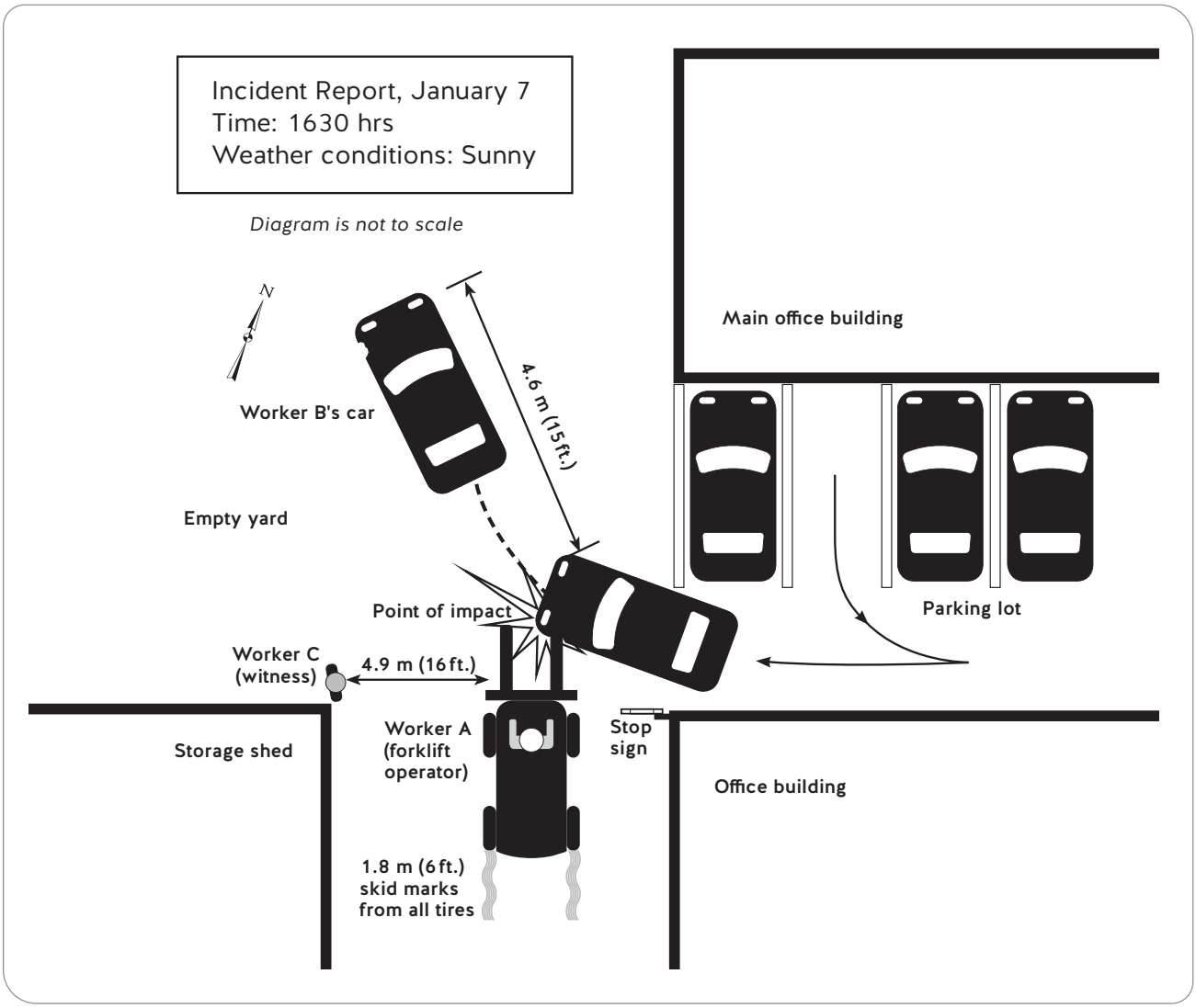
Surveying the scene

It's critical to survey the scene as soon as possible after the incident, because it provides you with a feel for the environment at the time the incident occurred. This is especially important if the incident occurred outdoors, with the chance that poor weather could erase such evidence as slip or impact marks. If potential witnesses happened to be passing by when the incident occurred, you may be able to identify them and record their names and contact information for subsequent follow-up.

For more complex investigations, photographs can be extremely valuable for recording the scene as you found it, and as a reference tool for later witness interviews. The general rule in taking photographs is to start with an "establishing shot" at a distance that records the relative position of all objects and materials. Then, continue to approach the scene, taking closer and closer shots to record details of specific objects or areas of interest. If the size of the objects is important, include a ruler or other common object (such as a pen) in the photo, in order to identify scale.

Drawings or sketches are also an excellent means of recording relative positions and measurements associated with an incident. A sample of such a sketch follows.

Figure 2: Sample sketch of an incident



Be prepared to list and tag all equipment or materials involved in the incident so that these items are readily identifiable for later reference.

Remember, you'll need to methodically collect information regarding the following:

- People (both those directly and indirectly involved, and witnesses)
- Equipment or material
- The environment
- The process (work procedures, instruction, training, and other safety records)

What information to gather

The law requires that certain information be collected and recorded in an incident investigation report. Using a checklist or blank incident investigation form as a guide will ensure that none of these items are overlooked.

During the preliminary incident investigation, you will need to collect and record the following information for the report:

(a) The place, date, and time of the incident
(b) The names and job titles of persons injured or killed in the incident
(c) The names and job titles of witnesses
(d) The names and job titles of any other persons whose presence might be necessary for a proper investigation of the incident
(e) A statement of the sequence of events that preceded the incident
(f) Identification of any unsafe conditions, acts, or procedures that significantly contributed to the incident
(g) Your identification and contact information as the employer
(h) A brief description of the incident
(i) The names and job titles of all persons who carried out or participated in the preliminary investigation of the incident (as set out in section 70(1) of the Act)
(j) Interim corrective actions you have identified to prevent the recurrence of similar incidents during the period between the occurrence of the incident and the submission of the full investigation report
(k) Information about what interim corrective actions have been taken and when future corrective actions will be taken
(l) The circumstances of the accident or incident that preclude the ability to address a particular element of the above-listed elements during the preliminary investigation period

As the employer, you are obliged to undertake, as far as possible, a preliminary investigation to identify any unsafe conditions, acts, or procedures that would interfere with the safe resumption of work during the interim between the incident and the conclusion of the full investigation. However, you may face circumstances outside of your control that inhibit your ability to fulfill this obligation. For example, the persons injured in the incident may not be available, or you may be prohibited from entering the workplace, or part of the workplace, because WorkSafeBC, the police, or other agencies are attending the scene of the incident and conducting their own investigations. For more information about preliminary investigations, see OHS Policy P2-71-1.

During the full incident investigation, you'll need to collect and record the following information for the report:

(a) Elements (a) through (f) of the list at the top of this page, including any updates available following the preliminary investigation period
(b) Your legal name, the name you are doing business under, your business address, contact number, email address, and WorkSafeBC account number
(c) The identification and contact information of other relevant workplace parties, such as an owner, prime contractor, other persons actively involved in the accident or incident, or persons implementing corrective actions following the full investigation
(d) Determination of the cause or causes of the incident
(e) A full description of the incident

(f) The names and job titles of all persons who carried out or participated in the preliminary and full investigation of the incident (as set out in section 70(1) of the Act)

(g) All corrective actions you have determined are necessary to prevent the recurrence of similar incidents

(h) Information about what corrective actions have been taken and when any future corrective actions will be taken

Note: Section 70(3) of the Act requires you to record the addresses and telephone numbers of witnesses and any other persons whose presence might be necessary for a proper investigation of the incident. This information does not form part of the full investigation report.

The preliminary and full investigations are similar in many ways. For example, the same or similar information is assembled and recorded for the following phases of the investigation:

- In the preliminary report, you must provide a brief description of the incident, and in the full report, you'll need to provide a full description. In a simple incident, these two descriptions may be the same. In a more complex incident, you may expand and update the brief description to include more information.
- In the preliminary investigation, you must identify, as far as possible, any unsafe conditions, acts, or procedures that significantly contributed to the incident. At the end of the full investigation, in addition to identifying unsafe conditions, acts, or procedures, you must also determine and record the underlying cause or causes of the incident.
- In the preliminary investigation and report, you must identify interim corrective actions that are required to prevent anyone else being injured in the same way. Following the full investigation, and providing it's relevant, you'll need to identify and record any additional corrective actions.
- You may use similar investigation procedures for both preliminary and full investigations, although the elements of each may differ slightly. The goal is to gather information about the incident, including events leading up to the incident and the order in which events occurred. You may gather this information by viewing the incident scene and speaking with witnesses or other people who were involved in the incident. Documenting the incident through pictures and organized notes will help you to organize and record the information you collect.

Note: Blasting and diving have industry-specific investigation and reporting requirements under the OHS Regulation, in addition to those under sections 71 and 72 of the Act, that must be considered in your investigation reports.

Conducting interviews

One of the main methods of gathering information in an incident investigation is to interview people who were at the scene. You can also conduct interviews with anyone who can give relevant information, even if they did not see what happened or were not present at the time of the incident. For example, you could speak with the supervisor who gave instructions at the start of the shift, or a trainer who instructed the worker, even if the training occurred several months earlier.

The following techniques may assist you in conducting your interviews:

- Conduct the interviews as soon after the incident as possible.
- Put the interviewee at ease.
- Conduct interviews individually and privately with witnesses and others who have information necessary for a proper investigation of the incident.
- Reassure each person of the investigation's main purpose — to identify corrective actions that can prevent similar incidents in the future.
- Ask people to explain what happened in their own words.
- Be curious — avoid making assumptions or offering suggestions.
- Try not to interrupt — if you have questions, wait until the interviewee pauses, then ask for clarification.
- Let the interviewee see your notes, and make sure he or she agrees with your interpretation of the story.
- Ask the interviewee for his or her suggestions as to how the accident could have been avoided.
- Encourage the interviewee to contact you at a later date, should they think of something else.
- Be sure to thank people for their help.

Step 3: Establish the sequence of events

A sequence of events (SOE) is simply the chronology of actions or decisions leading up to, and possibly occurring after, an incident. You must include a statement of the sequence of events that preceded the incident in both the employer's preliminary and full incident investigation reports.

Developing the sequence of events can help you understand what happened, and in what order. This can help you to shape the questions that will uncover any unsafe conditions, acts, or procedures that contributed to the workplace incident, and allow you to determine the cause or causes of the incident.

What to include

The sequence of events includes a list of the events leading up to, and including, the consequences of the incident under investigation. In some cases, it may also be appropriate to include events that followed the incident. Where to begin and end the sequence of events will depend on the nature of the incident and the complexity of the incident investigation. Generally, the more complicated the incident, the lengthier and more detailed you will need to make the sequence of events.

You may include the relevant activities or events that occurred before the incident, such as events from the day of the incident, or events that go back several years — for example, the installation of new machinery, changes in ownership, product changes, strategic decisions, or new policies or procedures. You may also want to include relevant activities or events that occurred after the incident, such as the first aid response or evacuation process.

The sequence of events helps you decide what questions to ask in order to identify unsafe conditions, acts, or procedures. Often, the answers to these questions will lead you to the cause or causes of the incident.

In addition to the main sequence of events that led to the incident, you might also want to expand on these factors by creating separate "branches" that denote other key factors or events that played a role in what happened (see figures 3.1 and 3.2 on page 20). These factors might involve people or machinery. For example, consider a motor vehicle incident involving a truck driver, icy ground, some improperly stored lumber, and a near-collision with another worker.

In this case, you could include a branch representing the truck and its operator, with its own sequence of events detailing the driver's connection to the incident. The worker could also have a branch illustrating the sequence of events that brought the worker to the incident scene. Another branch could denote the factors that led to the lumber being stored improperly. In each case, you may need to create separate branches for different people and machinery involved in the incident.

Here are the key points to keep in mind when developing a sequence of events, as follows:

- An event is one action.
- An event is something that is known or believed to have happened.
- Something that did not happen is not an event. Do not include non-events or omissions in the sequence of events; these can be considered in your analysis of the events.
- Include the date and time of each activity or event (if known).
- Organize the activities and events chronologically (earliest to latest).

Making a diagram

Diagrams are useful tools for describing the sequence of events, particularly when you're including multiple branches denoting various event sequences. At the same time, when you are developing a sequence-of-events diagram, keep in mind that each event should represent one action.

For more complex events involving more than one person or multiple sources of energy, you might find it helpful to record each event on a spreadsheet or table, or even on a small slip of paper. This way, as the investigation proceeds and you gain more information, you can move or rearrange the events in order to establish the correct sequence.

The following figures illustrate a near-miss event involving a work yard, a truck, icy ground, and improperly stored lumber. Figure 3.1 takes a simple, linear approach to the sequence of events. Figure 3.2 is more complex, making use of multiple branches to show other key factors involved in the incident. Note that the dotted lines in Figure 3.2 indicate other, previous events that may need to be considered but have been left out here due to space considerations.

Figure 3.1: Sample main sequence of events

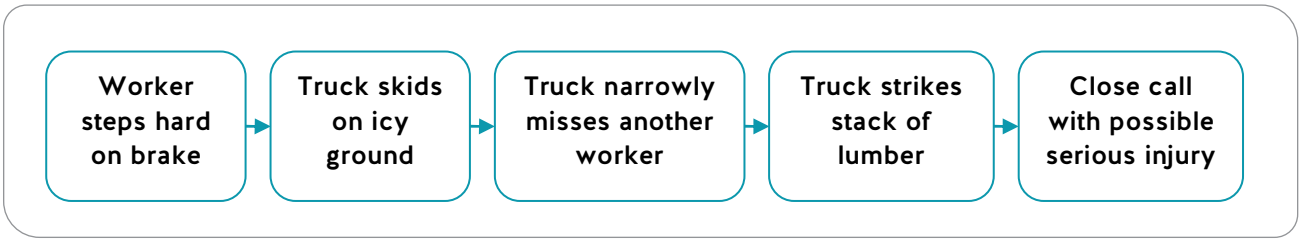
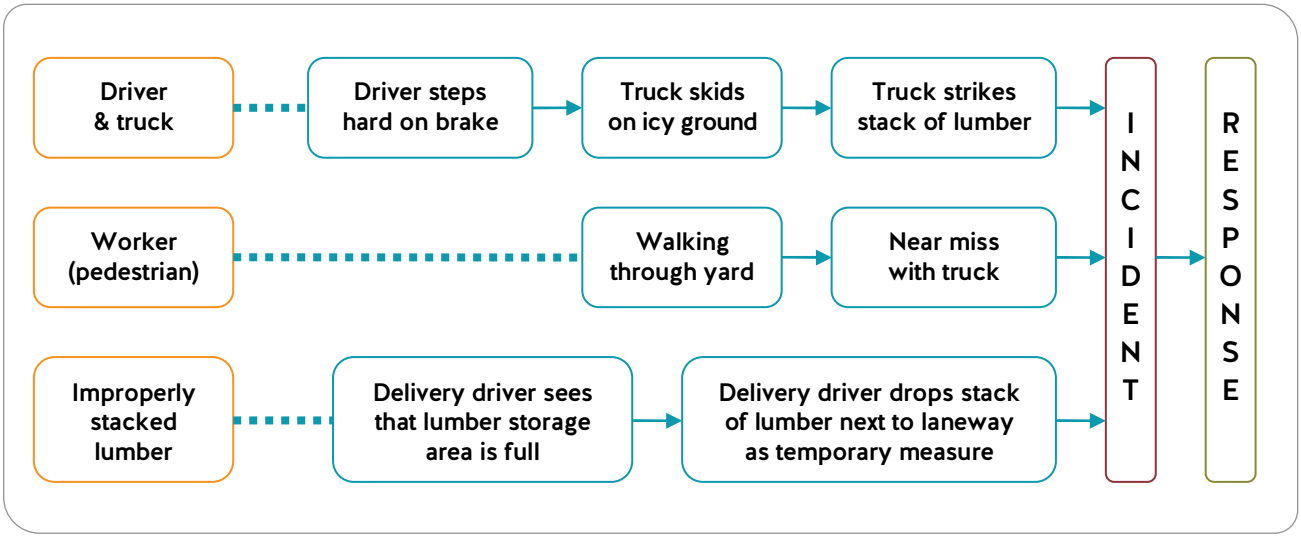


Figure 3.2: Sample multiple-branch sequence of events



Step 4: Analyze the sequence of events

The purpose of analyzing the sequence of events is to determine the cause or causes of the incident. The causes may include unsafe conditions, acts, and procedures. You must conduct an analysis of the sequence of events and record results for both the preliminary and full investigations.

Identifying unsafe conditions, acts, and procedures

An unsafe condition may include the work environment (for example, a congested work area, poor housekeeping, or poor visibility) or the condition of the equipment used (for example, lack of safeguarding or poor maintenance).

An unsafe act is an action or a lack of action in the presence of a hazard. For example, a worker uses a grinder without a guard, works on energized equipment without locking out, or doesn't wear personal protective equipment.

Procedures are the established way of doing something, and include formal written directions, as well as the commonly accepted way of performing work in a workplace. A procedure may be unsafe due to the inclusion of errors (for example, a failure to update procedures for new or modified equipment) or due to lack of clarity or communication (for example, steps in the procedures that are missing or unclear).

The sequence of events sets out an ordered list of events that occurred before and after the incident. When analyzing the events, try to establish why each event occurred, and whether something should have happened, but didn't. Start with the first event in the sequence and consider each event in turn, in the order that it happened.

Generally, you can start your analysis by asking the following questions and taking the following steps:

1. Should another event have happened before this event?
   - If yes, did the other event happen?
   - If the other event happened, add it to the sequence of events.
   - If the other event did not happen, decide whether this is significant from a health or safety perspective.
   - If it is significant, then find out why the event did not happen as it should have.
2. Was the event planned or expected to happen?
   - If yes, did the event happen at the right time?
   - If the event was not planned, or did not happen at the right time, decide whether this is significant from a health or safety perspective.
   - If it is significant, then find out why the event happened when it did.

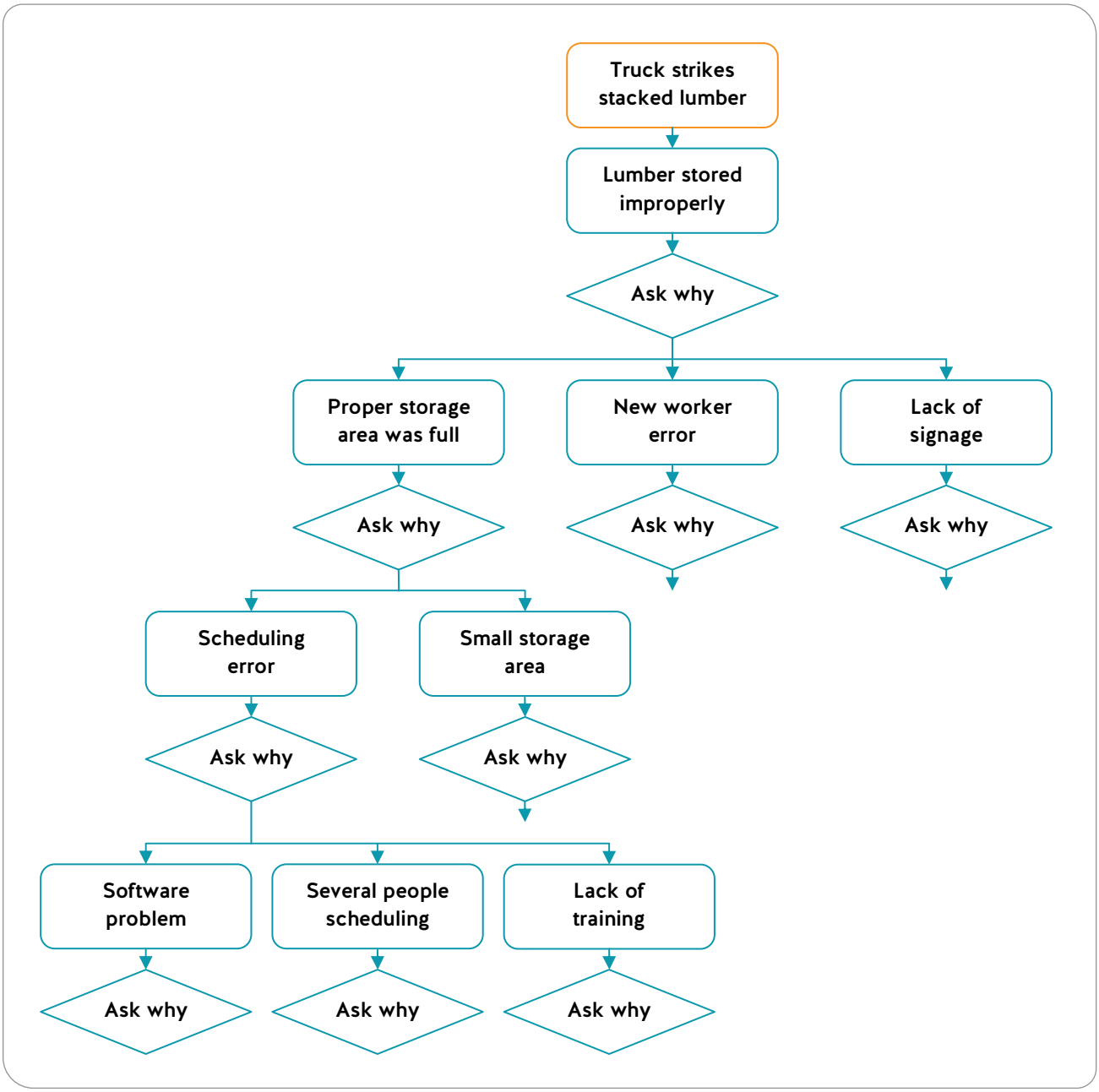
These questions and steps can help you to structure your analysis and refine your sequence of events. As you ask these questions, be aware that what you learn from the analysis of later events might require you to reconsider your original analysis of an event. (For a more in-depth look at the event-analysis process described above, refer to the flow chart in Appendix 4.)

When you are analyzing the sequence of events, choose events that may be significant from a health or safety perspective, or that may have contributed to the incident. See Figure 4 on page 22. This shows how an event from the sequence of events (see figures 3.1 and 3.2 on page 20) can be selected for further analysis, such as the truck's collision with stacked lumber.

Ask "why" repeatedly until you identify the unsafe conditions, acts, or procedures that contributed to the incident, and how they came to be. Avoid stopping your analysis because you come across personal factors, such as "the worker was complacent," "she needs to be more careful," "the supervisor was not paying attention," or "he did not follow procedures." Often, when you identify a personal factor, you'll need to ask at least one more "why" question. Stopping the analysis when you arrive at a personal factor will lessen your opportunity to improve safety in your workplace.

Base your conclusions on information collected during the investigation. Use objective information from interviews, documentation, observation, and analysis of equipment. Do not base your conclusions on someone's personal opinion of the situation. The following diagram may help you understand how to structure your analysis of the events leading up to the incident.

Figure 4: Analysis of a sequence of events



Consider each event in the sequence of events to analyze what happened and identify any unsafe conditions, acts, or procedures that may have contributed to the incident.

When evaluating the evidence you have gathered and drawing conclusions based on that evidence, consider the following dos and don'ts:

Do:

- 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.
  - Direct (a witness saw an event happen)
  - Circumstantial (indirect evidence, establishing a conclusion by inference from known facts)
  - **Hearsay (someone heard something said by someone else)**

Do not:

- Draw conclusions upon or stop at the first basic cause you find.
- Believe carelessness is a cause of accidents and incidents.
- Assume contradictory evidence indicates falsehood.
- Conduct interviews as if in a courtroom.
- Ask for signed statements from witnesses.
- Look for only one basic cause.
- Forget about others' personal feelings.
- Overlook the confidentiality of personal medical information.

Remember that developing and analyzing a sequence of events can be a repetitive and evolutionary process, with answers to initial questions leading to a different line of questioning. Use what you learn from analyzing the events to revise the sequence of events as required. Your goal is to fully describe what happened.

Note: This technique is based on the "5 Why" method and is only one way to analyze an incident. You can use alternative methods, as long as they meet the intent of the legislation.

Determining underlying causes

Through your analysis, you should identify a number of unsafe conditions, acts, and procedures that contributed to the incident. These are sometimes referred to as "symptoms of the problem."

However, if you ask why these symptoms happened, it is often possible to identify underlying deficiencies in the health and safety program, management systems, or workplace culture that allowed these unsafe conditions, acts, or procedures to occur. In other words, if a worker not wearing a hard hat is struck on the head, the problem is not so much that he wasn't wearing a hard hat, but *why* he wasn't wearing one.

Also consider the "4 Ps" of your organization: philosophy, policy, procedures, and practice. How could each of these elements have contributed to an incident occurring? Were each of these consistent with your workplace activities? Sometimes a gap develops between procedures and practices. Probe further to find out how and why the gap developed.

Some of the underlying causes you identify may be associated with the following:

- Lack of management commitment or resources for safety
- Poor worksite design or construction
- Improper planning
- Purchasing practices that allow or encourage unsafe or defective tools or equipment
- Equipment purchases that took place without worker consultation because the equipment was considered the easiest and safest to use
- Lack of inspection or monitoring for OHS issues
- Lack of a preventive maintenance program
- Clumsy automation or unreliable alarms or indicators
- Lack of an adequate hazard and risk assessment
- Inadequate documentation of safe, workable procedures
- Inadequate training
- Gaps in supervision
- Lack of progressive discipline
- Routine or accepted unsafe shortcuts

All of these deficiencies can be significant barriers to working safely, and human error will persist. For example, if you have a workplace culture that ignores unsafe work practices or rewards taking shortcuts that neglect safety, workers are far more likely to make poor choices with regard to their safety. The environment in which people work has a significant effect on their performance.

During your analysis, avoid focusing on what you feel workers should have been able to anticipate. The goal of the investigation is to understand why the worker's actions made sense to him or her at the time. Understanding why it made sense to the worker will help you identify what workplace factors need to be changed to reduce the likelihood of recurrence.

When determining the underlying causes, remember to ask the question: "What, in this workplace environment, might be supporting the unsafe work activity?" For a good safety culture to exist, workers must believe that management is committed to the idea that working safely matters.

For the most serious accidents and incidents, you may wish to retain an occupational health and safety professional or other subject matter expert to conduct an in-depth analysis of the causes and underlying factors. This dedication of additional resources ensures a thorough investigation and can demonstrate your commitment to workplace safety.

Step 5: Determine and implement the corrective action

During the interim period between the preliminary and full investigations, you must take all actions reasonably necessary to address the unsafe conditions, acts, and procedures that contributed to the incident. The goal is to ensure that work can be continued or resumed safely during the interim period between the incident and the conclusion of the full investigation. The interim corrective action may include fully or partially shutting down a worksite, removing equipment, or reassigning workers.

This interim corrective action must remain in place until you have done either of the following:

- Undertaken any further corrective action identified in the full investigation
- Determined that the interim corrective action is enough to prevent similar incidents that could occur after the full investigation

Once the full investigation is completed, you must identify and implement the corrective action necessary to prevent the recurrence of similar incidents. In order to prevent similar incidents, your recommendations for corrective action need to address the underlying cause or causes of the incident, rather than the symptoms. Your recommendations must also address all causes.

Implementing corrective action and following up are the most important steps of the incident investigation process. If the recommendations are not implemented, the contributing factors could result in another incident.

When considering the contributing factors, ask the following questions:

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

Identify the necessary corrective action and assign the responsibility to implement it within an appropriate time period.

How management can take control

- Identify and correct the unsafe or defective equipment.
- Establish proper working conditions.
- Ensure good housekeeping.
- Eliminate or minimize physical hazards.
- Ensure proper planning.

How supervisors can take control

- Provide proper orientation and instruction in safe work procedures.
- Ensure consistent discipline.
- Monitor unsafe work practices.

How all workers can take control

- Improve ability through retraining.
- Ensure that the task fits with the person's abilities.

For each of these areas, you may implement a variety of specific corrective actions. For example, if you identify problems with safe work procedures, you may ask yourself the following:

- Were safe work procedures developed?
  If not, and you determine they are needed, assign a qualified person to develop them.
- Were the procedures written or otherwise available?
  If not, devise a method to document them, and then ensure they are available to workers.
- Were the procedures adequate for the equipment or task?
  If not, ask further questions to find out why. (For example, were there changes to the equipment, product, or work process since procedures were implemented?) Then, update the procedures and put measures in place to make sure the procedures are updated as needed.
- Did the procedures adequately address the hazards and risks that were present?
  If not, ask further questions to find out why. (For example, was equipment deterioration or poor maintenance a factor?) Address these issues.
- Were the procedures used? If not, ask more questions to find out why.
  - Determine if the procedures were understood. Find out how and when they were communicated, and whether barriers may have affected workers' understanding (such as procedures provided in English to workers with English as a second language). Address communication issues.
  - Determine if gaps exist in supervision, and if so, why. Is supervisory training needed, or are there deeper issues with workplace culture and commitment from senior management? Address these issues.

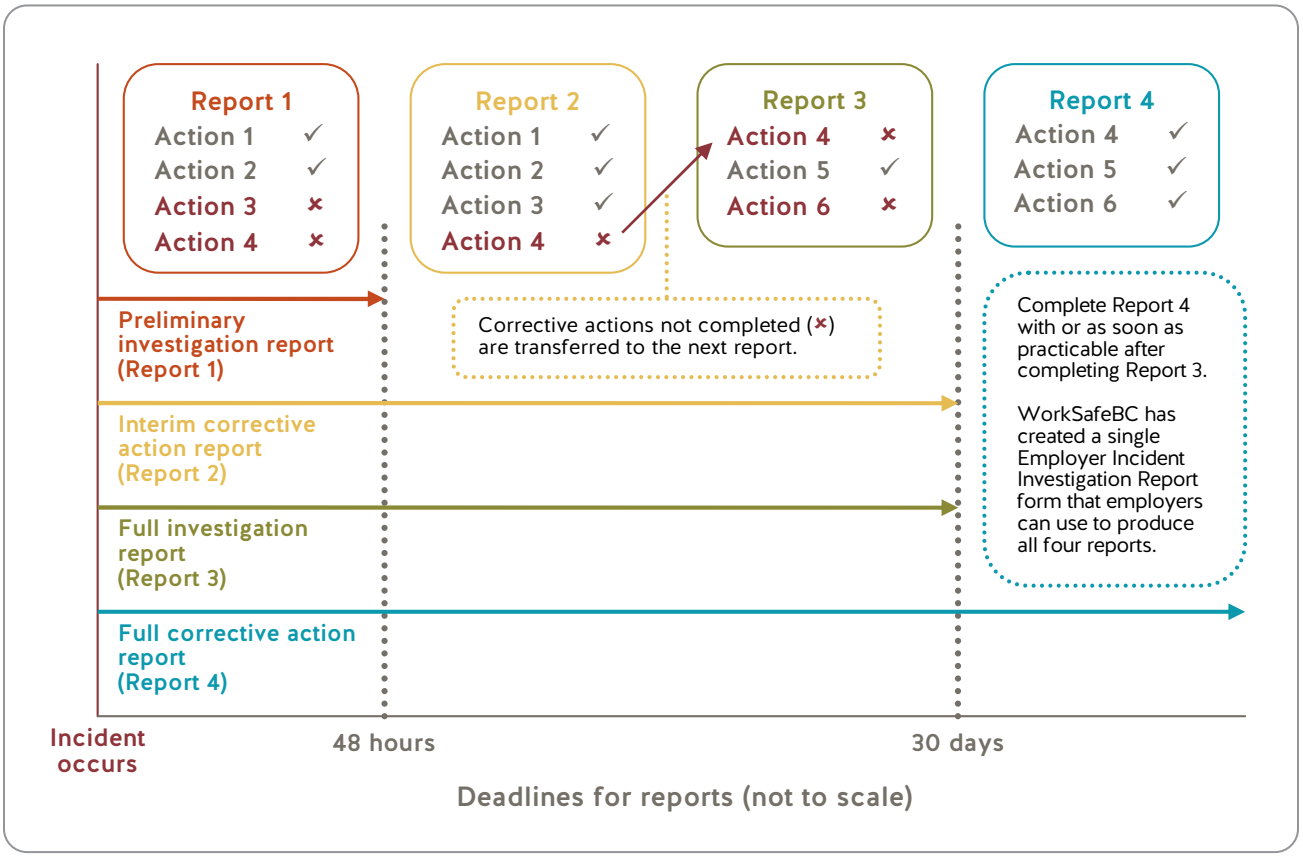
When you are identifying the corrective actions, include who is accountable for each corrective action and set an action date. If the action is the responsibility of another department or individual, make sure you have consulted with them to see if the recommendation is reasonable, and ensure they are aware of the assigned responsibility.

Confirming and following up

Once you've implemented all corrective actions, review these actions and confirm their completion and effectiveness. Without a firm commitment to implementing the recommendations, the whole exercise of conducting an investigation offers limited safety benefits. Remember that results — in terms of workplace injury and illness prevention — are based on action.

The design of the incident investigation report allows you to track the actions and completion dates on both the interim corrective action report and the full corrective action report. As shown in Figure 5, a corrective action listed in the interim corrective action report that has yet to be completed can be copied onto the full investigation report and tracked from there. Once the action is completed, it is documented in the full corrective action report.

Figure 5: Illustration of employer incident investigation report (EIIR) requirements



You should also follow up to ensure the corrective action was effective. Sometimes, actions believed to be corrective or preventive can have no effect or even a negative effect on workplace safety. Once you've implemented these actions, it's important to confirm that the recommendations were good and are actually improving safety.

If the actions you take are ineffective, then you'll need to return to the analysis and identify alternative solutions for reducing the hazard and the risk. The joint committee or worker representative can play a vital role in monitoring the effectiveness of corrective actions.

Step 6: Write and share the report(s)

Depending on the nature of the incident, you may need to prepare more than one of the following reports:

- A preliminary incident investigation report
- A preliminary corrective action report
- A full incident investigation report
- A corrective action report that follows the full report

Your incident investigation reports should provide readers with as much — if not more — detailed information than they would have obtained if they had witnessed the incident themselves. However, because these reports will be shared with other workplace parties, the report should only contain information relevant to the incident. The *Personal Information Protection Act* (PIPA) governs the private sector's collection, use, and disclosure of personal information in a manner that recognizes both the right of individuals to protect their personal information and the need of organizations to collect, use, or disclose personal information for purposes that a reasonable person would consider appropriate in the circumstances. As an employer, it is your responsibility to consider possible privacy implications around information in the incident investigation reports. If you have concerns around what can and cannot be disclosed in the report, you may wish to obtain legal advice.

Public bodies like WorkSafeBC are governed by the *Freedom of Information and Protection of Privacy Act* (FIPPA). PIPA does not apply to personal information if FIPPA applies to the personal information (refer to PIPA section 3(2)(d)). This means that a report submitted to WorkSafeBC must include all information required by policy. You cannot delete facts, such as the injured worker's name, since WorkSafeBC is already required to protect that information in accordance with FIPPA.

Employer incident investigation reporting timeline

Figure 6: Reporting timeline

Required report	When it's required	Who gets a copy
Preliminary investigation	Within 48 hours of the incident	• The joint committee or worker health and safety representative. If not applicable, post in the workplace. • WorkSafeBC may ask for a copy.
Corrective action identified in the preliminary investigation	As soon as practicable	• The joint committee or worker health and safety representative. If not applicable, post in the workplace.
Full investigation	Within 30 days of the incident	• WorkSafeBC. • The joint committee or worker health and safety representative. If not applicable, post in the workplace.
Corrective action taken as a result of the full investigation	As soon as practicable	• The joint committee or worker health and safety representative. If not applicable, post in the workplace.

Depending on the complexity of the incident, you might be able to complete your full investigation report within 48 hours and combine both the preliminary and full reports. (See "Combining reports" on page 31.) The 48-hour period can be extended if it expires on a Sunday or other holiday, or if it expires on a day you are not normally open for business.

WorkSafeBC employer incident investigation report template

WorkSafeBC has developed an employer incident investigation report (EIIR) template you can use to create all four of the reports you may need to complete following an incident in your workplace. This template will help you collect all the necessary information and reduce the work associated with completing multiple reports. You can also use the companion six-page guide to help you to write the report.

To find the template on worksafebc.com, type "EIIR" in the search box. The template is available in two formats: as a PDF and a Word document.

The PDF template is dynamic — you can type information into all the fields. However, you won't be able to customize it with additional fields.

The Word template for these reports also provides dynamic fields for entering your information. You may wish to customize the template by adding a company logo, more fields for tracking and categorizing incidents, or more rows in different sections (for complex or large investigations). The template contains the minimum-required content to satisfy the Act. If you choose to customize any report forms, you may add fields, but you should not delete any of the current fields.

For an example of a completed EIIR template based on the truck incident shown in figures 3.1 and 3.2, see Appendix 5.

Ways to submit an Employer Incident Investigation Report (EIIR)

- Through our online reporting tool, which includes convenient features such as being able to:
  - Create preliminary and full investigation reports
  - Prepopulate information from your preliminary report
  - Save a partially completed report
  - View previously submitted reports through online services

  Once you have logged into your online services account, click on the "Health & Safety" tab. You will see a link to the Employer Incident Investigation Report (EIIR) Dashboard where you can view and submit EIIRs.
- If you are using our fillable PDF template or your own reporting template, you can upload your report to us.
- Alternatively, you can fax your report to 604.276.3247 (toll-free at 1.866.240.1434) or send by mail to: WorkSafeBC, PO Box 5350 Stn Terminal, Vancouver, BC V6B 5L5.

You do not need to submit all of the investigation's supporting documentation (interview notes, photographs, copies of safe work procedures and other documents, etc.) with your full investigation report. However, you must retain these materials for future reference, and you must make them available if a WorkSafeBC officer requests them.

In some situations, a WorkSafeBC officer may direct you to submit a preliminary investigation or other report. When you're submitting this report, ensure that the officer's name is clearly identified either on the form generated by the template (see the first box in section 5 of the template) or on a cover sheet attached to your own form.

Required content

Your **preliminary incident investigation report** must contain the following information:

(a) The place, date, and time of the incident
(b) The names and job titles of anyone injured or killed in the incident
(c) The names and job titles of witnesses
(d) The names and job titles of anyone else whose presence might be necessary for a proper investigation of the incident
(e) A statement of the sequence of events that preceded the incident
(f) Identification of any unsafe conditions, acts, or procedures that significantly contributed to the incident
(g) Employer identification and contact information
(h) A brief description of the incident
(i) The names and job titles of the individuals who carried out or participated in the preliminary investigation
(j) Interim corrective action you have determined to prevent the recurrence of similar incidents during the interim between the occurrence of the incident and the submission of the full investigation report
(k) Information about what interim corrective action has been taken and when any future corrective action will be taken
(l) The circumstances of the accident or incident that preclude you from addressing one of the elements listed above during the preliminary investigation period

Note: Section 70(3) of the Act requires you to record the addresses and telephone numbers of witnesses and any other persons whose presence might be necessary for a proper investigation of the incident. This contact information is not included in the preliminary investigation report.

Where you have identified any necessary corrective action as a result of the preliminary incident investigation, you must also prepare a report of the corrective action you've taken. In the **interim corrective action report**, you must identify the following:

(a) The unsafe conditions, acts, or procedures that made the corrective action necessary
(b) The corrective action you took to prevent the recurrence of similar incidents
(c) Your identification information (as the employer)
(d) The names and job titles of the people responsible for implementing the corrective action
(e) The date you took the corrective action

The **full incident investigation report** must contain the following information:

(a) Elements (a) through (f) of the preliminary incident investigation, including any updates available following the preliminary investigation period:
   - The place, date, and time of the incident
   - The names and job titles of anyone injured or killed in the incident

- The names and job titles of witnesses
- The names and job titles of anyone else whose presence might be necessary for a proper investigation of the incident
- A statement of the sequence of events that preceded the incident
- Identification of any unsafe conditions, acts, or procedures that significantly contributed to the incident

(b) Your legal name, the name you are doing business under, your address, contact number, email address, and WorkSafeBC account number

(c) The identification and contact information of any other relevant workplace parties, including the following:
- The owner of the workplace
- The prime contractor at the workplace
- Any individual who was actively involved in the incident
- The individuals implementing the corrective action following the full investigation

(d) Determination of the cause or causes of the incident

(e) A full description of the incident

(f) The names and job titles of everyone who carried out or participated in the preliminary and full investigation of the incident

(g) All necessary corrective actions you have identified to prevent the recurrence of similar incidents

(h) Information about what corrective action has been taken and when any future corrective action will be taken

Where you have identified any necessary corrective action as a result of the full incident investigation, you must also prepare a report of the corrective action you've taken. In the **full corrective action report**, you must identify, as follows:

(a) Additional corrective actions necessary to prevent the recurrence of similar incidents. Your recommendations for corrective action need to address the underlying cause or causes of the incident, rather than the symptoms.

(b) Your identification information (as the employer).

(c) The names and job titles of the people responsible for implementing each corrective action.

(d) The expected completion date for each corrective action.

(e) The date each corrective action was completed.

You may wish to consider using WorkSafeBC's employer incident investigation report (EIIR) template to create the reports listed above. The template will help you collect all the necessary information and reduce the work involved in completing multiple reports. The template is available from worksafebc.com (type "EIIR" in the search box).

If you are using your own form, it is critical that you review and revise it to ensure that it contains all the required information. As a short-term measure, use a cover sheet with your submitted form to ensure that all additional required information is submitted to WorkSafeBC.

Combining reports

Depending on the complexity of the incident investigation, it may be possible to complete the full investigation report and resulting corrective action within 48 hours. You may combine one or more reports as long as you've met all of the requirements and you complete the reports within the required time. Consult WorkSafeBC prevention policy on worksafebc.com for more details on what to do once you've completed the incident investigation and resulting corrective action within 48 hours.

Combining the two corrective action reports

Once you've completed the full investigation within 48 hours of the incident and determined the corrective action necessary to prevent the recurrence of similar incidents, prepare a single corrective action report to provide to the joint committee or worker health and safety representative, as applicable. If there is no joint committee or worker health and safety representative, post this report at the workplace. This would meet your corrective action reporting requirements for both section 71 and 72 of the Act.

If you complete both the preliminary and full incident investigations and all corrective action within 48 hours of the incident, a single report may fulfill all reporting requirements for simple incidents. You must submit this single report to WorkSafeBC within 30 days of the date of the incident.

However, for more complex incidents that require more time to analyze and to determine underlying causes, you will be required to provide multiple reports to the joint committee or worker health and safety representative, as applicable. If there is no joint committee or worker health and safety representative, post these reports at the workplace. Submit the full investigation report to WorkSafeBC within 30 days of the date of the incident.

Summary

We have discussed the concepts and procedures for employer incident investigations. Here is a summary of the incident investigation procedure:

- Prepare for an incident investigation by identifying investigators, providing training, and assembling necessary materials. If an incident occurs, go to the scene of the accident promptly. Attend to the needs of the injured, address any immediate hazards, and preserve the scene as required.
  (1) Immediately begin the preliminary investigation. Gather all needed information. Survey the scene, talk to witnesses, and, if it's possible and necessary, talk to the injured worker as well. Take notes and photos as appropriate.
  (2) Create a sequence of events based on collected facts and evidence.
  (3) Analyze the events to look for unsafe conditions, acts, and procedures while identifying possible causes.
  (4) During and after the preliminary investigation, implement interim corrective action to ensure worker safety while the investigation proceeds. Continue to develop the corrective action as you undertake the full investigation.
  (5) Prepare the preliminary investigation report within 48 hours of the incident and the interim corrective action report as soon as practicable.
  (6) If a WorkSafeBC officer requests that you do so, submit a copy of the preliminary investigation report or the interim corrective action report to WorkSafeBC. Make sure to include the name of the officer who required the submission.
  (7) Provide a copy of the preliminary investigation report and interim corrective action report to the joint committee or worker representative. If there is no joint committee or worker representative, post the reports in the workplace.

- Begin the full investigation.
  (1) Continue to gather information.
  (2) Revise the sequence of events and the incident description, if needed.
  (3) Continue to analyze the events to look for unsafe conditions, acts, and procedures, and to identify the associated underlying causes.
  (4) Implement corrective action to address the underlying causes, as needed. Follow up to ensure implementation and effectiveness.
  (5) Prepare a report of the full investigation and a full corrective action report.
  (6) Submit a copy of the full investigation report to WorkSafeBC within 30 days by mail, fax, or online at worksafebc.com.
  (7) Provide a copy of the full investigation report and full corrective action report to the joint committee or worker representative. If there is no joint committee or worker representative, post the reports in the workplace.

- Continue to follow up to ensure all corrective action is implemented and effective.

Appendices

1. Glossary of terms
2. Incident investigation checklist
3. Considerations in a critical incident
4. Analyzing an event
5. Employer incident investigation report template (completed example)
6. Investigating musculoskeletal injuries

Appendix 1: Glossary of terms

Accident includes a wilful and intentional act, not being the act of the worker, and also includes a fortuitous event occasioned by a physical or natural cause (section 1 of the *Workers Compensation Act*).

Determining the cause or causes means analyzing the facts and circumstances of the incident to identify the underlying factors that led to the incident. This includes identifying the underlying factors that made the unsafe conditions, acts, or procedures possible, and identifying health and safety deficiencies (OHS Policy P2-72-1).

Hazard is a thing or condition that may expose a person to a risk of injury or occupational disease (section 1.1 of the Occupational Health and Safety Regulation).

Incident includes an accident or other occurrence which resulted in or had the potential for causing an injury or occupational disease (section 1.1 of the Regulation).

Joint committee refers to a joint health and safety committee under Division 5 of Part 2 of the Act (section 13 of the Act).

Major release of a hazardous substance refers to the quantity and nature of the release as well as the extent of the risk to worker health. (OHS Policy P2-68-1 provides additional guidance around what constitutes a major release of a hazardous substance.)

Medical treatment means treatment by a physician or other registered medical practitioner. Medical treatment usually involves treatment above and beyond that provided at the workplace by a first aid attendant.

Officer is a person appointed as an officer under section 329(1) of the Act or a person authorized to act as an officer under section 18 of the Act.

Personal injury is defined as any physiological change resulting from some cause. It may result from a specific incident or a series of incidents occurring over a period of time. (*Rehabilitation Services & Claims Manual*, Volume II, item C3-12.00).

Practicable means that which is reasonably capable of being done (section 1.1 of the Regulation).

Risk is the chance of injury or occupational disease (section 1.1 of the Regulation).

Sequence of events is a chronology of actions, events, or decisions leading up to and following an incident.

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. (See OHS Guideline G-P2-68-1, WorkSafeBC Notification of Serious Injuries.)

Under the Act in this document means in accordance with Part 2, Division 10 (Accident Reporting and Investigation) of the *Workers Compensation Act*.

Unsafe conditions, acts, and procedures

- An **unsafe act** is an action, or lack of action, made in the presence of a hazard. For example, a worker uses a grinder without a guard, works on energized equipment without locking out, or doesn't wear personal protective equipment.
- **Unsafe conditions** include aspects of the work environment (for example, congested work areas, poor housekeeping, poor visibility) or the equipment used (for example, lack of safeguarding, poor maintenance).
- **Procedures** are the established way of doing things and include formal written directions as well as the commonly accepted way of performing work in a workplace.

Worker health and safety representative means a worker health and safety representative under section 45 of the Act.

Worker representative means

(a) In relation to a workplace for which there is a joint committee, a worker representative on the committee, and

(b) That representative in relation to a workplace for which there is a worker health and safety representative (section 13 of the Act)

Appendix 2: Incident investigation checklist

Notification	Other party
☐ Notify police, WorkSafeBC, etc.	☐ Name
☐ Time and date of incident	☐ Occupation
☐ Time and date of notification	☐ Experience in this industry
☐ Time and date of arrival on site	☐ Experience in this job
	☐ Method of supervision
Scene	☐ Familiarity with equipment used
☐ Diagram ☐ Photos	☐ Knowledge of the Regulation
☐ Measurements	☐ Role in incident
Worker	
☐ Name, age, and occupation	**General condition of equipment**
☐ Home address and phone number	☐ Make and model; serial number
☐ Training for job	☐ Manufacturer's information
☐ Personal variables, such as:	☐ Maintenance information and records
☐ Experience in current job/industry	☐ Suitability of equipment
☐ Familiarity with equipment	☐ Adequacy of equipment
☐ Ability	☐ Layout of operation
☐ Mental and emotional state	
☐ Method of supervision provided	**Environment and site**
☐ Personal protective equipment	☐ General condition
☐ Illness or disability	☐ Lighting
☐ Nature of injuries	☐ Ventilation
☐ Knowledge of the Regulation	☐ Weather conditions (wind, temperature, etc.)
	☐ Noise
Supervisor	☐ Terrain
☐ Name and age	
☐ Experience as a supervisor	
☐ Experience in current job	**Other persons with information**
☐ Personal knowledge of worker	☐ Names
☐ Method of supervision of workers (on-site, remote, etc.)	☐ Work and residence addresses
☐ Knowledge of the Regulation	☐ Evidence provided
☐ Opinion of how the accident happened and how it could have been prevented	
☐ Supervisor's education and training	
	Employer
First aid	☐ Name and address of head office
☐ Services that were available; services provided	☐ Address of office where worker records are held
☐ Name of the first aid attendant	☐ Location of incident

Appendix 3: Considerations in a critical incident

Serious injuries and other critical incidents

Critical incidents include traumatic events, such as a workplace death or serious injury, or incidents with the potential for serious injury, such as a workplace robbery. Because of their serious nature, these incidents often bring unique challenges and stressors to the workplace. This appendix discusses some points you can consider, should such an event occur in your workplace.

Remember, 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 traumatic injuries that are life-threatening, life-altering, or result in a loss of consciousness. Serious injuries can also include incidents (such as chemical exposures, heat stress, or cold stress) that are likely to result in a life-threatening condition or cause permanent injury or significant physical impairment.

911 — the role of the police and the coroner

When an ambulance or other emergency service is called for a death or serious injury, the police are routinely notified, and will usually attend the workplace as well. The role of the police is to determine whether or not a criminal act has been committed. In the event of a workplace death or expected death, you must, as the employer, inform the police. If necessary, the police will, in turn, notify the BC Coroners Service.

The coroner is a quasi-judicial investigator, independent from all law enforcement agencies and health authorities. The coroner determines the identity of the deceased and the cause of death, and classifies the death as "natural, accident, suicide, homicide, or undetermined." The coroner does not assign fault or blame, but conducts a fact-finding investigation into deaths that are unnatural, unexpected, unexplained, or unattended. One of the most important purposes of a coroner's investigation is to identify risk factors to prevent future deaths. The *Coroners Act* and Regulation govern the coroner's scope of activity.

WorkSafeBC investigations

WorkSafeBC investigates certain workplace accidents and other incidents to do as follows:

- Determine the causes and underlying factors
- Provide recommendations to industry to aid in the prevention of future injury and disease
- Gather information to help monitor and analyze industry trends on workplace fatalities, serious injuries, and disease
- Identify associated compliance issues and help ensure compliance with law, regulation, and policy
- Refer cases for prosecution or administrative penalties, as needed

A WorkSafeBC investigation can only begin after the police and coroner have released the scene. WorkSafeBC investigating officers conduct these investigations on behalf of WorkSafeBC. Depending on the circumstances, an investigation may also include engineers, lawyers, human factors specialists, hygienists, and external contractors with specific expertise, as required. Under the Act, you have a legal duty to cooperate with this investigation.

Depending on the complexity, an investigation may take anywhere from a few days to many months. Some investigations may require specialized testing of equipment, the production of expert reports, and/or a review of thousands of documents. Timely completion of an incident investigation is a high priority for WorkSafeBC, in the interests of workers and their families, as well as in ensuring health and safety for everyone in the workplace.

You may only begin your investigation after WorkSafeBC has released the scene.

Dealing with emotions after an incident

Following a serious injury, death, or other critical incident, all workplace parties can experience difficult emotions. These emotions can range from anger and resentment to fear and extreme grief.

As an employer, you can effectively manage critical incidents with clear policies and procedures that are humane, sensitive, and responsive to workers. This can include intervention procedures, independent of the incident investigation, to lessen workers' intense responses to an incident and assist them in returning to their duties. The types of interventions you can consider are listed below.

Defusing sessions

Held within 6 to 8 hours of the incident, a defusing session is a brief, confidential, non-judgmental group meeting of workers affected by the incident. It is critical to have experienced people trained to conduct a defusing session; this can include trained peers. The defuser explains the physical, emotional, and psychological reactions that workers may be experiencing, and how workers can take care of their emotional and physical health following the incident.

Debriefing sessions

A debriefing session is ideally held within 24 to 72 hours after an incident. It is a confidential, non-judgmental discussion of the continuing effects of a traumatic incident on workers. The purpose of this session is to alleviate the trauma of affected workers and to assist in the recovery process. Debriefing focuses on the emotional well-being of workers; it does not attempt to find the cause of the accident or assign blame. Sessions should be led by trained professionals, and participation should be voluntary.

Critiquing sessions

A critiquing session is held a few weeks after the incident. Employers, supervisors, and workers review all aspects of the incident to uncover deficiencies in the handling of the incident and provide corrective solutions. The session looks at how the incident was handled, how it could have been handled better, how it could have been prevented, and the effectiveness of the intervention. It includes a review of related company policies, safety regulations, and safe work procedures.

The corporate review

Within 30 days of an incident, you conduct a broad review of all steps taken in response to the incident, including the following:

- First aid
- Emergency procedures
- Critical incident debriefing
- Accident investigation
- Corrective responses
- Claims management

The purpose of a corporate review is to assess the effectiveness of your company's procedures, how well the company responded, and suggest other corrective steps you can put in place. This general review does not replace an incident investigation.

Biological materials cleanup

Often a serious injury or death can result in blood or other biological material being present in the workplace. If a first aid attendant is present at the workplace, he or she will have the training and equipment necessary to safely clean up the site.

However, if there is no first aid attendant on site, you can follow these steps regarding the safe cleaning of blood or other body fluid:

Step 1: Restrict access to the area.

Step 2: Gather the necessary tools and materials (for example, plastic bags for contaminated items and bleach or germicide for the spill).

Step 3: Put on disposable, waterproof gloves. Other necessary personal protective equipment (PPE) may include a face shield, a gown, and waterproof covers for footwear.

Step 4: Wipe up and dispose of visible material first (for example, using disposable towels). If necessary, change your gloves before the next step.

Step 5: Decontaminate the area using a fresh solution of household bleach and water (one part common household bleach to 10 parts water). Carefully pour the solution over the spill site, leave it on for 10 minutes, wipe it up with disposable towels, and dispose of the towels.

Step 6: Clean and decontaminate all soiled and reusable equipment.

Step 7: Wear the gloves to remove other PPE. Dispose of or clean PPE according to the manufacturer's directions.

Step 8: Remove and dispose of your gloves and wash your hands.

Remember to dispose of this potentially infectious material safely in accordance with local authorities. For further information, see the WorkSafeBC publication *Controlling Exposure: Protecting Workers from Infectious Disease*.

If large amounts of biological material are present, you may wish to retain a third-party service to clean and disinfect the workplace. You can usually obtain the names and contact numbers for such services by contacting local police.

Third-party services or other resources

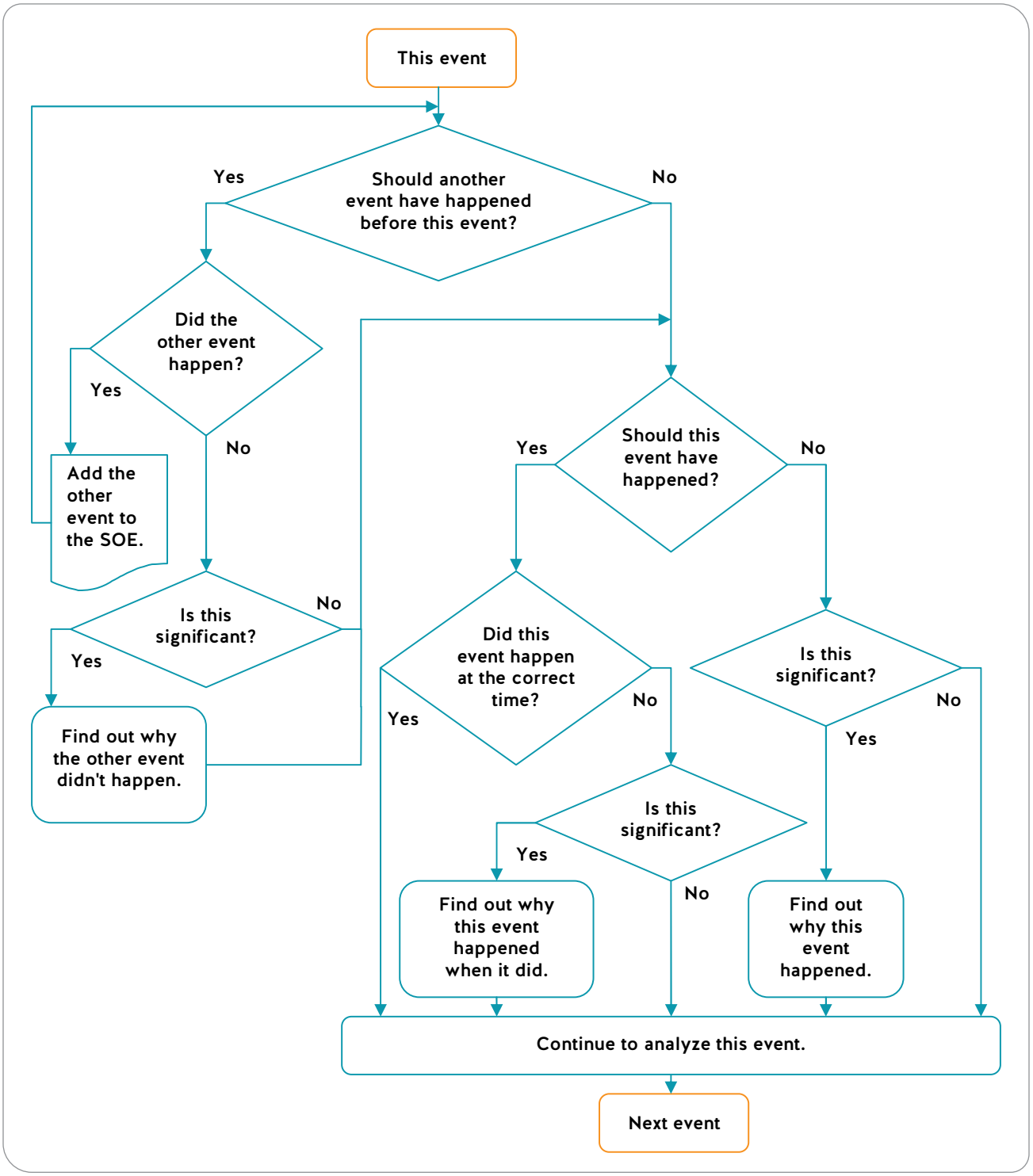
As described above, for many critical incidents, you may wish to retain additional resources to provide expert advice and a neutral, independent perspective. The decision to hire an outside investigator to assist the investigation team can ensure a thorough and timely investigation.

Also, if the event is a "workplace critical incident" — an event that caused emotional or psychological trauma to people exposed to the incident directly — it can have a dramatic effect on workers' feelings about their jobs and the workplace overall. To minimize suffering and allow work to resume more quickly, you can consider retaining professional counselling services.

WorkSafeBC has a Critical Incident Response (CIR) Program. If you would like support or information about this service, please page the CIR Program at 1.888.922.3700 (between 9 a.m. and 11 p.m., seven days a week).

Appendix 4: Analyzing an event

The following flow chart visualizes the event-analysis process laid out in "Step 4: Analyze the sequence of events" (starting on page 20). These questions and steps can help you to structure your analysis and refine your sequence of events. As you ask these questions, be aware that what you learn from the analysis of later events might require you to reconsider your original analysis of an event.



Appendix 5: Employer incident investigation report template (completed example)

Employer Incident Investigation Report (EIIR)

Please refer to the companion quick guide for assistance completing the investigation and this form. Please attach a separate sheet if necessary.

1. Employer's information

Employer's name (legal name and trade name) ABC Lumber Ltd.		
WorkSafeBC account number 123456	Operating location number 001	
Employer's head office address 123 Main Street		
City Prince George	Province BC	Postal code
Employer's representative's name Chris Yu	Phone number (include area code) 250.123.4567	
Email address c.yu@abclumber.com		

2. Injured persons

Last name	First name	Job title
a) Hansen	Bill	Receiving assistant
b)		

3. Place, date, and time of incident

Location where incident occurred (street address or GPS coordinates) East storage yard next to receiving department, 123 Main Street		
City (nearest) Prince George	Province BC	Postal code K1M 4P9
Date of incident (yyyy-mm-dd) 2016-01-16	Time of incident 11:55	❄ a.m. ☐ p.m.

4. Type of occurrence (select all that apply)

- ☐ Death of a worker
- ☐ Serious injury to a worker
- ☐ Major structural failure or collapse
- ☐ Major release of hazardous substance
- ☐ Blasting accident causing personal injury
- ☐ Dangerous incident involving explosives other than blasting incident
- ☐ Diving incident, as defined by regulation
- ☐ Incident of fire or explosion with potential for serious injury
- ☐ Minor injury or no injury but had potential for causing serious injury
- ☐ Injury requiring medical treatment beyond first aid

An incident investigation report is NOT required under the *Workers Compensation Act* if none of the above applies or if this incident is a motor vehicle accident occurring on a public street or highway.

5. Report type (select all that apply) If this is a revised version of a previous report, please check here ☐

☐ **Preliminary Investigation Report**	☐ **Interim Corrective Action Report**	☐ **Full Investigation Report**	☐ **Full Corrective Action Report**
Report date (yyyy-mm-dd) 2016-01-17 Only provide to a WorkSafeBC officer **if requested** Officer's name	Report date (yyyy-mm-dd) 2016-01-17	Report date (yyyy-mm-dd) 2016-01-17 **Must be provided to WorkSafeBC within 30 days*** **Fax 1.866.240.1434** Date sent: 2016-01-18	Report date (yyyy-mm-dd) 2016-01-18

6. Witnesses

Last name	First name	Job title
a) Finch	Susan	Labourer
b)		

7. Other persons whose presence might be necessary for proper investigation

Last name	First name	Job title
a) none		
b)		

8. Sequence of events that preceded the incident

Required in Preliminary Report. Update in Full Report if necessary. Describe events earlier that day or even in previous years that led up to the incident. Examples may include events such as training given or changes in equipment, procedures, or company management.

- 5 weeks ago: Young worker hired
- 4 weeks ago: New worker orientation provided

Day of Incident (Weather: -5 degrees F — Ground frozen with icy rain)

- 6:30 am: Front entrance and employee parking lot sanded and salted
- 7:30: Start of day shift
- 8:00: Worker arrived at plant (30 minutes late)
- 8:15: Crew meeting (with worker in attendance) regarding daily tasks/schedules
- About 9:50: Delivery driver saw lumber storage area was full
- About 10:00: Stack of lumber dropped next to laneway as temporary measure
- 11:45: Plant manager called to request urgent pick up of a piece of equipment
- 11:50: Worker volunteered to pick up equipment from rear yard
- 11:50: Manager directed worker to take old truck (1995 Ford) parked outside
- About 11:53: Other worker (2) exited building, descending stairway to crossing
- About 11:55: Worker got into truck to drive to rear storage yard
- About 11:55: Worker turned on ignition and put on seatbelt
- About 11:55: Worker in truck accelerated quickly towards laneway and turned left
- About 11:55: Other worker (2) entered pedestrian crossing area
- About 11:55: Worker in truck saw improperly stacked lumber near laneway (worker reportedly startled)
- About 11:55: Worker braked hard
- 11:55: Worker in truck as it skidded on icy ground toward lumber and other worker
- 11:55: Other worker (2) in pedestrian crossing jumped out of the way of the truck
- 11:55: Truck collided with improperly stacked lumber

9. Unsafe conditions, acts, or procedures that significantly contributed to the incident

Required in all reports. Describe anything, or the absence of anything, that contributed to the hazard such as poor housekeeping or poor visibility, using equipment without guards, or the lack of safe work procedures.

- Freezing rain and icy ground (slick surface)
- Rushing to complete urgent task
- 1995 Ford truck (condition of brakes and steering unknown at this time)
- Lack of orientation/training with specific equipment (Ford truck)
- Drove too fast and braked too hard for weather conditions
- Improperly stored lumber

10. Nature of the serious injury (optional — complete only if there has been an injury)

- ☐ Life threatening or resulting in loss of consciousness
- ☐ Major broken bones in head, spine, pelvis, arms, or legs
- ☐ Major crush injuries
- ☐ Major cut with severe bleeding
- ☐ Amputation of arm, leg, or large part of hand or foot
- ☐ Major penetrating injuries to eye, head, or body
- ☐ Severe (third-degree) burns
- ☐ Punctured lung or other serious respiratory condition
- ☐ Injury to internal organ or internal bleeding
- ☐ Injury likely to result in loss of sight, hearing, or touch
- ☐ Injury requiring CPR or other critical intervention
- ☐ Diving illness such as decompression sickness or near drowning
- ☐ Serious chemical or heat/cold stress exposure
- ☐ Other (specify)

11. Brief description of the incident

Required in Preliminary Report. Briefly, summarize the sequence of events, the unsafe factors, and the resulting injury, if any.

At about 11:55 am on January 16, 2016, a worker was driving the old truck on the way to pick up a piece of equipment from the rear yard, in response to an urgent request from the plant manager. The new, young worker had not previously driven this truck.

The ground was icy and there was freezing rain. Due to the weather conditions, the front entrance and parking lot had been salted and sanded, but the back yard laneways were not addressed. After getting into the vehicle, the worker turned on the ignition and put on the seat belt. The worker accelerated quickly toward the laneway.

As the worker turned left at the corner, he was startled to see a stack of lumber stored next to the laneway. The worker stepped hard on the brake, and the truck started to skid. The truck skidded into the stack of lumber and nearly hit another worker who was in a pedestrian walk area.

The worker in the truck only required first aid on site, although the truck sustained considerable damage. The worker in the pedestrian walkway was not injured. This incident is being investigated as a near miss due to its potential for serious injury.

12. Corrective actions identified and taken to prevent recurrence of similar incidents

Action (Required in Preliminary Report and Interim Corrective Action Report. Update in Full Report, if necessary.)	**Action assigned to** (name, job title, contact information)	**Expected completion date** (yyyy-mm-dd)	**Completed date** (yyyy-mm-dd)
Salt and sand rear laneway area	Jan Smitt, Plant Mgr.	2016-01-16	2016-01-16
Move stack of lumber to correct storage area	Chris Yu, Warehouse Mgr.	2016-01-16	2016-01-16
Remove truck from service until repaired or replaced	Kim Singh, Purchasing	2016-01-16	2016-01-16
Discussion with worker, supervisor and plant manager about rushing	Jan Smitt, Plant Mgr.	2016-01-16	2016-01-16

13. Explanation of blank areas on this Preliminary Report, if any

If there are blank areas, describe the circumstances beyond your control that explain this lack of information.

None

14. Persons who carried out or participated in the preliminary investigation

Representative	**Name**	**Job title**	**Signature** (optional)	**Date signed** (yyyy-mm-dd)
Employer representative (required)	Chris Yu	Warehouse Manager		2016-01-17
Worker representative (required)	Peter Russell	JHSC co-chair		2016-01-17
Other				

End of report

Completing all the sections above satisfies the requirements for a Preliminary Investigation Report and an Interim Corrective Action Report.

Note:

If this was a simple investigation and **all needed corrective actions have been completed within 48 hours**, the Preliminary and Full Investigation portions of the report can be completed at the same time. If so, you can check both the Preliminary Investigation Report and the Full Investigation Report boxes in section 5 on page 1.

Copies of **all** reports must also be provided to the joint health and safety committee or worker representative, as applicable.

15. Determination of causes of incident

Required in Full Report. Analyze the facts and circumstances of the incident to identify underlying factors that led to the incident. Underlying factors include factors that made the unsafe conditions, acts, or procedures in the Preliminary Report possible. Update items from section 9, if needed.

- Lack of procedure to ensure specific orientation prior to assignment to operate equipment
- Failure to ensure all potential vehicle travel areas in the plant yard are sanded and salted during severe weather
- Lack of designated, safe storage area for lumber when regular storage area is full
- Failure to conduct a risk assessment prior to requesting/assigning an urgent order request

16. Full description of the incident

At approximately 11:55 am on January 16, 2016, a worker was driving the 1995 Ford truck (VIN 6789678) on the way to pick up a piece of equipment from the rear yard, in response to an urgent request from the plant manager. The new, young worker had received a general plant orientation but had not received any training or orientation on this equipment. The ground was icy and there was freezing rain. Due to the weather conditions, the front entrance and parking lot had been salted and sanded earlier that morning, but the back yard laneways were not addressed.

After getting into the vehicle, the worker turned on the ignition and put on the seatbelt. The worker accelerated toward the laneway. The worker reported that as he turned left at the corner, he was startled to see a stack of lumber stored next to the laneway. This lumber had been temporarily placed here at approximately 10 am, because the delivery driver found the regular lumber storage area was full. The worker stepped hard on the brake and the truck started to skid. The truck skidded into the stack of lumber and nearly hit another worker who was in a pedestrian walk area.

Although the truck sustained considerable damage, the worker in the truck only required first aid treatment on site. The worker in the pedestrian walkway was not injured. This incident is being investigated as a near miss due to its potential for serious injury.

17. Additional corrective actions necessary to prevent recurrence of similar incidents

Additional corrective action (Required in Full Report and Full Corrective Action Report.)	**Action assigned to** (name, job title, contact information)	**Expected completion date** (yyyy-mm-dd)	**Completed date** (yyyy-mm-dd)
Update orientation procedure to include specific training prior to assignment to operate equipment	Chris Yu, Warehouse Mgr.	2016-01-17	2016-01-17
Revise procedure to ensure all potential vehicle travel areas in the plant yard are sanded and salted during severe weather	Jan Smitt, Plant Mgr.	2016-01-17	2016-01-17
Identify and sign alternate safe lumber storage area	Chris Yu, Warehouse Mgr.	2016-01-17	2016-01-18
Discuss required risk assessment process with all plant managers at next scheduled OSH management meeting, focusing on urgent orders and other non-standard tasks	Jan Smitt, Plant Mgr.	2016-01-17	2016-01-18
Ensure Ford truck is included in preventive maintenance program	Stu Norman, Maintenance Manager	2016-01-17	2016-01-17

18. Persons who carried out or participated in the full investigation

Representative	**Name**	**Job title**	**Signature** (optional)	**Date signed** (yyyy-mm-dd)
Employer representative (required)	Chris Yu	Warehouse Manager		2016-01-17
Worker representative (required)	Peter Russell	JHSC co-chair		2016-01-17
Other				

19. Other relevant workplace parties

Company name	**Contact person and job title**	**Contact number or email address**
none		

End of report

Completing all the sections above satisfies the requirements for a Full Investigation Report and a Full Corrective Action Report.

Employers are required to submit **full** investigation reports to WorkSafeBC **within 30 days* of the incident**. Reports may be submitted by fax to 604.276.3247 (Greater Vancouver), toll-free fax 1.866.240.1434, or by mail to PO Box 5350, Stn Terminal, Vancouver BC V6B 5L5. Do NOT submit a preliminary report unless you have been so directed by a WorkSafeBC officer.

* Employers can request an extension from a WorkSafeBC officer, **if the full investigation cannot be completed within 30 days**.

Copies of **all** reports must also be provided to the joint health and safety committee or worker representative, as applicable.

Submit your incident investigation reports online

You can now view and submit your incident investigation reports through your online services account. To do so, you'll first need to set up access through one of the following ways:

- **If you are the administrator of your online services account**, you can give yourself access by selecting "Change my or another user's access to online tools" under the Administration menu.
- **If you are not the administrator of your online services account**, you will need to request access from the account's administrator(s). You can do this by selecting "Request a change in my access to online tools" under the My profile menu.

Once you have access, click on the "Health & Safety" tab and you will see a link to "View & submit incident investigation reports"

Appendix 6: Investigating musculoskeletal injuries

This appendix is intended to assist you in conducting an incident investigation and completing an employer incident investigation report associated with a worker report of a work-related musculoskeletal injury (MSI) requiring medical treatment. (Keep in mind that this appendix is not intended to provide a comprehensive list of questions to ask while conducting your investigation.)

Incident information and pertinent documentation

- Ask the worker when and how the MSI occurred. For example, when did the worker first experience symptoms? Did the worker go to first aid?
- If an ergonomic assessment of the task or workplace has been conducted, what were the identified hazards and risks?
- If an ergonomic assessment of the task or workplace has not been conducted, describe the physical demands of the task in question. For example, if material handling (lifting, pushing, pulling, etc.) is involved, describe the weight, frequency, carrying, or lifting distances, and any required twisting movements. Also, examine and describe any equipment involved in the task and the overall design and layout of the work area.
- Take pictures or videos of the task to include in the report. Make sketches with measurements.
- Collect safe work procedures, instructions, manuals, and other types of formal or informal written records that may provide clues to MSI causes.

Unsafe conditions, acts, and procedures, and underlying causes

Examples of questions to ask during your analysis include, but are not limited to, the following:

- Has the worker been adequately trained in ergonomic hazards and prevention of MSIs?
- Is job rotation or a substitution of tasks available to allow the worker to change his or her work task or posture?
- Is the worker familiar with how to set up his or her workstation properly and when and where to find help?
- Does the worker have some involvement and control over the work processes?
- Is there adequate communication and supervision between the worker and the supervisor?
- Has the worker recently returned from an absence? How long was the worker away?
- Have there been any recent changes to the worker's duties? Unaccustomed work?
- Has the worker been doing overtime work? How much?
- Have there been any changes to the worker's equipment? New physical demands? New layout?
- Is the workplace layout a factor? Is awkward posture, cold, or vibration a factor?
- Are issues of urgency, such as production demands, creating additional risk factors?
- Does the worker take his or her scheduled lunch breaks or work through lunch?
- Is the worker taking rest breaks from tasks that require long duration or repetitive postures or forces? (In the office, consider the amount of keying or mousing activities.)
- Has the worker received a recent eye exam if he or she is experiencing eye strain, blurred vision, irritated eyes, or headaches?

Note: The conclusions are based on what you learn after analyzing available information and facts. Do not include conclusions that you cannot support with the evidence and analysis.

Possible corrective actions

Some examples of possible corrective action include, but are not limited to, the following:

- Eliminate the task by automation, being sure not to introduce equivalent or worse risks.
- Modify the task to reduce the risk. For example, reduce the physical demands by limiting the weights being lifted or the pace of the work.
- Provide additional equipment (hoists, conveyors, powered lifts, etc.) to reduce physical demands.
- Provide training on how to correctly use the equipment meant to reduce ergonomic risks.
- Establish an ongoing preventive maintenance program for all equipment.
- Upgrade workplace conditions to remove risks. Examples of such upgrades include repairing floors, providing heat, removing noise or vibration, etc.
- Reorganize the layout of the workplace and the assigned work area to reduce physical and mental demands.
- Modify work tasks to reduce repetitive motions and to regularly break up static postures.
- Ensure the worker takes regular breaks to provide rests between work activities. (In office settings, consider using a “stretch break” or a “click-less mousing” program.)
- Reduce the physical demands on the worker by sharing demanding tasks among a group of workers.
- Establish or revise safe work procedures to address ergonomic risks and controls.
- Provide direct instruction and coaching to train the worker in best ergonomic practices.
- Review educational materials, such as the WorkSafeBC publication *Preventing Musculoskeletal Injury* (MSI), with the worker and your supervisors.
- Establish clear employer expectations regarding urgency, supervision, and discipline.
- If the task cannot be modified, consider incorporating physical demand requirements into the job description and revising your hiring practices.
- For complex situations, consider hiring a professional to conduct an ergonomic assessment and recommend appropriate corrective action.

Resources

The following key resources related to incident investigation and reporting are available at no charge online. Visit **worksafebc.com** and enter the full or partial name of the resource in the search box.

Legislation

Workers Compensation Act

- Part 2, Division 5, sections 31 to 46, Joint Committees and Worker Representatives
- Part 2, Division 10, sections 68 to 73, Accident Reporting and Investigation

Regulation, policies, and guidelines

Occupational Health and Safety Regulation

- Part 3, section 3.3, Contents of (OHS) Program
- Part 3, section 3.28, Participation by Employer or Representative of Employer and Worker Representative
- Part 21, Blasting Operations
- Part 24, Diving, Fishing and Other Marine Operations

OHS Policies (found in WorkSafeBC's *Prevention Manual*)

- Policy P2-31-1, Joint Committees — When a Committee is Required
- Policy P2-68-1, Major Release of Hazardous Substance
- Policy P2-71-1, Preliminary Incident Investigation, Report and Follow-Up Action
- Policy P2-72-1, Full Incident Investigation, Report and Follow-Up Action

OHS Guidelines

- Guideline G3.1, When an Occupational Health and Safety Program is Required
- Guideline G3.2, Occupational Health and Safety Programs for Small Operations
- Guideline G3.28, Participation in Employer Incident Investigations
- Guideline G21.3, Dangerous Incident Reports
- Guideline G-P2-68-1, WorkSafeBC Notification of Serious Injuries
- Guideline G-P2-72-1, Full Incident Investigation, Report, and Follow-Up Actions

Forms and related publications

- **Employer Incident Investigation Report (EIIR) Template**
  Use this template (Form 52E40) to create a preliminary investigation report, an interim corrective action report, a full investigation report, and a full corrective action report. The template is available in PDF and Word versions.
- **Guide to Completing an Employer Incident Investigation Report (EIIR)**
  Use this six-page guide to help you use the Employer Incident Investigation Report above.
- **Fishing Incident Investigation Report Form**
  This form (Form 52E40F) is provided to the master or owner of the vessel for the purpose of documenting the investigation into a fishing incident. The form is available in PDF and Word versions.