VIU Incident AND ACCIDENT INvestigation procedures Manual

Department of Health and Safety Services

**2017**

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## 1. Introduction

Incident and accident investigations are an important part of the Vancouver Island University (VIU) Health and Safety program. Investigations are a process of fact finding to identify the root (underlying) cause of accidents/incidents and act as a means of preventing further occurrences. Including investigations in the larger VIU occupational health and safety (OH&S) program strengthens the internal responsibility system and is essential to building a positive health and safety culture in the workplace.

## 2. Purpose

The purpose of this procedure is to describe the systematic requirements established by VIU to report and investigate incidents and accidents that occur on any of the VIU campuses. An investigation is a well-planned analysis of an event that identifies the root cause and recommends corrective action to prevent the event from happening again. While the aim of VIU’s OH&S program is to prevent accidents and incidents, when incidents or accidents do happen, the process to find the root cause of these events is outlined in this manual.

## 3. Scope

The VIU Incident and Accident Investigation procedures deal specifically with outlining the processes that VIU, Departments, Supervisors, the Joint Occupational Safety and Health Committee (JOSHC) and our employees (faculty and staff) follow when investigating an incident or accident on our campuses. This program outlines the responsibilities and requirements to report and conduct preliminary and full investigations at VIU.

## 4. VIU Health and Safety Policy 41.09

 “Vancouver Island University is committed to promoting a safe and healthy working and learning environment. It is the priority of the University to ensure safe working conditions and job safety practices in the planning, budgeting, direction and implementation of the University’s activities.”

## 5. Responsibilities for Incident and Accident Investigations

At VIU, everyone has a responsibility for safety. In BC, the Workers Compensation Act identifies the health and safety responsibilities of the employer, supervisors, and workers.

The employer, represented by the senior management group at VIU, has important responsibilities with respect to health and safety in the workplace. They are responsible for ensuring that resources are made available so that every precaution, within reason, can be implemented in order to protect the VIU community from unnecessary harm while on our campuses.

It is the employer’s responsibility to ensure that investigations into incidents and accidents take place and are conducted as soon as possible after the occurrence. It is also the employer’s responsibility to ensure that recommendations from the Investigation Team are responded to quickly to prevent reoccurrence.

## VIU Responsibilities (Employer)

It is VIU’s responsibility, acting through the appropriate VIU administrative heads (Deans, Executive Directors, Campus Administrators, etc.) to:

1. Complete an accident investigation report in the timelines specified in the BC Workers Compensation Act (The Act, therein):
2. Complete a *preliminary investigation* **within 48 hours** of the incident and prepare a preliminary investigation report.
3. Determining interim corrective actions as appropriate and prepare a corrective action report.
4. Completing a *full investigation* and prepare a full investigation report as required under The Act. Submit a copy to WorkSafeBC **within 30 days** of the incident as required.
5. Determining the final corrective actions as appropriate and prepare a final corrective action report.

VIU must immediately notify WorkSafeBC of any accident resulting in:

1. serious injury or death;
2. a major structural failure or collapse of a building, bridge tower, crane hoist, temporary construction support system or evacuation;
3. a major release of a hazardous substance;
4. a fire or explosion that had a potential for causing serious injury to a worker; or
5. an incident required to be reported as per the specifics of the BC Occupational Health and Safety Regulations.

## Health and Safety Services Responsibilities (H&SS)

Provides the co-ordination, technical expertise and administrative oversight for the Incident and Accident Investigation procedures at VIU including:

1. Manage, develop, implement and maintain the VIU health and safety program and its related procedures;
2. Educate, train, and create tools and resources for the VIU campus community regarding the procedures;
3. Maintain VIU’s database dedicated to incident and accident reports and investigations;
4. Ensure that investigations are completed as required; and
5. Assist and participate in an incident investigation, as required.

## Administrative Heads (Deans, Executive Directors, campus administrators)

1. Ensuring that supervisors, faculty (instructors and technicians) and staff in their respective areas are aware of the VIU Incident and Accident Investigation procedure;
2. Ensure that appropriate investigation training in incident and accident investigations is made available to the faculty and staff in their respective areas;
3. Ensure that faculty and staff know their responsibilities during an incident and accident investigation;
4. Ensure that faculty and staff report all incidents and accidents to their supervisor immediately; and
5. Assist and participate in an incident and accident investigation, as and when required.

## Supervisors Responsibilities

A supervisor is a person who instructs, directs and controls workers (and students) in the performance of their duties. At VIU this includes individuals who are employed as Directors, Managers and Supervisors as well as

Deans, Principal Investigators, Administrative Officers, Faculty and Lab Instructors. It may also include other positions that exercise supervisory responsibilities.

1. Receive training in incident and accident investigations;
2. Complete the VIU Incident/Accident Report and Investigation Form **as soon as** receiving notification of the incident or accident;
3. Complete incident investigation with worker or worker representative and develop corrective actions;
4. Correct unsafe work practices or hazardous conditions promptly;
5. Ensure corrective actions are implemented;
6. Assist and participate in an incident investigation, as and when required.

## Joint Occupational Health and Safety Committee Members, Faculty and Staff (instructors, technicians, workers) Responsibilities

1. Work in a safe manner at all times;
2. Receive training in incident and accident investigations;
3. Reports all incident and accidents to their Supervisor as soon as possible;
4. Assist and participate in an incident investigation, as and when required.

## Chair, Risk and Threat Assessment Team

It is the responsibility of the Chair, VIU Risk and Threat Assessment Team to disclose and disseminate, on behalf of VIU, all information related to investigations related to incidents of threats and violence in the workplace to all affected VIU workers where there is a risk for violence in the workplace.

# 6. Regulatory and Best Practice Requirements

[**BC Workers Compensation Act, Part 3 Division 10**](http://www2.worksafebc.com/Publications/OHSRegulation/WorkersCompensationAct.asp#SectionNumber:Part3Division10)

**Canadian Human Pathogens and Toxins Act and Regulations**

# 7. Incident and Accident Investigation Procedures

## A. Key Terminology

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

**Incident:** Includes an accident, or other occurrences which resulted in, or had the potential to for, causing an injury or occupational disease.

**Hazard:** A thing or condition that may expose a person to a risk of injury or occupational disease.

**Risk:** The chance that an injury or occupational disease occurs

**Preliminary Investigation:** Preliminary investigation reports must be initiated immediately and are used to identify any unsafe conditions, acts, or procedures, and to identify and manage hazards in the workplace. Preliminary investigations must be completed within 48hrs of the incident. The *VIU Incident/Accident Report and Investigation Form* is used to guide you through the preliminary investigation.

**Full Investigation:** Full investigations are used to determine the underlying cause(s) of the incident.

**Medical-Aid and Time-Loss Injuries** involve incidents in which an employee has to seek professional medical attention, such as a family doctor or a walk-in clinic, or in which the employee missed time from work beyond the day of injury. These need to be reported to H&SS within 24 hours of occurrence using the *VIU Incident/Accident Report and Investigation Form*.

**Fatalities and Serious Incidents** must be reported to WorkSafeBC immediately. H&SS and the Administrative Head will need to be informed as well.

**Near Misses** are incidents that had the potential to cause injury or property damage, but did not. Serious near misses should be reported to the supervisor and H&SS and the JOSHC.

**Property Damage** should be reported to the supervisor without delay. The supervisor will determine whether an investigation and further reporting is required based on the requirements of WorkSafeBC.

**Release of Hazardous Substances** For serious releases, call 911 immediately, then WorkSafeBC. Follow [VIU Emergency Procedures](http://sites.viu.ca/emergency/) as and when required.

**Injuries to Contractors, Visitors or Students** are reported by completing the *VIU Incident/Accident Report and Investigation Form* and are sent to Health & Safety Services.

## B. Reporting Incidents, Accidents and Investigations

There are two levels of incident reporting:

1. **At the work site.** Faculty and staff report *all* incidents using the [Safety Portal](https://safetyincidents.viu.ca/login?logout=1). Incidents include but are not limited to:
	* + release of a hazardous substances
		+ minor injuries/first aid
		+ near miss
		+ property damage
		+ sexual assault
		+ theft
		+ violence or threats.

They must also report all work related injuries and acute illnesses (a disease or a condition with a rapid onset and a short, severe course).

**VIU Incident Reporting Procedure**

At VIU *all* incidents are reported using the [Safety Portal](https://safetyincidents.viu.ca/login?logout=1). The form is submitted directly to their immediate supervisor and Health and Safety Services as soon as possible after the incident occurs.

For all incidents of concerning, threatening and violent behaviour, the VIU Incident/Accident Report and Investigation Form is also submitted to the Chair, VIU Risk and Threat Assessment Team in Student Affairs.

All incidents, and the corrective actions of the investigation, shall be communicated to everyone involved. Incidents of threats and violence must be disclosed to all VIU workers where there is a risk for violence in the workplace. It is the responsibility of the Chair, VIU Risk and Threat Assessment Team to disseminate this information on behalf of VIU.

1. **To WorkSafeBC.** VIU must report specific incidents to WorkSafeBC immediately including when:
* A worker is seriously injured or killed on the job
* There is a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation
* There is a major release of a hazardous substance
* There is a diving incident as defined by OHS Regulation [24.34](https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-24-diving-fishing-and-other-marine-operations#B8FDF568090A40FF9781B9D0D1CBD484#SectionNumber:24.34)
* There is a dangerous incident involving a fire or explosion that had potential for causing serious injury to a worker
* There is a blasting incident that results in personal injury or injuries

.

## C. Types of Investigations

### Preliminary Investigation:

VIU must conduct a preliminary investigation for *all* incidents ***within 48 hours***. The preliminary investigation must:

1. identify any unsafe conditions, acts or procedures that significantly contributed to the incident, and:
2. if unsafe conditions, acts or procedures are identified in the Step 1 above, VIU must determine the corrective action necessary to prevent the recurrence of similar incidents.

Following the preliminary investigation, VIU must, without undue delay, undertake any corrective action determined to be necessary to prevent future occurrence. VIU must also prepare a report of the action taken, and provide the report to the Joint Occupational Safety and Health (JOSH) committee.

### Full Investigation:

Full investigation must be completed within 30 days of the occurrence of the incident. A full report is submitted to the WCB by Health and Safety Services on VIU’s behalf.

VIU is required to complete a full investigation when the accident:

1. resulted in injury to a worker requiring medical treatment, (Beyond receiving VIU First Aid services)
2. did not involve injury to a worker, or involved only minor injury not requiring medical treatment**, but** had a potential for causing serious injury to a worker, or
3. is an incident required by regulation to be investigated (please contact H&SS for assistance determining if this is a reportable incident)

In the event that an incident occurs that is listed above the scene of an accident ***must not*** be disturbed except to:

1. attend to persons injured or killed,
2. prevent further injuries or death, or
3. protect property that is endangered as a result of the accident.

## D. Why Investigate

1. To identify factors that contributed to the incident
2. To identify and implement corrective actions
3. To prevent the recurrence of similar incidents
4. Incidents are costly: 3-50X’s the cost we see on the surface
	* Building damage
	* Tool and equipment damage
	* Product and Material damage
	* Production delay and interruptions
	* Legal expenses
	* Interim equipment rentals
	* Expenditure of emergency supplies and equipment
	* Investigation time
	* Wages paid for time lost
	* Cost of hiring and/or training replacement personnel
	* Overtime
	* Extra supervisory time
	* Clerical time
	* Decreased output of injured worker upon return to work
	* Loss of business and goodwill

**NOTE:** Investigations DO NOT find fault or place blame

## E. What to Investigate

Incidents that MUST be investigated by VIU include those:

1. Resulting in serious injury or the death of a worker
2. Involving a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation
3. Involving the major release of a hazardous substance
	1. Does not only mean considerable quantity or the nature of the release like gas or volatile liquid but more importantly the seriousness of the risk to the health of workers
4. Resulting in injury to a worker requiring medical treatment
5. That did not involve injury to a worker, or involved only minor injury requiring medical treatment but had POTENTIAL for causing injury to a worker (a near miss).
6. That are an incident required by the BC Occupational Health and Safety regulation to be investigated.

## F. When to Investigate

**Preliminary Investigations:** MUST be completed ***within 48 hours*** of the occurrence of the incident.

**Full Investigations:** Full investigation must be completed ***within 30 days*** of the occurrence of the incident and the investigation report must be submitted to WorkSafeBC.

## G. Who Investigates

**Supervisor –** Must always be involved in the investigation

**Knowledgeable Person (worker, experts in the field, etc.) -** Must always be involved in the investigation

**Worker Representative -** Must always be involved in the investigation

**Health and Safety Services (optional)**

**VIU Campus Security (optional)**

## H. How to Investigate

### What to bring to an Investigation

1. **Camera:** Used as a means to gather information be taking a snapshot of the scene so that it can be references to at a later time during the investigation.
2. **Pen/Notebook:** used as a means to gather information and take notes, make sketches and write down the sequence of events
3. **Measuring Tape:** Used to get rough estimated of distances that may be crucial to the investigation.
4. **Personal Protective Equipment:** This may be required at the scene of the incident, depending on the location of the incident. You must always ensure your own personal safety is taken care of first before entering an accident area.

### Manage the Accident Scene

* 1. Provide Treatment to the Injured:
		1. First Aid: Call 740-6600 for all non-emergent medical aid
		2. Emergency: Call 911, then 740-6600 to inform only of the situation and so that personnel can go to the scene to assist first reponders.
	2. Control the hazards:

Ensure the accident scene is safe and the hazard is removed.

Examples:

energized equipment

slippery surface

falling or tripping hazards

* 1. Preserve the Accident Scene

Ensure the accident scene is safe by roping off the area

### Gather Information

1. Interviews
	1. Interview all parties involved – separately. This allows investigators to get each individual’s version of what happened.
	2. Put the person at ease
	3. Be neutral
	4. Give witness feedback of your own understanding of what happened.
	5. Use visual aids or re-enactment
	6. End discussions on a positive note
	7. Keep all lines of communication open
	8. Take notes
2. Physical Evidence
	1. Take notes
	2. Note the timing of events
	3. Take pictures/photos
	4. Draw rough sketches
	5. Take measurements
3. Documentation
	1. Training records
	2. Inspection records – equipment, facility, etc.
	3. Maintenance records
	4. Standard Operating Procedures

### Evaluate Findings

The reason for evaluating all findings is to determine the sequence of events of the incident. The sequence of events always includes those leading up to the incident. All of this information should be included in the then incident description section of the incident report form.

Example: It is insufficient to just say ‘the worker fell on the stairs’. It is better to say “The worker was carrying a pile of papers and running down the stairs. The stairs were wet and the worker slipped and fell down 2 stairs. The worker landed on their back at the bottom of the stairs.”

***Do not*** include the names of the workers during the evaluation step.

After interviewing coworkers, witnesses and the injured worker, gather additional information and determine the sequence of events.

Example:

1. Worker spilled oil on the ground because he was rushing to get a cake out of the oven
2. The worker looked around but did not find anything to clean up the spill with
3. The worker tried to avoid stepping in the oil and went to reach for a utensil
4. Worker lost their balance
5. Worker ended up stepping in the spill, hitting leg on the bucket in the aisle and fell to the ground
6. Another coworker happened to walk in at that moment and called first aid to help the injured worker.

### Determine Cause(s)

There is seldom one cause for an incident.

**Direct Causes**

Direct Causes are also known as Substandard Acts and Substandard Conditions. Direct Causes are the circumstances that *immediately precede* the incident and can usually be seen or sensed.

|  |  |
| --- | --- |
|  | Things to Consider |
| PEOPLE | Personal Protective Equipment (PPE) worn?Was PPE worn correct for the work being done? |
| EQUIPMENT | Part(s) missing?Incorrect choice of equipment for the work being done? |
| MATERIALS | Incorrect tool?Weight of the items being used. Too heavy? Awkward to handle? |
| Environment | Lighting, noise, temperature, housekeeping |

Examples of Direct Causes:

|  |  |  |
| --- | --- | --- |
| **Task Related Causes** | **Environment Related Causes** | **Equipment Related Causes** |
| Lifting Overhead | Variations in floor surface | High force equipment |
| Heavy Load – Push | Wet/Slippery | Signage/labelling inadequate |
| Heavy Load – Lift | Personal Protective Equipment restrictions | Equipment vibration |
| Heavy Load - Pull | Housekeeping | Defective equipment |
| Awkward load to handle | Cold/Hot | Preventative maintenance inadequate |
| Hot load | Vision obstructed | Material/equipment failure |
| Sharp edges on load | Limited space/constrained posture | Incorrect equipment |
| Stooping |  |  |
| Incorrect tool |  |  |
| Procedures not followed |  |  |
| Twisting the trunk |  |  |
| Repetitive motion |  |  |
| Extended Reach |  |  |
| Rushing |  |  |
| Lifting |  |  |

You must select an option(s) in each category of causes (Task, Environment, and Equipment).  Avoid clicking "No Task Causes", "No Environment Causes", "No Equipment Causes" and choose an option that is provided or list the cause under "Other."

The incident investigator must select an option(s) in each category of causes (Task, Environment, and Equipment). ***Best practice*** is to avoid selecting “No Task Causes”, “No Environment Causes”, or “No Equipment Causes” and choose an option that is provided or list the cause under “Other”.

**Root (underlying) Causes**

Root causes are the underlying causes of the incident. These are the reason why the direct cause exists, or occurred. Root causes are not apparent, so fact finding is crucial when determining these causes. Obtaining the root cause can be done by asking **“WHY?”** to each direct cause identified.

**Example:** How to determine the root cause



Examples of Root Causes:

|  |  |
| --- | --- |
| **Organizational Root Causes** | **Human Root Causes** |
| No “Organizational” root causes | No “Human” root causes |
| Excessive workload | Knowledge/skill/experience lacking |
| Planning inadequate | Personal distraction |
| Poor job design | Pre-existing condition |
| Poor communication | Illness |
| Job/skill training inadequate | Language difficulties |
| Staffing inadequate | Physical limitations |
| No Standard Operating Procedures available | Fatigue |

Proper investigation and corrective actions of incidents that involve property loss and/or a near miss will reduce the likelihood of a serious injury or death

### Determine Corrective Actions/Controls

There should be no blame associated with an investigation and corrective actions should take into account the bigger picture. Corrective actions should apply to all individuals who would find themselves in similar circumstances.

Please note that offering modified duties to a worker ***are not*** considered Corrective Actions as modified duties do not prevent injuries occurring to others in the same situation or doing the same task.

When implementing a corrective action it must not create another hazard to workers. A corrective action should work to prevent similar incidents AND will address the Root Cause. In other words, a corrective action should not be a simple Band-Aid fix for one incident. The corrective action will be a long-term solution and will never be aimed at an individual. They should encompass the bigger picture.

When implementing a corrective action there must be an assigned person (or position) responsible that ensures the ongoing implementation of the corrective action.



### Implement Control(s)

It is best to follow the Hierarchy of Control when implementing Corrective Actions

1. **Elimination**
	* Remove the Hazard completely – may not always be feasible
2. **Substitution**
	* Substitute the hazard with something less hazardous yet still has similar properties to serve the purpose for its use
3. **Engineering**
	* Built into the design to minimize the risk if the hazard
		+ Options include:
			- Enclosures/Isolation
			- Ventilation
			- Process changes
4. **Administrative**

Administrative controls are required even if Engineering Controls are in place. All processes must have some type of Administrative control in place as a means to mitigate hazards and risks. Administrative controls are a method of documenting things and include:

* 1. **Education and training** – the skills and knowledge that enable a person to safely conduct the job or tasks they are being asked to do.
	2. **Standard Operating Procedures** – these are established or prescribed methods to be followed routinely for the performance of designated operations or in designated situations.
	3. **Emergency Procedures** – VIU has developed [emergency procedures](http://sites.viu.ca/emergency/) for campus-wide emergency events such as evacuations, fires, and gas leaks. It is important for all areas on campus to individualize emergency procedures for the specific hazards/risks of their specific workplace.
	4. **Inventories** – This includes both chemicals and equipment.
1. **Personal Protective Equipment (PPE)**

Personal Protective Equipment is always the last line of defense and will never be used without one or more of the other control methods. It should also never be disregarded because there are other controls are in place.

It is important to keep in mind that PPE does not remove the hazard it simply acts as a protective barrier to the hazard being used. The type of PPE selected must be chosen on the conditions of a detailed risk assessment and regulatory requirements. When it is identified that PPE is needed as a method of control, it must be worn at all times. The individual who is required to wear it must also be training on how and when to use it (e.g. donning and doffing) and the limitations of its use.

### SMART Corrective Actions

When implementing Corrective Actions make sure that they are:

**S**pecific – State exactly what needs to be done – include as much detail as possible.

**M**easureable – This allows you to know when the corrective action was expected to be implemented

**A**ctionable – Use strong, clear language (action verbs) when describing the corrective action

**R**ealistic – the corrective Action must be within reach and it needs to take into consideration all, if any, obstacles that may prevent this timeline from being achieved.

**T**imely – This is the Completion Date. When developing a corrective action avoid the terms ‘ASAP’ or ‘Immediately’ as this is ambiguous and allows things to be prolonged.

**Example:**

|  |  |  |  |
| --- | --- | --- | --- |
| **ACTION** | **ACTION ASSIGNED TO****(name, job title)** | **ANTICIPATED COMPLETION DATE (YYYY-MM-DD)** | **DATE COMPLETED (YYYY-MM-DD)** |
| 1. Review and revise spill clean-up procedure to identify gaps.
 | JP | 8/13/2016 | TBD |
| 1. Click here to enter text.
 | Click here to enter text. | Click here to enter a date. | Click here to enter a date. |
| 1. Click here to enter text.
 | Click here to enter text. | Click here to enter a date. | Click here to enter a date. |

### B. Accident/Incident Investigation Flow Chart

