

# Incident Investigation Guidelines

**Commencement Date:** 02 December 2011

**Category:** Campus Life, Information Management

## 1. PURPOSE

This *Incident Investigation Guideline* is a guide to completing an incident investigation and the *Incident Reporting and Investigation* form. It is designed to meet the legislative requirements for incident reporting and investigation outlined in the *OSH Act* [1] and *OHS Regulations* [2].

## 2. PROCEDURE SUPPORTED

This *Incident Investigation Guideline* supports the Curtin University *Incident Reporting and Investigation* procedure.

## 3. APPLICATION

This guideline applies to Curtin University *Managers, Supervisors, SHRs* and anyone else assisting with the completion of incident reports and investigations.

## 4. DEFINITIONS

The following definitions apply to this *Incident Reporting and Investigation Procedure*:

Term	Definition
<b>Hazard</b>	A situation that has the potential to harm a person or cause damage to the environment or property.
<b>Hierarchy of Controls</b>	A complete definition of Hierarchy of Controls is contained in the <a href="#">Writing Safe Work Procedures Guideline</a> .
<b>Illness</b>	Any work related illness, including disease.
<b>Incident</b>	<i>“Any unplanned event resulting in, or having a potential for injury, ill health, damage or other loss.” (AS/NZS 4801:2001 [3])</i>
<b>Serious injury or illness</b>	An injury or illness that will result in the affected person losing one or more working days or shifts.
<b>Actual Consequence</b>	Actual Consequence is defined as insignificant, minor, moderate, major and catastrophic based on the University Health and Safety Risk Matrix. It describes the consequence of the incident.
<b>Potential Risk</b>	Potential risk is defined as <i>low, medium, high</i> or <i>extreme</i> based on the University Health and Safety Risk Matrix <u>prior to</u> any corrective actions or controls have been implemented.
<b>Residual Risk</b>	Residual risk is defined as <i>low, medium, high</i> or <i>extreme</i> based on the University Health and Safety Risk Matrix <u>after</u> recommended corrective actions or controls have been implemented.



## 5. EXCEPTIONS

Incidents of bullying and stress are to be reported using the online incident/hazard reporting system. These incidents are not required to be seen by a Manager or SHRs and will be managed in accordance with the University's policy on [Bullying in the Workplace](#).

## 6. CONDUCTING THE INCIDENT INVESTIGATION

### 6.1 Initial Investigation

Investigation procedures need to be systematic. The investigation team should:

- act as soon as possible after the incident;
- visit the scene before physical evidence is disturbed;
- not prejudge the situation;
- not remove anything from the scene;
- enquire if anyone else has moved anything; and
- take photographs and/or sketches to assist in reconstructing the incident.

### 6.2 After the initial Investigation

After the initial investigation is complete the team should:

- identify, label and store all evidence. For example, tools, defective equipment, fragments, chemical samples etc;
- interview each witness separately;
- ascertain if there have been any "near hits" in similar circumstances;
- record all sources of information;
- keep records to show that the investigation was conducted in a fair and impartial manner;
- review all potentially useful information, including design specifications, operating logs, purchasing records, previous reports, procedures, equipment manuals, job safety analysis reports, records of training and instruction of the people involved and experiences of people in similar workplaces/industries; and
- reconstruct the incident (while ensuring that another incident doesn't occur) to assist in verifying facts, identify what went wrong and what can be done to prevent it happening again.

### 6.3 What to look for

Look for causes, not blame. Systems fail for many reasons and the people involved are not always the cause of the incident. Build a chain of events to identify all the causes. For the investigation to be successful it is necessary to establish the following information:



### **6.3.1 Events leading up to the incident**

Investigate:

- the system of work being carried out and the adequacy or suitability of that system for the job;
- the instructions and/or training given for the work;
- any variation from instructions or standard work practices and the reasons for such variation;
- the workplace conditions, such as lighting, floor surfaces, stair treads and handrails, warning signs, temperature and weather (if the incident occurred outside);
- the exact location of the incident with sufficient detail for the spot to be readily identified by others reading the report;
- the materials in use or being handled;
- the type of transport or equipment in use; and
- whether adequate supervision was provided.

### **6.3.2 Facts of the incident itself**

Investigate:

- the state of the system and the actions that occurred at the time;
- the people directly and indirectly involved;
- the tools, equipment, materials and fixtures directly connected; and
- the time the accident or incident occurred.

### **6.3.3 Facts regarding what occurred immediately after the incident**

Investigate:

- any injuries or damage resulting directly from the incident;
- what people are involved, including those rendering aid; and
- any problems in dealing with the injuries or damage, for example faulty extinguisher, isolation switch difficult to locate.

### **6.3.4 Essential factors and causes**

To conduct an effective accident/incident investigation, it is essential to look at all aspects of design, environment/work process, and behaviour components, such as plant, procedures and people, rather than trying to isolate a single cause.

#### **Design components**

Poor systems design may result in exposure to hazards such as:

- unguarded dangerous parts of machinery;
- ineffective safety devices;
- provision of makeshift plant, equipment and tools; and
- inadequate ventilation.

## Environmental components/work processes

How people function in the work environment depends on what they experience in it. Environmental factors may be both physical and social.

The way in which people do the job, the procedures and work processes followed are important factors in incident investigation. Poor work process may lead to hazard exposure.

## Behavioural components

Examples include misuse of safeguards, improper use of tools and equipment, disregard of cautionary notices, failure to wear personal protective equipment, horseplay and poor standards of housekeeping. Poor practices may indicate that improved communication, further training or some other action, such as supervision, are necessary.

The common practice in industrial accident/incident investigation is to look for the cause of any accident/incident. Searching for a single cause of an accident/incident is restrictive. It focuses attention on only one, or at best a very few, of the essential factors while others, which may be more easily controlled, pass unnoticed.

## 7. DOCUMENTING THE INVESTIGATION

### 7.1 Login to RMSS and Print Investigation Form

As an investigator you will be assigned a temporary login and password. Login to RMSS at [http://healthandsafety.curtin.edu.au/event\\_and\\_hazard/index.cfm](http://healthandsafety.curtin.edu.au/event_and_hazard/index.cfm) and use your temporary login and password to login.

### 7.2 Complete the Investigation Form

Incident Investigations can be completed using the *Incident Reporting and Investigation* form available from the **Event and Hazard** page under **Health and Safety** on the Curtin University website at:

[http://healthandsafety.curtin.edu.au/event\\_and\\_hazard/index.cfm](http://healthandsafety.curtin.edu.au/event_and_hazard/index.cfm).

Managers and Supervisors shall monitor and record progress of implementing of corrective actions and notify the *Safety Advisor* once implementation of corrective actions is finalised.

The following describes the sections of the template *Incident Investigation* form:

1. **[Click to add Short Title] Incident:** Add a short title that best describes the incident.

**[Click to add Short Title] Incident Reporting and Investigation Form**

#### Incident Details

INCIDENT DETAILS		Incident Report No.	
Incident reported by		Date of incident	
Person(s) injured /involved		Date of report	

2. *Incident Report No:* Add the RMSS reference number if known.
3. *Incident Reported by:* Name of the person who first reported the incident.
4. *Persons Injured/involved:* Name of the person injured or involved.
5. *Date of incident:* Date the incident occurred.
6. *Date of report:* Date the report is finalised.

### Investigation Details

INVESTIGATION DETAILS			
Name of person completing this form		Date completed	
Telephone number		Email address	
Investigation Team members		Telephone number	
		Telephone number	
		Telephone number	
Name(s) of persons interviewed as part of this investigation? <i>(Attach witness statements if applicable)</i>		Telephone number	
		Telephone number	
		Telephone number	

7. *Name of person completing this form:* Insert the name of the author of the report.
8. *Telephone Number:* The number of the author of the report.
9. *Email Address:* The email addresss of the author of the report.
10. *Investigation Team members:* List the names and contact telephone numbers of the investigation team.
11. *Name(s) of persons interviewed as part of this investigation:* List all witnesses interviewed.

## Description of Events

DESCRIPTION OF EVENTS	
Describe the task being performed at the time of the incident	
Describe the sequence of events leading to the incident	
Describe equipment/tools involved	
Describe materials being handled	
Describe any unusual condition(s)	
Conclusion (attach additional information if required)	

12. *Describe the task being performed at the time of the incident:* Free text.
13. *Describe the sequence of events leading to the incident:* Free text.
14. *Describe equipment tools involved:* List any equipment or tools involved in the incident.
15. *Describe materials being handled:* List any materials being handled.
16. *Describe any unusual condition(s):* For example, wet weather.
17. *Conclusion:* Describe your conclusions about the incident.



### Root Cause Analysis

ROOT CAUSE ANALYSIS		
<b>CONTRIBUTING FACTORS PROMPT S</b> (Tick one or more boxes as appropriate)		
<b>People (Supervision, experience, training, fitness for work etc)</b>		
<input type="checkbox"/> Unclear reporting relationship <input type="checkbox"/> Unclear / Conflicting responsibility and accountability <input type="checkbox"/> Inadequate/incorrect instruction <input type="checkbox"/> Misunderstanding of instructions <input type="checkbox"/> Inadequate supervision/ monitoring <input type="checkbox"/> Inadequate feedback on performance standards <input type="checkbox"/> Supervisors not Leading by example <input type="checkbox"/> Non-compliance or unauthorized working <input type="checkbox"/> Improper posture or technique for the task <input type="checkbox"/> Physical incapability/deficiency <input type="checkbox"/> Working at unsafe pace / Trying to save time <input type="checkbox"/> Risk Taking <input type="checkbox"/> Inappropriate behaviour/horseplay <input type="checkbox"/> Inadequate communication between workers/supervisors/others	<input type="checkbox"/> Language barrier <input type="checkbox"/> Lack of or Inadequate Training <input type="checkbox"/> Inadequate instructor qualification <input type="checkbox"/> Lack of experience/ competence / Knowledge suitable for the task <input type="checkbox"/> Failure to follow Safe Work Procedure <input type="checkbox"/> Inadequate or lack of Safety briefings/meetings <input type="checkbox"/> Fatigue <input type="checkbox"/> Working under the influence of Drugs (incl Medications) and Alcohol <input type="checkbox"/> Stress <input type="checkbox"/> Psychological condition/incapability <input type="checkbox"/> Inattention / Lack of Awareness/ Distraction <input type="checkbox"/> Act of violence <input type="checkbox"/> Hazard identification/perception <input type="checkbox"/> Occupational Hygiene Practices	
<b>Organisational/ Procedural (formal, informal, written, verbal, Client, Contractor, Sub-Contractor)</b>		
<input type="checkbox"/> Inadequate work planning <input type="checkbox"/> Inadequate pre-task checking <input type="checkbox"/> No or Inadequate job safety analysis <input type="checkbox"/> Inadequate identification and notification of worksite risks / hazards <input type="checkbox"/> None or inadequate Procedures / Guidelines/Standards/Specifications <input type="checkbox"/> Operating procedures not updated after making changes / Out dated revisions still in use <input type="checkbox"/> Inadequate incident reporting / investigation	<input type="checkbox"/> Use of non-approved or not inducted contractor <input type="checkbox"/> Unsuitable or incorrect transport arrangements <input type="checkbox"/> Inadequate safety and health information <input type="checkbox"/> Improper salvage and / or waste disposal <input type="checkbox"/> No corrective action responsibility assigned <input type="checkbox"/> No accountability for corrective action <input type="checkbox"/> Inadequate or Inappropriate controls applied <input type="checkbox"/> Inadequate audit / inspection / monitoring	
<b>Equipment/Materials (machinery, systems and Absent/Failed Defences)</b>		
<input type="checkbox"/> Failing to use or overriding safety device <input type="checkbox"/> Personal protective equipment not used <input type="checkbox"/> Improper use of personal protective equipment <input type="checkbox"/> Inadequate or Nil Personal protective equipment <input type="checkbox"/> Working/servicing on energized equipment <input type="checkbox"/> Inadequate guards or protective devices <input type="checkbox"/> Defective guards or protective devices <input type="checkbox"/> Disabling or removal of guards, warning systems or safety device <input type="checkbox"/> Improper use of equipment and tools <input type="checkbox"/> Use of defective equipment and tools <input type="checkbox"/> Inadequate or Unavailable appropriate equipment/tools	<input type="checkbox"/> Improper placement of tools, equipment or materials <input type="checkbox"/> Inadequate ergonomic design <input type="checkbox"/> No independent design review <input type="checkbox"/> Inadequate or Defective safety devices <input type="checkbox"/> Inadequate or Defective warning systems <input type="checkbox"/> Inadequate Assembly or Maintenance/Repair <input type="checkbox"/> Excessive wear and tear or out-dated Equipment <input type="checkbox"/> Inadequate material packaging <input type="checkbox"/> Improper handling of materials <input type="checkbox"/> Improper storage of materials or spare parts <input type="checkbox"/> Unauthorized substitution	
<b>Environmental Conditions (physical environment)</b>		
<input type="checkbox"/> Fire and explosion radiation exposure <input type="checkbox"/> Noise <input type="checkbox"/> Electrical systems <input type="checkbox"/> Extremes temperature /Heat, Cold <input type="checkbox"/> Fauna / Flora <input type="checkbox"/> Weather Conditions (other) <input type="checkbox"/> Inadequate workplace maintenance <input type="checkbox"/> Restricted access <input type="checkbox"/> Obscured access, entries and exits	<input type="checkbox"/> Hazardous Substances (chemicals, radiation etc.) <input type="checkbox"/> Inadequate ventilation <input type="checkbox"/> Visibility <input type="checkbox"/> Poor housekeeping <input type="checkbox"/> Lighting <input type="checkbox"/> Loose, Slippery or uneven surfaces <input type="checkbox"/> Inadequate workplace/ workstation lay out / design	

18. *Contributing Factor Prompts:* Tick all applicable.

ACTUAL CONSEQUENCE					
Define the event severity (i.e. low, medium, high or extreme) of the incident using the matrix below.					
<b>CONSEQUENCE DESCRIPTION</b>	No injury or illness; or Minor injury or illness requiring First Aid treatment	Lost Time injury <10 days. Injury or illness requiring Medical Treatment	Lost Time Injury >10 days. Incident reportable to relevant Authorities.	Single fatality. Permanent Total Disability	Multiple fatalities. Permanent Total Disability
<b>EVENT SEVERITY</b>	LOW	LOW	MEDIUM	HIGH	EXTREME
Event Severity:					

19. *Actual Consequences:* Use the table to assess the severity of the actual incident and enter the corresponding Event Severity (e.g. low, medium, high, extreme).

### Corrective Actions

CORRECTIVE ACTIONS									
Contributory Factors	Potential Risk			Proposed Corrective Actions	Responsible Person	By When	Residual Risk		
	Likelihood	Consequence	Rating				Likelihood	Consequence	Rating

20. *Contributing Factors:* List all Contributory Factors identified from the Root Cause Analysis above.



21. *Potential Risk:* Use the Risk Matrix to assess the likelihood and consequences of the incident happening again prior to any corrective actions and enter the corresponding risk rating. When assessing the potential risk always use the worst case scenario.
22. *Proposed Corrective Actions:* List Corrective Actions required to address each Contributory Factor.
23. *Responsible Person:* Assign a person responsible for implementation of each Corrective Action.
24. *By when:* Assign a date for completion of each Corrective Action.
25. *Residual Risk:* Use the Risk Matrix to assess the likelihood and consequences of the incident happening after corrective actions have been put in place and enter the corresponding risk rating.

### Investigation Team Sign-off

INVESTIGATION TEAM SIGN-OFF		
NAME:	SIGNATURE:	DATE:
NAME:	SIGNATURE:	DATE:
NAME:	SIGNATURE:	DATE:

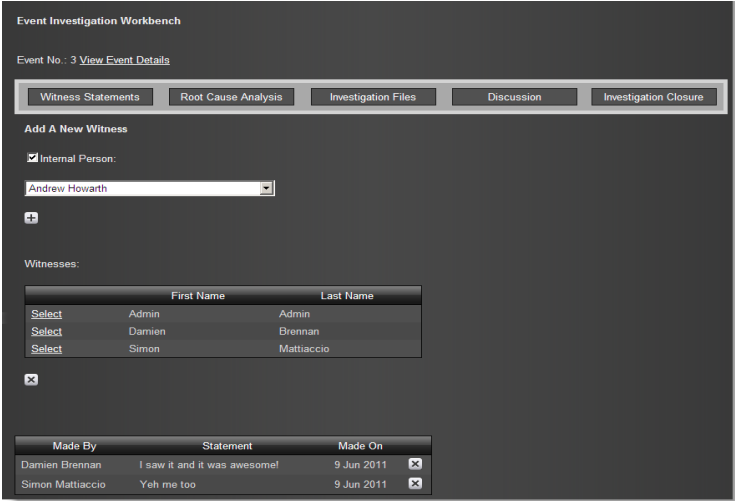
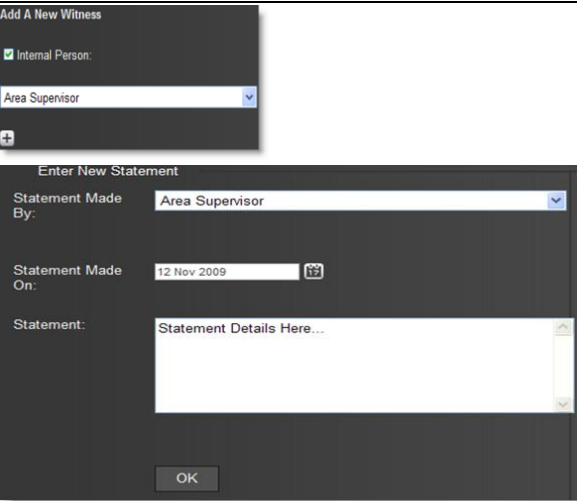
26. Add names, signatures and dates for all investigation team members.
27. Submit the completed form to the Curtin University Health and Safety Team.

### 7.3 COMPLETING THE RMSS INVESTIGATION WORKBENCH

## Event Investigation Quick Reference

## RMSS Event Manager

The *Event Investigation Quick Reference* is designed to assist anyone new to using the RMSS software with the investigation of an event.

Event Investigation	
<p>1. To complete an investigation, click on the link provided in the email notification, and log in using your temporary <i>username</i> and <i>password</i>. You will be taken directly to the <i>Event Investigation Workbench</i>.</p> <p>The <i>Event Investigation Workbench</i> is used to enter <i>Witness Statements</i>, <i>Root causes</i>, <i>Investigation Files</i>, <i>Discussions</i> and for the <i>Investigation Closure</i>.</p> <p>Tip: To view the details of the event, click on the <span style="border: 1px solid black; padding: 2px;">Event No.: 3 View Event Details</span> located in the top left corner of the screen.</p>	
<p>2. Click on the <span style="border: 1px solid black; padding: 2px;">Witness Statements</span> button to add new statements.</p> <p>a. To <i>Add a New Witness</i>, tick the box for an <i>Internal Person</i> and select their name from the drop down list. Click on the <span style="border: 1px solid black; padding: 2px;">+</span> symbol button to add the <i>Witness</i>. For an <i>External Person</i>, un-tick the <i>Internal Person</i> box and enter the details of the witness. Click on the <span style="border: 1px solid black; padding: 2px;">+</span> symbol button to add the <i>Witness</i>.</p> <p>c. Enter the <i>Statement</i>. Use the Calendar icon to select the date the statement was made. Enter the <i>Statement</i> details in the free text box and click the 'OK' button.</p>	

## Event Investigation

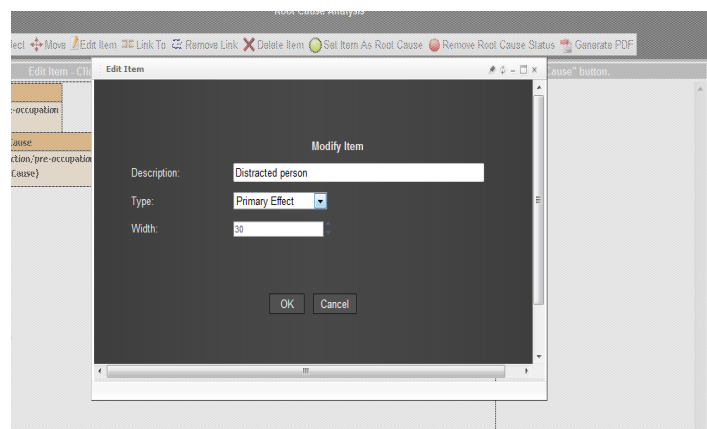
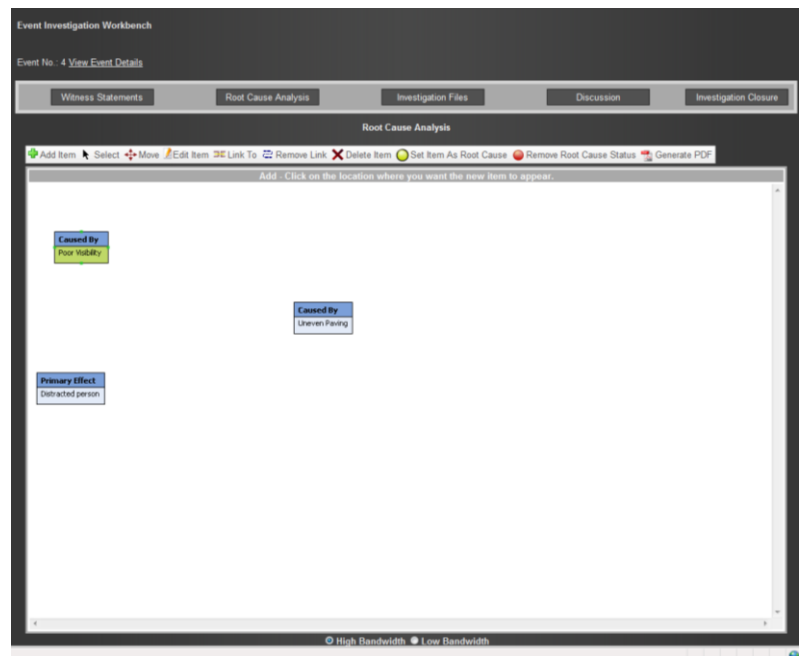
### 3. Click on **Root Cause Analysis**

a) Click on the **Add Item** button and then click on any place on the white section of the screen. Click the 'Add Item' button (a yellow pop-up blocker appears "This website is using a scripted window to ask your information.." Right click on the pop-up and click on *Temporarily Allow Scripted Windows.*)

Now click on any place on the white section of the screen. A pop-up box will appear - enter the text in the space provided followed by the Ok button. The box will appear wherever you selected on the canvas with a heading of *Primary Effect*.

b) To add another entity, follow the above steps. From the second entity onwards all boxes will default to 'Caused By'.

Note: You can edit how boxes are displayed by clicking on *Edit Item* and then clicking on the item you wish to edit. A pop-up box is displayed where you can edit/modify the item by editing the Description text or the Type by selecting from the dropdown list and then click on "OK".



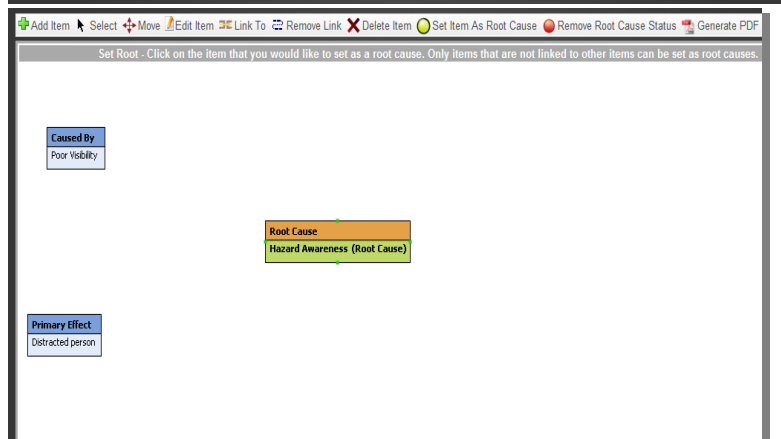
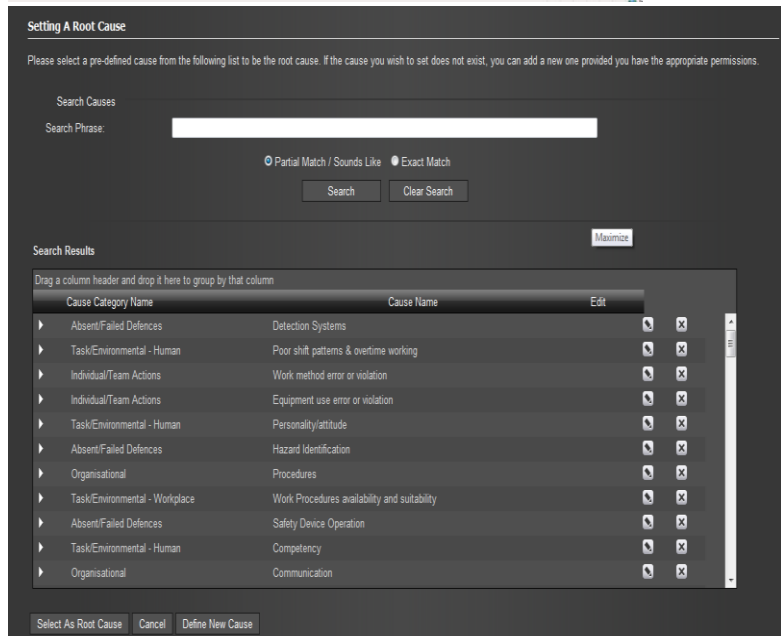
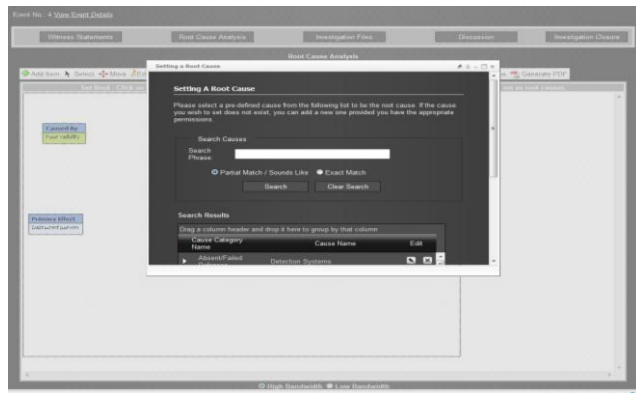
## Event Investigation

c) **Selecting a Root Cause:** Click on *Set item as root cause* and then select the item you wish to set as root cause. The *Setting Root Cause* popup will appear. Select a root cause by clicking on the white arrow on the left of the page – the item will then appear highlighted. Click on the *Select As Root Cause* button at the bottom of the page.

**Tip:** If you would like to sort the *Cause Category Name* or *Cause Name* alphabetically, simply click on either the *Cause Category Name* or *Cause Name* (in the header row), and it will automatically appear in alphabetical order.

The item selected now displays as the Root Cause for the event.

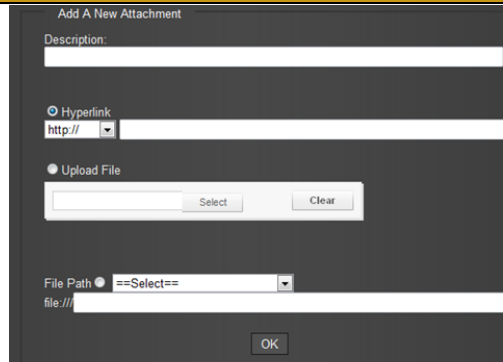
To Edit, Delete or Remove Items, refer to the Investigation User Guide.



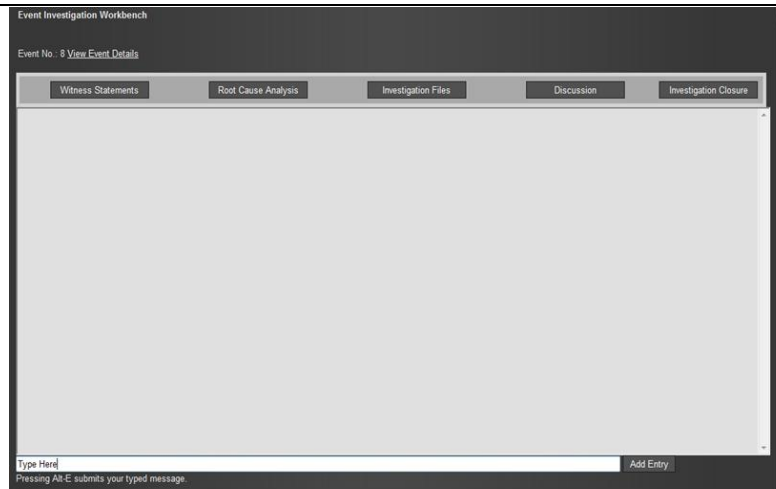
## Event Investigation

4. Click on the **Investigation Files** button to upload links, files and file paths. Enter a description of the link, file or file path in the *Description* text box. Then upload the files or links and click **OK**.

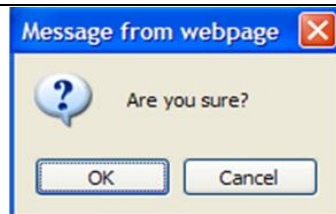
As part of event investigation, an *Incident Investigation Form* must be completed, which can be found at: [http://healthandsafety.curtin.edu.au/hs\\_toolkit/publications.cfm](http://healthandsafety.curtin.edu.au/hs_toolkit/publications.cfm)  
After completing the Incident Investigation Form, please upload the form in the in this section.



5. Click on the *Discussion* button to enter comments, discussions or conversations had regarding the event and with other investigators. Enter comments in the space provided at the bottom of the page, and to add this entry click on the **Add Entry** button.



6. Select the *Investigation Closure* button to vote to close the investigation.
- To vote to close, select the **Vote to close this investigation** button.
  - When prompted 'Are you sure?' select **OK** to continue.



7. The check box next to your name will be ticked. The investigation will only close when all investigators have voted to close. Once the Health and Safety Department has approved and closed the investigation you will receive an e-mail notification stating that the investigation has been closed.

Exit the Investigation by simply closing the page in the top right hand corner(x).



## 8. REFERENCES

- [1] *Occupational Safety and Health Act, 1984*
- [2] *Occupational Health and Safety Regulations, 1996*
- [3] *AS 1885.1-1990 Workplace Injury and Disease Recording Standard*
- [4] *Tips for investigating accidents and incidents, Worksafe WA Safety Bulletin 2-2007*

## 9. LIST OF SCHEDULES

- [Incident Reporting and Investigation Form](#)

## 10. RELEVANT DOCUMENT LINKS

- [Incident Reporting and Investigation Procedure](#) (incl. Incident Reporting and Investigation Flow Chart)

## 11. REVISION HISTORY

Revision Ref. No.	Approved/ Rescinded	Date	Authority	Resolution Number	Document Reference
Rev 1.0	Approved	2/12/2011	Nelly Gaasdalen	N/A	N/A