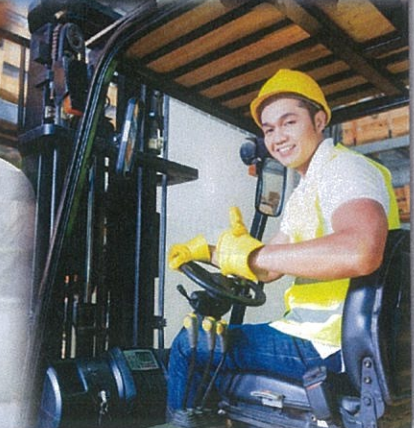
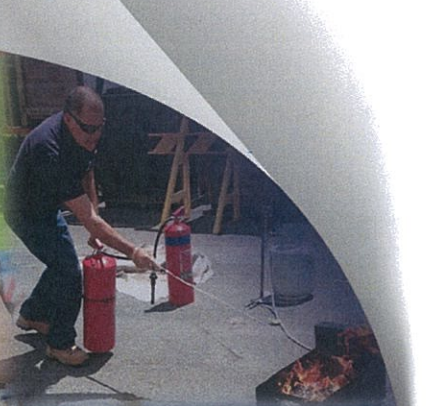


BSBWHS510

Contribute to implementing emergency procedures



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ASSESSMENT FOR BSBWHS510

Student name	Shaun Coffey
Date of assessment submission	12/01/2019
Trainer/Assessor's name	
Date of assessment marking	Click here to enter a date.
Outcome for unit	☐ Competent ☐ Not Yet Competent

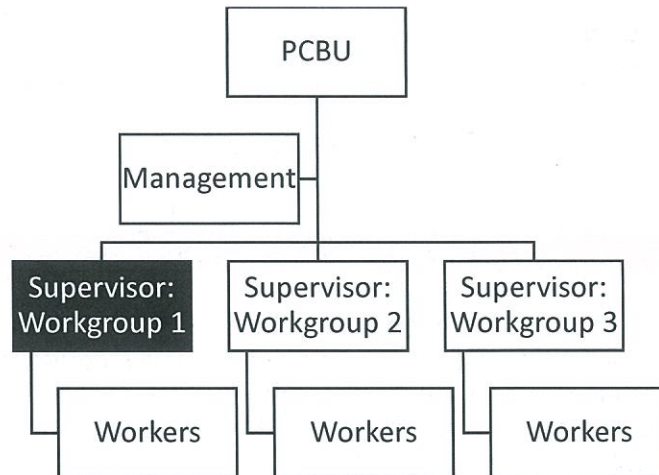
TASK INSTRUCTIONS

- The assessment for this unit of competency consists of the following:
 - A series of activities:** Some of these activities will require you to provide a response within this document, others will require you to gather evidence to demonstrate your knowledge and skills (overview below)
 - Quiz:** You will be required to complete a series of questions to demonstrate your knowledge and skills.
 - Practical task:** You will be required to have an observer attest to your knowledge and skills and sign a report to this effect.
- At times, you will be provided with a specific business context to which you must respond, otherwise it is anticipated that you will use a workplace of your choosing (your own, or hypothetical) to provide the context to the task.
- At all times, the responses in your assessment must reference **Australian** (Queensland or Federal) documentation, including legislation, regulations, codes of practice, standards and guidance publications.

ACTIVITY OVERVIEW	REQUIRED FOR SUBMISSION
1. Identifying emergencies and initial response	Workbook response (below)
2. Risk register	Workbook response (below)
3. Plan and implement initial response	Workbook response (below)
4. Post-event activities	Workbook response (below)
5. Review emergency responses	Workbook response (below)

ACTIVITIES

For the following activities, you will assume the role of a workgroup supervisor in a workplace of your choosing (see example organisational chart below).



Name a workplace and workgroup that you are (or hypothetically are) the supervisor for:

Name of workplace	Dyno Nobel
Workgroup	Operations

ACTIVITY 1

- a) Identify one (1) emergency that would fall under each of the following emergency categories:
 - Fire evacuation
 - Security breach
 - Serious medical injury
- b) Describe one (1) hazard which may cause each of the emergencies identified.
Describe one (1) hazard which may occur during each of the emergencies identified.
- c) Identify one (1) standard that you may refer to when identifying the cause of (and advice for initial response to) each emergency.
 - Categorise each of the emergency according by colour code.
- d) Identify one (1) stakeholder who may be useful in identifying the cause of each emergency. Justify their suitability.
- e) Identify one (1) internal specialist advisor who you could liaise with to identify the cause of (and advice for initial response to) each emergency. Justify their suitability.
- f) Identify one (1) emergency agency who you could liaise with to identify and respond to each emergency.
 - Outline the requirements for liaising with an agency during reporting, arrival and in response to an emergency.
- g) Identify the impacts each emergency has on personnel, property and the environment.
- h) Identify initial response actions which could limit these impacts.
 - List the actions in order of priority.
 - Justify your responses with reference to current industry practice.

Fire evacuation
Describe emergency
If a turbine was to catch fire this would result in a fire evacuation.
Hazards (i.e. causing and during)
Can be caused by leaking lube oil close to the turbine, or any combustible material (with an ignition temperature under ~350 degrees Celsius) on the turbine casing.
Standard which may identify cause of (and response to) emergency
AS3745:2010 "Planning for Emergencies at Facilities" could be referenced.
Stakeholder who may identify cause of emergency
Generally rotating engineers and turbine specialists can identify the cause of turbine fires and the appropriate response. Their training (mechanical engineering, and specific equipment training from manufacturers) addresses the best way to handle turbine fires and other hazards arising from their use.
Internal specialist advisor who may identify cause of (and response to) emergency
Senior safety advisors have significant experience in turbine fire root cause analysis and in the creation of emergency response to procedures. Their suitability stems from
Emergency agency to liaise with
QFES can provide guidance on fires, mitigation measures, and their attendance of fires.
Impacts on personnel, property and environment
Personnel can be subject to burns, smoke inhalation, and heat related illness from fires. Property such as the turbine, surrounding equipment (compressors, electrical cables, piping, valves / instruments, etc) can be damaged or destroyed. This can include thermal shock to metal components that leads to embrittlement (weakening of steel). The environment can be damaged by toxic or pollutants being emitted from the fire.
Initial response actions which could limit impacts
Early response is critical – regular inspection of known leaks and the system, flame scanners / detectors placed on equipment (with alarm), or having mitigative controls (such as steam hoses ready / in place for quicker response), trained operational personnel (such as emergency response team).

Security breach
Describe emergency
Unauthorised access to site would qualify as a security breach.

Hazards (i.e. causing and during)

This can be caused by fault in the system controlling site access, or the equipment at access points such as turnstile gates, fencing, or the main security gate.

Standard which may identify cause of (and response to) emergency

AS3745-2010: Planning for emergencies in facilities or the Guide for Major Hazard Facilities: Preparation of a Safety Case can be referenced.

Stakeholder who may identify cause of emergency

Generally, A PCBU will assist in identifying the cause of the emergency. They are tasked with ensuring inspection of the perimeter and all access points after any breach and writing a report identifying root causes and the corrective actions.

Internal specialist advisor who may identify cause of (and response to) emergency

The Facilities Superintendent is ultimately responsible for site security. They are the owner of the site security plan and therefore across the requirements conditional for the license. The security contractor also reports to the Facilities Superintendent.

Emergency agency to liaise with

QPS would be the most appropriate emergency agency and should be informed of the security plan of the site and response procedures.

Impacts on personnel, property and environment

Personnel can be harmed, property can be damaged, resources can be stolen, and the environment can be harmed by uncontrolled / unauthorised releases of chemicals resulting from security breaches.

Initial response actions which could limit impacts

Having 24 hour security personnel / vehicles (including search lights), and operational procedures that require immediate reporting of any unauthorised access or perimeter gaps are good initial responses. Additionally, having escalation procedures for contacting QPS is ideal.

Serious medical injury

Describe emergency

Third degree burn would qualify as a serious medical injury.

Hazards (i.e. causing and during)

This can be caused by exposure to hot process pipes or a rupture of a process pipe / vessel under high temperature.

Standard which may identify cause of (and response to) emergency
AS3745-2010: Planning for emergencies in facilities would be a good reference guide.
Stakeholder who may identify cause of emergency
A PCBU Officer that is a qualified incident investigator such as a senior safety advisor would be able to determine the cause of a serious burn. They often have process knowledge and experience dealing with burn incidents.
Internal specialist advisor who may identify cause of (and response to) emergency
A senior first aider (Emergency Response Team member) with appropriate process experience would be capable of identifying
Emergency agency to liaise with
QAS would be the emergency service most appropriate to liaise with.
Impacts on personnel, property and environment
Burns can cause permanent injury and death in extreme cases. The cause of the burn can incur damage to property but generally not the environment.
Initial response actions which could limit impacts
Safety showers are a critical control – water on the burn immediately after the burn can greatly control the burn impact. Having trained advanced first aiders and first aid equipment / products (such as first aid room / burn aid product) will also limit the impact of severe burns.

Outcome for Activity 1	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 2

For the three (3) emergencies identified in Activity 1, develop a risk register which outlines:

- Hazard details
- Location of hazard
- People exposed to the hazard
- Possible injuries/damages caused by the hazard
- Control measures required (including responsibility for implementation within organisation)
- Results of risk assessment

Record 1**Date of entry**

12/01/2019

Hazard details

Turbine Fire

Location of hazard

CD-5 Turbine (located on the Northern Tower in the Ammonia Plant).

People exposed to hazard

Operators and any other personnel entering the plant (such as engineers) are exposed to the hazard.

Possible injuries/damage

Burns, heat exhaustion, and smoke inhalation are possible injuries that can result from turbine fires. Extreme cases cause result in a fatality, however, this is extremely unlikely. Damage to equipment surrounding the turbine (compressors, piping, instruments, etc) is also possible.

Control measures required

Control measures required are continual monitoring of equipment, increased monitoring of leaks, flame detectors, dry powder extinguishers, temperature probes, and the provision of a suitable qualified emergency response team with appropriate training in turbine fires.

Risk assessment

Matrix	A: Death or permanent disability	B: Serious injury	C: Lost time injury	D: Casualty Treatment	E: First Aid
1: Very Likely	E	E	H	H	M
2: Likely	E	H	H	M	M
3: Possible	H	H	M	M	L
4: Unlikely	H	M	M	L	L
5: Very Unlikely	M	M	L	L	L

E: Extreme

H: High

M: Medium

L: Low

Level of risk: B (Serious injury) x 4 (Unlikely) = Medium

Record 2**Date of entry**

12/01/2019

Hazard details

Unauthorised access to site.

Location of hazard

Can be in multiple areas – however for this exercise we will say that someone has entered the site and ammonia plant.

People exposed to hazard

Personnel in the ammonia plant at the time.

Possible injuries/damage

There could be harm inflicted to personnel in the plant from the intruder, in addition to equipment being tampered with or damaged by the person.

Control measures required

A security plan, fencing, and gates that require authorisation (swipe card) to operate. Additionally, 24/7 security to inspect and maintain the site perimeter.

Risk assessment

Matrix	A: Death or permanent disability	B: Serious injury	C: Lost time injury	D: Casualty Treatment	E: First Aid
1: Very Likely	E	E	H	H	M
2: Likely	E	H	H	M	M
3: Possible	H	H	M	M	L
4: Unlikely	H	M	M	L	L
5: Very Unlikely	M	M	L	L	L

E: Extreme	H: High	M: Medium	L: Low
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Level of risk: D (Casualty Treatment) x 4 (Unlikely) = Low

Record 3**Date of entry**

12/01/2019

Hazard details

Third Degree burn – contact with super-heated steam piping.

Location of hazard

Located at the

People exposed to hazard

Personnel entering the ammonia plant, specifically, the upper deck are exposed.

Possible injuries/damage

The potential for third degree burns to personnel that come into direct contact with exposed piping exists.

Control measures required

Lagging of pipes to insulate temperature from exposed surface, signage to highlight the hazard to persons in the vicinity, and safety showers should be installed proximate to the exposure site.

Risk assessment

Matrix	A: Death or permanent disability	B: Serious injury	C: Lost time injury	D: Casualty Treatment	E: First Aid
1: Very Likely	E	E	H	H	M
2: Likely	E	H	H	M	M
3: Possible	H	H	M	M	L
4: Unlikely	H	M	M	L	L
5: Very Unlikely	M	M	L	L	L

E: Extreme	H: High	M: Medium	L: Low
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Level of risk: B (Serious injury) x 4 (Unlikely) = Medium

Outcome for Activity 2

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 3

Plan for the emergencies identified in Activity 1, through your responses to the following:

- a) Identify one (1) type of emergency equipment required for each emergency.
 - Where should such equipment be stored for easy access?
 - How often should it be checked (i.e. for cleanliness and to be serviced)? Justify your response.
- b) Outline possible training required to effectively implement the initial responses identified.
 - List suitable parties to deliver such training (internally and externally)
- c) Explain your role in implementing initial response procedures identified.
 - Explain how you document and display actions for initial response.
 - Outline your own role in emergency response, as outlined in workplace WHS policies and procedures.

Fire evacuation**Emergency equipment**

Steam hoses. These should be stored in the emergency response shed, and in the field at the site if there is a known oil leak or ignition risk. Hoses should be inspected (tagged and tested) yearly, however they should be inspected prior to every use. This is supported by legal requirements and industry best practice for steam hose use.

Required training

Possible training includes Basic fire training, Fire operations training and ERT general training. These courses can be provided by external providers. ERT monthly training is conducted internally and practices real life scenarios and reviews existing response guides which includes response plan for turbine fires.

Your role in implementing initial response procedures

Actions for emergency response to turbine fires are outlined in the Emergency Response Guide. This document captures significant events and features a roles and responsibilities for turbine events and a checklist for such occurrences. My response requirements are usually as a data collector, recording all times and significant events for the incident and implementing them to the WHSIS.

Security emergency**Emergency equipment**

Security vehicle, site alarm, and telephone.

Required training

Security personnel are required to be trained in security service provision, in addition to the site-specific process of security breaches and linked escalation requirements. All site personnel undergo an induction that requires them to immediately notify security of any security risks.

Your role in implementing initial response procedures

My role is to inform security of any damage I notice to security fencing or gates, or notify of any unauthorised access immediately.

Serious medical injury
Emergency equipment
First aid room, safety showers, first aid products (burn aid), radios, and telephone communication.
Required training
Advanced first aid training and emergency response training.
Your role in implementing initial response procedures
My role is usually as a control room operator to raise the alarm if a safety shower is activated or an emergency call comes over the radio.

Outcome for Activity 3	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 4

For the emergencies identified in Activity 1, identify your responses to the following:

- a) Outline one (1) action that may occur as part of the second response phase.
 - Identify the personnel who would be involved.
 - Outline how you may assist personnel involved.
- b) As part of your workgroup supervisor role, how you would contribute to the debriefing process.
 - Who should be involved in the debriefing process?
 - When should the debriefing process occur?
 - Identify three (3) aspects of the emergency response that might be considered during the debriefing process.

Evacuation emergency

A secondary response phase may involve medical personnel for the ongoing treatment of injuries resulting from the event of the initial emergency response to the event. Assistance could be offered to personnel by arranging the consultation, transport to / from, and also checking in on their progress with the injury. Additionally, support can be offered with ensuring their insurance or work cover is contacted if required.

Security emergency

A secondary response may be a standby security personnel and maintenance person to fix the breakdown is the security perimeter. Assistance could be offered by acting as a standby person until an appropriate security person can be organised, or by assisting in arranging the repair work with the maintenance department ensuring they are aware of the priority.

Serious medical injury

Secondary response phase may involve medical personnel for the ongoing treatment of injuries resulting from the event of the initial emergency response to the event. Assistance could be offered to personnel by arranging the consultation, transport to / from, and also checking in on their progress with the injury. Additionally, support can be offered with ensuring their insurance or work cover is contacted if required.

Your contribution to debriefing process

Review the process and highlight the successes and the opportunities for improvement around adherence to procedures, communication effectiveness, the suitability of procedures and equipment, in addition to the learnings from persons involved and how to implement them.

Outcome for Activity 4

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 5

It is very important to monitor emergency responses, address deficiencies and identify areas for improvement.

- a) Identify ways in which you might monitor emergency responses (including personnel response and equipment) for efficiency, timeliness and effectiveness.
 - Why should stakeholders be consulted to assist with monitoring?
 - In what ways might you collect information from the stakeholders?
 - What advice might you seek from specialist advisors and emergency agencies?
- b) Who might you report the results of any monitoring to?
- c) Identify one (1) possible area that a workplace might need to improve upon in their emergency response.
 - Provide recommendations to address this area.
- d) Identify one (1) possible area that you, in your role as a workgroup supervisor, might need to improve upon in your emergency response.
 - Provide recommendations to address this area.
- e) Outline the requirements of Commonwealth and state or territory WHS Acts and regulations with regards to:
 - Implementation of emergency procedures
 - Cessation of work
- f) Outline the recommendations of a code of practice with regards to the implementation of emergency procedures.
- g) Identify and briefly one form of guidance material (from the regulator) with regards to the implementation of emergency procedures.

	Response
a)	Emergency responses can be monitored by revision of the existing procedures against requirements, consultation and feedback from their use. ERT training days should incorporate live drills for scenarios which can be monitored for compliance and time effectiveness. Inspection of equipment for adequacy will ensure that it can provide the necessary function when required. Stakeholders should be consulted to assist with monitoring as they have duties but are also well positioned to enact change and provide valuable feedback. Information should be collected from stakeholders in informal and formal communication, surveys, feedback sessions or booklets, and through allocated committees or groups. Specialist advisors and emergency agencies can provide information that will assist in linking their procedures with the site-specific procedures. You can also request information that will speed up the efficiency of interaction. For example, what information an ambulance officer will need when taking a patient transfer.
b)	Monitoring results should be reported to the group / department related to the monitoring, such as the emergency department in this case. Additionally, the persons responsible for the department should be informed. If any significant findings or suggestions are made these should be captured via a site bulletin or email.
c)	An area that a site can improve on in emergency response procedure is interface with emergency procedures. This can be done by involving emergency services with training on site and scenario training. This will allow practice of handovers and familiarisation of the opposing procedures and personnel.
d)	As a workgroup supervisor I need to improve on seeking feedback from workers in the emergency response team and driving their suggestions into implemented changes. This can be done by informing the team of a meeting to be had to capture their ideas, then having the meeting, documenting suggestions and creating actions to implement the suggestions.

e)	Sections 557 and 567 of the WHS Regulations 2011 (Qld) provide guidance on the requirements of emergency plans and their implementation. Part 5, Division 6 of the WHS Act 2011 (Qld) outlines the rights of workers to cease work or direct a cessation of work.
f)	The Guide for Major Hazard Facilities – Emergency plans includes recommendations for the emergency procedures relative to their creation, training, monitoring and review for implementation.
g)	Workplace health and safety Queensland endorse “Emergency Planning: A Guideline for hazardous industry”. It outlines that emergency procedures should be a live document that can be updated on the WHSIS, tried and tested with updates as required.

Outcome for Activity 5	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

QUIZ

QUESTIONS	CORRECT
1. Which of the following are emergency prevention controls typically installed in a workplace? Select all that apply. ☒ Emergency alerting systems ☒ Emergency protection systems ☒ Smoke alarms, fire alarms and fire extinguishers ☐ Canary birds to detect gas ☒ Safety wear ☒ Security systems	☐
2. What information must you provide when calling emergency services (000) and upon their arrival? Select all that apply. ☒ The service requested (Police, Fire or Ambulance) ☒ Address or location of emergency ☐ The number and exact location of smoke alarms ☒ A description of the emergency	☐
3. Safety representatives and WHS regulators have the power to direct workers to cease work immediately if an immediate danger to WHS exists. ☒ True ☐ False	☐
4. It is optional to check and account for people during an evacuation. ☐ True ☒ False	☐
5. What is the biggest benefit in issuing instructions in an authoritative manner during emergencies? Select the most appropriate response. ☐ So that people in neighbouring buildings can hear you ☒ So that people obey the instruction given ☐ So that people in the bathroom hear the instructions ☐ So that people are scared	☐
6. Who might appropriately deliver training regarding initial emergency response? Select all that apply. ☒ Internal Health and Safety Representatives ☒ Fire fighters ☒ First aid trainers ☒ Registered Training Organisations	☐

7. Debriefing and reports are part of the initial response procedures. ☐ True ☒ False	☐
8. Which of the following are appropriate ways to document and display actions for initial response? Select all that apply. ☒ Evacuation map ☒ Emergency plan ☐ Labelling every door and window with a number ☐ Having a phone book at every entrance	☐

Outcome for Quiz	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

PRACTICAL TASK

You are required to have a suitable observer verify your ability to complete the following tasks. These tasks may be simulated (using the handouts provided) or real.

TASKS		VERIFIED
A.	Consult with other workers, specialist advisors (e.g. Trainer/Assessor) and emergency services (e.g. personally/via website) to identify: - Potential fire hazards/emergencies within the workplace - Actions to be taken by workers and others, according to internal/external WHS information	☒
B.	Conduct a safety audit of the work area: - Identify resources available and required for immediate response (including evacuation maps) - Check emergency equipment to ensure serviceability, accessibility, cleanliness and correct location	☒
C.	Document potential emergencies and their causes in a risk register, identifying: - Possible injuries/damage - Required control measures (including training needs and responsibility for implementation within organisation) - Risk assessment results	☒
D.	Respond to a fire emergency/drill: - Providing information needs to emergency response personnel during reporting, arrival and in response to emergency - Checking and accounting for people during an evacuation	☒
E.	Show leadership in contributing to the debrief after fire emergency/drill: - Monitor responses to emergency for efficiency and timeliness - List hazards arising from evacuation - Identify areas for organisational and personnel improvements - Document and verbally present results to appropriate persons (e.g. PCBU, Trainer/Assessor)	☒
Name of observer		Allan Martin
Role of observer (Confirm their suitability to sign)		☒ Trainer/Assessor ☒ Other (specify): Operations Team Leader
Phone number of observer		041 8877 031
Email address of observer		allan.martin@incitecpivot.com.au
Signature of observer		
Date		Click here to enter a date. 12-1-19
Comments		

Outcome for Practical Task	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

