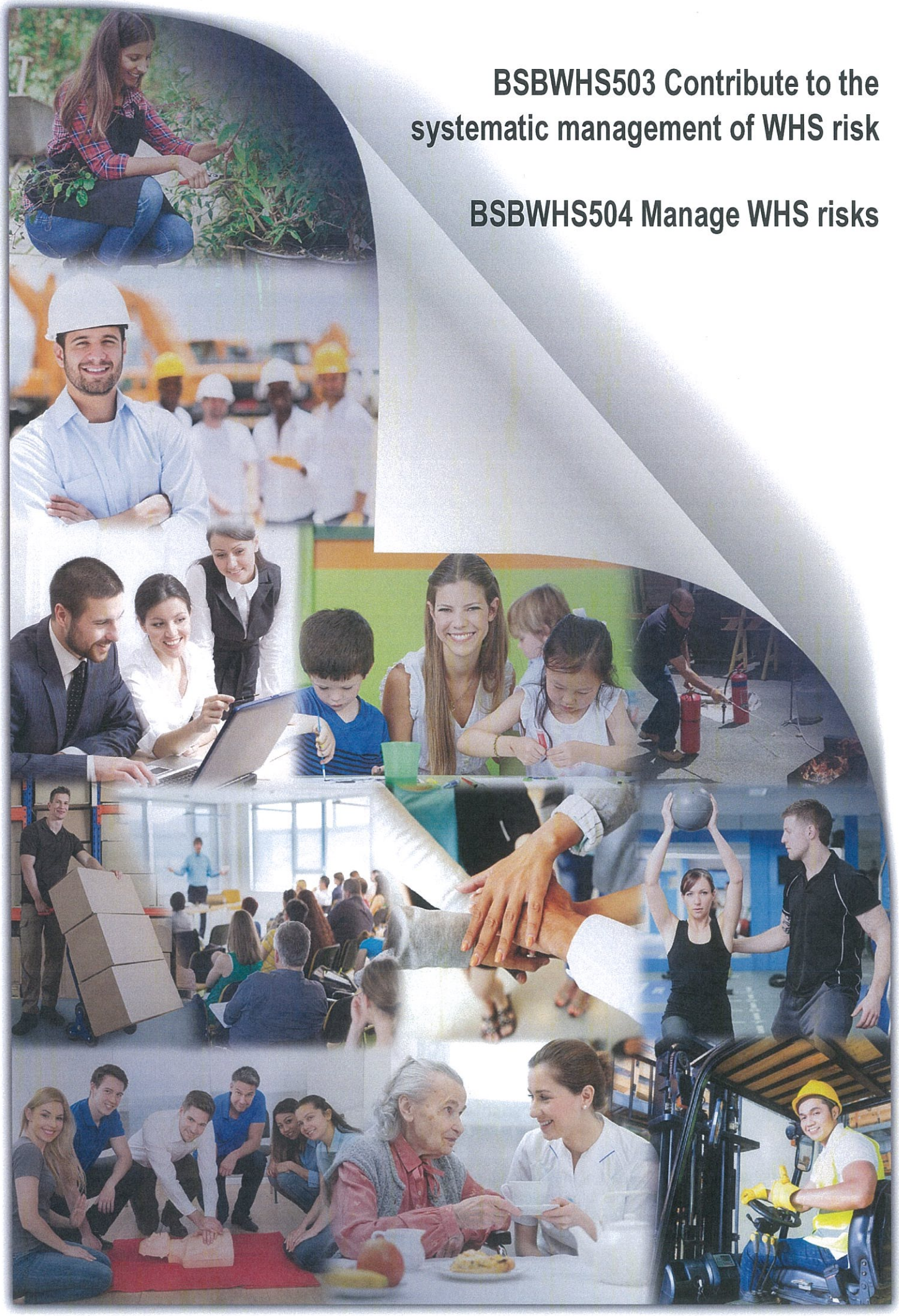
BSBWHS503 Contribute to the systematic management of WHS risk

BSBWHS504 Manage WHS risks



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ASSESSMENT FOR BSBWHS503 & BSBWHS504

Student name	Shaun Coffey
Date of assessment submission	14/12/2018

Trainer/Assessor's name	
Date of assessment marking	Click here to enter a date.
Outcome for units	☐ Competent ☐ Not Yet Competent

TASK INSTRUCTIONS

- The assessment for these units 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. Risk management requirements	• Workbook response (below)
2. Identify/assess hazards and risks	• Workbook response (below)
3. Implementation of risk controls	• Workbook response (below)
4. Effectiveness of risk controls	• Workbook response (below)

ACTIVITIES

For the following activities, name a workplace that you wish to examine.

Name of workplace	Dyno Nobel Moranbah

ACTIVITY 1

Identify duty holders' obligations regarding risk management (including PCBUs and workers) by explaining the requirements found in:

a) WHS Acts
b) WHS Regulations
c) Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks
d) Standards
e) Guidance material
f) Organisational policies
g) Organisational procedures
h) Organisational processes

Example:

Name and location of Legislation (Commonwealth or State)
Work Health and Safety Act 2011 (Qld) found at www.legislation.qld.gov.au
Relevant excerpt/requirement for chosen workplace
Section 19: A person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of workers.

Name and location of Legislation (Commonwealth or State)
The Work Health and Safety Act 2011 (QLD) found at https://www.legislation.qld.gov.au/view/html/inforce/current/act-2011-018
Relevant excerpt/requirement for chosen workplace
Section 19 outlines PCBUs have a duty of care to, as far as reasonably practicable, ensure the health and safety of associated or contracted workers. Additionally, PCBUs are to, so far as reasonably practicable, ensure the health and safety of other persons is not put at risk as a result of the work conducted by that PCBU. Under this section a self-employed worker is regarded as a PCBU. Sections 20-26 lists additional areas where PCBUs are required to undertake risk management. Sections 46 and 47 (Part 5) highlight the requirement for PCBUs to facilitate consultation with other parties and workers regarding risk management. Section 27 mandates that officers must exercise due diligence to ensure that responsibilities prescribed under the Act are met by PCBUs. This can be achieved by; compiling and maintaining WHS knowledge, understand the operational risks and controls, ensure appropriate safety systems are in place to minimise or eliminate WHS risk, ensure the provision of adequate resources, and implement processes for complying with duties / obligations. Section 28 requires workers to take reasonable care: for their own health and safety, to ensure that their acts or omissions do not affect the health and safety of others, to comply as far as they are reasonably able to with reasonable instruction given by a PCBU to comply with this Act, and co-operate with all reasonable policies and procedures of the PCBU that have been notified to them. Section 29 requires all persons at a workplace regardless of being afforded other duties under the part to take reasonable care: for their own health and safety, to ensure their acts or omissions do not adversely affect the health and safety of other persons, and to comply as far as they are reasonably able with reasonable instruction given by the PCBU to comply with this Act.

Name and location of Regulation
Work Health and Safety Regulation 2011 (QLD) available at: https://www.legislation.qld.gov.au/view/html/inforce/current/sl-2011-0240
Relevant excerpt/requirement for chosen workplace
Chapter 3 outlines the requirements of PCBUs including; duty to identify hazards, manage risks including risk minimisation through the hierarchy of controls, the maintenance & review of control measures, supply adequate training and instruction, provide first aid, prepare, implement, and maintain emergency plans, and many more. Additionally, Section 703 outlines a primary duty of care to ensure as far as reasonably practicable the health and safety of any person that might be affected by the relevant person's activity. Section 704 highlights the requirement of officers to exercise due diligence to ensure relevant persons are complying with their WHS duties. It also defines the steps that should be including in providing due diligence. Section 46 requires workers to use or wear PPE as per training / information or reasonable instruction provided by the PCBU. Additionally, they must not intentionally, damage or misuse PPE and inform the PCBU of any damage, defect, required cleaning, and the need to decontaminate PPE. Section 705 echoes the Act (Section 29) requirements for other persons at relevant premises (see previous answer).

Name and location of Code of Practice
How to manage work health and safety risk (Code of Practice 2011) retrieved from: https://www.worksafe.qld.gov.au/__data/assets/pdf_file/0003/58170/Manage-WHS-risks-COP-2011.pdf
Relevant excerpt/requirement for chosen workplace
PCBUs that engage workers, direct/influence workers, or who may put others at risk as a result of their operation, manage or control the workplace fixtures, fittings, or plant and equipment, design, manufacture, import, or supply plant, substances, structures, for use at a workplace, or install, construct or commission plant or structures at a workplace have a duty to manage health and safety duties under this COP. The risk resulting from the operation of a PCBU must be controlled to as far as reasonably practicable. The COP requires PCBUs to conduct a minimum of four basic steps when managing risks: Identifying hazards, Assessing the risk, Controlling Risks, and Reviewing the effectiveness of implemented controls. The COP also outlines the requirement of PCBUs to consult with workers and consulting / co-operating and co-ordinating activities with other duty holders. Officers must exercise due diligence to ensure that the business or undertaking complies with the WHS Act and Regulation. Stating that reasonable steps should include; gaining an understanding of the hazards and risks resultant from the operation, ensure the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks to health and safety.

Name and location of Standard
Australian Standard / International Standards Organisation 31000:2018: Guidelines – Risk Management Guidelines. Retrieved from SAI Global:
Relevant excerpt/requirement for chosen workplace
This document outlines the Australian and International Standard for Organisations that are required to manage risks (PCBUs). The document provides framework to ensure adequate understanding of risk and resources to manage it are allocated. It includes information on the communication, consultation, principles, and outlines the process for effective risk management.

Name and location of Guidance material
Lesson Learned Bulletin for falling object (Internal to DNM) retrieved from internal email. (Not authorised to distribute).
Relevant excerpt/requirement for chosen workplace
Highlighted expectations around working at heights and waste management. Items to be cut into manageable size for control, Workers need a clear process for managing items at heights and workers are to consider enclosed scaffold when handling materials at height.

Name and location of Organisational policies
Summary of Risk Management Policy and Framework retrieved from https://www.incitecpivot.com.au/about-us/about-incitec-pivot-limited/corporate-governance/risk-and-policy-framework
Relevant excerpt/requirement for chosen workplace
"Incitec Pivot Limited (Dyno Nobel) has adopted an integrated Group Risk Framework for the oversight and management of material business risks and manages risk within a comprehensive risk management process which is based on the principles and guidelines outlined in ISO 31000 - Risk Management".

Name and location of Organisational procedures
The Company uses an electronic system (eDocs) to hold all safe operating procedures. Not Authorised to distribute.
Relevant excerpt/requirement for chosen workplace
All non-routine tasks and some routine tasks have a Safe Operating Procedure that is to be followed. These documents feature risk management of each step including hazard identification and control in place to reduce the risks associated with a particular step within the task.

Name and location of Organisational processes
HSE corporate safety strategy / processes retrieved from: https://www.incitecpivot.com.au/sustainability/ipl-online-sustainability-report/workplace-health-and-safety
Relevant excerpt/requirement for chosen workplace
"Our approach to workplace to health and safety is implemented via our HSE Strategy which focuses on four key areas referred to as the '4Ps': Passionate Leadership, People, Procedures and Plant. We believe that safety performance is a result of investment in each of these four areas. IPL has in place a fully integrated HSEC Management System which provides the foundation for effective identification and management of health, safety and environmental risks. Based on our HSEC Policy, this foundation is complemented by the corporate commitment to continuous improvement through BEx"

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

ACTIVITY 2

Identify two (2) hazards (one chemical, one causing occupational disease) that may occur in your workplace. For each hazard identified, find information to explain:

a) The nature and scope of the hazard, including the incidents/injuries it can cause
b) Determine the level of risk for the hazard within your workplace
c) Determine the application and limitations of each of the following techniques, tools and processes in identifying and controlling your nominated hazard (and associated risk):
   - Hazard/risk checklists
   - Hazard hunts
   - Job safety analysis (JSA)
   - Manifest/register (e.g. dangerous hoods, hazardous chemicals and plant)
   - Safe work method statement (SWMS)
   - Surveys (e.g. questionnaires, interviews)
   - Workplace inspections and walk-throughs
d) Name and justify at least two (2) risk controls that may be implemented to address the hazard and risk assessment results
   - Explain which of these risk control options would be the most suitable

Name hazard resulting from chemicals

Burns resultant from contact with Sulphuric Acid.

Nature and scope of hazard

Sulphuric Acid is highly corrosive to metals and can cause severe burns to skin/eyes or the respiratory / ingestion systems if inhaled / swallowed.

Source of information *(e.g. website address)*:
https://www.csbp.com.au/docs/default-source/msds---products/ammonia-ammonium-nitrate-products/sulphuric-acid-(98-solution).pdf?sfvrsn=c5a56e0d_6

Determine the level of risk

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: 4: Unlikely x C: Lost time injury = Medium

Techniques, tools and processes to identify hazard/risk

Describe application or limitations for each of the following in identifying the hazard/risk:

- Hazard/risk checklists: Can be used to identify leaks prior to entering a work area.
- Hazard hunts: Can be used to identify leaks or incorrect storage of product.
- Job safety analysis (JSA): Essential for use when handling, disconnecting or reconnecting hoses to Sulphuric Acid containers.
- Manifest/register (e.g. dangerous hoods, hazardous chemicals and plant): Critical to

ensure that incompatible materials are not stored with Sulphuric Acid.

- Safe work method statement (SWMS): Not used on our site, but are similar to Safe Operating Procedures which are considered critical controls.
- Surveys (e.g. questionnaires, interviews): Potentially could be used to improve storage or work methods involving Sulphuric Acid.
- Workplace inspections and walk-throughs: Can be used to identify leaks, incorrect storage.

Risk controls

PPE (apron, long sleeve clothing, googles, face shield, PVC / Rubber gloves). This will reduce the potential area of contact with Sulphuric Acid.
Safety Showers – These will reduce the severity of burns is applied quickly after contact.

Both of the suggested controls are mitigating controls. The most suitable of the two controls is PPE. As it has the potential to reduce the amount of burns received, where a safety shower has the capacity to reduce the affect of the burns on the area. As these are low effective controls, ideally an engineering solution such as a plastic screen or elimination of the product through substitution would be more appropriate control measures.

Source of information *(e.g. website address)*:
https://www.csbp.com.au/docs/default-source/msds---products/ammonia-ammonium-nitrate-products/sulphuric-acid-(98-solution).pdf?sfvrsn=c5a56e0d_6

Name hazard causing occupational disease

Nitrogen Dioxide (NO2) gas.

Nature and scope of hazard

Nitrogen Dioxide gas is a toxic, corrosive, and flammable gas (oxidiser) that is extremely harmful to people. It has the potential to cause pulmonary oedema which results in excess fluid in the lungs reducing or eliminating the capacity to breathe.

Source of information *(e.g. website address)*:
https://www.boconline.co.uk/en/images/nitrogen_dioxide_tcm410-55843.pdf

Determine the level of risk

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: 4: Unlikely x A: Death or permanent disability

Techniques, tools and processes to identify hazard/risk

Describe application or limitations for each of the following in identifying the hazard/risk:

- Hazard/risk checklists: Can be used to identify where there is risk of NO2 exposure.
- Hazard hunts: These have very limited applicability unless accompanied by a gas monitor as in low concentrations, NO2 is not detectable / visible.
- Job safety analysis (JSA): A good way of defining the aspects of tasks that have exposure potential and the effectiveness of controls (SCBA).
- Manifest/register (e.g. dangerous hoods, hazardous chemicals and plant): Critical to understanding the harmfulness of NO2, and the minimum controls that are to be in place.
- Safe work method statement (SWMS): Not used on our site, but are similar to Safe Operating Procedures which are considered critical controls.
- Surveys (e.g. questionnaires, interviews): Could be used to assist consultation into the health and safety risks, controls, and their effectiveness.
- Workplace inspections and walk-throughs: Limited applicability unless accompanied by a gas monitor as in low concentrations, NO2 is not detectable / visible. However could be a good tool to ensure agreed controls are implemented.

Risk controls

Self-Contained Breathing Apparatus (SCBA) – this provides air from a pressurised cylinder allowing a person to breathe air in a toxic atmosphere.
A suitable gas monitor will alert a person if NO2 is present, ideally at low concentration to allow the person to remove themselves prior to exposure to high concentration.

SCBA is the more effective risk control. Although it is PPE, it allows separation that provides respiratory protection for workers. It is a mandatory requirement where there is any risk of exposure to NO2 gases. A gas monitor is a device that can aid in early detection of NO2 gas, however it provides no further protection.

Source of information *(e.g. website address)*:
https://www.boconline.co.uk/en/images/nitrogen_dioxide_tcm410-55843.pdf

Outcome for Activity 2	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 3

Referring to the hazards identified in Activity 2, consider the implementation of the proposed control measures.

a) What impact will the organisation's WHS management system (WHSMS) have on the implementation process?
b) Explain which individuals/parties need to be consulted when determining the suitability of the proposed risk controls.
   - Describe the formal/informal communication and consultation processes used when addressing these individuals/parties
c) Outline how both risk controls will be implemented in the form of an action plan
   - Identify resourcing requirements, allocate roles and responsibilities, and training needs required for implementation
   - Prioritise tasks and specify timelines for implementation
d) How will the risk control processes be recorded?
   - How will the organisation's WHS information system (WHSIS) influence this?

Impact of WHMS

Sulphuric Acid Control: PPE – implementing PPE to control risks associated with sulphuric acid impact the WHS management system in a number of ways. Training needs to be provided for the PPE to ensure it is maintained and used correctly, information on the relevant hazards need to be captured for workers to reference (in Safe Operating Procedures and in ChemAlert, the SDS management system). Additionally, there needs to be a system in place to maintain and distribute PPE to workers in order for it to be used.

Sulphuric Acid Control: Safety Showers – Implementing safety showers will trigger the WHS management system's "management of change" process. This is a formal process that involves approval / review for any changes in plant areas. Reviews analyse the change from a process, safety, engineering, compatibility and various other aspects. The proposed implementation, will have to be described in detail, granted initial approval before being reviewed by the relevant persons.

NO2 Control: SCBA – Given the substantial risk and applicability to all operations, the WHS management system triggers updating of the global procedure controlling hazardous materials. This is a process that must be raised to the document owner, including the reasons for the proposed change. The changes will be reviewed and if implemented, the document will be updated and communicated to all sites. Site WHS management systems are designed to support / align with global procedures. For example, training manuals, isolation procedures, and safe operating procedures reference or re-iterate standards required under a global procedure.

NO2 Control: Gas Monitor – The WHS safety management system requires

Consulting individuals/parties

Consultation should take place with Operational and Maintenance workers regarding the proposed implantation of controls. The consultation should include the opportunity for workers / contractors to provide their feedback on the proposed controls, discuss the expected effectiveness, and discuss any potential alternatives that could be used. The consultation should also include the proposed strategies for implementing the controls (such as training to take place). These can occur through formal and informal meetings, through surveys, voting, email and site bulletins. The outcomes should be communicated in various channels – such as site notices, toolbox talks, daily meetings, etc.

Action plan

PPE: The resources required include the capital for the procurement of the listed PPE items. This could be organised by the HSE Manger in conjunction with the procurement department (to make the items a standard stock item in the workplace store for autonomous stock maintenance). The HSE manager can also champion the training provided for the PPE. This can involve the training department whom can provide competent trainer assessors to develop and provide training, in addition to updating the training material to reflect the expectations. Also, the operations team can introduce the requirement into their safe operating procedures – this can be driven by the operations team leaders.
Equipment to be ordered by and listed in SAP as a standard item by 15/01/2019. Training should take place the following week and be completed by the 22/02/2019.
Procedures and training material should be updated by 22/03/2019.

Safety showers require the development of a modification. This can be executed by a mechanical and electrical engineer who can collaborate to determine the appropriate installation method. It will also require approvals from the plant manager and review from senior engineers before final approval is granted. From here, the maintenance team will require boiler makers, fitters, and electricians to commission the equipment. Training will have to be provided in addition to the update of the site induction to highlight the availability of safety showers. This can be lead by the training department. Communication in the form of a site bulletin will be used (distributed via email and placed on noticed boards) to be discussed in the daily team meetings when they are commissioned.
Modification should be drafted by 15/01/2019, initial approval granted by 21/01/2019, and detailed design and estimates completed by 28/02/2019. The installation can is due for completion on the 1st of April 2019. Training and the communication of the installation should be carried out within a week of commissioning (by the 8th of April).

SCBA units can be purchased by the WHS manager. This will require significant capital that likely exceeds the budget, requiring plant manager approval. The training department will have to facilitate nationally accredited training for staff members to ensure they can operate and maintain SCBAs. Additionally, the installation of a compressor to refill cylinders and appropriate storage area be designated for SCBAs. Operations will have to update their safe operating procedures to ensure the use of SCBAs is captured in relevant procedures.
Purchase of SCBAs by 28/02/2019. Nationally accredited training due by 7th of March 2019, and the revision of relevant documentation due by the 30/03/2019.

The purchase of gas monitors can also be facilitated by the WHS manager. This will require capital and should include the selection of a contractor to maintain the equipment on a long-term basis for yearly maintenance or repair work. Training will be required in the use of gas monitors and basic maintenance. This can be facilitated by the training department. Operations and training department will also have to update their documentation to identify the requirements for the usage of gas monitors. The monitors should be ordered by 30/01/2019. The training should take place in the following week (due by the 7th of February), and the training and operational documentation should be updated by the 28th of Feb.

Additionally, consideration should be given to developing an interim plan to identify how these hazards will be managed whilst the listed controls are implemented.

Recording risk control process

The risk control process should be captured using a formal risk assessment. A tool of the WHS management system, it will identify the raw risk (prior to controls) the residual risk (after controls implemented), and list the required monitoring of the proposed controls and the assessment of their ongoing effectiveness. It will also allocate the responsibilities and due dates of these actions. The safety reporting system SHEARS should also be monitored for incidents involving the specified hazards.

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

ACTIVITY 4

Referring to the hazards identified in Activity 2, consider the effectiveness of the proposed control measures.

a) Identify factors that may impact on the effectiveness of the risk controls and how they might be addressed. Consider the impact of:
   - Workers with specific needs and limitations (e.g. cultural background and diversity, low language, literacy and numeracy levels)
   - Structure and organisation of the workforce (i.e. part time vs casual vs contract workers; shift rosters; geographical location)
   - Workplace culture relating to gender and alcohol/drug use

b) How will you monitor and review the success of each risk control?
   - What impact will the organisation's WHSMS have on this process?
   - Identify the criteria used for the evaluation (i.e. positive performance indicators).

Factors impacting on risk management
Training and communication channels should avoid excessive utilisation of computers as there are varying levels of computer skills in the target groups. The training department will have to navigate the rotating shift roster and the site remoteness to deliver training.
Monitoring
The organisation's WHS management system includes a formal risk assessment. It identifies the raw risk of a hazard and the residual risk after the proposed controls are listed. It allocate responsibilities (such as the implementation of controls, their monitoring, and the review of their effectiveness) and provides dates that these actions have to be carried out by. The positive performance indicators will be the risk score being reduced by 8 for each of the identified hazards, with this reduction being sustained during monitoring and review of the control effectiveness. Additionally, zero incidents relating to these hazards should occur after the control implementation..

Outcome for Activity 4	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

QUIZ

QUESTIONS	CORRECT
1. A systematic approach to managing WHS risk in the workplace involves: Assessment of hazards/risks, consultation with workers, development and implementation of risk controls by PCBU, and review of risk controls. ☒ True ☐ False	☐
2. Which of the following may impact on WHS risk and the management of WHS? Select all that apply. ☐ Consultation meetings being too long and boring ☒ Language, literacy and numeracy levels of the workforce ☒ Workplace culture ☒ Having separate work sites	☐
3. Which of the following can be used for identifying and controlling WHS hazards and risks? Select all that apply. ☒ Hazard and risk checklists ☒ Hazard hunts ☒ Job safety analysis ☒ Manifests and registers ☒ Safe work method statements ☒ Surveys ☒ Workplace inspections and walk-throughs ☒ WHS management system ☒ WHS information system	☐
4. Which of the following are limitations of using a generic hazard/risk assessment checklists and risk ranking processes? Select all that apply. ☒ Specifics of the workplace are not considered ☒ Not all checklist points will be applicable ☐ Such checklists/processes must be completed on a computer ☐ You always have to purchase these checklists	☐

5. Match the following terms and definitions by placing the corresponding term number next to each definition. ☐

Label	Term
1	Causation
2	Hazard
3	Prevention
4	Risk
5	Foreseeability

Label (1 – 5)	Definition
3	The action of stopping something from happening.
5	That which is seen as the natural result of action/inaction.
4	A measure of the possibility of harm, considering seriousness of injury and likeliness of occurrence.
2	Something which has the potential to harm people.
1	The relationship between conduct and the resulting effect (e.g. injury)

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 handout provided) or real.

TASKS		VERIFIED
A.	In a small group, show leadership while conducting a safety audit of the work area. • Check quantities and suitability of emergency equipment	☒
B.	Document potential emergencies and their causes in a risk register, identifying: • Possible injuries/damage • Required control measures (referring to legislation, standards and considering requirements of organisation's WHSMS and WHSIS) • Risk assessment results	☒
C.	Electronically and orally present findings to appropriate persons (e.g. PCBU, Trainer/Assessor). As part of the presentation: • Identify factors that will impact on WHS risk management • Explain how control measures will be monitored and reviewed for effectiveness (using positive performance indicators), and in accordance with WHSMS	☒

Name of observer	Allan Martin
Role of observer (Confirm their suitability to sign)	☑ Trainer/Assessor ☑ Other (specify): Team head Operations
Phone number of observer	(07) 4840 3756
Email address of observer	allan.martin@incitecpivot.com.au
Signature of observer	Allan Martin
Date	Click here to enter a date. 17/12/2019
Comments	

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