BSBWHS505

Investigate WHS incidents

ASSESSMENT FOR BSBWHS505

Student name	NYAIM THU AUNG
Date of assessment submission	26/05/2017

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

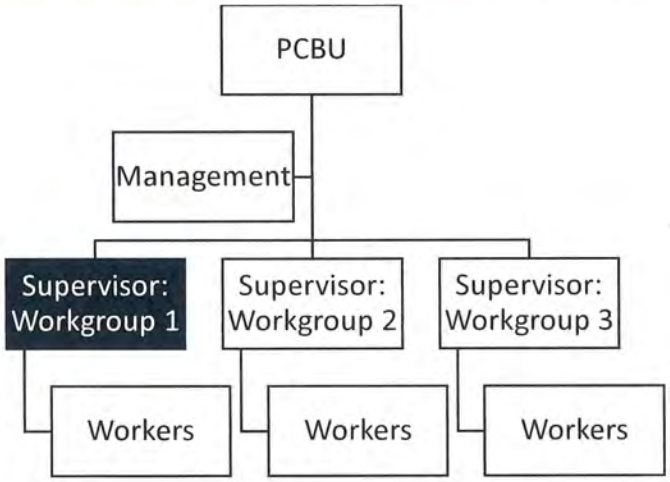
TASK INSTRUCTIONS

- 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. Initial responses to incidents	• Workbook response (below)
2. Planning the investigation	• Workbook response (below)
3. Collecting and analysing information and data	• Workbook response (below)
4. Completing investigation report	• 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. Also, identify a likely incident to occur within this workplace which requires investigation. It may have actually happened or could hypothetically happen.

Name of workplace	AsiaFlex Manufacturing Plant
Workgroup	End Fitting Mounting Area
Describe incident	Crushed injury to fingers of a worker at EF Mounting bay. While assembling End Fitting at the one end of the Flexible pipeline (Flowline), workers were working with hammers to assemble the End Fitting parts on the respective layers of the Flexible pipe. Suddenly, one of the workers injured his fingers by striking them with the hammer unwittingly by another worker, while he was checking the parts by taking out his impact resistance gloves and touching the product with bare hand.

ACTIVITY 1

Consider the initial responses to the incident, in preparation for an investigation:

a) How would you ensure the incident site is safe and secure?
   - Describe how you would address the immediate needs of those involved in the incident

b) Outline the WHS legislative requirements for your workplace regarding incident response (i.e. duty holders, notification/reporting, preserving incident sites) as outlined in:
   - WHS Acts
   - WHS Regulations

c) Outline the your workplace's requirements regarding incident response as outlined in:
   - Policies
   - Processes
   - Procedures
   - Systems

Ensuring safety and security of site

First the injured person (IP) was provided immediate first aid treatment on site then he was taken to Plant Clinic for further review and treatment by Occupational Nurse there.

Incident area is barricaded and signed do not entry. Take photo of the IP wound (prior and after immediate first aid treatment), equipment, area, location of work for evidence. After that, the eye witness workers and supervisor were called out for incident statement immediately, and organize a stop work and safety stand down at site until further notice.

WHS Acts

Under WHS Act 2011, person who conducts a business or undertaking must ensure that the regulator is notified immediately after becoming aware that a notifiable incident arising out of the conduct of the business or undertaking has occurred. The notice must be given as required under this section and by the fastest possible means. The notice must be given by telephone; or in writing. The person with management or control of a workplace at which a notifiable incident has occurred must ensure so far as is reasonably practicable, that the site where the incident occurred is not disturbed until an inspector arrives at the site or any earlier time that an inspector directs

WHS Regulations

Under WHS Act 2011, As soon as practicable after a major incident occurs, the operator of the major hazard facility must take all reasonable steps to provide the persons, with information about the major incident, including:
(a) a general description of the major incident; and
(b) a description of the actions the operator has taken and proposes to take to prevent any recurrence of the major incident or the occurrence of a similar major incident; and
(c) recommended actions that the local authority and members of the local community should take to eliminate or minimise risks to health and safety.
If a notifiable incident occurs in connection with the construction project to which the statement relates, the person must keep the WHS management plan for at least 2 years after the incident occurs.

Policies

In TechnipFMC HSES policy, it is encouraged people to stop the job and intervene for safety. Nonetheless, the management also committed to ensure continual improvement of HSE management system and performance, whereby if incident occurs, the root cause shall be identified and communicated within the organization and preventive and improvement action shall be to ensure no reoccurrence.

Processes
In case of incident occur, the first witness shall activate the emergency alarm and notify to their supervisor. Then HSE personnel will receive the information to report to the respective HSE manager in charge. The incident area is then need to be barricaded or isolated to ensure the evidence is not destroyed. Incident investigation is immediately arranged to identify the root cause. After that, carry out the improvement and preventive action to avoid the reoccurrence.
Procedures
Incident notification and investigation procedure has been published and communicated widely within the organization. In the procedure, it stated the category of incident, classification of injury and also the process of incident notification until investigation close out.
Systems
All incident shall report to TechnipFMC in house incident systems called Synergi / Velocity. The incident shall be registered in the system within 24 hours. Then, preventive action or corrective action shall be carried out, and update in the Synergi / Velocity with valid evidence to close the incident case.

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

ACTIVITY 2

You are required to develop an investigation plan to address the incident:

a) Define the scope and purpose/objectives of the investigation
   - Ensure this reflects the scope and nature of the incident
   - Explain which individuals/parties you would consult with in planning the investigation, including deciding between options (e.g. internally, external advisors)

b) Outline the requirements of the investigation in the form of an action plan
   - Identify resourcing requirements, and allocate roles and responsibilities
   - Prioritise tasks and specify timelines for the investigation
   - Identify how the outcomes of the investigation will be documented

c) Identify factors that may impact on the investigation 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

Ensure that the requirements from Activity 1 are met through your responses to Activity 2.

Scope and purpose/objectives of the investigation

The purpose of the incident investigation is to identify the root cause(s) of the injurious incident for improvement and to prevent reoccurring of the unwanted event. Therefore, it is very important to consult the workers who had involved in the incident such as the IP and also the witnesses, as well as the Site Supervisor. Nonetheless, the investigation shall be also facilitated by qualified and competent investigator to ensure the effective investigation is carried out.

Action plan

Preventive action shall be recorded down in the investigation report. It is to ensure the prevention action is being agreed to execute. Example of the preventive action is, modifying the work plan at End Fitting mounting area to avoid taking out the impact resistance Gloves to touch the parts with bare hand. Also, the duration of the preventive action to execute and responsibility of the preventive action shall be also identified and allocated. For example, this action shall be carry out by Engineering department but supervisor in charge and HSE officers must double check and ensure the compliance on site.

Impacting factors

The only factor that impacting the investigation process is Language used in the investigation process. This is due to some local workers at site just speak Bahasa Malaysia and not fluent in English. As a result, a spokesman/translator has been identified to do translating and explanation throughout the investigation process.

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

ACTIVITY 3

Consider the collection and analysis of information and data:

a) Explain why and how you will inspect the incident site.
b) Explain why and how you will inspect the equipment used at the time of the incident.
c) Identify other evidence you would gather regarding the incident.
d) Outline how you would gather information and data in ways that ensure objectivity, confidentiality, validity and accuracy.
e) What reasoning would you give to the investigation team to justify using the conceptual basis for the analysis, namely:
   - Adopting an open-minded and objective approach
   - Analysing policies, procedures, processes and systems in place at the time of the incident
   - Focussing on the 'how', 'what' and 'why' of the incident
   - Not focussing on individual behaviour or fault
   - Using applicable models of causation and occurrence

Inspecting the incident site

The reason of inspecting the incident site is to understand the incident scenario and identify the unsafe act(s) and condition(s). All areas of the incident must be visited such as position of the worker carry out the job and any findings identified during the visiting must capture down by camera as evidence. Other than that, it is also can be requested the victim to illustrate how the incident occur, and also can arrange a mock up (re-enactment) to understand the incident scenario.

Inspecting equipment

All the equipment used shall be physically checked including its function. It has to bring over lab for calibration if necessary. For example, if the rating of the impact resistance gloves is to be questioned, they can be sent to manufacturer or 3rd party experts to test and verify it. Also similar goes to the type, nature and safety factors of hammers used at this site.

Other evidence

Other evidence can be taken from the CCTV nearby, equipment purchasing certificate, worker's training record, worker's health record, worker's HSE violation record, work process, and other similar incident investigation report. Witness statements of nearby co-workers will also be useful.

Process for gathering information and data

Information and data can be collected from interviews, physical survey such as inspection of the equipment, observation of the working position and unsafe conditions if any. Nonetheless, the information should be also available from document review of any documents which relevant to the incident (for example, the Work Plan for EF Mounting.

Briefing the investigation team

The objective of the investigation team using the named conceptual basis for analysis is to ensure a quality of investigation is carry out. It is to make sure the root cause(s) are identified properly and achieving a fair and balance investigation report inclusive of suggested corrective and preventive actions.

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

ACTIVITY 4

Complete an investigation report of the identified incident for your PCBU in the following structure:

1.0 INTRODUCTION

- Outline the background of your company, its role and purpose
- Briefly describe the incident that has taken place
- Define the scope and purpose of the investigation

2.0 INVESTIGATION FINDINGS

- Construct a timeline of events leading up to the incident (e.g. who was involved, what happened, initial responses to meet legislative/organisational requirements)
- Describe the scope of the investigation (e.g. identify investigation team, sources of information and data, site/equipment inspections that took place, other evidence gathered, experts consulted)
- Outline how information and data was gathered using objective, confidential, valid and accurate methods.
- Highlight the root causes of the incident:
  - Note the key events, conditions and/or circumstances that together resulted in the incident
  - Consider the effectiveness of workplace policies, procedures, processes and systems

3.0 RECOMMENDED PREVENTION MEASURES

- Highlight points at which the incident could have been prevented
- Outline actions, interventions and practical measures that would prevent reoccurrence of the incident, which address the root causes identified
  - Evaluate between alternative strategies to identify the best option(s) for the workplace, identifying the criteria used for this decision
  - Identify resourcing requirements, and allocation roles and responsibilities
  - Prioritise tasks and specify timelines for implementation
  - Outline how the effectiveness of these solutions will be measured and evaluated

4.0 CONCLUSION

- Explain the importance of WHS to your company, and the value of addressing and avoiding incidents

TIPS:

- Use the report template (below) and elaborate on the points above.
- Write in simple English. Remember that people from a range of backgrounds and abilities would be reading this document.
- Be sure to reference evidence to back up your conclusions and recommendations, providing sufficient detail so that the reader can look into it further.

1.0 INTRODUCTION

TechnipFMC Asia Pacific (APAC) is the leading engineering technology solutions and turnkey contracting provider in Asia Pacific for the design and construction of hydrocarbon field development, oil refining, gas processing, petrochemicals and selected non-hydrocarbon projects. TechnipFMC APAC consists of countries; Singapore, Vietnam, China, Brunei, Malaysia, Thailand, Indonesia and Myanmar. And activities cover 4 business segments i.e. Onshore/Offshore, Subsea Services, Subsea Projects and Surface.
Incorporated in 1982, and combined with FMC Technologies in early 2017, the company participates in business activities internationally with Kuala Lumpur in Malaysia as the main operational centre in the Region.
However, a recordable injury accident occurred on 10th May 2017 in one of the projects under control of Kuala Lumpur Management. It happened at AsiaFlex Manufacturing Plant in Johor. A fitter (IP) was one of the team members working at End Fitting (EF) Mounting bay for fixing EF to the ends of a Flexible Flow Line for the later Subsea installation. At one point of activities, his hand was hit by the hammer of another co-worker which caused the IP to sustain crushed injuries to his left middle and index fingers which required beyond the onsite first aid treatments but some orthopaedic procedures in hospital. This incident was classified as RWC (Restricted Work Case) as per OSHA and Group HSE classification guidelines.

2.0 INVESTIGATION FINDINGS

As this was the very first Recordable Incident for this year in the Region, an Incident investigation team was formed by representatives from Regional Management and Plant Management. Incident site visits as well as interviews with relevant parties/ personnel were done. Re-enactments were also performed. After evaluating all information and available resources, an incident investigation report was produced by the team.
Below are the findings from investigation;

As usual working day, the Injured Person (IP) attended the daily toolbox talk which was conducted by his Supervisor and site safety personnel. Then the EF Mounting activities started.
He has assigned by the supervisor as a team member of fitters to work on assembling the EF parts on the respective layers of the Flexible Pipe (Flow line). They use hammers to strike the EF parts in place on flexible layers. This is considered as a relatively high risk activity as per defined in Job Hazards Analysis (JHA). Mitigations include to highlight about pinch points during toolbox talks as well as using impact resistance gloves for the workers involved in this process.
However, as per Work Plan for EF Mounting, at some points workers need to check the EF parts status by their hand. It is not very practical to do this task with impact resistance gloves on their hands and workers used to take out the gloves whenever they do this task.
At approximate 1100 hours, IP was checking the status of EF parts by his bare hand. One of his co-workers meanwhile strike the hammer to fix a nearby EF part. The hammer missed the target point and unwittingly slipped sideway. Hammer head landed on the left hand of the IP causing crushed injuries to middle and index fingers.
IP was given immediate first aid treatment on site and then sent to Plant Clinic. After being assessed by occupational nurse in clinic, he was referred to nearby tertiary Hospital to consult with Orthopaedics Surgeon. He required to go through with some Orthopaedics procedure to fix bone injuries inside those fingers. He was given only light duties for further 2 weeks before he recovered fully.
As investigation team did interviews with IP, some of his co-workers (eye witnesses), site supervisor and plant HSE team, it became obvious that the underlying and root causes were mostly related to People and Organization factors. (Please refer to the TOPSET flow chart provided in separate sheet.) The risk of being struck by hammer during this kind of activities has been captured in JHA but mitigations were not effective. On contrary, the work plan involves some steps asking to perform the fitters manually checking EF parts during the process of installation which makes them to be enforced to take out their impact resistance gloves while doing so.
There were a few minor injuries and near misses at EF mounting bay while performing

similar task. However, as for a recordable injury, this is the first time of occurrence. Previous investigations didn't call for the modification of Work Plan of EF Mounting.

Investigation team also looked into Technology related factors. However, the impact resistance gloves ratings are good and quality of the gloves also were checked and confirmed reliable. Hammers used at the sites also got good safety ratings and good maintenance records. There were no defects identified with hammers.
IP and team were under some 'time pressure' to finish the job as per demanding Project schedule. Apart from that, there were no other environmental contributing factors.
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3.0 RECOMMENDED PREVENTION MEASURES

As result of the investigation, it is recommended to modify the Work Plan at EF Mounting fixing activities. 'Elimination' being the best hierarchy of control, if workers no more required to manually checking the EF parts simultaneously with mounting activities, the chance of similar accidents in future will be able to avoid. The checking of the EF parts shall be done as a separate step in EF mounting process while all other workers stop their activities and standby until the fitter inspecting parts give them green light to resume their activities. Nevertheless, the utilization of good safety rated Hammers and also the usage of impact resistance gloves shall be continued. Hazards of pinch points and line of Fire shall be being continued highlighting in all daily and pre-shift toolbox meetings. JHA of this activity shall also be updated to capture the changes in Work Plan.

This incident and investigation results as well as corrective actions are to be shared in all project progress meeting, HSE committee meeting and in weekly toolbox talks. This is to ensure all project and plant personnel understand the hazards and to avoid the reoccurrence again as well as aware of changes done in Work Plan and JHA.
A One Pager Safety Alert is to be produced and cascade to whole APAC Region so that the key points related to this incident and lessons learnt will be shared to all relevant parties.

4.0 CONCLUSION

TechnipFMC strongly keep priority in HSE and wanted ourselves to be a reference company in HSE, therefore we have zero tolerance in HSE. It is also because we value the importance of HSE which able to help us in getting more projects from our Clients like Petronas, SHELL, Chevron, JX NIPPON and Murphy etc. especially in such a challenging Oil & Gas business environment.
We also value the life of the workers are precious and can't be replaced. Therefore, HSE is priority and important in all project implementation and executions.
As we can implement the lessons learnt from this incident, we will be able to take a chance to improve ourselves in obtaining above Goals.

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

QUIZ

QUESTIONS	CORRECT
1. Which of the following matters are considered as initial responses to an incident? Select all that apply. ☒ First aid ☐ Evaluation of response ☒ Preserving the incident site ☒ Evacuation	☐
2. Under Part 3 of the *Work Health and Safety Act 2011* (Qld), a PCBU must notify Work Health and Safety Queensland about all incidents that occur in the workplace, even if there is no injury or damage caused. ☐ True ☒ False	☐
3. Which of the following should be considered when developing an investigation plan? Select all that apply. ☒ WHS legislation ☒ Workplace policies, procedures, processes and systems ☒ Appropriate selection of a team for the scope of the investigation ☒ Consultation and participation of individuals/parties with planning ☒ Obtaining necessary resources for investigation, including expert advice	☐
4. Under Part 9 of the *Work Health and Safety Act 2011* (Qld), which of the following rights and powers does a WHS inspector possess? Select all that apply. ☒ To provide information and advice about WHS compliance ☒ To assist in resolving WHS issues in the workplace ☒ To inspect a workplace, including investigation of WHS incidents ☒ Enter a workplace with or without the PCBU's permission	☐
5. Which of the following factors would be considered barriers to an incident investigation? Select all that apply. ☒ Availability of witnesses due to organisational structure (e.g. casual employees, shift work) ☒ Differences in understanding due to diversity (e.g. cultural background, low language, literacy and numeracy levels) ☒ Attitudes of investigators (e.g. negative views of opposite gender) ☒ An extended time passing since the incident occurred	☐

6. Under Part 10 of the *Work Health and Safety Act 2011* (Qld), which of the following types of notices may be issued by a WHS inspector? Select all that apply. ☒ Improvement notices ☐ Non-disturbance notices ☒ Prohibition notices ☐ Time out notice	☐

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 or real.

TASKS		VERIFIED
A.	Work with others to carry out initial responses to a notifiable incident: • Ensure incident site is safe and secured, addressing the immediate needs of those involved • Ensure workplace policies, procedures, processes and systems are followed (e.g. evacuation procedures, providing support, requesting information from those involved) • Ensure WHS regulator is notified	☒
B.	Take a leadership role when consulting with others to develop and document an investigation plan: • Determine scope and purpose of investigation, including timelines • Form an appropriate investigation team and assign responsibilities and roles • Identify and evaluate alternative strategies and resources for investigation process • Obtain necessary resources for investigation • Ensure requirements of WHS legislation and workplace policies, procedures, processes and systems are met by the plan	☒
C.	Work in investigation team to collect information and data: • Inspect incident site, equipment and other evidence (e.g. witnesses) • Extract mathematical information, as required • Gather information and data in ways that ensure objectivity, confidentiality, validity and accuracy • Electronically document outcome of inspection	☒
D.	Work with others to analyse information and data: • Construct a timeline of events leading up to the incident • Analyse numerical data, key events, conditions and/or circumstances • Demonstrate and open-minded and objective approach • Analyse policies, procedures, processes and systems in place at the time of the incident • Focus on the 'how', 'what' and 'why' of the incident, using models of causation and occurrence rather than focussing on individual behaviour or fault	☒
E.	Consult with others to determine prevention measures: • Develop and detail actions, interventions and practical measures to address root causes and prevent the reoccurrence of the incident • Identify how solutions will be measured and evaluated to determine effectiveness	☒
F.	Prepare and verbally present an electronic investigation report to relevant parties (e.g. PCBU, Trainer/Assessor): • Identify the events leading up to the incident, immediate and underlying causes and points at which the incident could have been prevented • Explain recommendations arising from the investigation • Cite evidence and basis for conclusions and recommendations • Develop appropriate report for audience and use objective language	☒

Name of observer	GekNgo Goh
Role of observer (Confirm their suitability to sign)	☐ Trainer/Assessor ☒ Other (specify): Corporate HSE Manager Onshore/Offshore | TechnipFMC Malaysia
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Signature of observer	GOH GEK NGO TPM Corporate HSE Manager 
Date	26/05/2017
Comments	

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