



Australian Government

PMASUP445 Participate in HAZOP studies

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMASUP445A Participate in HAZOP studies

Application

This unit of competency covers the skills and knowledge required to participate in hazard and operability studies (HAZOP).

HAZOP is a systematic method for examining complex facilities or processes to identify actual or potentially hazardous procedures and operating issues within the design, construction and commissioning of equipment and plant so that they may be eliminated or mitigated. Typically a multi-disciplinary team comprising operators, engineers, safety and other personnel will review a change in plant, process or equipment to see if the change can cause unforeseen hazards or introduce unexpected operability problems and confirm that the change meets the standards.

This unit of competency applies to senior technicians and those in similar roles who are required to apply in-depth knowledge of process and plant in order to review piping and instrumentation diagrams (P&IDs) or similar in relation to a proposed change, identify possible hazards or operability issues, recommend amendments to improve safety and operability of the change, and review and amend procedures in relation to the change.

This unit of competency applies to an individual who is part of a multi-disciplinary HAZOP team. At all times they would be liaising and cooperating with members of the team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

PMAOPS280 Interpret process plant schematics

Competency Field

Support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|--|---|
| 1 | Prepare for HAZOP study | <ul style="list-style-type: none">1.1 Explain the purpose of the HAZOP study1.2 Review the key steps in undertaking the HAZOP study1.3 Review the HAZOP tools to be used |
| 2 | Participate in a HAZOP study | <ul style="list-style-type: none">2.1 Identify the purpose and operation of the new/modified equipment/process2.2 Determine the normal operating conditions, method of operation and associated equipment and componentry of proposed change2.3 Review relevant information to assist in the identification of possible problems2.4 Process available information to identify potential hazards or operability issues2.5 Identify potential hazards or operability issues and possible consequences utilising key words2.6 Assess the risks arising from identified potential hazards or operability issues2.7 Identify items needing further action2.8 Review relevant operating and safety procedures2.9 Recommend possible solutions to minimise risk of proposed change |
| 3 | Complete delegated actions within scope of responsibility | <ul style="list-style-type: none">3.1 Perform delegated actions within area of responsibility3.2 Follow initiated items through until final resolution has occurred3.3 Identify problems needing further action3.4 Determine possible fault causes within area of responsibility3.5 Report outcomes to designated person |

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Hazards Hazards identified are situations/conditions which may lead to an incident or make operation difficult and will arise from consideration of key words.

Sources of information Sources of information include, as appropriate to the proposed change:

- provisional layouts
- safety data sheets (SDS)
- process drawings (e.g. P&IDs, process flow diagrams (PFDs), and cause and effect)
- plant model
- equipment arrangement drawings
- provisional operating instructions/procedures
- plant operating procedures
- logic diagrams
- equipment reference manuals
- hazardous area layouts
- start-up and shutdown emergency procedures
- access to plant and equipment

Delegated action Delegated actions arising from HAZOP study include one or more of the following:

- review of plant operating procedures
- undertaking additional tasks from action list HAZOP report
- attendance at HAZOP review meetings
- recording results from additional tasks

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>