



Australian Government

PMAOPS522 Coordinate plant shutdown

Release: 1

PMAOPS522 Coordinate plant shutdown

Modification History

Release 1. Supersedes and is equivalent to PMAOPS522A Coordinate plant shut down

Application

This unit of competency covers the skills and knowledge required to coordinate a planned, major shutdown.

A planned, major shutdown may be for whole plant/system, one plant area or one plant in an integrated complex and will typically occur to enable:

- regulatory vessel inspection (PVI)
- major maintenance
- upgrades or refits
- catalyst and/or column repacking
- other activities which are scheduled for the shutdown.

This unit of competency applies to senior technicians or those in similar roles who are required to apply in-depth knowledge of process and plant operations and problem solving in order to coordinate shutdown sequence to ensure all process shutdown activities completed to schedule, coordinate the activities of a number of work groups, analyse/problem solve and develop contingency plans, and identify and coordinate resources and pre-shutdown requirements.

This unit of competency applies to a plant technician who is performing the plant shutdown coordinator role as their primary activity. This technician would be part of a team working with technical experts, maintenance experts, contractor representatives, process/production teams and management.

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

Pre-requisite Unit

Nil

Competency Field

Operations

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 | Identify shutdown work scope | 1.1 | Analyse relevant information for activities intended for the shutdown |
| | | 1.2 | Determine all activities intended for shutdown |
| | | 1.3 | Confirm priorities and identify all essential work |
| | | 1.4 | Resolve conflicts between proposed activities |
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| 2 | Plan and schedule resources | 2.1 | Identify each individual task in the shutdown process |
| | | 2.2 | Determine resources required for each task and assign appropriate owner |
| | | 2.3 | Determine prerequisite tasks prior to shutting down process |
| | | 2.4 | Ensure hazards are identified and controls are in place |
| | | 2.5 | Ensure all safety and testing equipment is calibrated and on site prior to shutdown commencing |
| | | 2.6 | Compile a schedule to track shutdown and equipment preparation sequence |
| | | | |
| 3 | Coordinate plant/equipment shutdown sequence | 3.1 | Prepare/review shutdown documentation |
| | | 3.2 | Coordinate plant shutdown according to procedures |
| | | 3.3 | Track plant shutdown progress |
| | | 3.4 | Coordinate execution of critical function test during shutdown phase |
| | | 3.5 | Coordinate equipment preparation |
| | | 3.6 | Validate equipment is safe to hand over to appropriate work party |

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| 4 | Hand over plant/
equipment to
relevant work
party | <p>4.1 Hand over plant and equipment to relevant work group according to site protocol</p> <p>4.2 Perform safety audits during shutdown work</p> <p>4.3 Record/report health, safety and environment (HSE) non-conformance</p> <p>4.4 Communicate as and when required</p> <p>4.5 Monitor shutdown work against critical path</p> <p>4.6 Monitor resource usage and take action</p> <p>4.7 Identify barriers to achieving shutdown critical path and negotiate solution</p> |
| 5 | Communicate
with all relevant
stakeholders | <p>5.1 Communicate shutdown plan/schedule to operations team</p> <p>5.2 Attend and contribute to regular shutdown progress meetings</p> <p>5.3 Record and report daily shutdown activities</p> <p>5.4 Ensure all authorisations required for tasks have been obtained</p> <p>5.5 Identify, communicate and manage HSE issues arising during execution of shutdown activities</p> <p>5.6 Contribute to post shutdown review</p> |
| 6 | Return plant to
service | <p>6.1 Confirm that all scheduled work on equipment is complete before hand back is accepted</p> <p>6.2 Ensure equipment hand back documentation complete according to site protocol</p> <p>6.3 Coordinate pre-start equipment integrity checks</p> <p>6.4 Coordinate and validate plant de-isolation and preparation for service</p> |

- 6.5 Ensure appropriate plant start-up authority is obtained
- 6.6 Coordinate start-up critical function tests as required
- 6.7 Coordinate and record plant start-up progress

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.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

All operations to which this unit applies are subject to stringent health, safety and environment (HSE) requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and HSE requirements, the HSE requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, include one or more of the following:

- emergency procedures
- work instructions

- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Scheduling Scheduling may be electronic or paper-based and include at least one more of the following:

- electronic databases, such as Access, DB, and Oracle
- project management software (e.g. Project, Gantt charts, critical path method (CPM) and programmed evaluation and review technique (PERT))
- other electronic forms, such as spreadsheets
- card files
- other paper-based systems
- other specialised planning software
- paper techniques

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>