



Australian Government

PMAOPS501 Provide operational expertise to a project team

Release: 1

PMAOPS501 Provide operational expertise to a project team

Modification History

Release 1. Supersedes and is equivalent to PMAOPS501A Provide operational expertise to a project team

Application

This unit of competency covers the skills and knowledge required to provide operational expertise to a project team. It applies to discrete projects for new facility, expansion or other major works.

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 review project design for safety and operability considerations, provide advice on the operational requirements and implications of the project, and prepare operator training materials and operation procedures.

The provision of operations expertise to a project team provides a critical, practical link to the operational requirements of the planned works. Project teams usually comprise engineers with various technical specialisations (e.g. process, mechanical, electrical and control,) and project managers.

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.

1	Identify operational requirements for the project	1.1	Review initial design specifications for project
		1.2	Analyse proposed requirements, including operational requirements, manning levels and expertise required for the proposed works

		1.3	Document operation review as required by the project
2	Review design	2.1	Review design for operational safety of proposed works
		2.2	Contribute operational expertise to systematic safety review process as part of the project team
		2.3	Review instrumentation and controls for operability
		2.4	Review control sequences and control screen layouts for operability considerations
		2.5	Document operability reviews of design as required by the project
3	Develop procedures and training to meet project needs	3.1	Develop procedures for commissioning and/or operations
		3.2	Develop training materials for operators based on design information
		3.3	Review operator training and procedures with project design team
		3.4	Document procedures, training and reviews as required by the project

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.

Hazards

Hazards include one or more of the following:

- operability and related ergonomic issues
- electricity
- gases and liquids under pressure
- structural hazards
- equipment failures
- industrial (machinery, equipment and product)
- noise, rotational equipment or vibration
- plant services (steam, condensate and cooling water)
- limited head spaces or overhangs
- working at heights, in restricted or confined spaces, or in environments subjected to heat, dusts or vapours
- flammability and explosivity
- hazardous products and materials
- extreme weather
- other hazards that might arise

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

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>

Assessment Requirements for PMAOPS501 Provide operational expertise to a project team

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include the ability to:

- analyse and interpret schematics, technical information, performance data and operational practices
- review project designs for safety and operability issues
- communicate and negotiate effectively with internal and external stakeholders
- clearly convey complex/technical information in writing
- use language, structures and formats that are appropriate to information needs, the reader and organisation requirements.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- plant equipment, its characteristics and limitations
- impact of variations in plant/process and the distinctive signs of each variation
- process chemistry, physics and biochemistry as relevant (e.g. to the extent of writing chemical equations and identifying factors controlling reaction rate and yield or equivalent, or determining mass or heat transfer rates for a process)
- organisational operating procedures and training materials
- safety review procedures and techniques (e.g. hazard and operability study (HAZOP))
- systems operating parameters, system integrity limits, product specifications and tolerances
- process control philosophies and strategies
- principles of operation of plant/equipment
- hierarchy of control
- hazards that may arise in the job/work environment. and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use a real project in an operational workplace. Where this is not possible or practical, assessment must occur using a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition, the assessor or anyone acting in subject matter expert role in assessment must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions
- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed

- being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
- having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
- conducting on-the-job training/assessments of the type of work being assessed
- being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

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