



Australian Government

Department of Education, Employment and Workplace Relations

PMAOPS501A Provide operational expertise to a project team

Revision Number: 1

PMAOPS501A Provide operational expertise to a project team

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the application of in depth knowledge of process and plant to the formulation, running and completion of a project for a new facility or expansion. The senior technician provides operational experience and advice to all facets of the project.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a senior technician provides operational expertise to a project team, for a new facility, expansion or other major works. Project teams usually comprise engineers with various technical specialisations (eg process, mechanical, electrical, control,) and project managers. The provision of operations expertise to a project team provides a critical, practical link to the operational requirements of the planned works.</p> <p>The senior technician may provide expertise in the following areas:</p> <ul style="list-style-type: none"> • initial scoping of the project, in terms of operational manning, control and operation requirements, practicality of operational design • operational safety reviews of the design process (eg HAZOP, HAZAN or similar review processes) • design reviews for operability considerations • review of instrument and control layouts, sequences and screens • preparation of operator training materials • preparation of operation procedures. <p>Generally the senior technician would work as part of the project team and thus the ability to communicate with all internal and external stakeholders is vital.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify operational requirements for the project.	1.1. Review initial design specifications for project 1.2. Analyse proposed operational requirements, including operational requirements, manning levels and expertise required for the proposed works. 1.3. Document operation review as required.
2. Review design.	2.1. Review design for operational safety of proposed works. 2.2. Contribute to systematic safety review process as required. 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
3. Develop procedures and training	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 as required 3.4. Document procedures, training and reviews as required.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

This unit requires skills of:

- plant operations
- interpretation of designs, schematics and specifications
- negotiation
- communication, face to face, written instructions, reports
- basic mathematics

Required knowledge

Competence includes a deep understanding 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
- operational requirements for equipment and processes
- organisational operating procedures and training materials
- safety review procedures and techniques (eg HAZOP)

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	<p>Assessment of this unit should include demonstrated competence on actual plant and equipment in a work environment. The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations which will include a range of problems, problem causes and environments.</p> <p>Simulation may be required to allow for assessment of parts of this unit. Simulation should be based on the actual problems and should include the use of case studies/ scenarios and role plays.</p> <p>This unit of competency requires a significant body of knowledge which will be assessed through questioning and the use of what-if scenarios.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Competence must be demonstrated in the ability to define and analyse the problem as well as deal with the stakeholders. The stakeholders should be satisfied with the solution, as well as the solution being technically sound.</p> <p>Consistent performance should be demonstrated. In particular look to see that:</p> <ul style="list-style-type: none"> • operational expertise can be applied across the planning, design and review stages of a project • different types of stakeholders can be satisfied (operations, technical and project management) • review and materials are appropriately documented • appropriate action is taken. <p>These aspects may be best assessed using a range of scenarios/case studies/what-ifs. These assessment activities should include a range of design projects which may have been generated from the past history and similar sources.</p>
Context of and specific resources for	Assessment will require a suitable method of

EVIDENCE GUIDE	
assessment	gathering evidence of problem solving ability over a range of situations. A bank of scenarios/case studies/what-ifs will be required as will a bank of questions which will be used to probe the reasoning behind the observable actions.
Method of assessment	In all plants it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Codes of practice/ standards	Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.
Context	This unit of competency includes provision of operational expertise and advice to a project team involved in designing a new plant or modifications to a facility.
Health, safety and environment (HSE)	All operations to which this unit applies are subject to stringent health, safety and environment requirements, which may be imposed through State 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.

Unit Sector(s)

Unit sector	Operational/technical
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		
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