



Australian Government

PMAOPS306 Operate and troubleshoot production unit

Release: 1

PMAOPS306 Operate and troubleshoot production unit

Modification History

Release 1. Unit code and title changed. Application and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMAOPS300 Operate a production unit.

Application

This unit describes the skills and knowledge required to operate an enterprise-specific unit of a production plant, which is not otherwise described by units in this Training Package. The production unit operation will integrate several plant items (single unit operations).

This unit applies to autonomous operators who are required to demonstrate a significant understanding of the process and the equipment operation in a plant with local control, or in liaison with the control-room operator in a plant with a centralised control panel. In the case of a large, complex plant, the operations technician would be part of a team during startup and shutdown procedures.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Operations

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Operate production unit according to procedures	1.1 Receive and give shift handover 1.2 Communicate with personnel to identify and coordinate work requirements 1.3 Identify, control and report process system hazards 1.4 Check for recent work undertaken on production unit and address outstanding and incomplete work 1.5 Check operational status of process system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.6 Perform routine checks and complete logs and paperwork, taking appropriate action on unexpected readings 1.7 Adjust production unit process system according to agreed operational parameters
2. Identify and respond to abnormal situations during operation	2.1 Monitor production unit process system frequently and critically throughout shift using own senses, and measured and indicated data 2.2 Monitor field data and instrumentation to ensure that product remains on specification 2.3 Identify impacts of changes upstream and downstream 2.4 Identify actual and developing situations that may require action 2.5 Take action to remedy abnormal situations according to operating procedures 2.6 Complete required documents outlining abnormal situation management and corrective action taken
3. Shut down and prepare production unit for maintenance	3.1 Prepare production unit process system to be shut down according to operating procedures 3.2 Complete pre-shutdown checks according to operating procedures 3.3 Shut down production unit process system according to operating procedures 3.4 Identify, control and report shutdown hazards 3.5 Monitor shutdown and identify abnormal situations that may require action 3.6 Take action to remedy abnormal situations according to operating procedures 3.7 Shut down and changeover duty and standby equipment according to operating procedures 3.8 Isolate production unit process system from energy sources
4. Prepare and start up production unit	4.1 De-isolate and prepare production unit process system to be returned to standby or service 4.2 Complete pre-start checks according to operating procedures 4.3 Start up production unit process system according to operating procedures 4.4 Identify, control and report startup hazards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.5 Monitor startup and identify abnormal situations that may require action 4.6 Take action to remedy abnormal situations according to operating procedures

Foundation Skills

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

- Learning skills to follow instructions, monitor process and select appropriate procedure.
- Reading skills to follow written procedures and documentation.
- Writing skills to complete workplace documentation.
- Oral communication skills to liaise and coordinate with team members and the control-room operator.
- Numeracy skills to monitor field data, instrumentation and process parameters.

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

Unit Mapping Information

Equivalent to PMAOPS300 Operate a production unit.

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 PMAOPS306 Operate and troubleshoot production unit

Modification History

Release 1. Unit code and title changed. Application and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMAOPS300 Operate a production unit.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit:

- at least 2 times, each in a separate work context.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- all items on a schematic of the production unit, including:
 - principles of operation of plant and equipment
 - type of production unit, the component plant items and their functions
 - operating parameters and integrity limits including temperature, pressure, flow, pH and amps
 - impact of external factors, including variations in weather and feed
 - methods of changing rate, grade, specification and feed, and the advantages and disadvantages of each
 - procedures for starting, stopping, operating, controlling and isolating unit
 - emergency shutdown procedures
 - required preparation and permits for different types of work to be done on production unit and its component items
 - interactions with processes
- physics and chemistry to the level of being able to provide an overview of the science of the production unit process
- product specifications and tolerances and effects of variations in process conditions and materials
- production unit abnormal situations and required actions, including but not limited to:
 - unstable and suboptimal operation
 - critical variables and outputs
 - variations in feed rates
 - variations in quality
 - unstable process variables
 - loss of utilities

- process plant trips
- emergency situations
- production hazards:
 - possible causes
 - potential consequences
 - appropriate risk controls
 - reporting and escalation procedures.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - production unit process system
 - operating procedures
- abnormal situations must be relevant to the production unit.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

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