Australian Government

PMAOPS358 Process design fundamentals

Release: 1

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Modification History

Release 1. This version was released with PMA Chemical, Hydrocarbons and Refining Training Package, Release 2.0.

Application

This unit describes the skills and knowledge required to identify and apply key process design fundamentals relevant to an operator's own role.

This unit applies to autonomous operators who are required to demonstrate an 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. This does not require the operation of a centralised control panel.

This unit applies to an individual working alone or as part of a team or group, and working in liaison with other shift team members and the control-room operator, as appropriate. In the case of a large, complex plant, the operations technician would be part of a team during startup and shutdown activities.

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**
Elements describe the essential *outcomes.*	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Identify scope of process	1.1 Identify process feedstock, by-products and products 1.2 Identify main process flows 1.3 Identify tasks required to perform own role in process 1.4 Identify support stakeholders available to assist in process operation 1.5 Identify process design hazards and controls

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Elements	**Performance Criteria**
Elements describe the essential *outcomes.*	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
2. Identify key components of plant process design	2.1 Identify function of major equipment components used in process 2.2 Identify function of major process control components used in process 2.3 Identify function of major safety components used in process 2.4 Identify human factor design components of process
3. Identify design and operating envelope	3.1 Identify safe operating envelope of major equipment operating variables 3.2 Identify alarms and trip parameters of major equipment operating variables 3.3 Identify process variables used to troubleshoot production issues 3.4 Identify what can initiate an emergency shutdown (ESD) event 3.5 Identify and conduct asset integrity routine duties 3.6 Identify work health and safety (WHS) and regulatory requirements of their role within plant 3.7 Identify impacts of changes upstream and downstream
4. Identify custody of information requirements	4.1 Identify document control process 4.2 Record observations on workplace documentation according to operational procedures 4.3 Escalate appropriate anomalies and deviations to relevant stakeholders 4.4 File workplace documentation according to procedures 4.5 Identify management of change process 4.6 Identify workplace deviation process

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.
- Numeracy skills to monitor field data, instrumentation and process parameters.
- Oral communication skills to liaise and coordinate with team members and control-room operator.

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- Reading skills to follow written procedures and documentation.
- Writing skills to complete workplace documentation.

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

Unit Mapping Information

Release 1. New unit.

Links

Companion Volume implementation guides are found in VETNet – - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875

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