



Australian Government

PMAOPS342 Conduct pipeline pigging

Release: 1

PMAOPS342 Conduct pipeline pigging

Modification History

Release 1. Unit Code and Application changed. Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMAOPS335 Conduct pipeline pigging.

Application

This unit describes the skills and knowledge required to conduct pipeline pigging. It applies to any type of pig (pipeline inspection gauge) in or on a large plant/platform, including batching, cleaning, gauging, intelligent and foam pigs.

This unit applies to autonomous operators who are required to demonstrate a significant understanding of pipeline operations 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.

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. They may also be communicating with customers.

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 the pipeline system for pigging (launching and receiving) 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 hazards 1.4 Liaise with the relevant people to ensure correct flow conditions are

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	in the pipeline system prior to launching 1.5 Verify that required permits have been issued 1.6 Prepare specified pig in accordance with requirements 1.7 Prepare pipeline for pigging operation in accordance procedures
2. Launch, monitor progress and receive pig	2.1 Prepare launching and receiving scraper barrels and intermediate site for launching and receiving operations 2.2 Load, launch and receive pig in accordance with procedures 2.3 Calculate pig travel speed during the pig's progress 2.4 Monitor and track progress of the pig in the pipeline system and take required action according to procedures
3. Interpret pigging data	3.1 Inspect the pig to determine wear and unexpected damage 3.2 Interpret pigging data from inspection, measurement and/or sample of the waste material gathered during pigging operations and take action in accordance with procedures 3.3 Dispose of waste materials according to procedures 3.4 Record data accurately to assist with assessment of pipeline condition
4. Identify and respond to abnormal situations	4.1 Monitor pig frequently and critically throughout shift using own senses, and measured and indicated data 4.2 Monitor field data and instrumentation to ensure that product remains on specification 4.3 Identify impacts of changes upstream and downstream 4.4 Identify actual and developing situations that may require action 4.5 Take action to remedy abnormal situations according to operating procedures 4.6 Complete required documents outlining abnormal situation management and corrective action taken

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 written reports and documentation.
- Oral communication skills to liaise and coordinate with team members, the control-room operator and customers.
- 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

Release 1. Supersedes and is equivalent to PMAOPS335 Conduct pipeline pigging.

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 PMAOPS342 Conduct pipeline pigging

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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:

- principles of pigging
- all items on a schematic of the pigging system and functions of each, including:
 - operating parameters and integrity limits
 - reasons for pipeline pigging and the type of pig used for each application
 - correct valve sequences
 - expected system pressures for launching and receiving operations
 - prevention and mitigation measures for closure risks
 - the nature and condition of materials and flows entering and leaving the scraper barrels during the launching and receiving operations
- abnormal situations and required actions, including:
 - closure seal failure resulting in hydrocarbon release and possible explosion
 - closure fastening mechanism failure resulting in door striking technician
 - stuck pig
 - delayed pig
 - scraper enclosure leaks
 - leaking valves
 - damaged pig
- hierarchy of control
- pigging system hazards:
 - possible causes
 - potential consequences
 - appropriate risk controls.

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:
 - pigging system
 - operating procedures
- abnormal situations must be relevant to pipeline pigging.

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

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