



Australian Government

PMAOPS335 Conduct pipeline pigging

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMAOPS335A Conduct pipeline pigging

Application

This unit of competency covers 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 of competency applies to operations technicians who are required to demonstrate a significant understanding of pipeline operations in order to prepare for, launch and receive pig, identify and rectify operational problems, and interpret pigging data.

This unit of competency applies to an individual operating independently in a plant with local control or in liaison with the control room operator in a plant with a centralised control panel, such as distributed control system (DCS) type controls. In the case of large complex plant, the operations technician would be part of a team during start-up and shutdown procedures.

This unit of competency 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, 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.

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|---------------------------|------------|---------------------------------------|
| 1 Prepare for work | 1.1 | Identify work requirements |
| | 1.2 | Identify and control hazards |
| | 1.3 | Coordinate with appropriate personnel |

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| 2 | Prepare the pipeline system for pigging (launching/receiving) | 2.1 | Liaise with the relevant people to ensure correct flow conditions are in the pipeline system prior to launching |
| | | 2.2 | Verify that all required permits have been issued |
| | | 2.3 | Prepare specified pig in accordance with requirements |
| | | 2.4 | Prepare pipeline for pigging operation in accordance procedures |
| | | | |
| 3 | Launch, monitor progress and/or receive pig | 3.1 | Prepare launching and/or receiving scraper barrels and intermediate site for launching/receiving operations |
| | | 3.2 | Load and launch/receive pig in accordance with procedures |
| | | 3.3 | Calculate pig travel speed during the pig's progress |
| | | 3.4 | Monitor and track progress of the pig in the pipeline system |
| | | 3.5 | Identify potential pigging problems |
| | | 3.6 | Take actions specified in procedures in response to results from monitoring |
| | | | |
| 4 | Interpret pigging data | 4.1 | Inspect the pig to determine wear and/or other information |
| | | 4.2 | Interpret pigging data from inspection, measurement and/or sample of the waste material gathered during pigging operations in accordance with procedures |
| | | 4.3 | Take action specified in procedures |
| | | 4.4 | Dispose of waste materials to procedures |
| | | 4.5 | Record data accurately to assist with assessment of pipeline condition |

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:

- gases and liquids under pressure
- velocity of pig
- structural hazards
- structural collapse
- equipment failures
- industrial (machinery, equipment and product)
- equipment or product mass
- plant services (steam, condensate and cooling water)
- working at heights, in restricted or confined spaces, or in environments subjected to heat, noise, dusts or vapours
- flammability and explosivity
- hazardous products and materials
- unauthorised personnel

- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- extreme weather
- other hazards that might arise

Routine problems

Routine problems are predictable problems with known solutions and include one or more of the following:

- closure seal failure resulting in hydrocarbon release and possible explosion
- closure fastening mechanism fails and results in door striking technician
- stuck pig
- delayed pig
- scraper enclosure leaks
- leaking valves
- damaged pig

Non-routine problems

Non-routine problems are unexpected problems, or variations of previous problems and must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts, to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person

Operational knowledge includes one or more of the following:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people

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
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Product Product includes anything produced by a process step and so includes:

- intermediate products, such as the product from one process step, which then becomes the feed for another

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>