

Title	Internally clean a gas pipe in a gas network		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to demonstrate knowledge of procedures, documentation, hazards and equipment for internal cleaning of a gas pipe; prepare to internally clean a gas pipe; internally clean a gas pipe; in a gas network and complete reporting and documentation.
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Classification	Gas Industry > Gas Network Construction
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Available grade	Achieved
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Guidance Information

- 1 This unit standard is intended for, but is not limited to, workplace assessment. The range statements relate to enterprise specific equipment, procedures, and processes.
- 2 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable manufacturer's specifications, company procedures and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of:
Health and Safety at Work Act 2015;
Resource Management Act 1991;
AS/NZS 4645.1:2018 *Gas distribution networks – Network management*;
AS/NZS 4645.2:2018 *Gas distribution networks – Steel pipe systems*;
AS/NZS 4645.3:2018 *Gas distribution networks – Plastics pipe systems*;
- 4 References
Australian standards (AS) may be found at www.standards.org.au;
Australian/New Zealand standards (AS/NZS) may be found at www.standards.govt.nz.
- 5 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 6 Definitions
Cleaning refers to using a pig using compressed air or inert gas to clean contaminants from the inside of a main or service or to assist with purging for commissioning or decommissioning of a main or service.

Company procedures mean the documented methods for performing work activities, and include health and safety, operational, environmental, and quality management requirements. They may refer to legislation, regulations, guidelines, standard operating procedures, manuals, codes of practice, or policy statements.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of procedures, documentation, hazards and equipment for internal cleaning of a gas pipe in a gas network.

Performance criteria

- 1.1 Company procedures for internal cleaning of a gas pipe are located and interpreted.
- Range may include – network standard, standard operating procedure, safe work procedure, work instruction, job hazard analysis, job risk assessment.
- 1.2 Documentation and instructions for a specified job are obtained.
- Range may include – non-routine procedure, site location, network drawings, job card, utility plans, permits, consents, easement conditions.
- 1.3 Equipment and materials for internal cleaning of a gas pipe are described in terms of function.
- Range may include – cleaning pig, pig launcher, pig receiver, pig manifold, vent stacks, pressure gauges, pressure relief valves, hoses, anchors or restraints, air compressor, inert gas supply, continuity bond, earthing equipment.
- 1.4 The general requirements for each step of internal cleaning of a gas pipe are described.
- Range pig launcher/receiver installation, pig loading, pig launching, pig monitoring, pig receiving, pig unloading, waste disposal.
- 1.5 Potential environmental and safety hazards and controls associated with internal cleaning of a gas pipe are described.
- Range hazards may include – excavations, other utilities, vehicles and public, overpressure, pneumatic release, noise, stuck pig, electrical, contaminants;
controls may include – safe access and egress, utility protection temporary traffic control, exclusion zones, signage, barriers, personal protective equipment, pressure relief, pressure restraint, anchoring, continuity bond, earthing, waste disposal.
evidence of six hazards and controls are required.

- 1.6 Potential hazards of incorrect application and operation of equipment and procedures for internal cleaning of a gas pipe are identified.

Outcome 2

Prepare to internally clean a gas pipe in a gas network.

Performance criteria

- 2.1 Hazards for the specified job are identified and controlled.
- 2.2 Equipment and materials for internal cleaning of a gas pipe are prepared and positioned.
- Range may include – cleaning pigs, pig launcher, pig receiver, pig manifold, vent stacks, pressure gauges, pressure relief valves, hoses, anchors or restraints, air compressor, inert gas supply, continuity bond, earthing equipment, tools, fittings.
- 2.3 Preparation ensures that pig receiver, pipework and fittings are anchored in position, and vent stacks and drainage points are positioned.

Outcome 3

Internally clean a gas pipe in a gas network.

Performance criteria

- 3.1 Pig is loaded into the pipe.
- 3.2 Pig launcher is attached to the pipe and anchored in position.
- 3.3 Pig manifold or hoses are connected to the pig launcher and securely restrained.
- 3.4 Communications between pig launching and pig receiving personnel are established.
- 3.5 Air compressor or inert gas supply is applied to the pig manifold to launch the pig.
- 3.6 The progress of the pig along the pipe and pipe pressure conditions are monitored.
- 3.7 Appropriate action is taken if the pig becomes stuck.
- Range may include – control of supply pressure, pressure cycling, flow reverse, reporting, pig location identification, excavating potential blockage.

3.8 The pig is received, and pre-unloading checks are carried out.

Range depressurised pipeline, confirmation of pig arrival, catchment of contaminants.

3.9 Pig is unloaded, cleanliness of pipeline and pig condition are assessed.

Outcome 4

Complete reporting and documentation.

Performance criteria

4.1 Records and documents are completed and processed, and information is communicated to internal and external parties as required.

Range may include – job card, as-built records, pipeline condition, description of contaminants, photographs, completion notice, additional work.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 May 2021	N/A

Consent and Moderation Requirements (CMR) reference	0014
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.