

Title	Insert a polyethylene pipe for a trenchless operation in a gas network		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to, in a gas network: demonstrate knowledge of documentation, company procedures, hazards and equipment for inserting a polyethelene pipe in a trenchless operation; prepare to insert and insert a polyethylene gas pipe for a trenchless operation 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 the:
 - Health and Safety at Work Act 2015;
 - Resource Management Act 1991;
 - Excavation Safety good practice guidelines ISBN 978-0-908336-49-4 ([online](#));
 - AS/NZS 4645.1:2018 *Gas distribution networks – Network management*;
 - AS/NZS 4645.3:2018 *Gas distribution networks – Plastics pipe systems*;
 - and any subsequent amendments and replacements.
- 4 References
 - 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 This unit standard excludes live insertion.

7 Definitions

Casing pipe is a duct through which runs a smaller pipe (carrier pipe). The duct that protects the smaller pipe is usually made of cast iron, steel, or polyethylene.

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.

Trenchless operation refers to an annular space which could be created by using directional drilling, soil displacement hammer or a casing pipe.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of documentation, company procedures, hazards and equipment for inserting a polyethelene pipe in a trenchless operation.

Performance criteria

1.1 Documentation and company procedures for inserting polyethylene pipe in a trenchless operation 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 – job card, network drawing, site location, utility plans, mark-outs, consents, easement condition.

1.3 Potential environmental and safety hazards and controls are described.

Range hazards may include – excavations, restricted working areas, other utilities, kinetic energy, traffic and public personnel, noise, dust, waste products;
controls may include – signage, barriers, personal protective equipment, restraining equipment, safe access and egress, temporary traffic control, environmental protection.

1.4 Types of insertion equipment and materials are identified and described.

Range equipment may include – pipes, spacers, seals, casings, jointing, fittings, cutting tools, parachute, draw wire, tow rope or wire, tracers wire, pull through rod, winch, anti-shear coupling, insertion pipe protection.

1.5 Potential faults associated with incorrect application and operation of equipment and procedures, and the steps to avoid them are described.

Range faults may include – excessive pipe strain, pipe damage, sharp edges, pipe distortion, damaged tracer wire.

Outcome 2

Prepare to insert and insert a polyethylene gas pipe for a trenchless operation.

Performance criteria

2.1 Safety and environmental hazards are identified and controlled.

Range hazards may include – other utilities, excavations, restricted working areas, kinetic energy, traffic and public personnel, noise, dust, waste products;
controls may include – signage, barriers, personal protective equipment, restraining equipment, safe access and egress, temporary traffic control, environmental protection.

2.2 Annular space is prepared.

Range may include – diameter check, residual space check, cleaning, drying, test for presence of gas, free of obstructions, no sharp edges.

2.3 Carrier pipe is prepared.

Range may include – pressure test, tow wire, draw wire, tracer wire, winch, winch head, anti-shear coupling, pull through rod.

2.4 Carrier pipe is inserted in annular space.

Range may include – check tracer wire integrity, visual inspection of carrier pipe, seal casing pipe.

Outcome 3

Complete reporting and documentation.

Performance criteria

3.1 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 drawing, test records, special conditions, 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	19 June 1997	31 December 2018
Revision	2	3 August 2000	31 December 2018
Review	3	22 October 2002	31 December 2018
Rollover and Revision	4	20 November 2006	31 December 2018
Review	5	21 May 2010	31 December 2018
Review	6	17 August 2017	31 December 2023
Review	7	27 May 2021	N/A

Consent and Moderation Requirements (CMR) reference

0014

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.