Title	**Describe gas metering equipment used in a gas network**		
Level	**3**	**Credits**	**3**

Purpose	People credited with this unit standard are able to describe: the types, operation, application, and handling of meters and electronic volume corrective devices used in a gas network; and describe the effect of pressure, temperature and altitude on a GMS.

Classification	Gas Industry > Gas Measurement

Available grade	Achieved

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;
Gas Act 1992;
Gas (Safety and Measurement) Regulations 2010;
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 – Plastic pipe systems*;
AS 2885.3-2012 *Pipelines – Gas and liquid petroleum Operation and maintenance*;
NZS 5259:2015 *Gas measurement*;
and any subsequent amendments and replacements.

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 Definitions

Company procedures means the documented methods for performing work activities and include health and safety, environmental, and quality management requirements. They may refer to manuals, codes of practice, or policy statements.

GMS means gas measurement system.

Outcomes and performance criteria

Outcome 1

Describe the types, operation, application, and handling of meters used in a gas network.

Performance criteria

1.1 Types of meters are identified, and their basic operation described.

Range diaphragm, turbine, rotary, ultrasonic, coriolis.

1.2 Metering terminology is described according to industry standards.

Range may include – fixed factor, time of use, maximum flow rate, maximum permissible error, pressure differential, operating pressure, check meter, primary meter.

1.3 Applications of meters are described according to system requirements.

Range may include – domestic, commercial, industrial, distribution, transmission.

1.4 Storage, handling, and transportation requirements for meters are described.

Range may include – packaging, protection, position, orientation, securing, seals.

Outcome 2

Describe the types, operation, application, and handling of electronic volume corrective devices used in a gas network.

Performance criteria

2.1 Types of electronic volume corrective devices used are described according to system requirements.

Range flow computer, data logger, corrector.

2.2 The operation of electronic volume corrective devices is described according to system requirements.

Range may include – uncorrected volume, corrected volume, absolute pressure, gauge pressure, temperature, absolute, gauge, electronic and mechanical index, synchronizing electronic uncorrected reading with meter reading.

2.3 Applications and compliance requirements of electronic volume corrective devices are described according to system requirements.

Range may include – commercial, industrial, distribution, transmission, internal, external.

2.4 Storage, handling, and transportation requirements for electronic volume corrective devices are described.

Range may include – packaging, protection, position, orientation, securing, seals.

Outcome 3

Describe the effect of pressure, temperature and altitude on a GMS.

Range NZS 5259.

Performance criteria

3.1 The effects of pressure on a GMS are described.

3.2 The effects of temperature on a GMS are described.

3.3 The effects of altitude on a GMS are described.

Replacement information	This unit standard, unit standard 32040, and unit standard 32041 replaced unit standard 30381.

Planned review date	31 December 2026

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 February 2020	N/A
Rollover	2	30 January 2025	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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.