

Title	Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to: demonstrate knowledge of atmospheric testing in potentially hazardous environments; conduct atmospheric tests; and interpret and respond to atmospheric testing results.
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Classification	Occupational Health and Safety > Occupational Health and Safety Practice
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Available grade	Achieved
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Guidance Information

1 Definitions

Atmospheric conditions – refer to the presence or absence of given gases.

Organisational requirements refer to instructions (oral, written, graphic) to staff on policy and procedures, which may be documented in memo or manual form and are available in the workplace. These requirements include but are not limited to – manufacturer's procedures, plant procedures, suppliers' instructions, site signage, legislative requirements, and standards and guides.

Standards and guides includes but is not limited to – AS/NZS 60079.10.1:2009

Explosive atmospheres - Classification of areas - Explosive gas atmospheres;

AS/NZS 2865:2001 *Safe working in a confined space*, available from

<http://www.standards.govt.nz>; and *Confined spaces: Planning entry and working safely in a confined space*, available from <http://www.worksafe.govt.nz>.

2 Performance of the outcomes of this unit standard must comply with the following enactments: Health and Safety at Work Act 2015; Resource Management Act 1991; and Hazardous Substances and New Organisms Act 1996.

3 The Environmental Protection Authority (EPA) is responsible for assessing and approving hazardous substances and, where appropriate, setting controls on the way the substance is used. Any questions relating to the provisions for hazardous substances should be directed to EPA New Zealand.

4 This unit standard can be used for a wide range of situations and environments in many workplaces where various activities give rise to the need for gas testing to ensure the atmosphere is safe to enter.

The expectation for candidates undertaking this unit standard is that they will work in organisational settings where established procedures apply to gas testing.

Calibration by the operator of testing equipment may not be required but equipment must be checked and in a fit working state for use.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of atmospheric testing in potentially hazardous environments.

Performance criteria

- 1.1 Reasons for atmospheric testing are explained in terms of atmospheric hazards.
Range includes but is not limited to – toxic, flammable, oxygen level.
- 1.2 Requirements for a safe working atmosphere are explained in terms of oxygen levels, explosive limits, and toxicity.
- 1.3 Abbreviations are explained in terms of their relationship to atmospheric testing.
Range abbreviations include but are not limited to – LEL, UEL, WES Ceiling, WES-TWA, WES-STEL.
- 1.4 Workplace hazardous atmospheric conditions are identified and explained in terms of their sources and effects on those exposed.
Range evidence is required of at least two examples.
- 1.5 A commonly used atmospheric testing device is identified and explained in terms of its fundamental principles of operation.
Range device must include at least one type that is used in a specific workplace;
examples of equipment may include but are not limited to – colourmetric tube-type, electrochemical sensor, catalytic sensor, infrared sensor.
- 1.6 Reasons for specific atmospheric testing equipment giving a false reading are identified and described in terms of the methods used to determine this is happening.
Range includes but is not limited to – atmospheric oxygen content, calibration, equipment fit for purpose, temperature, cross-sensitivity, contaminants.
- 1.7 The units of measurement used by common atmospheric testing equipment are described.
- 1.8 Alarm set points on site specific atmospheric testing equipment are identified and explained in terms of their relevance.

Outcome 2

Conduct atmospheric tests.

Range evidence is required for minimum of one from – colourmetric tube-type, electrochemical sensor, catalytic sensor, infrared sensor.

Performance criteria

- 2.1 Testing equipment is matched to atmosphere type in accordance with organisational requirements.
- 2.2 Atmospheric testing equipment prestart checks are carried out in accordance with organisational requirements.
- 2.3 Atmospheric testing or monitoring is carried out in accordance with organisational requirements.

Outcome 3

Interpret and respond to atmospheric testing results.

Performance criteria

- 3.1 Atmospheric test results are interpreted in accordance with organisational requirements.
- 3.2 Actions to be taken where atmosphere does not comply with organisational requirements are demonstrated in accordance with organisational requirements.
Range demonstration may be in a real or simulated situation.
- 3.3 Results are documented and reported in accordance with organisational requirements.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 January 2009	31 December 2018
Rollover and Revision	2	22 May 2014	31 December 2018
Rollover and Revision	3	19 January 2017	N/A
Rollover and Revision	4	22 August 2019	N/A
Rollover	5	25 March 2021	N/A

Consent and Moderation Requirements (CMR) reference

0121

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.