Title	Operate advanced industrial rope access systems		
Level	4	Credits	15

Purpose	People credited with this unit standard are able to: – prepare and confirm equipment for use in advanced industrial rope access systems; – construct and operate advanced industrial rope access systems; – construct and operate improvised anchors; and – secure gear and site.

Classification	Lifting Equipment > Industrial Rope Access

Available grade	Achieved

Guidance Information

1   All tasks must be carried out in accordance with:
   a quality management systems;
   b designer's requirements and manufacturers' operating instructions; and government and local government legislation, regulations, bylaws, Health and Safety at Work Act 2015 and New Zealand Standards.
   c *Industrial Rope Access in New Zealand: Best Practice Guidelines May 2012* available from the website https://worksafe.govt.nz/; and
   d AS/NZS 1891 parts 1 - 4:2009 *Industrial fall-arrest systems and devices*: AS/NZS 4488 parts 1 and 2:1997 *Industrial rope access systems*. New Zealand Standards are available from http://www.standards.co.nz, or their subsequent amendments.

2   Definition
Advanced industrial rope access systems require knowledge of mathematics and vector forces, as well as comprehensive training and guidance under the direct supervision of an advanced operator with extensive experience in the application of advanced techniques.

3   Assessment
Those undertaking assessment against this unit standard should note that work in the industrial rope access industry usually takes place at heights well above ground level, and therefore requires a level of physical fitness and ability to work at heights.

4   This unit standard has been developed for learning and assessment on-job or off-job in a simulated environment.

Outcomes and performance criteria

Outcome 1

Prepare and confirm equipment for use in advanced industrial rope access systems.

Performance criteria

1.1   Prepare and confirm equipment to be used meets the requirements of industrial rope access best practice guidelines and manufacturer's specifications.

> Range   equipment includes but is not limited to – personal kit, team kit, personal protective equipment, fall arrest systems, access systems, rescue kit.

1.2   Confirm industrial rope access systems meet safety requirements of workplace in accordance with the Best Practice Guidelines.

> Range   requirements include but are not limited to – anchors, back-up anchors, rope, attachment, personal rope access equipment.

1.3   Tie appropriate knots.

Outcome 2

Construct and operate advanced industrial rope access systems.

Performance criteria

2.1   Use equipment in accordance with manufacturers' limitations and specifications.

2.2   Construct and operate advanced industrial rope access systems.

> Range   techniques include but are not limited to – belaying using auto locking devices, lead climbing, aid climbing, hauling up to 250kg, cableway systems, securing of tools, plant and equipment over 8 kg.

Outcome 3

Construct and operate improvised anchors.

Performance criteria

3.1   Identify safe improvised anchor points.

> Range   includes but not limited to – counterweight needles, tripods, building structure, knowledge of angles, shared anchor concepts, loading requirements.

3.2   Calculate weights required for a counter-weight needle for rope access.

       Range   includes but is not limited to – based on the inboard, outboard and desired anchor rating.

3.3   Construct and operate mid rope anchors.

3.4   Construct and operate intermediate anchor points.

       Range   includes but is not limited to – beam clamps, aiding device, slings, wire ropes.

Outcome 4

Secure gear and site.

Performance criteria

4.1   Secure equipment, tools, and plant.

Planned review date	31 December 2024

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 November 2002	31 December 2016
Review	2	23 March 2006	31 December 2016
Review	3	16 July 2015	31 December 2021
Review	4	22 August 2019	N/A

Consent and Moderation Requirements (CMR) reference	0003

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 at reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.