Title	**Demonstrate knowledge of radiation and radiological protection in the workplace**		
Level	**4**	**Credits**	**4**

Purpose	This unit standard is intended for experienced people who use x-rays in the workplace and who would be in a supervisory role in their workplace. People credited with this unit standard are able to demonstrate knowledge of: categories of radiation found inside and outside the workplace; radiation doses and the effects of exposure on workers; and radiological protection methods and procedures for own work team using x-rays in the workplace.

Classification	Occupational Health and Safety > Hazardous Substances and Materials

Available grade	Achieved

Guidance Information

1 References
Legislative requirements and codes of practice relevant to this unit standard includes but is not limited to – Radiation Safety Act 2016; *Code of Safe Practice for the Use of X-rays and Radioactive Material in Industrial Radiography*, Office of Radiation Safety, Ministry of Health, Version 1.2, 2010, ISBN 0110-9316.

2 Definition
Organisational requirements – instructions to staff on policies and procedures which are documented in memo or manual format. These requirements include but are not limited to – site-specific requirements, any quality management requirements.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of categories of radiation found inside and outside the workplace.

Performance criteria

1.1 Categories of radiation found inside and outside the workplace are explained in terms of their sources.

Range categories include but are not limited to – ionising, non-ionising.

1.2 Types of ionised radiation found inside and outside the workplace are explained in terms of their penetrating power.

Range types include but are not limited to – alpha, beta, gamma, x-rays.

Outcome 2

Demonstrate knowledge of radiation doses and the effects of exposure on workers.

Performance criteria

2.1 Types of radiation doses that affect workers are explained in terms of their impact.

Range types include but are not limited to – sievert, millisievert, microsievert.

2.2 Average dose of radiation from sources is identified and the impact on workers is explained.

Range sources include but are not limited to – natural, medical, fallout, air travel, occupational, luminous dials.

2.3 Effects of radiation exposure on workers are explained.

Range effects include but are not limited to – damage to DNA, threshold effects.

Outcome 3

Demonstrate knowledge of radiological protection methods and procedures for own work team using x-rays in the workplace.

Performance criteria

3.1 Methods to reduce radiological doses to own work team are explained in terms of legislative and organisational requirements and codes of practice.

Range methods include but are not limited to – time, distance, shielding, interlocks.

3.2 Procedures for safe operations, maintenance, and cleaning of equipment in own work area is explained in accordance with organisational requirements.

Planned review date	31 December 2020

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 August 2011	N/A
Rollover and Revision	2	22 May 2014	N/A
Rollover and Revision	3	8 December 2016	N/A
Rollover and Revision	4	22 August 2019	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.