



Australian Government

DEFOH008B Develop ionising radiation safety plans

Release: 2

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Modification History

Release	TP Version	Comments
2	DEF12V2	Removal of repetitive Performance Criteria Statement Application added Minor change to Unit Descriptor and Range Statement Changes to Evidence Guide
1	DEF12V1	Primary release.

Unit Descriptor

This unit covers the competency required to measure and analyse ionising radiation and to develop relevant safety plans and procedures.

In the context of this unit, ionising radiation may include emissions from radioactive elements, controlled apparatus, sealed and unsealed sources.

The unit includes developing and drafting policy, procedures and plans/instructions for the management, amelioration and/or control of ionising radiation in the workplace.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication. In a Defence context, this means that there is no civilian need to hold this unit in order to meet licensing, legislative, regulatory or certification requirements.

Application of the Unit

This unit was developed for Defence workers involved in developing ionising radiation safety plans as a workplace responsibility, but is applicable to all individuals who work in this field. Typically, these individuals must demonstrate the ability to work independently or as part of a team under indirect supervision. They must be able to use discretion and judgement and take responsibility for the quality of their outputs. All activities are carried out in accordance with relevant legislation, standards (particularly AS/NZS 1269.2:1998 Occupational Ionising Management, Part 2: Ionising control management), and organisational policies and procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element.

Where ***bold italicised*** text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the development of ionising radiation safety plans	1.1 Ionising radiation sources are identified and confirmed in accordance with organisational policy and procedures. 1.2 Standards and legislation appropriate to ionising radiation exposure levels are identified and accessed 1.3 Existing organisational records relevant to ionising radiation are identified and accessed 1.4 Equipment and resources required for the measurement of ionising radiation are identified, acquired and prepared.
2. Measure ionising radiation	2.1 Measuring equipment is deployed and readings are recorded. 2.2 Work health and safety (WHS) requirements are applied throughout the operation
3. Analyse ionising radiation	3.1 Measurements are interpreted and confirmed in accordance with measuring protocols 3.2 Ionising radiation is analysed/determined and findings are reported to appropriate authorities/superiors.
4. Develop ionising radiation safety plans	4.1 Appropriate consultation with stakeholders is conducted. 4.2 Technical standards, organisational environmental requirements and ionising radiation exposure levels are identified and interpreted 4.3 Ionising radiation safety plans are developed. 4.4 Ionising radiation safety plans are forwarded.
5. Record and interpret data from personal monitors	5.1 Full exposure data from personal monitors is clearly recorded. 5.2 Individual records are made available to the radiation worker. 5.3 Appropriate action is initiated whenever anomalous records are obtained. 5.4 Personal monitoring records are reviewed regularly and recommendations for changes in workplace procedures are recommended as appropriate.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- analyse
- communicate
- negotiate
- operate ionising radiation measuring equipment
- plan

Required Knowledge

- ionising radiation control requirements
- ionising radiation exposure level standards/requirements
- ionising radiation legislation
- ionising radiation measuring techniques and equipment
- WHS requirements for the organisation/industry and for supervisors/managers in the workplace
- relevant Australian and international standards
- relevant environmental factors relating to workplace ionising radiation
- relevant organisational policy and standards
- reliability of measures
- tolerances of error that may apply

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- measure and analyse ionising radiation
- develop practical ionising safety plans that
- adhere to Australian and organisational standards and with recognition of stakeholder requirements
- monitor and record data from personal ionising radiation monitors
- require appropriate action to be initiated in accordance with organisational policy and procedures.
- demonstrate knowledge of relevant work health and safety and ionising radiation legislative frameworks
- identify inspection tools and methods appropriate to the workplace
- demonstrate the application of the principles and practices of work health and safety and ionising radiation inspections
- identify intervention points for advice to assist in work and to guide problem solving

Consistency in performance

Evidence of competency in this unit must be gathered over time and across a range of workplace or simulated situations.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the workplace or under conditions that accurately simulate a realistic workplace in accordance with all relevant legislation and organisation requirements.

Evidence should be gathered while observing the individual developing and monitoring ionising radiation plans in an actual or simulated workplace. A record of all relevant research, interviews and findings in the development of the ionising radiation safety plan should also be submitted as evidence for assessment.

Specific resources for assessment

Access to relevant research material, manufacturers' equipment specifications and existing related standards, policy and instructions.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Exposure levels</i> may include:	• Occupationally exposed radiation worker – low level, medium level, high level • Worker not occupationally exposed
<i>Organisational records</i> may include:	• Electronic records • Inventories • Journals • Registers
<i>Equipment and resources</i> may include:	• Gauges • Ionising radiation measuring and monitoring instruments • Recording devices
<i>Preparation of equipment and resources</i> may include:	• Calibration of testing equipment • Testing equipment for safe operation (confidence testing) • Testing equipment for serviceability
<i>Work health and safety requirements</i> may include:	• Award provisions • State/territory/commonwealth and local government legislation and by-laws
<i>Stakeholders</i> may include:	• External agencies • Government/agency regulators/inspectors • Immediate supervisors • Internal agencies • WHS representatives • Other interested parties, including members of the public • Relevant personnel in the chain of command • Unit managers
<i>Ionising radiation safety plans</i> may include:	• Monitoring processes • Protocols and local controls • Recommendations for additional control measures • Referrals to other experts
<i>Appropriate action</i> may include:	• Cessation of all work where ionising radiation is present • Immediate referral of worker/s to qualified medical officers • Installation of protective devices (such as alarms and/or warning signs) to minimise exposure

	• Modification of work practices in the vicinity of the ionising radiation
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Unit Sector(s)

Not applicable.