



Australian Government

PSPRAD001 Work safely in a radiation environment

Release: 1

PSPRAD001 Work safely in a radiation environment

Modification History

Release	Comments
1	This unit was released in PSP Public Sector Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to PSPRAD201Work safely in a radiation environment. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice

Application

This unit describes the skills required to apply radiation protection and work safety measures when working in an environment where sources of ionising radiation are present. This involves recognising the hazards and risks associated with working near sources of ionising radiation, interpreting and following site safety information, using specified radiation protection and safety measures, applying required operational safety measures, and responding appropriately to actual or potential emergencies.

This unit applies to those to personnel who directly handle, or come in direct contact with, radioactive materials in the mining and mineral processing industry sector and who may receive occupational exposures of greater than 1 millisievert per annum.

These personnel include drillers, miners, loader operators, plant operators, and samplers/testers, laboratory workers, operating theatre staff, contractors, sales and service engineers, who may:

- undertake exploration surveys of radioactive ore bodies
- extract, mill, process or pack radioactive ores, concentrates or mineral products
- manage radioactive by-products, contaminants and/or waste
- rehabilitate mine sites
- undertake laboratory testing
- undertake cabinet x-rays
- service ionising radiation equipment
- work in a nuclear facility

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work under direct supervision performing routine tasks, in a familiar context.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Radiation Safety

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Complete site safety induction	1.1 Participate in required radiation protection and site safety training. 1.2 Confirm contact details for personnel who can provide emergency and radiation protection and safety information.
2. Recognise site radiation hazards and degree of risk	2.1 Apply information about the nature and magnitude of radiation hazards and degree of risk associated with work activities at the site. 2.2 Apply information about exposure pathways and health effects of radiation exposure. 2.3 Apply information about occupational dose limits. 2.4 Recognise possible sources of personal contamination and implement recommended decontamination procedures. 2.5 Identify hazards and risks in work area prior to starting work, at regular intervals during work, and in response to changes in working conditions. 2.6 Recognise and report non-routine hazards, unusual situations, and potential or actual emergency incidents.
3. Follow procedures for controlling radiation hazards	3.1 Implement instructions based on radiation protection principles during assigned work. 3.2 Apply specified safe working rules, and use required personal protective equipment (PPE) and personal monitoring during assigned work tasks. 3.3 Comply with all site safety signs. 3.4 Observe required standards of personal hygiene and behaviour while on site.

	3.5 Seek advice or instructions to deal with any situation beyond own technical competence. 3.6 Apply specified procedures to decontaminate work surfaces and/or personnel as necessary. 3.7 Implement instructions for managing contaminated waste produced during assigned tasks. 3.8 Advise employer of previous employment involving occupational exposure to radiation and cooperate in obtaining records of previous exposure. 3.9 Complete required records and reporting.
4. Follow workplace emergency response procedures	4.1 Review information about workplace emergency response procedures and personal responsibilities in the event of a radiation incident. 4.2 Recognise emergency alarms, move to the designated muster point, and follow instructions.
5. Report problems	5.1 Recognise and report defects in plant equipment and procedures that may compromise radiation protection and safety or radiation protection safety standards, codes and guidelines.

Foundation Skills

Foundation skills are embedded within the elements and performance criteria of this unit.

Unit Mapping Information

This unit supersedes and is equivalent to PSPRAD201 Work safely in a radiation environment.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

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Assessment Requirements for PSPRAD001 Work safely in a radiation environment

Modification History

Release	Comments
1	These Assessment Requirements were released in PSP Public Sector Training Package release 1.0 and meet the Standards for Training Packages. • Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- following required radiation protection and safety procedures
- following radiation safety signs
- regularly assessing and reassessing risks and hazards and applying required control measures
- recognising dose limits
- using and caring for PPE and personal monitoring equipment that has been issued for assigned work tasks
- responding correctly when encountering contaminated work surfaces and personnel

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- responsibilities of employers and employees under:
 - relevant Commonwealth guidelines, including RPS No.1
 - state or territory legislation and local regulations and by-laws
 - duty of care obligations
- radioactive decay, radioactive material, ionising radiation, shielding, safe distance, contamination, contamination controls, decontamination
- types and properties of ionising radiation
- relevant occupational dose limits

- sources of hazardous radiation around the site and degree of risk of exposure or contamination
- internal and external exposure pathways and protective measures
- radiation health effects
- location of controlled or supervised areas within the site
- layers of protection:
 - avoiding exposure, where practicable
 - isolating sources of radiation where practicable through shielding, containment and remote handling techniques
 - engineering controls
 - adopting safe work practices, including work methods which make appropriate use of time, distance and shielding to minimise exposure
 - using approved PPE where other means of controlling exposure are not practicable
- personal hygiene requirements, and effects and implications of risky behaviours
- safe working rules and safe operating procedures for equipment
- safety signs relevant to assigned tasks
- use and care of PPE and personal monitors for assigned tasks

Assessment Conditions

This unit contains no specific industry-mandated assessment conditions. Guidance on suggested and recommended conditions and methods can be found in the Implementation Guide.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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