



Australian Government

PSPRAD012 Work safely in a radiation environment

Release: 1

PSPRAD012 Work safely in a radiation environment

Modification History

Supersedes and is equivalent to PSPRAD001 Work safely in a radiation environment.

Application

This unit describes the performance outcomes, skills and knowledge required to apply radiation protection and work safety measures when working in an environment where sources of ionising radiation are present.

This unit applies to personnel who handle, or come into 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.

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

The skills in this unit must be applied in accordance with Commonwealth and State or Territory legislation, Australian standards and industry codes of practice.

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

Pre-requisite Unit

Nil

Competency Field

Radiation Safety

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Complete site safety induction.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 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.

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| 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. |
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| 5. Identify and report problems. | 5.1. Recognise defects in plant equipment and procedures that may compromise radiation protection and safety or radiation protection safety standards, codes and guidelines. |
| | 5.2. Report defects in accordance with workplace procedures. |

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	• identify and interpret safety information and signs.
Writing skills to:	• complete routine workplace health and safety records.

Unit Mapping Information

Supersedes and is equivalent to PSPRAD001 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>

Assessment Requirements for PSPRAD012 Work safely in a radiation environment

Modification History

Supersedes and is equivalent to PSPRAD001 Work safely in a radiation environment.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and on at least one occasion:

- follow required radiation protection and safety procedures
- follow radiation safety signs
- recognise dose limits
- use and care for PPE and personal monitoring equipment that has been issued for assigned work tasks
- respond correctly when encountering contaminated work surfaces and personnel.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- responsibilities of employers and employees under:
 - relevant Commonwealth guidelines
 - 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

Skills must be demonstrated in the workplace or in a simulated environment that reflects workplace conditions.

Simulated assessment environments must simulate the real-life working environment where the skills and knowledge within this unit would be utilised, with all the relevant equipment and resources of that working environment.

Assessment must ensure access to:

- Commonwealth codes of practice and standards
- local, State and Territory legislation and regulations
- supervision by a radiation safety professional (depending on radiation sources present)
- appropriate PPE and personal monitoring equipment
- organisation's radiation management plan or standard operating procedures.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

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