



Australian Government

PSPRAD002 Work safely with radioactive ores and minerals

Release: 1

PSPRAD002 Work safely with radioactive ores and minerals

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 PSPRAD202 Work safely with radioactive ores and minerals. • 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 recognise the hazards and risks of working with uranium and/or thorium ores, mineral sands and any other naturally occurring material and to use appropriate radiation protection and safety measures. This involves recognising the hazards and risks associated with assigned work activities, using the required radiation protection and safety measures, responding appropriately to actual or potential emergencies, and contributing to improved radiation safety.

This unit applies to those 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 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.

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. Identify hazards and associated risks with the site and assigned tasks	1.1 Interpret and apply information about hazards, where necessary requesting further information on radiation protection safety standards, codes and guidelines. 1.2 Implement instructions about site radiation control measures, monitoring, safe working rules and personal protective equipment (PPE) specified for the location and work activities. 1.3 Recognise hazards and risks in work area prior to starting work, at regular intervals during work, and in response to changes in working conditions and seek advice if necessary. 1.4 Recognise and report non-routine hazards and seek advice to deal with any situation beyond own technical competence.
2. Apply required radiation protection and safety measures	2.1 Use recommended hazard and risk control measures and follow safe working rules. 2.2 Comply with all site safety signs. 2.3 Follow required tag-out and lock-out procedures. 2.4 Use plant and equipment supplied for radiation protection or for the monitoring and assessment of radiation exposure. 2.5 Maintain required standards of personal hygiene.
3. Respond to potential or actual radiation incidents	3.1 Recognise any unsafe situation, hazard or incident associated with assigned tasks. 3.2 Inform relevant personnel about the situation, hazard or incident and seek their advice. 3.3 Provide appropriate workplace first response in accordance with instructions and organisation's workplace emergency response procedures.
4. Contribute to radiation safety	4.1 Recognise and report defects in plant, equipment or procedures that may compromise radiation protection and safety or the management of radioactive waste.

	4.2 Participate in required radiation safety training and participative and/or consultative activities within the scope of own responsibilities. 4.3 Advise of previous employment involving occupational exposure to radiation and cooperate in obtaining records of previous exposure. 4.4 Complete required records and reporting.
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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 PSPRAD202 Work safely with radioactive ores and minerals.

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 PSPRAD002 Work safely with radioactive ores and minerals

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 the organisation's information about radiation protection and safety
- regularly assessing and reassessing risks and hazards and applying appropriate control measures
- applying standard operating procedures and specified safe working rules for assigned tasks
- seeking advice and further directions when faced with unexpected situations that may require decisions or response actions beyond own technical competence
- using and caring for PPE and personal monitoring equipment required in job role

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, subcontractors and employees under:
 - Commonwealth guidelines, including RPS No.9 Code of Practice and Safety Guide for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (2005)
 - state or territory legislation and local regulations and by-laws
 - duty of care obligations
- radioactivity, radioactive material, naturally occurring radioactive material (NORM), ionising radiation, contamination, contamination controls, shielding, half-life, and safe distance

- types and properties of ionising radiation, particularly radiation associated with uranium, thorium and decay products
- relevant dose limits
- sources of hazardous radiation and
- changes in risk of exposure and/or contamination due to factors including weather, time of day
- location of controlled or supervised areas within site and working rules for each
- internal and external exposure pathways and protective measures
- signs and symptoms of radiation exposure, radiation health effects
- techniques for assessing radiation hazards likely to be encountered in job role
- application of the hierarchy of control measures, including:
 - 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, and effects and implications of risky behaviours
- health, safety and workplace emergency response procedures
- safe working rules and safe operating procedures for equipment
- safety signs relevant to job role
- use and care of PPE and monitoring equipment for job role and assigned tasks
- potential adverse health and performance effects of wearing PPE while working in potentially hazardous environments
- principles and techniques for decontamination of personnel and equipment
- procedures for the disposal of contaminated waste

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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