



Australian Government

PSPRAD003 Perform basic radiation measurements

Release: 1

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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 PSPRAD301 Perform basic radiation measurements. • 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 directly measure radiation using instruments calibrated by others. Basic radiation measurements will be straightforward involving one or two steps, take a short time and produce results that can be easily compared with specified limits. Measurements that are part of this unit would be performed under the authorisation and supervision, or delegated supervision, of a responsible person.

The activities may take place:

- at a mine or plant that processes radioactive ore and minerals
- with instruments that emit ionising radiation at geotechnical, construction, mining and manufacturing sites, or analytical and research facilities
- in a laboratory or licensed facility that handles radioactive materials or has radiation-emitting apparatus
- in a nuclear facility.

This unit applies to those undertaking radiation-related work activities, including:

- extracting, milling, processing and packing radioactive ores
- operating, installing, servicing and calibrating fixed radiation gauges, bore hole logging or industrial radiography equipment, and moisture/density gauges
- decontaminating and servicing equipment that has been in contact with radioactive material
- XRF and XRD analysis
- collecting, preparing and testing samples containing radioactive materials.

- using radionuclides in a laboratory

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 supervision, or be authorised by the responsible person, to perform routine tasks in familiar contexts.

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. Prepare for radiation measurements	1.1 Confirm purpose, priority and nature of required ionising radiation measurements and any site access arrangements with supervisor. 1.2 Use organisation's radiation management plan to obtain information about the hazards associated with performing the measurements, measuring instruments and safe working rules to be used and refer to radiation protection safety standards, codes and guidelines as necessary. 1.3 Perform and record pre-use checks of measuring instruments and tag or replace faulty items as necessary. 1.4 Check that personal protective equipment (PPE) and other task-related equipment is fit for purpose. 1.5 Stow measuring instruments and task-related equipment to ensure safe transport to the site and within the boundaries of the site.
2. Obtain reliable radiation data	2.1 Operate measuring instruments in accordance with radiation management plan and manufacturer specifications and applying safe working rules to minimise personal radiation exposure. 2.2 Perform measurements at specified locations and times. 2.3 Seek advice if required measurements cannot be made or if specified procedures require modification. 2.4 Conduct regular instrument checks and minor maintenance if required. 2.5 Take sufficient measurements to ensure reliable data.

	2.6 Recognise obvious errors and atypical data, and take appropriate corrective actions. 2.7 Record data with the required precision, accuracy and units. 2.8 Record environmental/site conditions or observations that may impact on data quality.
3. Finalise radiation measurements	3.1 Check for contamination and, if necessary, perform personal decontamination. 3.2 Re-stow measuring instruments and task-related equipment to ensure safe transport from the site and within the boundaries of the site. 3.3 Record use of PPE and measuring instruments according to radiation management plan. 3.4 Check condition of measuring instruments, PPE and task-related equipment before storing them.
4. Report results	4.1 Record results. 4.2 Compare results with relevant radiation limits and identify/record significant differences or atypical results. 4.3 Maintain required records that are complete, accurate, legible and secure.
5. Respond to potential or actual radiation incidents	5.1 Recognise unusual situations, unexpected hazards, and potential or actual emergency radiation incidents. 5.2 Inform relevant personnel about the situation, hazard or incident and seek their advice. 5.3 Initiate appropriate workplace emergency first response.

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 PSPRAD301 Perform basic radiation measurements.

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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