



POSITION DESCRIPTION

Position Title:	Radiological and Nuclear Defence Physicist
Position Reference Number:	ECRLD005
Division	Land Division
Position Classification:	S&T 3-4 Above
Position Location:	Fishermans Bend , Victoria
Security Level:	Neg Vet 1
Minimum Academic Qualification:	PhD (or equivalent) in a field related to radiological and nuclear physics.
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Academic Disciplines

Aerospace/ Aeronautical Engineering, Naval Architecture	Chemical, Radiological, Biological,	Materials Science
Computer Sciences, IT, Software Engineering, Telecommunications	Mathematics and physics	Psychology and Social Sciences, Food sciences
Mechanical and Mechatronic Engineering (including robotics)	Electronic/ Electrical Engineering	Other

Position Overview

The Radiological and Nuclear Defence Physicist works as part of the science team that provides support, training, advice and R&D for the Australian Defence Force (ADF). The team provides training in radiation detection and safety to specialised units within the ADF and also provides testing of equipment in support of Defence acquisition programs. The science team operates an accredited radiological laboratory which includes a range of radiological sources. R&D activities are focussed on high-end radiation source search, including stand-off imaging detection and the use of unmanned platforms. A significant effort is underway to develop a sophisticated radiation simulation capability that will allow accurate modelling of radiation transport and detection in complex environments.

Position Duties

Under guidance, the Radiological and Nuclear Defence Scientist will:

- Contribute to R&D in radiation detection and characterisation including into radiation source search using gamma-ray and neutron imaging, and source search via unmanned platforms.
- Work with other science team members and Defence clients to shape the Radiological and Nuclear Defence R&D program.
- Contribute to the development of radiation transport and detection simulation capabilities at DST using the Geant4 simulation toolkit.
- Contribute to the provision of support, training and advice to ADF clients, including at locations away from the Fishermans Bend DST site.

Other Requirements

Appointees will be initially be engaged on a **BASELINE** security clearance with an upgrade to a **Negative Vetting 1 (NV1) Security Clearance** required upon commencement.

Demonstrated knowledge of radiological and nuclear physics, with demonstrated ability to shape and execute an R&D program in support of client outcomes.

Knowledge of radiation simulation, such as via the Geant4 toolkit.

Qualifications to handle radiological sources