



## POSITION DESCRIPTION

<b>Position Title:</b>	Senior Radiochemist
<b>Cluster / Business Unit / Division</b>	NSSS – Nuclear Stewardship
<b>Section or Unit:</b>	Radioanalytical Chemistry
<b>Classification:</b>	Band 6
<b>Job Family:</b>	Science
<b>Position Description Number:</b>	PD-1562
<b>Work Contract Type:</b>	Research
<b>STEMM/NON-STEMM:</b>	STEMM

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### POSITION PURPOSE

The primary objective of the Senior Radiochemist is to provide radiochemistry expertise, advice and experimental data for internal and external research as well as operational areas at ANSTO and manage a radiochemical wet laboratory and counting facility which delivers quality results.

### ORGANISATIONAL ENVIRONMENT

ANSTO is the national organisation for nuclear science and technology. We focus on undertaking leading edge research, delivering innovative scientific services and providing specialised advice to government, industry, academia and other research organisations.

Nuclear Stewardship maintains national capabilities that support industry, government and scientific users. Capabilities include radionuclide metrology, ionising radiation detection and measurement, radioanalytical chemistry, nuclear forensics and environmental monitoring.

The Radioanalytical Chemistry Capability (RACC) Group within Nuclear Stewardship aims to develop and maintain specialist radioanalytical and experimental facilities utilising nuclear techniques to support ANSTO's core activities and its stakeholders and to apply these techniques and associated expertise to topics related to releases of radionuclides into the environment, nuclear fuel cycle and other research areas involving quantification of radionuclides at or above typical environmental levels.

### ACCOUNTABILITIES & RESPONSIBILITIES

#### Key Accountabilities

The key accountabilities for this position include:

- Research, develop and implement new and/or refined radiochemical and counting techniques as required by internal and external clients and ensure ANSTO keeps up with advances in radiochemistry and measurement techniques and continually adds to the range of measurement capabilities and applications;
- Independently and/or collaboratively (as a project team member) plan and undertake experiments, provide experimental results, assess data and make preliminary interpretations of the data. This work contributes to leading edge scientific research for understanding the fate and mobility of pollutants in sub-surface environments and may involve research into sensitive or confidential topics including legacy contaminated sites, such as the LFLS (Little Forest Legacy Site), or environmental behaviour of radioactive materials;
- Utilise skills in radiochemistry, environmental chemistry and soil science to share knowledge and assist researchers;
- Directly supervise and mentor two staff members; develop their skills in the areas of radiochemistry and nuclear counting techniques, monitor staff performance to provide advice in the assessment of

performance, and develop an environment which promotes teamwork and improvement to work methods and techniques;

- Manage assigned laboratories to ensure smooth and effective operation and maintenance of equipment and facilities; coordinate and manage others, delegate duties, prioritise, plan and schedule work, review data, interpret, check and report results;
- Provide training and supervise staff, contractors, students and/or visitors to ensure laboratories are functioning effectively; provide leadership and mentoring to novice users of the laboratories and techniques.
- Contribute to research, commercial and internal publications by compiling data, ensuring high quality datasets are maintained and/or preparing manuscripts;
- Participate at scientific conferences, meetings and seminars, and develop and maintain research networks to share outcomes of work with research, industry and community groups;
- Manage wet chemistry laboratory and counting facility which involves: discharging the role of Area Supervisor of two areas, developing and establishing laboratory procedures, knowledge of techniques undertaken and relevant hazards and ensuring safety documentation is relevant and up-to-date, participating in internal/external audits, and ensuring training is current;
- Operate, maintain and provide expert advice on usage of multiple pieces of specialised radiochemical and nuclear counting equipment and participate in external round robins and laboratory proficiency tests to ensure equipment is well maintained, calibrated and is available for use by research and operational projects and data generated is of high standard consistent with international best practice;
- Provide clients and collaborators with advice on a wide range of existing radiochemical capabilities and provide high quality data generated using fit-for-purpose techniques;
- Plan and participate in fieldwork to collect high quality and targeted samples related to the movement of contaminants, including radionuclides;
- Undertake additional duties within the workgroup as required and during periods of leave of other staff.

### **Decision Making**

- The ANSTO values, organisational corporate plan, business plan, operational excellence program, Nuclear Stewardship Business Plan and Radioanalytical Chemistry Capability Area Operational Plans and Arrangements provide the context for the position.
- The position holder works within a framework of legislation, policies, professional standards and resource parameters. Within this framework the position will be provided with the parameters in which to operate the laboratories and facilities. The position holder has some independence in determining the tasks and activities required to achieve day-to-day activities.
- The position is fully accountable for the accuracy, integrity and quality of the content of advice provided to users and staff, and is required to ensure that decisions are based on sound evidence.
- Daily work priorities are determined within the context of agreed work plans and the position holder will consult with the line manager on complex, sensitive and major issues that have a significant impact on the (section/unit).
- The levels of authority delegated to this position are those approved and issued by the Chief Executive Officer. All delegations will be in line with the ANSTO Delegation Manual AS-1682 (as amended or replaced).

### **Key Challenges**

The major challenges for this position include:

- Developing and implementing new or improved radioanalytical techniques for a wide range of radionuclides in required timeframes;
- Promoting current and high quality radiochemistry and method improvement or modification within ANSTO;

- Developing and retaining staff in the area of radiochemistry and nuclear counting techniques.

## KEY RELATIONSHIPS

Who	Purpose
<b>Internal</b>	
Line Manager	<ul style="list-style-type: none"> <li>• Receive guidance and direction</li> <li>• Provide expert, authoritative and evidence based advice</li> <li>• Negotiate and report on resources consistent with strategic plans and goals</li> <li>• Recommend and gain endorsement for plans and other initiatives</li> </ul>
Work area team members	<ul style="list-style-type: none"> <li>• Provide and receive supervision, instruction, direction, support, training and technical leadership</li> <li>• Provide expert advice and analysis on a range of radioanalytical, instrument and laboratory matters</li> <li>• Contribute to group decision making processes, planning and goals</li> <li>• Collaborate and share accountability</li> <li>• Negotiate and resolve scheduling conflicts</li> </ul>
ANSTO Users (scientists, researchers, technical staff)	<ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Provide advice on analytical capabilities and scheduling</li> <li>• Liaise with on analytical requests and reporting</li> <li>• Collaborate with on new research ventures</li> </ul>
<b>External</b>	
Scientists, Researchers and technical staff	<ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Provide advice on analytical capabilities and scheduling</li> <li>• Liaise with for analytical requests and reporting</li> <li>• Collaborate with on new research ventures</li> </ul>
Commercial clients	<ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Provide advice on analytical capabilities and scheduling</li> <li>• Liaise with on commercial projects, analytical requests and reporting</li> </ul>
Instrument suppliers and providers of calibration, and maintenance services	<ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Clearly communicate needs, deliverables and expected outcomes</li> </ul>

## POSITION DIMENSIONS

<b>Staff Data</b>	
Reporting Line	Reports to the Manager, Radioanalytical Chemistry
Direct Reports	
Indirect Reports	
<b>Financial Data (2021/2022)</b>	
Revenue / Grants	N/A
Operating Budget	N/A
Staffing Budget	N/A
Capital Budget	N/A
Assets	N/A
<b>Special / Physical Requirements</b>	

Location:	Lucas Heights Working in different areas of designated site/campus as needed
Travel:	May be required travel to ANSTO sites from time to time Infrequent travel both internationally and nationally Infrequent field work in remote locations
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer). Labour intensive physical requirements (sitting, standing, frequent manual handling). Standing for long periods Public speaking Wearing personal protective equipment for the handling of hazardous and/or radioactive materials.
Radiation areas:	May be required to work in radiation areas under tightly regulated conditions. Perform duties in an area where radioactive materials are handled under tightly controlled safety conditions. Perform duties with and in an area where hazardous chemicals or materials are handled under tightly controlled safety conditions.
Hours:	Willingness to work extended and varied hours based on operational requirements. After hours work may be required for short and infrequent periods
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements Obtain and maintain appropriate federal government clearance

### Workplace Health & Safety

Specific role/s as specified in <u>AG-2362</u> of the ANSTO WHS Management System	All Workers
	Managers/Leaders/Supervisors
	Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties

## ORGANISATIONAL CHART

Refer to the published organisation chart.

## KNOWLEDGE, SKILLS AND EXPERIENCE

1. Bachelor Degree in Chemistry, Environmental Chemistry or Soil Science;
2. Extensive knowledge of radiochemical separation procedures;
3. Extensive experience operating within a radiochemistry laboratory within a research environment;
4. Demonstrated experience managing a laboratory, leading a small team of analysis/laboratory personnel and ability to train staff and facility users;
5. Experience with alpha, beta and gamma counting techniques, in particular alpha spectrometry and liquid scintillation counter instruments;
6. Practical understanding of behaviour of radionuclides in the environment as well as the nuclear fuel cycle in order to assess appropriate analysis and provide interpretation for a range of sample types;
7. Knowledge and experience collecting environmental samples and/or fieldwork;
8. Ability to work in a team and provide experimental and research support;
9. Demonstrated ability to follow policy, procedures and guidelines;
10. Personal qualities that add value to a team operating in a high level analytical, safety and quality environment.

## VERIFICATION

This section verifies that the line manager and appropriate senior manager/executive confirm that this is a true and accurate reflection of the position.

<b>Line Manager</b>		<b>Delegated Authority</b>	
Name:	Jennifer Harrison	Name:	Miles Apperley
Title:	Leader, Nuclear Stewardship	Title:	Head of Platforms, Research Infrastructure
Signature:		Signature:	
Date:		Date:	