



## POSITION DESCRIPTION

<b>Position Title:</b>	Scientist, Microanalysis Nuclear Science & Technology
<b>Cluster / Business Unit / Division</b>	– Research Infrastructure
<b>Section or Unit:</b>	Nuclear Stewardship – Nuclear Forensics
<b>Classification:</b>	Band 5
<b>Position Description Number:</b>	PD-2032
<b>Job Family:</b>	Science
<b>Work Contract Type:</b>	Scientist
<b>STEMM/NON-STEMM:</b>	STEMM

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### POSITION PURPOSE

The Scientist, Microanalysis supports the operational microanalytical activities of the Nuclear Forensics capability area by ensuring efficient and compliant operation of the laboratories, developing and validating procedures, and undertaking sample preparation and microscopy analysis for nuclear forensic examinations. The Scientist, Microanalysis supports the Senior Scientist, Nuclear Forensics and Microanalysis to develop new microanalysis processes and implement improvements and efficiencies in all workflows.

### ORGANISATIONAL ENVIRONMENT

ANSTO leverages great science to deliver big outcomes. We partner with scientists and engineers and apply new technologies to provide real-world benefits. Our work improves human health, saves lives, builds our industries and protects the environment. ANSTO is the home of Australia's most significant landmark and national infrastructure for research. Thousands of scientists from industry and academia benefit from gaining access to state-of-the-art instruments every year.

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 Science & Technology (NST) incorporates ANSTO's research, innovation, landmark research infrastructure and associated platforms and capabilities. NST conducts research and development in relation to nuclear science and technology and connects people, transfers knowledge and provides nuclear-based products and services for the benefit of Australia.

The Research Infrastructure portfolio consists of platforms established on scientific infrastructure and capabilities, with a number of the platforms categorised as landmark infrastructure. This includes a range of scientific assets, infrastructure, capability development & delivery for multi-decadal, multi-disciplinary, multi-user platforms for a collaborative user community and for internal research and development endeavours.

Nuclear Stewardship is the custodian of ANSTO's mandated and site-essential capabilities housed within NST that respond to the needs of the Australian Government, industry and the community relevant to nuclear forensics, radionuclide metrology, radioanalytical chemistry and environmental monitoring. These capabilities underpin ANSTO's ability to be responsive to and prepared for a range of nuclear stewardship related functions and responsibilities through the provision of reliable and trusted scientific and technical advice and specialised services.

The Nuclear Forensics capability area operates Australia's designated nuclear forensics laboratory and works in close cooperation and collaboration with internal and external stakeholders domestically and internationally. Nuclear Forensics has a high profile in international engagement and outreach to strengthen global nuclear security and provides trusted advice and specialised services in support of needs of the Australian Government.

## **ACCOUNTABILITIES & RESPONSIBILITIES**

### **Key Accountabilities**

- Develop, validate and implement sample preparation procedures for microanalysis in a clean and highly controlled environment.
- Develop, validate and perform microscopic analysis for the purpose of material isolation, characterisation and preparation for instrumental analysis. Support the Senior Scientist, Nuclear Forensics and Microanalysis with the development and documentation of stringent and robust analytical and quality systems.
- Contribute to the commissioning of fit-for-purpose laboratory spaces and implement new workflows and analytical processes.
- Ensure laboratory housekeeping and equipment is maintained at all times to enable readiness and safe operation of the laboratories to an exceptional quality standard.
- Under instruction of the Senior Manager, Radiological and Nuclear Security Science or delegate is proactive in maintaining compliance with quality, safety, security, environmental, and operational requirements of the laboratories and applicable areas.
- Contribute to a working environment and culture which promotes teamwork and knowledge sharing, is collaborative and user focussed, and achieves high quality scientific outcomes.
- Demonstrate professionalism, discretion and sound judgement to achieve high quality outcomes within the requirements of a security sensitive environment.
- Undertake additional duties as required and during periods of leave of other staff.

### **Decision Making**

- The ANSTO values, organisational corporate plan, business plan, operational excellence program, NST strategy, Nuclear Stewardship Business Plan and Nuclear Forensic 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. The position holder has 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 the Senior Scientist, Nuclear Forensics and Microanalysis 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 Senior Manager, Radiological and Nuclear Security Science and Senior Scientist, Nuclear Forensics and Microanalysis on complex, sensitive and major issues that have a significant impact on the Nuclear Forensic capability area.
- 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**

- Identifying relevant legislation, standards, policies and best practices (e.g. Workplace Health and Safety and ISO9001 requirements) that can inform decision making and tasks and activities.
- Undertake training in microanalysis techniques to develop, validate and implement standard operating procedures to provide reproducible, high quality data.
- Maintaining a vigilant and exacting approach to ensure laboratory outputs are of a consistently high quality standard.

- Developing knowledge and understanding of Nuclear Forensic concepts including knowledge of the nuclear fuel cycle.
- Developing knowledge of a range of analytical techniques for characterisation of materials.
- Ability to work under limited supervision, manages time effectively, prioritise work and satisfy needs of multiple stakeholders.
- Having a clear understanding of information security requirements and a commitment to the application of protective measures.
- Keeping abreast of recent developments in the field, ensuring continual improvement and implementation of best practice to enhance the ability of Nuclear Stewardship to carry out its business.
- Operating effectively across the Nuclear Stewardship capability areas as a team member and scientist.

## KEY RELATIONSHIPS

Who	Purpose
<b>Internal</b>	
Line Manager	<ul style="list-style-type: none"> <li>• Receive direction and guidance</li> <li>• Provide authoritative and evidence based advice</li> <li>• Recommend and gain endorsement for improvement or development plans and goals 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>• Teamwork and knowledge sharing</li> <li>• Engagement and learning</li> </ul>
ANSTO staff	<ul style="list-style-type: none"> <li>• Build constructive and productive relationships within ANSTO in support of the delivery of client services</li> </ul>
Government and International Affairs	<ul style="list-style-type: none"> <li>• Work cooperatively with Government partners in conjunction with Government and International Affairs</li> </ul>
<b>External</b>	
Users (customers, scientists, researchers, post-docs, students, and visitors)	<ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Consult to identify users requirements and desired outcomes</li> <li>• Provide advice on analytical capabilities, analysis and training</li> </ul>
Instrument suppliers and providers of calibrations and maintenance services	<ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Clearly communicate needs and expected outcomes</li> </ul>
National and international stakeholders	<ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Communicate scientific outcomes and identify opportunities for continuous improvement</li> </ul>

## POSITION DIMENSIONS

<b>Staff Data</b>	
Reporting Line	Reports to the Senior Manager, Radiological and Nuclear Security Science
Direct Reports	Nil
Indirect Reports	Nil
<b>Financial Data</b>	
Revenue / Grants	
Operating Budget	

Staffing Budget
Capital Budget
Assets

#### Special / Physical Requirements

Location:	Lucas Heights Working in different areas of designated site/campus as needed
Travel:	May be required to travel to ANSTO sites within Australia occasionally Infrequent travel both internationally and nationally May be required to undertake field work in remote locations from time to time
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Laboratory facility physical requirements (lifting, standing for long periods, operating machinery and equipment Wearing personal protective equipment for the handling of hazardous and/or radioactive materials Public speaking (at conference and in-house meetings/events)
Radiation areas:	Perform duties with and 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 Required to hold the appropriate national security clearance

#### Workplace Health & Safety

Specific role/s as specified in AG-2362 of the ANSTO WHS Management System	All Workers May be required to undertake one or more of the specified roles within the context and course of their duties <ul style="list-style-type: none"> <li>• Area Supervisor</li> <li>• Building Warden</li> <li>• Contractor Supervisor</li> <li>• Designated First Aid Officer</li> <li>• Health and Safety Committee Member</li> </ul> Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties
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#### ORGANISATIONAL CHART

Refer to published Organisational Chart.

#### KNOWLEDGE, SKILLS AND EXPERIENCE

1. Degree in relevant field of science (e.g. chemistry, geochemistry, analytical chemistry, environment).
2. Experience and skills in clean room practices, optical microscopy or microanalysis techniques or other transferable skillset.

3. A conscientious approach and willingness to assess performance of repetitive tasks to a high standard to address stringent analytical requirements.
4. Experience in planning and setting up routine and non-routine experiments, collecting and presenting data under minimal supervision.
5. Demonstrated troubleshooting abilities and a willingness to adapt and develop improved processes and procedures.
6. Demonstrated ability to work as a part of a team and establish productive relationships.
7. Excellent interpersonal and communication skills.
8. Ability to identify and follow applicable standard procedures, regulations and WHS requirements and experience and enforcing QA requirements.
9. Demonstrated personal qualities that will achieve the high quality outputs required of the position. The ideal candidate will be meticulous, questioning, measured, accountable and respectful of safety and security requirements.

## 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.

Line Manager		Delegated Authority	
Name:	Tegan Bull	Name:	Jennifer Harrison
Title:	Senior Manager, Radiological and Nuclear Security Science	Title:	Leader, Nuclear Stewardship
Signature:		Signature:	
Date:	19/11/2021	Date:	19/11/2021

## Appendix 1

<b>ANSTO Job Families</b>
Accounting & Finance
Administration
Communications & Marketing
Compliance & Regulation
Engineering and Technical
Human Resources
ICT & Digital Solutions
Information & Knowledge Management
Legal
Manufacturing
Monitoring & Audit
Operations
Organisational Leadership
Project & Program
Research
Science
Security & Intelligence
Senior Executive
Service Delivery
Strategic Policy
Trades & Labour