



POSITION DESCRIPTION

Position Title:	Senior Metallurgist
Cluster / Business Unit / Division	Nuclear Science and Technology
Section or Unit:	Nuclear Materials Development and Characterisation
Classification:	Band 7
Job Family:	Science
Position Description Number:	PD-1299
Work Contract Type:	Scientific/Technical
STEMM/NON-STEMM:	STEMM
STEMM CATEGORY:	Research & Sciences

POSITION PURPOSE

The primary objective of the Senior Metallurgist is to provide support to ANSTO's nuclear infrastructure, commercial operations and research and development programs through expertise and specialised physical metallurgical advice. The role draws on extensive experience and understanding of structure -function properties of materials, testing and analysis, integrity and failure analysis of materials and structures. The role provides leadership for failure analysis, materials compatibility, and materials testing facilities within the research infrastructure team.

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.

Nuclear Science and 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 Nuclear Materials Development & Characterisation (NMDC) team conducts materials synthesis, characterisation, modelling, testing, and development for ANSTO and industrial clients. The team are the custodians of some unique facilities at ANSTO that, coupled with expertise, provide an integrated multidisciplinary technical support to Australian industry across a variety of sectors. The NMDC is also Australia's primary source of know-how in the development, characterisation, modelling and testing of radioactive materials. The NMDC team also collaborates with internal research groups and Australian and international universities.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities

- Utilise extensive experience and specialist knowledge to solve complex scientific problems by considering and evaluating situations, calculating and assessing the risks, costs and benefits of solutions.

- Provide certification of Engineering reports relating to internal and external metallurgical related projects.
- Lead technical delivery of major projects or tasks within projects, with the responsibility for management of the project or tasks, from conception to development of project ideas and maintain visibility of the project with internal and external stakeholders.
- Lead and supervise input to key project work of the Materials Testing Capability Group, providing advice and guidance on technical performance, knowledge and capabilities.
- Develop a significant national and international reputation for excellence in their field of expertise, through producing research of international standard, publication in refereed journals, other reputable publications and presentations at conferences.
- Participate in, or lead negotiations aimed at reaching workable agreements with clients, project leaders and other stakeholders.
- Working in a highly collaborative way, to build and maintain ongoing productive working relationships with internal and external stakeholders.
- Apply a range of communication techniques when communicating with a diverse range of stakeholders at various levels of scientific or technical understanding, to effectively address audience needs.
- Responsible for maintaining knowledge of industry best practice and technological developments, through investigate and assess the relevance of developments and their benefit to the Institute and ANSTO.
- Monitor and action the feasibility assessment of requests submitted through the user portal.
- Undertake additional duties as required and during period of leave of other staff.

Decision Making

- The ANSTO values, organisational corporate plan, business plan, operational excellence program, the NST strategy and NMDC defined strategy and plans provide the context for the position.
- The position works within a framework of legislation, policies, professional standards and resource parameters. Within this framework the position has some independence in determining how to achieve assigned objectives however will be constrained by the project deliverables and timeframes.
- Use expertise to solve complex problems by considering and evaluating situations and options, calculating and assessing the risks, costs and benefits using and evidence-based decision making.
- The position is fully accountable for the accuracy, integrity and quality of the content of advice provided and is required to ensure that decisions are based on sound evidence, but at times may be required to make effective judgements under pressure or in the absence of complete information or expert advice.
- Determine key work priorities within the context of agreed work plans and project plans and consult with the line manager on complex, sensitive and major issues that have a significant impact on the project.
- The levels of authority delegated to this position are those approved in accordance with the project management structure 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

- Carry out work in accordance with project delivery schedule while working across numerous projects with varying deadlines.
- Undertaking activities in a heavily regulated environment and comply at all times with regulatory & safety requirements, codes, standards and specifications.
- Communicating and negotiating with key staff and representatives, or other government agencies and professional organisations, to achieve desired outcomes for ANSTO.

- Provide support to ANSTO’s nuclear infrastructure and businesses in areas of expertise by responding to requests for advice and assistance in solving complex problems while providing consideration to other commitments and responsibilities.
- Source and bring to fruition opportunities to generate external funding for projects. This encompasses identifying funding opportunities, preparing grant submissions and proposals and presenting funding applications to internal and external stakeholders.
- Working at a strategic level in order to take part in the formulation of new projects, either by significantly contributing to project proposals and concept development or by taking a lead in the process.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Line Manager	<ul style="list-style-type: none"> • Receive guidance and direction • Provide expert, authoritative and evidence-based advice and recommendations. • Provide regular updates on key tasks, issues & priorities • Negotiate and report on progress of project outcomes consistent with project plans and goals. • Recommend and gain endorsement for project activities and other initiatives. • Escalate issues and propose solutions
Team members	<ul style="list-style-type: none"> • Lead the delivery of specific work package as defined by the project. • Provide expert advice and analysis on a full range of matters • Lead the group decision making processes, planning and goals • Collaborate and take responsibility • Identify, negotiate and resolve technical conflicts
ANSTO Operations and researchers	<ul style="list-style-type: none"> • Provide expert advice or guidance to operations and maintenance of critical nuclear research and operations infrastructure. • Support researchers by providing expertise in root cause analysis and materials testing

POSITION DIMENSIONS

Staff Data	
Reporting Line	Reports to the Leader of the NMDC platform or their delegate
Direct Reports	Nil
Indirect Reports	Nil

Financial Data (2023/2024)

Revenue / Grants	N/A
Operating Budget	N/A
Staffing Budget	N/A
Capital Budget	N/A
Assets	N/A

Special / Physical Requirements

Location:	Lucas Heights Working in different areas of designated site/campus as needed
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Travel:	May be required travel to ANSTO sites from time to time Frequent travel both internationally and nationally
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Industrial facility physical requirements (lifting, standing for long periods, operating machinery, equipment, and manipulators) 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 with and in an area where hazardous chemicals or radioactive materials are handled under tightly controlled safety conditions
Hours:	Willingness to work extended and varied hours based on operational requirements
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements

Workplace Health & Safety

Specific role/s as specified in <u>AG-2362</u> of the ANSTO WHS Management System	All Workers Officer (definitions found in appendix 1 of AG-2362) May be required to undertake one or more of the specified roles within the context and course of their duties Area Supervisor Building Manager Building Warden Contractor Supervisor Source Responsible Officer Nominated Safeguards Authorised Officer SRA Process Owner
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ORGANISATIONAL CHART

Refer to Published Organisational Chart.

KNOWLEDGE, SKILLS AND EXPERIENCE

1. Degree or post graduate qualifications in Metallurgy, Materials Science or Materials Engineering or related discipline.
2. Demonstrated experience in the field of metallurgy along with physical testing, failure analysis of materials and structures.
3. Demonstrated experience in component assessment in a regulated industry
4. Demonstrated research experience and recognition as an expert in the field of metallurgy and materials testing.
5. Project delivery skills including setting goals and objectives, leading negotiations and technical reporting.
6. People management skills and the ability to motivate and direct others.
7. Leading negotiations, managing, and motivating multi-disciplinary or specialist project teams.
8. Ability to communicate effectively.
9. Ability to build networks and to develop linkages with the nuclear industry.
10. Personal qualities that add value to a team operating at a high-level, focussed on client delivery.
11. Ability to interacting with staff of varying backgrounds and experiences and able to establish productive working relationships.

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:	Gerry Triani	Name:	Mihael Moody
Title:	Interim Leader, NMDC	Title:	Director of Nuclear Materials Research and Technology Group
Signature:		Signature:	
Date:		Date:	

Appendix 1

ANSTO Job Families
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