



POSITION DESCRIPTION

Position Title:	Nuclear Analysis Section Leader - Thermohydraulics
Cluster / Business Unit / Division	Nuclear Operations and Nuclear Medicine
Section or Unit:	Nuclear Analysis Section
Classification:	Band 7
Job Family:	Science and Engineering
Position Description Number:	PD-2499
Work Contract Type:	Manager
STEMM/NON-STEMM:	STEMM
STEMM CATEGORY:	Science

POSITION PURPOSE

The primary objective of the Nuclear Analysis Section (NAS) Section Leader Thermohydraulics is to manage a multi-disciplinary team and provide technical specialist leadership in the area of Thermohydraulics. They ensure that team members are effectively utilised to deliver the safe, efficient and reliable operation of the OPAL Research Reactor and provide timely technical support to other nuclear facility projects as required. The Section leader applies leadership capabilities and science/engineering experience to coordinate the activities of the group in a supportive and productive environment.

ORGANISATIONAL ENVIRONMENT

ANSTO is the national organisation for nuclear science and technology and is the home of Australia's most significant landmark and national infrastructure for research. 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.

Nuclear Operations and Nuclear Medicine (NONM) brings together the key areas of Reactor Operations, Waste Management, ANSTO Health and the ANSTO Nuclear Medicine facility, which together form Nuclear Medicine.

The Nuclear Analysis Section (NAS) comprises a team of scientists and engineers who are responsible for conducting numerical modelling, experiments and analysis in support of a broad range of ANSTO nuclear projects. These projects include the safe operation of OPAL, analysis and review of reactor design and safety features, irradiation of new types of targets in the reactor, design and operations of nuclear facilities and equipment, and modifications of nuclear facilities and equipment.

Nuclear Analysis Section Leader Thermohydraulics reports to the Manager Nuclear Analysis Section. The position has is responsible for the leadership and management of a multidisciplinary team of engineers and scientists..

The position's key internal customers and stakeholders include other areas within Reactor Operations, Australian Centre for Neutron Scattering, ANSTO Health, ANSTO Maintenance and Engineering and other areas within ANSTO as required

ACCOUNTABILITIES & RESPONSIBILITIES

The key accountabilities for this position include:

- Provide leadership, supervision and a supportive and engaging work environment for the Thermohydraulics team to ensure outcomes are planned and achieved that are in alignment with the objectives of safe, efficient and reliable reactor operation and other organisational strategic objectives and values;
- Work cooperatively with the Nuclear Analysis leaders to allocate, prioritise, plan and schedule work activities of the Thermohydraulics team and to review work undertaken;

- Ensure operation and maintenance of the rig and ancillary components that comprise the Water Tunnel Flow Visualisation Facility.
- Support complex projects ensuring risk management and proactive compliance within regulatory requirements is undertaken and the project is delivered on time and within budget while meeting required performance goals
- provide expert computational and analytical services in nuclear applications, nuclear safety and licencing to OPAL and other Nuclear facilities and projects at ANSTO.
- Manage the allocation and prioritisation of work and projects within the team according to individual expertise and provide direction, coaching and training to enhance capability of the team
- Make recommendations on improvements to systems and processes relating to Nuclear Analysis Section tools, models and methods of work.
- Monitor performance of Thermohydraulics team members and conduct annual performance and effectiveness appraisals (APEAs);
- Reinforce the desired safety culture within the team to ensure the safest possible workplace culture and behaviours
- Present lectures to trainees within the Reactor Fundamentals Course provided by Reactor Operations Training Unit.
- Maintain up to date knowledge on international best practice and cutting edge advancements in the NAS areas of expertise and implement improvements as identified.
- Foster and maintain a culture of scientific, technical and safety excellence by coaching, mentoring leading staff, working collaboratively to share expertise within and outside the team.
- Fulfil WHS responsibilities as specified in AG 2362 of the ANSTO WHS system.
- Undertake additional duties as required and during period of leave of other staff.

Decision Making

- 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 objectives of the unit, including deciding on methods and approaches, operations, project planning and allocation of resources.
- The position is fully accountable for the accuracy, integrity and quality of the content of the work 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.
- 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).
- The position determines key work priorities within the context of the agreed work plans and will consult with the Manager Nuclear Analysis Section on complex, sensitive and major issues that have a significant impact on operations.
- In collaboration and agreement with the other NAS managers, the position determines how to achieve outcomes, including deciding on methods and approaches, project planning and allocation of resources and is fully accountable for delivering the group outcomes within agreed timeframes and budget.
- The position is fully accountable for the accuracy, integrity and quality of the content of advice and services provided to ANSTO and is required to ensure that activities and equipment and their interaction with the OPAL Research Reactor are compliant with regulatory and safety requirements at all times.

Key Challenges

The major challenges for this position include:

- Pursue the application of solutions to complex conceptual problems across multi-disciplinary boundaries.

- Motivate and monitor the team to produce high quality work that enables safe, efficient and reliable reactor operation.
- Establish and develop nuclear analysis techniques that are relevant to the safety and operation of OPAL.
- Manage heavy workload through prioritising work to meet project schedules, whilst ensuring compliance with regulatory and safety requirements.
- Maintaining timely delivery across numerous projects with varying deadlines and priorities.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Manager/Executive	<ul style="list-style-type: none"> • Receive guidance and direction • Provide expert, authoritative and evidence based advice • Staff engagement and quality recruitment • Negotiate and report on budgets and resources consistent with strategic plans and goals • Recommend and gain endorsement for plans and goals and other initiatives
Work area team members	<ul style="list-style-type: none"> • Provide expert advice and analysis on a full range of matters • Contribute to group decision making processes, planning and goals • Collaborate and share accountability • Negotiate and resolve conflicts
Direct Reports	<ul style="list-style-type: none"> • Provide leadership, guidance and support • Set performance requirements and manage performance and development • Engage to monitor trends, performance and progress against the plan and evaluate further support which may be required to ensure delivery against the plan • Coach and mentor staff
Other departments	<ul style="list-style-type: none"> • Reactor Operations • Australian Centre for Neutron Scattering, • ANSTO Health, • ANSTO Maintenance and Engineering • other areas within ANSTO as required.
External	
Title, group, committee, industry or business	<ul style="list-style-type: none"> • Develop and maintain collaborative relationships • Provide expert, authoritative and evidence based advice • Share knowledge and deliver outcomes from partnered engagements

POSITION DIMENSIONS

Staff Data	
Reporting Line	• Reports to the Manager Nuclear Analysis Section
Direct Reports	3-5
Indirect Reports	Nil
Financial Data (2024/2025)	
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 travel to ANSTO sites from time to time Occasional travel both internationally and nationally 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) Occasional Public speaking Wearing personal protective equipment for the handling of hazardous and/or radioactive materials Occasional Working in confined space environment including wearing respiratory equipment
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 Required to participate on an on-call roster
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 AP2362 of the ANSTO WHS Management System	Managers / Leaders / Supervisors
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ORGANISATIONAL CHART

Refer to published Organisational Chart.

KNOWLEDGE, SKILLS AND EXPERIENCE

1. PhD Degree in Engineering, Physics or Mathematics, with a strong thermal-hydraulics component;
2. Experience in supervising staff, including good coaching and mentoring skills
3. Extensive experience in the principles and application of nuclear reactor physics and/or engineering.
4. Extensive experience in numerical modelling and computational modelling and analysis techniques including numerical and statistical computation, neutronics, reactor physics, nuclear safety and criticality safety;
5. Strong project management skills including balancing of schedule, budget and quality objectives and managing client expectations.

6. Demonstrated ability to analyse data to develop practical advice and engineering solutions for problems.
7. Demonstrated influencing and negotiation skills.
8. Excellent written and verbal communication skills.
9. Desire to seek and promote continuous improvement and willingness to implement change.
10. Proven ability to show initiative in working independently be deadline driven, assertive and reliable in following through with actions.

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:	Name: Pamela Naidoo-Ameglio
Title: Manager Nuclear Analysis Section	Title: Group Executive, NONM
Signature:	Signature:
Date:	Date: