



POSITION DESCRIPTION

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| Position Title: | Nuclear Analyst |
| Cluster / Business Unit / Division | Nuclear Operations and Nuclear Medicine |
| Section or Unit: | Nuclear Analysis |
| Classification: | Band 5/6 Linked Role |
| Job Family: | Engineering and Technical |
| Position Description Number: | PD-2156 |
| Work Contract Type: | Technical |
| STEMM/NON-STEMM: | STEMM |
| STEMM CATEGORY: | Technical |

POSITION PURPOSE

The primary objective of the Nuclear Analyst is to provide analytic assessments and technical advice to ANSTO senior management and other stakeholders in support of nuclear reactor safety, utilisation and operations. Supporting the safe operation of OPAL and other projects seeking to utilise the OPAL facilities are the main focus of the work.

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 Operations and Nuclear Medicine brings together the key areas of Reactor Operations, the commercial businesses of Health, ANSTO Nuclear Medicine (ANM) and Waste Management.

Reactor Operations provides nuclear services to ANSTO for the purpose of supporting the strategic objectives of the organisation. This includes the provision of neutron beams for research institutes and irradiation services to Health and ANM for the purpose of the manufacture and sales of radiopharmaceutical and radiochemical products.

Waste Management is responsible for the safe, compliant and effective management of legacy, current and future anticipated radioactive waste arising in line with ANSTO's strategic objectives, regulatory requirements and public expectations.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities Band 5

- Develop specialist knowledge in radiation transport, reactor physics and OPAL design.
- Undertake numerical modelling, measurements and analysis for a broad range of ANSTO projects.
- Assist in the analysis and review of reactor design and safety to ensure the optimum operation of OPAL.
- Assist in the provision of technical and analytic advice and assessments in support of safety submissions for OPAL and other ANSTO projects. This includes assistance with development of submissions requiring ARPANSA approval.
- Assist in the provision of high quality internal and external advice to stakeholders on relevant computational and experimental analysis techniques.
- Develop and improve the available codes for reactor analysis and fuel management to support OPAL operational requirements.

- Drive continuous improvement by encouraging the sharing of knowledge and experiences within unit and across site.
- Fulfilling OHSE responsibilities as specified in AP-2362 of the ANSTO OHSE system.
- Undertake additional duties as required and during period of leave of other staff.

In addition to performing all Band 5 accountabilities, the Band 6 role includes these additional accountabilities

Key Accountabilities Band 6

- Use specialist reactor physics knowledge to undertake analysis and review of reactor design and safety to ensure the optimum operation of OPAL.
- Provide technical and analytic advice and assessments in support of safety submissions for OPAL and other ANSTO projects. This includes the development of submissions requiring ARPANSA approval.
- Provide high quality internal and external advice to stakeholders on relevant computational and experimental analysis techniques.
- Foster and establish professional networks at international and national levels in order to promote ANSTO's research and operational efforts.
- Maintain up to date knowledge on international best practice and cutting edge advancements in the NAS areas of expertise and implement improvements as identified.

Decision Making

- The ANSTO values, organisational corporate plan, business plan, operational excellence program, the Reactor Operations 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.
- The position is responsible for completing assigned work objectives given to them by their line management, project manager or senior team members.
- The position is accountable for providing support to senior team members in the provision of advice to stakeholders.
- Work to priorities as agreed in work plans and consult with the Leader Nuclear Analysis on complex, sensitive and major issues that have a significant impact on the work.
- 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).

In addition to all Band 5 decision making, the Band 6 role includes these additional decision making requirements

- 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.
- Independently determine key work priorities of activities within the context of agreed work plans and consult with the Leader Nuclear Analysis on complex, sensitive and major issues that have a significant impact on the work.

Key Challenges

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

KEY RELATIONSHIPS

| Who | Purpose |
|----------------------|---|
| Internal | |
| Manager | <ul style="list-style-type: none">• Receive guidance and direction- Provide evidence based advice and recommendations• Provide regular updates on key tasks, issues & priorities• Recommend and gain endorsement for project activities and other initiatives• Escalate issues and propose solutions |
| Team/project members | <ul style="list-style-type: none">• Work effectively with team/project members and work collaboratively to contribute to achieving outcomes• Provide advice and analysis on a full range of matters- Contribute to group decision making processes, planning and goals• Collaborate and share accountability- Identify, negotiate and resolve technical conflicts |
| Other departments | <ul style="list-style-type: none">• Report on technical development and outcomes- Consult regarding results and stakeholder requirements• Provide advice and recommendations |

POSITION DIMENSIONS

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| Staff Data | |
| Reporting Line | Reports to the Nuclear Analysis Leader |
| Direct Reports | Nil |
| Indirect Reports | Nil |
| Financial Data (2022/2023) | |
| 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 |
| Physical: | Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Public speaking |

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| Radiation areas: | May be required to work in radiation areas under tightly regulated conditions Perform duties 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 |
| Linked Role: | The Transition from Band 5 to Band 6 is not automatic and requires a full written submission, in addition to the attached checklist, to demonstrate how the employee meets the requirements. Transition will only occur following approvals from the Line Manager - Nuclear Analysis Leader and General Manager Nuclear Operations and Nuclear Medicine |

Workplace Health & Safety

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| Specific role/s as specified in <u>AP-2362</u> of the ANSTO WHS Management System | All Workers Officer (definitions found in appendix A of AP-2362) Group Executive / General Manager Managers / Leaders / Supervisors 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

On file

KNOWLEDGE, SKILLS AND EXPERIENCE

Band 5 level

1. Degree in Engineering, Physics or Mathematics
2. Knowledge of the principles of nuclear reactor physics and/or engineering.
3. Experience in modelling and analysis techniques
4. Demonstrated ability to analyse data to develop practical advice and engineering solutions for problems.
5. Demonstrated influencing and negotiation skills.
6. Excellent written and verbal communication skills.
7. Desire to seek and promote continuous improvement and share knowledge.

In addition to the required knowledge skills and experience above the Band 6 level will require:

1. PhD in a relevant discipline or relevant experience.
2. Demonstrated experience in the principles and application of nuclear reactor physics and/or engineering.
3. Extensive experience in numerical modelling and computational modelling and analysis techniques.

VERIFICATION

| Line Manager | Delegated Authority |
|--------------|---------------------|
| Name: | Name: |
| Title: | Title: |
| Signature: | Signature: |
| Date: | Date: |

Nuclear Analyst - Linked Role (PD-2156)
Band 5 to Band 6 Transition Checklist

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| Name: | |
| Commencement Date: | |
| Assessment Date: | |

Note: Full written submission demonstrating and justifying how the employee meets the requirements must also be attached.

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| 1. Minimum 3 years working as Nuclear Analyst (Band 5) or equivalent experience | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 2. Demonstrated capability to independently manage projects to successful completion | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <ul style="list-style-type: none"> Demonstrated ability to independently and responsibly perform Band 6 accountabilities and apply required knowledge, skills and experience for the Band 6 position including: <ul style="list-style-type: none"> Undertake Band 6 accountabilities independently with no direct supervision Apply specialised knowledge and experience to resolve reactor physics and radiation transport problems with no supervision or guidance Utilise judgement to independently assess priorities of projects and tasks to optimise the allocation of resources Providing feedback and contributing to the process of continual improvement in safety, reliability and efficiency and individual knowledge and competency | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No |

Manager Recommendation:

I have reviewed the employee's competence in accordance with Nuclear Analyst PD-2156 and certify that the employee meets all requirements for transition and recommend transition from Band 5 to Band 6 be endorsed.

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| Manager Name: | |
| Signature: | |
| Date: | |

Group Executive Assessment

I have assessed the submission and confirm that the employee meets all requirements for transition from Band 5 to Band 6

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| General Executive Name: | |
| Signature: | |
| Date: | |