Australian Government

ANSTO
Science. Ingenuity. Sustainability.

POSITION DESCRIPTION

Position Title:	Sample Environment Officer/Senior Sample Environment Officer
Cluster / Business Unit / Division	Nuclear Science & Technology and Landmark Infrastructure – Research Infrastructure
Section or Unit:	Australian Centre for Neutron Scattering – Operations – Sample Environment
Classification:	Band 5/6 linked
Position Description Number:	PD-1797
Work Contract Type:	Science/Technical

POSITION PURPOSE

The Sample Environment Officers undertake technical and scientific activities to support the scientific experiments that utilise the neutron beam instruments (NBI) along with related sample environment equipment and devices. Sample Environment Officers work within a team of laboratory technicians, technologists, engineers, instrument scientists, and other internal and external scientists and researchers to facilitate and contribute to research, supporting users who are conducting experiments on neutron beam instruments.

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 & Technology and Landmark Infrastructure (NSTLI) incorporates ANSTO's research, innovation, landmark research infrastructure and associated platforms and capabilities. NSTLI 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 scientific infrastructure and capabilities, with a number of them categorised as landmark infrastructure. This includes a range of scientific assets, infrastructure, capability development & delivery for multi-decadal, multi-disciplinary, multi-user platforms for the user community and for internal research and development endeavours.

The Australian Centre for Neutron Scattering (ACNS) operates neutron and X-ray scattering instruments with specialised sample environment equipment utilising ANSTO's modern high flux OPAL reactor and its cold neutron source. ACNS conducts structural and functional scientific investigations for industry, health, environment, biotechnology, nanotechnology, energy, advanced materials, engineering, food and heritage / archaeology sectors. ACNS is one of the top neutron facilities worldwide and unique within the Southern Hemisphere with an internationally competitive instrument suite complemented by an extensive suite of sample environments. There is an extensive user program of >500 users (1400 visits) per year from Australian universities and institutes, international institutions and internal ANSTO researchers. ACNS also services industry needs in engineering, infrastructure, food, automotive and other sectors.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities – Band 5

- Assist in the execution of neutron scattering experiments by efficiently preparing, installing, operating and removing sample environment equipment on neutron beam instruments (NBI).

- Facilitate the use of the facilities and equipment to internal and external users. Prioritise, plan and schedule work in order to ensure user expectations are met.
- Provide technical advice to NBI users on the purpose and use of sample environment equipment & devices and collaborate with instrument scientists, other sample environment team members and users in the design of experiments to enable quality research outputs and results.
- Provide advice and analysis in specifying, procuring, commissioning and testing a variety of different devices, equipment and instruments.
- Ensure equipment is utilised in accordance with operational safety, security, sustainability requirements and adhere to applicable standards, legislative and regulatory requirements.
- Undertake equipment maintenance and calibration, ensure housekeeping standards, spare parts and stock levels are maintained to ensure reliability, productivity and availability of equipment and facilities.
- Write clear and concise instructions for the handling of complex devices. Ensure accurate and timely records are made and maintained as required for traceability, safety and regulatory purposes.
- Contribute to equipment and technical improvement projects or activities.
- Undertake additional duties as required and during period of leave of other staff.

Key Accountabilities - Band 6

- Undertake all Band 5 accountabilities at a technical expert level and independently without supervision or guidance.
- Provide technical and scientific leadership for the development of new and innovative sample environment methodologies and techniques, conducting research or scientific investigation to achieve organisational outcomes.
- Exercise sound individual judgement and apply extensive knowledge within sample environment to design and implement modifications of new and existing equipment for the ACNS environment.
- Promote the quality of research outcomes via experimental development activities.
- Utilise specialist technical and scientific knowledge and expertise to examine, interpret, check and validate methods and results to provide scientific analysis and ensure accuracy of results produced.
- Provide expert advice on technical feasibility and general safety of scientific proposals submitted through the user portal.
- Provide technical leadership and demonstrate best practice for other workers within the facility. Actively contribute to a working environment which promotes teamwork, knowledge sharing, collaboration and achieves quality scientific outcomes for the facility and its users.
- Train, supervise and provide expert advice to staff, users (scientists, researchers, post-docs, students), visitors and contractors to help ensure effective and safe work within the facility.
- Collaborate and exchange information with other sample environment laboratories and groups at international neutron beam facilities.
- 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 NSTLI strategy and ACNS objectives 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 limited independence in determining how to achieve objectives of the sample environment work area.
- The position is fully accountable for the accuracy, integrity and quality of the content of advice and services provided to users and instrument scientists, and is required to ensure that activities and equipment and their interaction with the neutron facility are complaint with regulatory and safety requirements at all times.

- Band 5 role – Work plans and work priorities are provided and position is required to consult with the Manager, Sample Environment on changes to work plans and priorities.
- Band 6 role – Determines key work priorities within work plans and is required to consult with the Manager, Sample Environment on complex, sensitive and issues that have a significant impact on the schedule and outcome of the neutron beam instrument experiments.
- 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

- Developing innovative and creative solutions to complex experimental problems where there may be few or no precedents.
- Establish and maintain professional networks and utilise networks to address challenges in an efficient way through technical and operational knowledge sharing.
- Meeting needs of multiple stakeholders and adjusting work plans and processes to meet user and operational requirements.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Manager, Sample Environment	• Receive guidance and direction • Provide advice and recommendations on sample environment operations and issues • Report on work plan achievements and resolution of issues or equipment usage conflicts • Recommend and gain endorsement for operational plans and goals and other initiatives
Work area team members	• Contribute to group decision making processes, planning and goals • Collaborate and share accountability • Negotiate and resolve conflicts
ACNS Instrument Scientists, ACNS technicians & technologists, computing & electronics staff	• Liaise regarding scheduling, prioritisation & management of experiments • Collaborate in relation to software integration, maintenance & repair schedule to ensure high equipment availability • Establish and maintain ongoing open communication to ensure end product meets needs and user requirements.
Radiation/environmental protection & safety staff	• Exchange ideas • Seek and provide advice
ANSTO facility users and students	• Provide training and monitor equipment usage • Communicate and collaborate to ensure end product matches user needs • Provide technical supervision
External	
Facility users (national & international scientists, students and collaborators)	• Provide training and monitor equipment usage • Communicate and collaborate to ensure end product matches user needs • Provide technical supervision
Suppliers and contractors	• Provide technical supervision

POSITION DIMENSIONS

Staff Data	
Reporting Line	Reports to the Manager, Sample Environment
Direct Reports	Nil
Indirect Reports	Provide technical supervision to contractors, junior staff and facility users.

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 from time to time Infrequent 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) Laboratory & industrial facility physical requirements (lifting, standing for long periods, operating machinery & equipment, frequent manual handling, frequent movements) Wearing personal protective equipment for the handling of hazardous and/or radioactive materials
Radiation areas:	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 in on-call roster during the reactor cycle
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements

Workplace Health & Safety	
Specific role/s as specified in AG-2362 of the ANSTO WHS Management System	All Workers Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties

ORGANISATIONAL CHART

On file

KNOWLEDGE, SKILLS AND EXPERIENCE

Band 5

1. Degree in Physics, Chemistry, Material Science or Mechanical, mechatronics or electronic Engineering.
2. Experience in a scientific research environment
3. Experience working with cryogenic, high temperature, gas delivery, magnetic and vacuum systems highly regarded
4. Demonstrated ability to deliver creative and systematic solutions
5. Proven ability to effectively interact with a range of multi-disciplinary scientists in a client/user environment.
6. Experience providing experimental support to other scientists and researchers.

7. Experience commissioning and maintaining scientific instrumentation
8. Experience with diagnosis, calibration and repair of complex systems
9. Experience with instrument, device controls and software development
10. Verbal communication skills to interpret customer needs
11. Demonstrated ability to follow policy, procedures and guidelines
12. Technical skills including computer interface and experience with laboratory programming and design packages

Band 6

1. Masters in Physics, Chemistry, Material Science or Engineering (mechanical, mechatronics or electronic) or equivalent extensive experience operating with sample environment equipment.
2. Extensive experience developing techniques and equipment, conducting research on technical subjects or scientific investigations.
3. Demonstrated extensive experience and expertise designing, installing, commissioning and operating a variety of different sample environment related systems.
4. Significant prior experience troubleshooting multiple sample environment systems and proven ability to investigate and resolve problems within and outside main field of qualification.
5. Demonstrated experience and proven success as the technical lead in the development of sample environment methodologies, techniques, scientific investigation or improvement projects
6. Extensive experience providing support to other scientists/researchers while meeting and at times exceeding user requirements and services.
7. Provide technical leadership for the development of new sample environment methodologies and techniques, conducting research or scientific investigation to achieve organisational outcomes.
8. Demonstrated ability to independently and expertly undertake duties as a band 5 sample environment officer.
9. Ability to lead and co-ordinate work activities to achieve user and facility outcomes.
10. Demonstrated experience providing technical leadership, coaching and mentoring to other sample environment officers (or similar).

Linked Role Transition

Transition to the higher band within the linked role is not automatic and ability to perform Band 6 accountabilities will need to be demonstrated and assessed. This can be done by completing the attached form and completing a full written submission demonstrating and justifying how an employee meets the transition 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:	Tim D'Adam	Name:	Jamie Schulz
Title:	Sample Environment Group Leader	Title:	Director, Australian Centre for Neutron Scattering
Signature:	As per email on file	Signature:	As per email on file

Date: 09/01/2018	Date: 09/01/2018

ACNS Sample Environment Officer (PD-1797) Band 5 to Band 6 Transition Checklist	
Name:	
Commencement Date:	
Assessment Date:	

Written submission demonstrating and justifying how the employee meets requirements must also be attached.

Requirements for transition	Met Criteria
a) Minimum 5 years working as Sample Environment Officer (Band 5) OR b) Minimum 5 years equivalent experience	☐ Yes ☐ No OR ☐ Yes ☐ No
Masters in Physics, Chemistry or Engineering (mechanical, mechatronics or electronic) or equivalent experience	☐ Yes ☐ No
Extensive experience operating sample environment equipment and demonstrate meeting all below requirements	☐ Yes ☐ No

Demonstrated ability to independently and responsibly perform band 6 accountabilities and apply required knowledge, skills and experience for the band 6 position including:	
Undertake band 5 accountabilities at a technical expert level and independently without supervision or guidance	☐ Yes ☐ No
Development of new and innovative sample environment methodologies and techniques	☐ Yes ☐ No
Application of extensive knowledge to design, implement modifications of new and existing equipment for the ACNS environment	☐ Yes ☐ No
Application of specialist technical and scientific knowledge and expertise to examine, interpret, check and validate methods and results to provide scientific analysis and accuracy of results	☐ Yes ☐ No
Troubleshooting multiple sample environment systems and investigation and resolution of problems within and outside main field of qualification	☐ Yes ☐ No
Provision of expert advice on technical feasibility, chemical, physical and radiological safety of proposals submitted through user portal	☐ Yes ☐ No
Provision of technical leadership, coaching, mentoring and demonstrating best practice to other sample environment officers and/or staff within the facility	☐ Yes ☐ No
Promotion of teamwork, knowledge sharing, collaborative and user focussed working environment	☐ Yes ☐ No
Training, supervision and provision of expert advice to staff and users (scientists, researchers, post-docs, students) to ensure effective and safe work within the facility and to ensure safety, regulatory and legislative compliance	☐ Yes ☐ No
Collaboration and exchange of information with other sample environment laboratories and groups at international neutron beam facilities	☐ Yes ☐ No
Lead and co-ordinate work activities to achieve user and facility outcomes	☐ Yes ☐ No

Attach written submission demonstrating and justifying how the employee meets <u>each</u> of the above requirements.

Manager Recommendation

I have reviewed the employee's competence in accordance with Linked Role PD-1797 and certify that the employee meets all requirements for transition and recommend transition from Band 5 to Band 6 be endorsed as demonstrated in the attached written submission detailing how the employee meets each of the requirements.

Name & Title:			
Signature:		Date:	

Operations Manager

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

Name & Title:			
Signature:		Date:	

Director, Australian Centre for Neutron Scattering

I have reviewed all information and approve transition from Band 5 to Band 6.

Name & Title:			
Signature:		Date:	
Effective date of transition:			