



POSITION DESCRIPTION

Position Title:	Senior Stable Isotope Analyst
Institute / Division / Business Unit:	Nuclear Science and Technology (NST)
Section or Unit:	Isotope Tracing in Natural Systems
Classification:	Band 5
Job Family:	Science
Position Description Number:	PD- 1412
Work Contract Type:	Research & Sciences
STEMM/NON-STEMM:	STEMM

POSITION PURPOSE

The Senior Stable Isotope Analyst operates, maintains, and develops new analytical methods on Isotope Ratio Mass Spectrometers (IRMS) and its peripherals as well as Cavity Ring-down Spectrometers. Provides analytical expertise to research and commercial projects that use environmental stable isotope measurements leading to significant outcomes that meet with ANSTO's strategic direction.

ORGANISATIONAL ENVIRONMENT

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 and Technology (NST) incorporate 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.

Isotope Tracing in Natural Systems (ITNS) is a Research Infrastructure platform that comprises three groups – Low Level Radioanalytical, Stable Isotope Analysis and Geochemical and Elemental Analysis; that operate specialist laboratories and instrumentation, providing expert analysis for high sensitivity measurement of radioisotopes and stable isotopes in environmental samples.

This role works closely as a part of a small team providing stable isotope analyses to internal and external stakeholders. The team operates and maintains existing instruments, as well as commissioning and testing new capabilities for stable isotope analyses.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities

- Manage the day-to-day operation and maintenance of the ITNS Stable Isotope Analysis facility with no direct supervision, though providing daily to weekly updates to the Capability Area Manager.
- Prioritise, plan and schedule sample preparation and analysis to meet the specific needs of diverse clients, managing conflicting priorities and deadlines, ensuring a continuous throughput of samples and analyses with minimum instrument downtime, so that maximum output is maintained
- Provide scientific and technical support, advice and training to junior staff, students, and collaborators, including the making of scientific and technical decisions.
- Provide guidance and supervision of routine and non-routine sample processing and stable isotope analyses, ensuring the data produced is of the highest possible standard.
- Apply a thorough understanding of the IRMS, CRDS and associated peripheral instrumentation the Stable Isotope Facility operates. This position will not focus on routine operation, but rather undertake or supervise junior staff in system evaluation, troubleshooting and intermediate to advanced maintenance. Liaise with manufacturers/service engineers to set up to resolve complex issues.
- Check and validate laboratory results, interpret and evaluate data, provide high quality analytical reports.
- Prepare and maintain laboratory instructions and standard operating procedures to meet regulatory requirements and maintain ISO 9001 & 14001 accreditation.
- Liaise with the Australian scientific community and international collaborators to establish productive networks. Participate in international proficiency test, achieving a high ranking. Develop knowledge of industry best practice and technological developments to contribute to improvement of the instruments and associated facilities.
- Undertake method development which increases ITNS' instrument utilisation, and understanding, improving the visibility and profile of ANSTO facilities.
- Ensure relevant policies, procedures and guidelines associated with WHS, radiation safety and plant/equipment are adhered to.
- Contribute to the success of the ITNS group in meeting its strategic goals, by participating in meetings, sharing new ideas, collecting data for Key Performance Indicators (KPI's), completing administrative requests in a timely manner and other activities which may arise with limited notice.
- Work collaboratively to share scientific expertise to contribute to the research culture within ITNS, Environmental Research and ANSTO.
- 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, the NST strategy and ITNS Business Plan 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 operational plans and objectives of the facility and must ensure compliance to relevant regulations at all times.
- The position is fully accountable for the accuracy, integrity, and quality of the content of advice, analysis and interpretation provided and is required to ensure that decisions are based on sound evidence.

- Determine daily work priorities within the context of agreed work plans and consult with the ITNS Capability Area Manager on complex, sensitive and major issues that have a significant impact on stable isotope analysis within ITNS.
- 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

- Prioritising sample processing schedules, taking into consideration client requirements, facility and resource availability, and workflows within the laboratory required to complete sample analysis and produce reports in a timely manner.
- Develop and maintain national reputation for high-quality application of stable isotope techniques.
- Troubleshoot complex and specialised systems, identifying problems and using problem solving skills to resolve issues.
- Working within a laboratory with high demand to often urgent deadlines, sometimes with short notice; managing time effectively to satisfy needs of internal and external customers.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Capability Area Manager - ITNS Stable Isotope Analysis (Line Manager)	<ul style="list-style-type: none"> • Receive guidance and direction • Provide regular updates on key tasks, issues, and priorities • Report on compliance of facility • Collaborate on plans and activities for the instrument/s and related matters • Recommend and gain approval for instrument modifications, enhancements and improvements, and process/procedure changes or improvements • Escalate issues and propose solutions • Contribute to budget planning • Contribute to portal allocations
Work-area team members	<ul style="list-style-type: none"> • Provide training, advice, analysis, and recommendations • Discuss and agree on daily tasks • Contribute to group-decision-making processes, planning, and goals • Collaborate and share accountability, information, ideas, and workloads • Negotiate and resolve conflicts
ITNS Platform Staff	<ul style="list-style-type: none"> • Contribute to group discussions, decision making processes and planning.

	<ul style="list-style-type: none"> • Participate in meetings, share information, and provide input on issues • Collaborate and share accountability
NST Researchers and Scientists, and other ANSTO staff utilising facilities	<ul style="list-style-type: none"> • Understand user requirements and desired outcomes • Provide expert advice, analysis, and results interpretation • Negotiate and resolve scheduling or lab access conflicts • Ensure safety and regulatory compliance • Provide training and supervision while working in stable isotope laboratories • Collaborate and share information • Build and maintain relationships
External	
Facility users from universities, industry, national and international research organisations.	<ul style="list-style-type: none"> • Understand user requirements and desired outcomes • Provide expert advice, analysis, and results interpretation • Negotiate and resolve scheduling or lab access conflicts • Ensure safety and regulatory compliance • Provide training and supervision while working in stable isotope laboratories • Share knowledge and innovative ideas, exchange intelligence and discuss new developments in stable isotope analysis
Suppliers	<ul style="list-style-type: none"> • Organise the timely purchase & delivery of consumables and other non-capital equipment. • Obtain information relating to the purchase, upgrade, or repair of capital equipment.

POSITION DIMENSIONS

Staff Data	
Reporting Line:	Reports to the Capability Area Manager - ITNS Stable Isotope Analysis
Direct Reports:	Nil
Indirect Reports:	1 x Stable Isotope Analyst

Special / Physical Requirements	
Location:	Lucas Heights Working in different areas of designated site/campus as needed
Travel:	Occasional 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) Standing for long periods Laboratory 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 Public speaking
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
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
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ORGANISATIONAL CHART

Refer to the published Organisational Chart.

KNOWLEDGE, SKILLS AND EXPERIENCE

1. Bachelor of Science Degree with relevant experience.
2. Extensive experience as an instrument scientist undertaking operation and maintenance
3. Extensive experience with sampling, sample preparation and method development for C, N, O and H isotopic analysis of liquid, solid, gas and biological materials.
4. Experience in managing an analytical laboratory, training and supervising technical staff, scheduling and prioritising work activities, maintaining laboratory equipment and infrastructure and engaging with client and laboratory users.
5. Demonstrated experience in processing large amount of analytical data using varying systems, spreadsheets and databases to produce quality analytical results.
6. Demonstrated ability to provide experimental support to research projects and keep up to date with the latest developments and/or research.
7. Ability to work effectively both within a team and independently and ability to plan and manage time to meet deadlines and objectives.
8. Strong customer focus and the ability to function well in an inclusive and diverse work environment and develop and maintain 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: Robert Chisari	Name: Cath Hughes
Title: Capability Area Manager	Title: Acting Leader - ITNS
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