



## POSITION DESCRIPTION

<b>Position Title:</b>	Stable Isotope Analyst
<b>Cluster / Business Unit / Division</b>	Nuclear Science and Technology (NST)
<b>Section or Unit:</b>	Research Infrastructure / Isotope Tracing in Natural Systems
<b>Classification:</b>	Band 3/4 (Linked)
<b>Job Family:</b>	Science
<b>Position Description Number:</b>	PD-1171
<b>Work Contract Type:</b>	Research & Sciences
<b>STEMM/NON-STEMM:</b>	STEMM

---

### POSITION PURPOSE

The primary objective of the Stable Isotope Analyst is to operate an Isotope Ratio Mass Spectrometer (IRMS) with associated preparation devices, and to perform all aspects of stable isotope analyses from receipt and logging of samples, sample preparation, analysis, results processing and instrument maintenance. The role will support the research & commercial goals of Nuclear Science and Technology (NST), and external customers.

### 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 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.

### ACCOUNTABILITIES & RESPONSIBILITIES

#### Key Accountabilities - Band 3

- Under the guidance and supervision of the Senior Stable Isotope Analyst, manage the daily operation and basic maintenance of the stable isotope analysis instrumentation in all ITNS laboratories.
- Under the guidance and supervision of the Senior Stable Isotope Analyst prioritise, plan and schedule sample preparation and analysis to meet the needs of clients
- Learn to recognise issues with instruments and/or software and inform the Senior Stable Isotope Analyst.

- Begin liaising with stable isotope analysis instrument manufacturers/service engineers to resolve issues, or organise significant repairs.
- Contribute to the preparation and/or maintenance of quality, regulatory and safety documentation.
- Ensure adequate stock of chemicals, consumables and spare parts are maintained.
- Under the guidance and supervision of the Senior Stable Isotope Analyst ensure laboratory equipment and consumables are utilised in accordance with operational safety, security, sustainability requirements and adhere to applicable standards, legislative and regulatory guidelines.
- Begin to track trends in data to identify long term averages and trends in instrument performance.
- Together with the Senior Stable Isotope Analyst, provide training and supervision to visiting researchers and continuing contractors on stable isotope analysis and sample preparation.
- Contribute to method development and appraisal of analytical instruments.
- As a team member, contribute to the success of the ITNS group in meeting its strategic goals, by participating in meetings, sharing new ideas, completing administrative requests in a timely manner and other activities which may arise with limited notice.
- Undertake additional duties as required and during period of leave of other staff.

#### **Key Accountabilities - Band 4**

- In consultation with the Senior Stable Isotope Analyst(s), manage the daily operation and intermediate maintenance of the stable isotope analysis instrumentation in all ITNS laboratories.
- In consultation with the Senior Stable Isotope Analyst(s), prioritise, plan and schedule sample preparation and analysis to meet the needs of clients and assist with their enquiries when required.
- Recognise issues with instruments and/or software and undertake necessary troubleshooting at an intermediate to advanced level to ensure minimal down time, this may be undertaken with input from the Senior Stable Isotope Analyst(s).
- Liaise with stable isotope analysis instrument manufacturers/service engineers to resolve issues, organise significant repairs and prepare for the replacement of old instruments.
- Prepare and/or maintain quality, regulatory and safety documentation.
- Prepare analytical reports and validate laboratory results in a timely manner to meet client needs. Reports are reviewed by the Senior Stable Isotope Analyst prior to being sent to the client.
- Contribute to discussions regarding client feedback about outstanding portal proposal acceptance and the development of sustainable laboratory outputs.
- Ensure laboratory equipment and consumables are utilised in accordance with operational safety, security, sustainability requirements and adhere to applicable standards, legislative and regulatory guidelines and ensure adequate stock of chemicals, consumables and spare parts are maintained.
- Provide regular updates to the Stable Isotope Capability Area Manager on progress of sample analysis, instrument performance, new ideas and challenges.
- Track trends in data to identify long term averages and trends in instrument performance.
- Provide training and supervision to visiting researchers and continuing contractors on stable isotope analysis and sample preparation.
- Together with the Senior Stable Isotope Analyst(s) undertake method development and appraisal of analytical instruments.
- Establish networks and collaborations with stable isotope analysis groups both within Australia and internationally and develop knowledge of world-wide best practice and technological developments in the field of isotope ratio mass spectrometry.
- As a team member, contribute to the success of the ITNS group in meeting its strategic goals, by participating in meetings, sharing new ideas, completing administrative requests in a timely manner and other activities which may arise with limited notice.
- Undertake additional duties as required and during period of leave of other staff

#### **Decision Making – Band 3**

- 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 is accountable for the accuracy, integrity and quality of the content of advice provided to users and staff and is required to ensure that decisions are based on sound evidence. Guidance from the Senior Stable Isotope Analyst or Capability Area Manager must be sought whenever an issue/topic first arises.
- Determine daily work priorities with guidance from the Senior Stable Isotope Analyst(s) within the context of agreed work plans and will consult with the 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).

#### Decision Making – Band 4

- 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 is accountable for the accuracy, integrity and quality of the content of advice provided to users and staff and is required to ensure that decisions are based on sound evidence. Guidance from the Senior Stable Isotope Analyst(s) or Capability Area Manager should be sought for more complex issues.
- Determine daily work priorities autonomously within the context of agreed work plans and will consult with the 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

The degree to which these challenges are managed by the role holder is dependent on their experience and abilities, in line with their Band.

The major challenges for this position include:

- Keeping abreast of recent developments in field, ensuring continual improvement and implementation of best practice.
- Together with the Senior Stable Isotope Analyst(s) and/or Capability Area Manager managing conflicting priorities and urgent deadlines with short notice across all ITNS laboratories.
- Together with the Senior Stable Isotope Analyst(s) and/or Capability Area Manager meeting needs of multiple stakeholders and adjusting work plans and processes, to meet user expectations.
- Ensuring compliance with WHS and ISO9001 requirements

#### KEY RELATIONSHIPS

Who	Purpose
<b>Internal</b>	
ITNS Capability Area Manager (Line Manager)	<ul style="list-style-type: none"> <li>• Receive guidance and direction</li> <li>• Provide regular updates on key tasks, issues &amp; priorities</li> <li>• Provide information on attendance and seek approval for leave</li> <li>• Provide expert, authoritative and evidence-based advice</li> <li>• Provide information on capital equipment</li> <li>• Submit orders for the purchase of non-capital equipment</li> </ul>
Senior Stable Isotope Analysts	<ul style="list-style-type: none"> <li>• Discuss and agree on daily - yearly work priorities and schedules.</li> <li>• Provide daily-weekly updates on the status of analyses</li> <li>• Receive guidance &amp; training on techniques that are new to the role holder</li> </ul>

	<ul style="list-style-type: none"> <li>• Receive guidance and training on difficult or unusual samples</li> <li>• Receive guidance and training on advanced instrument maintenance.</li> </ul>
Work area team members (B16 & B21 SIA lab staff)	<ul style="list-style-type: none"> <li>• Receive and provide data on the status of the work environment.</li> <li>• Discuss and agree on daily - yearly work priorities and schedules.</li> <li>• Contribute to group decision making processes, planning and goals.</li> <li>• Collaborate and share accountability</li> <li>• Negotiate and resolve conflicts</li> </ul>
ITNS Platform Staff	<ul style="list-style-type: none"> <li>• Contribute to group discussions, decision making processes and planning. Participate in meetings, share information and provide input on issues.</li> <li>• Collaborate and share accountability</li> </ul>
Centre for Accelerator Science (CAS) Chemist	<ul style="list-style-type: none"> <li>• Discuss and agree on sample prioritisation for stable carbon analysis.</li> <li>• Provide information on issues with provision of stable carbon analysis</li> </ul>
<b>External</b>	
Suppliers	<ul style="list-style-type: none"> <li>• Organise the timely purchase and delivery of consumables and other non-capital equipment.</li> <li>• Obtain information relating to the purchase, upgrade or repair of capital equipment.</li> </ul>
Facility users from universities, industry, national and international research organisations.	<ul style="list-style-type: none"> <li>• Assist the AMS Chemistry Stable Isotope Analyst to provide all visiting users with a safe and productive experience during their time at ANSTO.</li> </ul>

## POSITION DIMENSIONS

<b>Staff Data</b>	
Reporting Line	Reports to the ITNS Capability Area Manager
Direct Reports	Nil
Indirect Reports	Nil
<b>Financial Data (2019/2020)</b>	
Revenue / Grants	N/A
Operating Budget	N/A
Staffing Budget	N/A
Capital Budget	N/A
Assets	N/A
<b>Special / Physical Requirements</b>	
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 Frequent travel to ANSTO sites within Australia Infrequent 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
Radiation and Hazardous chemical areas:	May be required to work in radiation areas under tightly regulated conditions May be required to 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 Maybe required to obtain and maintain appropriate federal government clearance

### Workplace Health & Safety

Specific role/s as specified in <a href="#">AG-2362</a> of the ANSTO WHS Management System	All Workers May be required to undertake one or more of the specified roles within the context and course of their duties <ul style="list-style-type: none"> <li>• Area Supervisor</li> <li>• Building Warden</li> <li>• Contractor Supervisor</li> <li>• Designated First Aid Officer</li> </ul> Health and Safety Committee Member Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties
--	--

### ORGANISATIONAL CHART

Refer to published Organisational Chart.

### KNOWLEDGE, SKILLS AND EXPERIENCE

#### Band 3

1. Diploma in Chemistry or Laboratory Technology, or equivalent (Essential)
2. Practical analytical laboratory experience including operating and maintenance of instrumentation. (Desirable)
3. Practical knowledge and experience in analytical data calculations (Desirable)
4. Experience in operating scientific software for data acquisition and data processing. (Desirable)
5. Desire to prepare analytical reports and data interpretation.
6. Demonstrated ability to work under limited supervision, and take initiative in responding to changing priorities and deadlines (Essential)
7. Experience in preparing and maintaining quality documentation and analytical records.
8. Demonstrated ability to follow policy, procedures and guidelines.
9. Experience in operating within laboratory quality and safety requirements

10. Interpersonal and communication skills including technical writing skills, with the ability to interact and communicate clearly, develop and maintain productive working relationships.
11. Desire to establish productive relationships.
12. Strong focus on meeting deadlines whilst maintaining attention to detail.

**Band 4**

1. Degree in Chemistry or related field or demonstrated equivalent experience (e.g. TAFE tertiary qualification and extensive experience in scientific field). (Essential).
2. Practical analytical laboratory experience including operating and maintenance of instrumentation. (Essential).
3. Practical knowledge and experience in analytical data calculations (Essential).
4. Experience in operating scientific software for data acquisition and data processing. (Essential)
5. Ability to prepare analytical reports and data interpretation.
6. Demonstrated ability to work under limited supervision, and take initiative in responding to changing priorities and deadlines (Essential)
7. Experience in preparing and maintaining quality documentation and analytical records.
8. Demonstrated ability to follow policy, procedures and guidelines.
9. Experience in operating within laboratory quality and safety requirements
10. Interpersonal and communication skills including technical writing skills, with the ability to interact and communicate with a varied and multidiscipline audience, develop and maintain productive working relationships. Assist in the training and supervision of others in the use and application of relevant analytical techniques.
11. Demonstrated ability to establish productive relationships.
12. Strong focus on meeting deadlines whilst maintaining attention to detail.

**Linked Role Transition**

Transition to the higher band within the linked role is not automatic and ability to perform Band 4 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

<b>Line Manager</b>		<b>Delegated Authority</b>	
Name:	Robert Chisari	Name:	Cath Hughes
Title:	ITNS Capability Area Manager	Title:	Acting Leader, ITNS
Signature:		Signature:	
Date:		Date:	

**Stable Isotope Analyst (PD-1171)**  
**Band 3 to Band 4 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 3 years working as a Stable Isotope Analyst (Band 3) or b) Minimum 4 years equivalent experience	<input type="checkbox"/> Yes <input type="checkbox"/> No
Degree (BSc or BSc (Hons)) in Chemistry or Environmental Science, or equivalent	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to independently and responsibly perform Band 4 responsibilities and apply required knowledge, skills and experience for the Band 4 position including:	
Undertake Band 3 accountabilities at a technically proficient level and independently with minimum supervision or guidance.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrate ability to manage the daily operation and Intermediate maintenance of the stable isotope analysis instrumentation routinely utilised in SIA ITNS laboratories.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to contribute to revision and updating of compliance documentation and processes, including quality control and safety documents as part of the process of continual improvement in safety, quality and efficiency within the Stable Isotope Laboratories	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to recognise issues with instruments and/or software and undertake necessary troubleshooting at an intermediate to advanced level to ensure minimal down time	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to provide detailed technical information on sample processing methods, scheduling, and sample outcomes to internal and external customers.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to occasionally undertake select additional duties for short periods of time of senior staff absences.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to provide training on methods and techniques for laboratory users and visiting students.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to arrange for maintenance work in the event of breakdowns to equipment and facilities.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to prioritise, plan and schedule sample preparation and analysis in consultation with Senior Stable Isotope Analyst (or delegate).	<input type="checkbox"/> Yes <input type="checkbox"/> No

Demonstrated commitment to a sustained proactive work ethic, by assisting others to meet deadlines or finish tasks in times when there is spare capacity.	<input type="checkbox"/> Yes <input type="checkbox"/> No
---	--

Attach written submission demonstrating and justifying how the employee meets each of the above requirements.

**VERIFICATION**

**Supervisor Recommendation**

I have reviewed the employee's competence in accordance with Linked Role 1171 and certify that the employee meets all requirements for transition and recommend transition from Band 3 to Band 4 be endorsed as demonstrated in the attached written submission detailing how the employee meets each of the requirements.

Name & Title:	
Signature:	
Date:	

**Leader, Isotope Tracing in Natural Systems**

I have reviewed all information and approve transition from Band 3 to Band 4

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



## Appendix 1

<b>ANSTO Job Families</b>
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