



POSITION DESCRIPTION

Position Title:	Nuclear Chemist
Cluster / Business Unit / Division	Nuclear Fuel Cycle
Section or Unit:	NST
Classification:	Band 5
Job Family:	Research
Position Description Number:	PD-1453
Work Contract Type:	Professional
STEMM/NON-STEMM:	STEMM

POSITION PURPOSE

The primary objective of the Nuclear Chemist is to conduct strategic and operational research through design, synthesis and characterization of materials that will be utilized in the next generation nuclear fuel cycle.

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.

The core mission of Nuclear Fuel Cycle is to develop, manufacture, characterise, model and ultimately, utilise materials in support of the Advanced Nuclear Fuel Cycle and next generation Nuclear Power generation systems.

It undertakes a number of other research activities through sponsored collaborative research programs and is home to other research activities that enhance our contribution to NST/ANSTO and the wider community. The NFC has access to world class materials processing, testing and characterisation facilities that are capable of handling radioactive materials. It performs its mission by undertaking: *Outcome focussed targeted research and development.*

The Senior Scientist, Nuclear Materials Chemistry reports the Leader, NFC or delegate. The position's key internal customers include projects within NFC, however, the position holder will be required to interact with other parts of ANSTO, such as OPAL, ANM. External customers include National and International Universities and research organisations.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities

The key accountabilities for this position include to:

- Conducts research relevant to ANSTO projects by seizing opportunities to innovate and be creative in the laboratory.
- Undertake substantial experimental work programmes, including sample preparation, testing and preliminary analysis of the experimental data. Analysed data is presented in a format appropriate for either technical reports or for publication in journals.
- Take research ideas to conclusion by looking for solutions, investigating alternative options with the aim of producing scientific outputs and contributing to planned project outcomes
- Key contributor with responsibility for discrete work packages within larger projects that are supervised by more senior staff and also works independently on distinct, well defined projects
- Contributes to applications for experimental time and major facilities.

- Undertake routine and non-routine problem solving in support of cross-functional projects, using specific expertise to assess the viability of proposed approaches, and exercises sound judgement in order to select and provide advice on the most effective techniques and methods.
- Prepare and present informative and persuasive arguments to people at various levels within and external to the organisation.
- Negotiate and reach agreement with clients, including investigate and use relevant new methods and technologies with the aim of improving processes or facilities.
- Undertake work in a highly collaborative way, building and maintaining productive working relationships within ANSTO and with external suppliers and partners.
- Communicate with others who are involved in similar work, and read widely to keep up to date with the latest developments and/or research, in order to ensure the best possible service and outcomes.
- Challenge established ways of working in favour of more productive approaches
- Produce well-written, comprehensive reports and publications of a technical nature
- Maintain, operate and calibrate laboratory equipment and custom designed experimental rigs
- Undertake additional duties as required and during periods of leave of other staff.
- Fulfil WHS responsibilities as specified in AG-2362 of the ANSTO WHS system.

Decision Making

- The ANSTO values, organisational corporate plan, business plan, operational excellence program, the NST Research strategy and Nuclear Fuel Cycle 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 unit
- 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.
- Determine own work priorities, methods and approaches within the context of agreed work plans and will consult with the line manager on issues that have an impact on the project or research theme.
- 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 major challenges for this position include:

- Undertake work in a manner that supports the team's ability to meet deadlines, by demonstrating a sense of urgency and the ability to prioritise tasks and activities to ensure client deadlines are met.
- Perform independent research, including the synthesis, characterization and analysis of materials, followed by interpretation/presentation and reporting of scientific findings in refereed journals.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Manager/Executive	<ul style="list-style-type: none"> • Receive guidance and direction • Provide expert, authoritative and evidence-based advice
Work area team members	<ul style="list-style-type: none"> • Provide advice and analysis on a full range of nuclear materials • Contribute to group decision making processes, planning and goals • Collaborate and share accountability

External	
Industry, Academia	<ul style="list-style-type: none"> • Provide expert, authoritative and evidence-based advice • Report on work outcomes, outputs, results, project contribution and status. • Build relationships, ensuring effective communication of commercial and research results and to allow collection of data and continued business.

POSITION DIMENSIONS

Staff Data	
Reporting Line	Reports to the Manager of Spent Fuel Management Program in NFC
Direct Reports	Nil
Indirect Reports	Nil

Financial Data (2022/2023)	
Revenue / Grants	NA
Operating Budget	NA
Staffing Budget	NA
Capital Budget	NA
Assets	NA

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 Infrequent travel to meet clients within Australia Some travel to workshops and conferences internationally and nationally
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Standing for long periods Public speaking Wearing personal protective equipment for the handling of hazardous and/or radioactive materials 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
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 AP- All Workers

2362 of the ANSTO WHS

Management System

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

ORGANISATIONAL CHART

Refer to published Organisational Chart.

KNOWLEDGE, SKILLS AND EXPERIENCE

1. Degree or higher degree in Chemistry, or equivalent experience in Physics, Materials Science, or similar relevant field.
2. Demonstrated experience operating specialised synthetic and analytical equipment as well as interpretation of data from that equipment.
3. Knowledge and experience in the day-to-day operations of materials chemistry and related task groups.
4. Ability to deal with large amounts of data requiring a highly methodical approach and an attention to detail
5. Demonstrates high level interpersonal and communication skills for both technical and non-technical audiences, within and external to the organisation, including the ability to share knowledge of relevant laboratory and/or technical expertise.
6. Demonstrated ability to produce written work suitable for publication in refereed journals and oral presentations at domestic and international conferences.
7. Ability to time-manage and to manage conflicting priorities
8. Strong team member who is willing to share information and contribute to the team's project planning and activities.
9. Experience Interacting with staff of varying backgrounds and experiences to establish productive working relationships.
10. Proactive in keeping up to date with current research and technology in areas relevant to the research group and aware of its potential impact on the work of the group

VERIFICATION

Line Manager		Delegated Authority	
Name:	Mihail Ionescu	Name:	Suzanne Hollins
Title:	Leader Nuclear Fuel Cycle	Title:	Head of Research
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