Australian Government

ANSTO
Science. Ingenuity. Sustainability.

POSITION DESCRIPTION

Position Title:	Research Scientist
Institute / Division / Business Unit:	ANSTO Minerals
Section or Unit:	
Classification:	Band 5
Position Description Number	0920
Work Contract Type	Research

Primary Objective

The primary objective of the Research Scientist is to support research activities relating to the processing of uranium and ores containing radioactivity with emphasis on leaching, solvent extraction, ion exchange and precipitation techniques.

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.

The ANSTO Minerals business unit is a team of more than 60 consultants and technicians with expertise that covers chemical engineering, metallurgy, mineralogy, chemistry, geology, and radiation safety. ANSTO Minerals provides practical solutions and innovative technology in ways that deliver financial and environmental benefits to the mining and minerals processing industries. The unit also operates a Research Group that seeks to identify, investigate and develop technologies that will:

- increase the competitiveness and environmental sustainability of operations in the uranium mining sector and mineral processing industries affected by NORM (naturally occurring radioactive materials);
- underpin our commercial consulting services; and
- foster collaborative relationships to broaden the research portfolio to address more fundamental research questions in core areas.

The Research Group projects also provide an effective means of training inexperienced staff in uranium processing and other areas.

Position Environment

The Research Scientist reports to the Research Leader.

The role holder is expected to manage their own research project, drawing on technical support from the business unit when appropriate.

Key Accountabilities

- Organise and coordinate experimental activities associated to the processing of uranium and ores containing radioactivity with emphasis on leaching, solvent extraction, ion exchange and precipitation techniques. This means planning and implementation experiments, in liaison with the Research team.
- Carrying out the experiments abovementioned, and analysis of the results;

- Prepare a project plan in accordance to guidelines given by project leader.
- Writing reports and contributing to journal and conference publications relating to the research projects;
- Collect, analyse and assess data, recognise the value of data and identify gaps that need to be filled in order to draw conclusions and develop process solutions. This involves applying sound judgement based on scientific knowledge/experience to identify good data and the ability to credibly question results.
- Seize opportunities for innovation and creativity for solving complex scientific problems and provide competitive advantage to ANSTO Minerals projects.
- Assist in the preparation and presentation of papers for national and international forums.
- Keep abreast of the literature; maintain knowledge of industry best practice and technological developments.

Challenges

The major challenges for this position include:

- Continually seek new solutions and develop new techniques/processes and methods that provide ANSTO Minerals with competitive advantage.
- Continually challenge established ways of working in favour of more productive approaches.
- Keep up to date with changing technology/ techniques and other industry/research developments

Special Requirements

- Working in different areas of ANSTO as needed
- The role holder maybe required to work for short periods of time outside ANSTO, possibly on remote sites and possibly on a shift roster.
- The position also requires some work to be performed in radiation areas where radioactive materials are handled under tightly controlled safety conditions.
- Willingness to work extended and varied hours based on operational requirements.
- Satisfy ANSTO Security and Medical clearance requirements.

Delegations

The levels of authority delegated to this position are those approved and issued by the Executive Director. All delegations will be in line with the ANSTO Delegation Manual AS-1682 (as amended or replaced).

Work Health & Safety Environmental Responsibilities

Supervisors

Are responsible for ensuring the application of the ANSTO WHS management system in the area under their control by ensuring;

- All plant and equipment is operating correctly;
- All staff are trained in work and WHS instructions;
- Work hazards are identified and risk assessments conducted;
- Controls are implemented and followed;
- Required maintenance is carried out;

- Incidents are reported and investigated; and
- All injured workers follow rehabilitation and return to work plans.

Individuals

Are responsible for undertaking their activities in a safe manner and cooperating with WHS requirements of their division to improve WHS in their workplace by;

- Reporting unsafe work practices, equipment, incidents and near misses;
- Working safely to reduce risk to self and others;
- Using appropriate controls; and
- Taking a proactive approach to WHS.

Knowledge, Skills and Experience

1. Degree in Chemical Engineering/ Applied Chemistry/ Chemistry or Metallurgy is essential and a PhD in a similar filed is ~~highly~~ desirable
2. Demonstrated research experience in Chemical Engineering/Applied Chemistry/ Chemistry and/or Hydrometallurgy.
3. Research experience in any field of hydrometallurgy such as leaching of minerals, separation science such as solvent extraction, ion exchange, crystallisation, membrane separation or water treatment would be an advantage
4. High level verbal communication skills and ability to present at professional forums.
5. Good written communication skills, including previous publication in refereed journals and other publications.

Verification

This section verifies that the Institute Head / General Manager or delegated senior officer within the division has read the Position Description and is satisfied that it accurately describes the position

Signature and date ……