

## POSITION DESCRIPTION

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|---|--|
| <b>Position Title:</b>                    | Meteorology Technical Officer                                  |
| <b>Cluster / Business Unit / Division</b> | Nuclear Safety, Security and Stewardship / Nuclear Stewardship |
| <b>Section or Unit:</b>                   | Environmental Monitoring                                       |
| <b>Classification:</b>                    | Band 5   |
| <b>Position Description Number:</b>       | PD-1379  |
| <b>Work Contract Type:</b>                | Technical  |
| <b>STEMM/NON-STEMM:</b>                   | STEMM  |

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### POSITION PURPOSE

The Meteorology Technical Officer ensures ANSTO's meteorology and environmental radiation monitoring systems are designed, developed and maintained in accordance with best practice; generating, analysing and validating high-quality meteorological, radiation and other data from networked local and off-site stations. The position is responsible for day-to-day operation of the meteorology facilities, planning and managing upgrade projects, performing instrument calibrations and installations on 50m Met Tower. Maintains interoperability of all hardware, software and data acquisition systems to ensure that the required data are available to support regulatory reporting of ANSTO's airborne radioactive emissions, dose assessments and plume dispersion modelling for emergency preparedness and response.

### 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 Nuclear Safety, Security and Stewardship (NSSS) division underpins Australia's nuclear capabilities and is strategically positioned to support ANSTO's mission and government more broadly. Within NSSS, Nuclear Stewardship is the custodian of ANSTO's mandated and site-essential science capabilities that respond to the needs of the Australian Government, industry and the community relevant to nuclear measurement, nuclear forensics, radionuclide metrology, radioanalytical chemistry and environmental monitoring. These capabilities underpin ANSTO's ability to be responsive to and prepared for a range of nuclear stewardship related functions and responsibilities through the provision of trusted scientific advice and specialised services.

The Environmental Monitoring (EM) group within Nuclear Stewardship develops and maintains specialist environmental monitoring facilities, including stack emission monitoring and meteorology systems and applications that support ANSTO's core activities and stakeholders. The EM capability applies nuclear techniques and associated expertise to monitor and model releases of radionuclides into the environment, conduct dose and environmental assessments and to the quantification of radionuclides at or above typical environmental levels.

### ACCOUNTABILITIES & RESPONSIBILITIES

The key accountabilities for this position include:

- Ensure the ANSTO Meteorological System (comprising networked weather stations, instruments, data acquisition and communication systems plus associated hardware and software) is designed, managed, maintained and calibrated to the highest standard, to provide accurate real-time data that is critical for emergency preparedness and response, and regulatory reporting of the dose impact of ANSTO's airborne emissions.

- Ensure the meteorological and environmental radiation data are quality-controlled and validated (in web-based or other applications) to ensure ANSTO's long-term meteorology records spanning over 50 years are maintained to the highest standard.
- Ensure the meteorology and modelling systems are continually improved to achieve operational and strategic objectives including applicable standards, legislative and regulatory requirements relevant to a nuclear facility. Develop and manage upgrade projects within scope and budget, and assess the associated risks, costs and benefits.
- Manage the Meteorology & Modelling facilities, programs, assets and equipment through the ANSTO asset management framework; maintain an inventory of key spare components to ensure reliability and operational availability.
- Develop risk assessments, work instructions and standard operating procedures for instrument calibrations, installations (working at heights at on-site and off-site stations), validation protocols and records.
- Meet or exceed performance metrics requirements around availability of accurate meteorology and radiation data reported to the Bureau of Meteorology and published via ANSTO's internal and external websites.
- Develop and manipulate computer programs to allow the meteorology and radiation stations to interface with telemetry/communications hardware to achieve data transmission, storage and quality objectives.
- Maintain a network of environmental radiation detectors and develop knowledge of gamma spectrometry for calibration, system development and interpretation of radiation data.
- Develop a working knowledge of ANSTO's atmospheric dispersion model (ERAIMS) and the quarterly processing of meteorology data.
- Sustain effective working relationships with team members and engage with internal and external stakeholders and clients. Establish and foster professional networks in order to access and share information to keep up to date with best practice in field. Provide technical advice and recommendations regarding meteorological and radiation detection instrumentation, diagnostic support and advice to stakeholders and BOM, as required.
- Undertake additional duties as required and during periods of leave of other staff.

### **Decision Making**

- The ANSTO values, organisational corporate plan, integrated business planning process, the Nuclear Stewardship strategic objectives and 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 independence in determining how to achieve the objectives of the unit under broad direction, including deciding on methods and approaches, system specifications, operations, project planning and allocation of resources.
- Determines key work priorities within the context of agreed work plans and will consult with the line manager on complex, sensitive or major issues that have a significant impact on the unit's operations or finances.
- The position is fully accountable for the accuracy, integrity and quality of the content of advice and the services provided to users, clients and stakeholders, and is required to ensure that decisions are based on sound evidence.
- 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**

- Ensuring the successful implementation of strategic objectives and completion of projects whilst managing scheduled instrument calibrations or responding to equipment outages;

- Developing an in-depth knowledge of the ANSTO meteorology and modelling systems;
- Keeping abreast of recent developments in the meteorology field, including instrumentation, calibration methodology, applicable standards and Regulatory frameworks to maintain technical expertise and achieve continual improvement and implementation of best practise;
- Improving the reliability of the meteorology, radiation detection and modelling systems through preventing outages, automating processes and reducing response times.

## KEY RELATIONSHIPS

| Who   | Purpose  |
|---|--|
| <b>Internal</b>   |  |
| Manager/Executive   | <ul style="list-style-type: none"> <li>• Receive guidance and direction</li> <li>• Provide expert, authoritative and evidence-based advice</li> <li>• Negotiate and report on project budgets and resources consistent with strategic plans and goals</li> <li>• Recommend and gain endorsement for plans, projects and other initiatives</li> </ul>                     |
| Work area team members  | <ul style="list-style-type: none"> <li>• Contribute to group decision making processes, planning and goals</li> <li>• Share resources, negotiate and resolve conflicts</li> <li>• Collaborate effectively across Nuclear Stewardship capability areas</li> </ul>   |
| ANSTO Users (scientists, researchers, technical staff)                                      | <ul style="list-style-type: none"> <li>• Provide Meteorological data and analysis</li> <li>• Advise on design and instrumentation for relevant experiments, eg tracer studies</li> </ul>   |
| <b>External</b>   |  |
| Users (clients incl. Bureau of Meteorology, scientists, researchers, students and visitors) | <ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Reporting and maintaining ANSTO's meteorological data for publication via the BOM website. May require interaction with Regulators, auditors, and various BOM departments, eg NSW Regional Observations, Computing and Communications, Media and Community Relations</li> </ul> |
| Instrument Suppliers and providers of calibration and maintenance services                  | <ul style="list-style-type: none"> <li>• Establish constructive relationships</li> <li>• Clearly communicate requirements, deliverables and expected outcomes</li> </ul>   |

## POSITION DIMENSIONS

| <b>Staff Data</b>                      |   |
|--|---|
| Reporting Line                         | Manager, Environmental Monitoring                                     |
| 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                         | \$10-20,000 (allocation varies each year)                             |
| Assets                                 | \$200,000 (excluding the LH tower structure, classed as a 'building') |
| <b>Special / Physical Requirements</b> |   |

|                         |  |
|-------------------------|--|
| Location:               | <ul style="list-style-type: none"> <li>The position is based at the Lucas Heights Campus, working in different areas of the campus and at local (off-site) met. stations</li> </ul>  |
| Travel:                 | <ul style="list-style-type: none"> <li>May be required to travel to other ANSTO sites from time to time or to attend relevant training/conferences/workshops</li> <li>Infrequent travel both internationally and nationally</li> <li>May be required to undertake field work in remote locations from time to time</li> </ul>  |
| Physical:               | <ul style="list-style-type: none"> <li>Labour intensive physical requirements include climbing the 50m meteorology tower, climbing fixed ladders to access work platforms and using fall arrest systems when working at heights</li> <li>Office based physical requirements include sitting, standing, movement around office and site, computer work</li> <li>Laboratory and field work including manual handling, calibrating, assembling and installing instruments</li> <li>Working in a noisy environment with hearing protection, eg when operating the wind tunnel</li> <li>Public speaking at conferences, meetings or events</li> </ul> |
| Radiation areas:        | <ul style="list-style-type: none"> <li>May occasionally be required to perform duties in an area where radioactive materials are handled, or to work in radiation areas under tightly controlled safety conditions</li> </ul>  |
| Hours:                  | <ul style="list-style-type: none"> <li>Willingness to work extended and varied hours based on operational requirements</li> <li>After hours work may be required for short and infrequent periods</li> </ul>   |
| Clearance requirements: | <ul style="list-style-type: none"> <li>Satisfy ANSTO Security and Medical clearance requirements, with periodic re-assessment for fitness to work at heights</li> </ul>  |

### Workplace Health & Safety

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|--|---|
| Specific role/s as specified in <a href="#">AG-2362</a> of the ANSTO WHS Management System | All Workers<br>Building Manager<br>Area Supervisor<br>Contractor supervisor |
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### ORGANISATIONAL CHART

Refer to published Organisational Chart

### KNOWLEDGE, SKILLS AND EXPERIENCE

1. Tertiary qualification combined with experience that is relevant to the duties, eg in the fields of meteorology, instrumentation, electronics, electrical engineering or a related field/discipline (essential).
2. Demonstrated experience in specifying, installing, calibrating, troubleshooting and maintaining complex instrumentation and/or telecommunication systems (essential).
3. Experience and programming skills in telemetry and data acquisition systems and interfacing hardware and software (essential).
4. Basic knowledge of meteorology and associated instrumentation (desirable).
5. Experience in working at heights (desirable).
6. Demonstrated ability to initiate and manage upgrade projects, including the design, testing and validation of new systems and to identify and manage risks. (desirable)

7. Demonstrated ability to work as part of a team, communicate effectively and establish productive working relationships (essential).
8. Technical writing skills with demonstrated ability to analyse data (essential).

**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:               | Emmy Hoffmann                     | Name:                      | Jennifer Harrison           |
| Title:              | Manager, Environmental Monitoring | Title:                     | Leader, Nuclear Stewardship |
| Signature:          |                                   | Signature:                 |                             |
| Date:               |                                   | Date:                      |                             |