



POSITION DESCRIPTION

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

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 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. Maintaining interoperability of all hardware, software and data acquisition systems is key 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 (NS) houses mandated and site-essential science capabilities that respond to the needs of the Australian Government, industry and the community relevant to nuclear detection, 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 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 bespoke IT applications to ensure ANSTO's long-term meteorology records (which span over 50 years) are maintained to the highest standard.
- Ensure the meteorology and environmental radiation 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 and environmental radiation facilities, programs, assets and equipment through the ANSTO asset management framework, with a focus on preventative maintenance to maximise reliability and operational availability.
- Develop risk assessments, work instructions and standard operating procedures for instrument calibrations and installations, including work at heights, validation protocols and records.
- Meet or exceed performance metrics requirements around availability of accurate meteorology and environmental radiation data reported to the Bureau of Meteorology and made available to staff and the public via ANSTO's internal and external websites.
- Develop and manipulate computer programs to allow the meteorology and environmental 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 to keep up-to-date with best practice. Provide technical advice and recommendations regarding meteorological and environmental 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

- Successfully implementing upgrade projects whilst managing scheduled instrument calibrations or responding to equipment outages.

- Developing an in-depth knowledge of the ANSTO meteorology and environmental radiation systems, and their bespoke IT applications.
- Maintaining technical expertise to achieve best practise by keeping abreast of recent developments in the meteorology field, including instrumentation, calibration methodology, and applicable guides, standards or regulatory frameworks..
- Improving the reliability of the meteorology, radiation detection and modelling systems through continual improvement, preventing outages, automating processes and reducing response times.

KEY RELATIONSHIPS

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

POSITION DIMENSIONS

Staff Data	
Reporting Line	Reports to the Senior Atmospheric Scientist, Environmental Monitoring
Direct Reports	Nil
Indirect Reports	Nil
Financial Data (2024/2025)	
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')

Special / Physical Requirements	
Location:	<ul style="list-style-type: none"> The position is based at the Lucas Heights Campus, working in different areas of the campus and at local (off-site) met. stations.
Travel:	<ul style="list-style-type: none"> May be required to travel to other ANSTO sites from time to time or to attend relevant training/conferences/workshops. Infrequent travel both internationally and nationally May be required to undertake field work in remote locations from time to time
Physical:	<ul style="list-style-type: none"> 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. Office based physical requirements include sitting, standing, movement around office and site, computer work. Laboratory work including manual handling, calibrating and assembling instruments. Working in a noisy environment with hearing protection, eg when operating the wind tunnel. Public speaking at conferences, meetings or events.
Radiation areas:	<ul style="list-style-type: none"> 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.
Hours:	<ul style="list-style-type: none"> Willingness to work extended and varied hours based on operational requirements After hours work may be required for short and infrequent periods
Clearance requirements:	<ul style="list-style-type: none"> Satisfy ANSTO Security and Medical clearance requirements, with periodic re-assessment for fitness to work at heights.

Workplace Health & Safety	
Specific role/s as specified in AG-2362 of the ANSTO WHS Management System	All Workers Building Manager Area Supervisor Contractor supervisor Designated first aid officer

ORGANISATIONAL CHART

Refer to published Organisational Chart

KNOWLEDGE, SKILLS AND EXPERIENCE

1. Tertiary qualification (or equivalent experience) in meteorology, instrumentation, electronics, electrical engineering or a related field/discipline (essential).
2. Demonstrated experience in specifying, installing, calibrating, troubleshooting and maintaining instrumentation and/or telecommunication systems (essential).
3. Knowledge of meteorology and associated instrumentation (desirable).
4. Experience in working at heights (desirable).
5. Experience and programming skills in telemetry and data acquisition systems and interfacing hardware and software (essential).
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.

Line Manager		Delegated Authority	
Name:	Leisa Dyer	Name:	Jennifer Harrison
Title:	Senior Atmospheric Scientist	Title:	Leader, Nuclear Stewardship
Signature:		Signature:	
Date:		Date:	