Ministry

Environment and Parks

Describe: Basic Job Details

Position

Position ID

Position Name

Air Monitoring Technologist

Current Class

Technologies 6

Job Focus

Operations/Program

Supervisory Level

00 - No Supervision

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Vacant

Organizational Structure

Division, Branch/Unit

Resource Stewardship, AWS Branch/Air Monitoring

Supervisor's Position ID

Supervisor's Position Name

Air Monitoring Manager

Supervisor's Current Class

Manager (Zone 2)

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

This position is required for the delivery of core, front-line air monitoring activities. Emergency air monitoring and the operation of the department's permanent air quality monitoring stations are listed as critical essential services in AEP's Business Continuity Plan. The data collected from these activities are used to provide real-time air quality information to Albertans and may be used in decisions regarding the protection of human health.

This position supports AEP Business Plan Key Objective 1.5: "Alberta's ambient environmental condition is monitored, evaluated and reported on."

Responsibilities

1. Operate the Department long-term air quality network in accordance with the Air Monitoring Directive (AMD) and accepted protocols for the purpose of providing reliable, accurate ambient air quality data.

· operate, maintain, troubleshoot, repair and calibrate a broad range of complex and sensitive air monitoring and sampling equipment; sometimes independently and in high-pressure situations.
· full participation in the Air Monitoring quality control/quality assurance (QA/QC) program
· work collaboratively and respectfully with team members on a daily basis
· identify needs, make recommendations for and implement changes or upgrades to equipment and systems
· configure data acquisition and communication systems for local and remote data polling

· participate in the Environment Canada National Air Pollutant Surveillance (NAPS) program
· train and co-ordinate personnel to operate Department sites in locations around the province

2. Operate data collection, handling and reporting systems, perform data QA/QC and provide monthly reports for the purpose of keeping the Department, stakeholders and the general public informed on the status of air quality.
· ensure the Air Quality Health Index (AQHI) information is exported to the AQHI website and available to all stakeholders on a continual basis
· report exceedances of Alberta's Ambient Air Quality Objectives and Guidelines
· perform daily data quality assurance checks according to set procedures
· perform monthly data validation according to set procedures and produce and submit monthly reports as required
· respond to requests for air quality information and data from the public, the Department and other stakeholders
· provide air quality data to the Department and local authorities during emergency situations
· be available for media interviews and public presentations as required

3. Assist in the deployment of portable or mobile equipment for emergency support or focused study monitoring
· operate and maintain portable and mobile sampling equipment where required
· daily readiness for responding to requests for emergency air monitoring throughout the province
· work extended hours in high pressure situations and adapt quickly to changing working environments
· work independently in remote locations and in adverse environmental conditions
· work collaboratively and respectfully in a team environment
· assist Science team in the development of monitoring plans
· perform data validation and reporting in support of mobile monitoring program where required

4. Provide technical assistance and expertise to Regional, Department, Government and non-government organizations and stakeholders in order to ensure collection of accurate, reliable air quality data in the Region, Alberta and in Canada.
· participate in government and non-government technical working groups and committees
· provide technical expertise to non-government stakeholders including contractors
· provide technical advice and expertise and assist Regulatory Assurance and Air Policy staff in resolving technical issues
· provide assistance in research and development to establish reliable air sampling methods and techniques

5. Support Ambient Air Audit Program
· support the maintenance, repair and operation of a broad range of audit program instrumentation and support equipment where required
· support the lab-based equipment and gas verification program where required
· support the field-based performance audit program where required
· assist lead auditor in the preparation of audit reports where required

6. Maintain Quality System Documentation
· develop, modify and maintain Standard Operating Procedures (SOPs) and other documentation relating to air monitoring equipment and operations according to the Quality Management System
· develop, modify and maintain the Quality Assurance Plan (QAP)

Problem Solving

Typical problems solved:

1) Competing Priorities - the air monitoring network operates 24/7 and the employee must be able to triage issues to address instrument malfunctions, troubleshooting and repair. These decisions may be required daily or even multiple times in the same day

2) Troubleshooting - the employee must be able to diagnose and repair a wide variety of complex instrumentation utilizing a variety of resources including equipment manuals, vendor guidance and manufacturer tech support. Effective troubleshooting requires patience and a positive outlook on solving

complex problems while learning on the fly.

3) Troubleshooting and priority setting may be required under adverse environmental conditions, while working alone and/or in high pressure situations

4)Working Alone - the position requires working independently and often in remote locations and adverse conditions. Adherence to safety protocols, and strong planning and communication skills are critical in this role

5) General time management - the continued successful operation of the network must also be balanced with other priorities and commitments including completing safety training and participating in safety programs, attending team meetings and completing other tasks such as performance agreements.

6)Provides information and technical advice to Department staff, industry, the public and other stakeholder like Airsheds on a frequent basis

7) Requires a thorough knowledge of physics, chemistry and electronics as related to the theory, operation and repair of air monitoring and sampling equipment and the generation of calibration test gases

Types of guidance available for problem solving:

The successful employee will have a variety of resources available for problem solving including:
 - Equipment Manuals and Standard Operating Procedures
 - Safe Work Practices and Hazard Assessments
 - Technical support from equipment vendors and manufacturers
 - Peer support and brain storming
 - Trial and error approach
 - Other sources of info including the internet

Direct or indirect impacts of decisions:

Data Availability - decisions regarding instrument operations impact the availability of the hourly AQHI values on AEP's website for the public as well as monthly data reporting that supports other key priorities including national/provincial framework reporting and long-term trend analysis.
AQHI information and data obtained during emergency situations may be used by agencies to make decisions regarding the protection of human health. Instrument maintenance, calibration, troubleshooting and repair is critical to ensure the continued collection data during emergencies.

Key Relationships

Major stakeholders and purpose of interactions:

Air Monitoring Team - planning, communication and support
Airshed Sciences - planning and technical support
Airshed Organizations - technical support and guidance
Regulatory Assurance - technical support
Environment and Climate Change Canada - technical communications, support and planning
Alberta Health Services, Health Canada, Municipalities - technical guidance and data sharing
ASERT - provide data during emergencies and technical guidance
Air Policy - technical support and interpretation

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Diploma (2 year)	Science	Science	

If other, specify:

Job-specific experience, technical competencies, certification and/or training:

‒ Minimum 2-year college/technical diploma or equivalent in a relevant environmental field
‒ Minimum 6 years direct experience in Air Quality Monitoring

− Class 5 Operators' License (or equivalent). Operate specialized vehicles independently e.g., MAML
− Required Safety certifications include: Standard First Aid, Defensive Driver, Collision Avoidance, WHMIS, TDG, HS2 Alive (will be provided if necessary)

Behavioral Competencies

Competency	Level A B C D E	Level Definition	Examples of how this level best represents the job
Agility	○ ◉ ○ ○ ○	Works in a changing environment and takes initiative to change: • Takes opportunities to improve work processes • Anticipates and adjusts behaviour to change • Remains optimistic, calm and composed in stressful situations • Seeks advice and support to change appropriately • Works creatively within guidelines	- Competing priorities change on a daily basis - Must work collaboratively and respectfully in a team environment to achieve goals - Workload can be intense; must be able to prioritize and communicate effectively
Creative Problem Solving	○ ○ ◉ ○ ○	Engages the community and resources at hand to address issues: • Engages perspective to seek root causes • Finds ways to improve complex systems • Employs resources from other areas to solve problems • Engages others and encourages debate and idea generation to solve problems while addressing risks	- must have the ability to investigate root causes independently but know when to seek support - understand full spectrum of available resources when troubleshooting - take risks and use creative thinking to solve problems
Build Collaborative Environments	○ ◉ ○ ○ ○	Facilitates open communication and leverages team skill: • Leverages skills and knowledge of others • Genuinely values and learns from others • Facilitates open and respectful conflict resolution • Recognizes and appreciates others	- must collaborate respectfully with team members and manager on a daily basis - must acknowledge and respect what others bring to the table in terms of opinions, experience and ideas - must maintain a professional manner during extreme situations including emergency support activities
Drive for Results	○ ◉ ○ ○ ○	Works to exceed goals and partner with others	- must set goals and continuously evaluate

		to achieve objectives: • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations	progress

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