Ministry

Environment and Protected Areas

Describe: Basic Job Details

Position

Position ID	Position Name
	Regulatory Data Specialist

Current Class	Requested Class
Technologies 5	

Job Focus	Supervisory Level
Operations/Program	00 - No Supervision

Agency (ministry) code	Cost Centre	Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Vacant

Organizational Structure

Division, Branch/Unit

RSD/Airshed and Watershed Stewardship

Supervisor's Position ID	Supervisor's Position Name	Supervisor's Current Class
	Air Quality Data Supervisor	Technologies 6

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

The Regulatory Data Specialist is part of a small team of subject matter experts responsible for all aspects of air data stewardship related to industrial air quality monitoring data managed within manual and electronic reporting systems. This position is responsible for the acquisition, quality assurance and control, storage, optimization and distribution of industrial air emissions data submitted to Alberta Environment and Protected Areas (EPA) and the Alberta Energy Regulator (AER) by regulated facilities operating within parameters set out in their Environmental Protection and Enhancement Act (EPEA) approval.

The Regulatory Data Specialist contributes to the development and enhancement of databases and is responsible for the maintenance of data within them. Currently, data is received via two major systems: the Environmental Management System (EMS) which accepts Continuous Emissions Monitoring Systems (CEMS) data; and the Air Data Management Program (ADMP) Electronic Transfer System (ETS) component which accepts air quality data prior to transferring it to the Enterprise Data Warehouse (EDW) repository. Management of the meta-data and related approval conditions for the EMS and the Alberta Air Conditions Component (A2C2) as well as the paper-based system (Air Notebook) are the responsibility of this position as well. As this technology changes and new systems such as the Digital Regulatory Assurance System (DRAS) are deployed, the incumbent provides advice and support for the design, development, testing, implementation and training phases of these initiatives while assuring data assets are protected or improved and aligned with government standards.

As a custodian of industrial air quality data supporting cumulative effects management, the Regulatory Data Specialist provides expert advice related to the content and meaning of data as well as its suitability for use. The incumbent strives to ensure industrial air monitoring data, information products and services are accurate, timely and meaningful.

The incumbent works directly with Regulatory Assurance Approval Coordinators for both EPA and AER while providing data products and services to several other EPA program areas. Data stewarded by the Regulatory Data Specialist is the foundation for monitoring, risk assessment, predictive modeling, approvals, operational oversight, compliance enforcement, emergency response, management actions and decisions, scientific reporting and stakeholder engagement. This valued asset is used by provincial, federal and municipal governments, approved operators and industry, commercial businesses, aboriginal and community organizations, environmental associations, contracted service providers, and Albertans to protect the environment, sustain the economy and assure public health and safety.

Responsibilities

1. Supports acquisition, storage and maintenance of electronic CEMS emission data
• Operates as a key contact and EMS back-up User Coordinator for regulated industrial facilities by registering approved operators, providing training, notifying them and resolving data submission problems;
• Monitors EMS system logs to identify problems with data submissions then diagnoses the problems and takes or recommends corrective actions depending on the scope of the problem;
• Confirms and updates monitoring and reporting requirements;
• Provides one-on-one assistance to approval holders to ensure submitted data files are meeting data quality and validation standards;
• Monitors the system to ensure data files are processed and loaded into the system correctly; and
• Ensures data standards are enforced and regulatory requirements are met.

 2. Maintains monitoring and associated business data in current databases and systems
• Receives and reviews notifications of new approvals or amendments to existing approvals from Regulatory Assurance Approval Coordinators;
• Confirms and updates approval operating, monitoring and reporting requirements in EMS, A2C2, and in the Air Notebook Database; and
• Maintains data within A2C2 and Air Notebook database and prepares it for distribution to EPA and AER to serve their regulatory and business requirements.

3. Provides access to emissions data, analyses and reports needed to inform EPA, partners, stakeholders and Albertans
• Provides support services and advice to EPA staff accessing emissions data within existing systems and optimizes the data for use by aggregating, analyzing, integrating, visually representing, and reporting it;
• Distributes emissions data directly or indirectly via EPA reports, websites, data platforms and portals to partners, stakeholders and citizens; and
• Develops standard and custom queries upon request to ensure data needed by EPA staff, particularly those involved in monitoring, assessment, approvals, compliance, investigation, emergency response, reporting and stakeholder engagement is readily available.

4. Contributes to system development and enhancement projects that improve data access and quality
• Serves as a key subject matter expert in the development of air policy, the air data program, and related data and information systems;
• Assesses business requirements relative to the functionality of existing systems and makes recommendations to enhance these systems in order to meet new and emerging data needs;
• Contributes to the design, development, testing, training and implementation of new information systems;
• Participates in data communities and committees as well as serves as a back-up representative on the EMS Business Users Committee and the EMS Work Item Priority Committee; and
• Assists the EMS-CEM User Coordinator and technical advisor as well as the Air Quality Data Supervisor to maintain and improve systems in order to meet regulatory and business requirements.

5. Assists in the stewardship of air quality data and administration of the air data program
• Oversees receipt of paper-based and electronic air quality monitoring data from regulated industries to ensure Alberta's air remains clean;
• Conducts technical reviews through document and data audits of air quality monitoring reports;
• Encourages development and dissemination of quality data to staff and stakeholders through standard products and centralized systems;
• Responds to requests for assistance and advice from the Air Quality Data Supervisor, team members, EPA staff and stakeholders;
• Trains internal staff on Continuous Emission Monitoring Systems (CEMS) reporting, Air Monitoring Directive (AMD) and EPEA, and the difference between the AMD forms, and their uses pertaining to approvals; and
• Contributes to general administration of the branch, division and ministry which includes participating in operational planning, priority initiatives, performance evaluation, training, team activities, occupational health and safety initiatives, Freedom of Information and Protection of Privacy requests, briefings and communications.

Problem Solving

Typical problems solved:

The Regulatory Data Specialist ensures industrial air quality data and reports are collected from approved operators, verified and validated, and then loaded into a system which helps maintain, optimize and distribute information needed to meet regulatory requirements and achieve environmental outcomes. Barriers that prevent data from flowing through this process must be identified and often resolved by the incumbent. This includes daily problems encountered when scrutinizing submitted files containing error messages that must be resolved with the industrial submitter to producing and distributing custom and standard reporting results needed to serve environmental stewards.

Future phase development of the ADMP, as well as maintenance of the A2C2, has increased the demand for problem solving skills required to perform the duties of this position, including increasing trouble shooting skills, critical and system thinking to manage the complexities of integrated software and databases, fundamental technical knowledge to identify malfunctioning components of the integrated system, provide strong and reliable technical advice to stakeholders and external clients, and evaluate potential innovations to be applied to current air monitoring and reporting databases.

Types of guidance available for problem solving:

As a business area and subject matter expert the incumbent works relatively independently yet relies on a small team of air quality data specialists who take ownership of their information assets and responsibility for assigned projects. This group is directly lead by the Air Quality Data Supervisor and indirectly by the Manager, Director and Executive Director of the Branch who will resolve increasingly challenging issues and draw upon departmental and governmental resources when necessary. This includes Service Alberta contracted information technology service providers who help maintain and enhance EPA infrastructure, databases, warehouses and information systems. Service Alberta also provides direction with respect to data governance and standards employed by the incumbent. When necessary, the Regulatory Data Specialist will draw upon these rules and resources as well as the guidance available through colleagues responsible for air policy, monitoring, approvals, compliance and reporting.

Direct or indirect impacts of decisions:

Decisions made by the Regulatory Data Specialist directly impact industry as the incumbent is responsible for providing guidance to these stakeholders and working with them to resolve technical issues and accept their submitted data reports - a mandatory requirement within their EPEA approval. The incumbent is regularly called upon to provide guidance to AER and EPA Regulatory Assurance Approval Coordinators and to the regulated facilities in order to resolve related issues, streamline processes and improve systems.

Key Relationships

Major stakeholders and purpose of interactions:

On a daily basis, the incumbent interacts with AER and EPA Regulatory Assurance Approval Coordinators, regulated facility representatives and EPA staff responsible for air policy, monitoring, compliance and reporting who are predominantly located in the Air Policy section, and the Regulatory Assurance and

Resource Stewardship Divisions. The Regulatory Data Specialist frequently communicates with Service Alberta staff including records managers, Freedom of Information and Protection of Privacy staff, contracted technical service providers and related consultants. Additionally, the incumbent may be asked by other government departments to provide data and subject matter expertise.

Required Education, Experience and Technical Competencies

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

If other, specify:

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

• Diploma or degree from a recognized institute in environmental sciences or related disciplines plus a minimum 5 years of technical experience in a related field;
• Extensive knowledge and a minimum 5 years of experience managing data and information. This includes demonstrable experience in data capture and transfer procedures, quality assurance and control, metadata management, records systems and databases, standards, distribution, analysis, and maintaining and developing systems;
• Extensive knowledge of EPEA, related legislation, approval processes, regulations, policies and guidelines such as the Air Monitoring Directive and CEMS Code which provide monitoring and reporting practices for industry. This is complemented by knowledge of EPA business needs, databases, systems and reports;
• Extensive technical knowledge of air monitoring and reporting standards as they apply to EPEA approval requirements and processes.
• Knowledge of the technology used to capture stack emissions and ambient air quality is an asset;
• Well developed written and verbal communication skills as well as interpersonal skills for effectively interacting with EPA staff, partners, stakeholders and citizens.

Behavioral Competencies

Competency	Level A B C D E	Level Definition	Examples of how this level best represents the job
Systems Thinking	○ ○ ● ○ ○	Takes a long-term view towards organization's objectives and how to achieve them: • Takes holistic long-term view of challenges and opportunities • Anticipates outcomes and potential impacts, seeks stakeholder perspectives • Works towards actions and plans aligned with APS values • Works with others to identify areas for collaboration	As a key contributing position in the design and development of data systems and policies for EPA and AER, this position works to continually improve processes, standards and systems needed to support air data stewardship. Due to the ADMP project as well as the A2C2 component, there is a higher demand for critical thinking required of this position to properly maintain and troubleshoot the many components of a complex and highly integrated data management system.

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	Technically assesses and resolves acquisition and loading challenges of air data from external parties into evolving data systems. As the air monitoring and reporting system is developing and becoming more complex, there is now more of a demand for creative problem solving, including reviewing and validating a large volume of data in a variety of formats, identifying erroneous data or metadata that is preventing data ingestion, and providing expert advice to external clients and stakeholders.
Drive for Results	○ ○ ◉ ○ ○	Takes and delegates responsibility for outcomes: • Uses variety of resources to monitor own performance standards • Acknowledges even indirect responsibility • Commits to what is good for Albertans even if not immediately accepted • Reaches goals consistent with APS direction	This position collaborates with air policy and and airshed experts with the goal of well-governed, relevant and timely data. Leads or participates in initiatives to support regulatory transformation. Due to the increased work load, increased complexity of the air monitoring and reporting system, and planned future implementation of the ADMP, there is a greater need for this position to work independently.