Ministry

Environment and Parks

Describe: Basic Job Details

Position

Position ID

Position Name

Sr Contaminant Risk Assessor

Requested Class

Scientific 3

Job Focus

Operations/Program

Supervisory Level

01 - Yes Supervisory

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Organizational Structure

Division, Branch/Unit

Regulatory Assurance/Regulatory Programs/CSR

Supervisor's Position ID

Supervisor's Position Name

Supervisor's Current Class

Senior Manager (Zone 1)

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

The Senior Contaminant Risk Assessor provides regulatory direction aligned with Alberta's Remediation Regulation to industry and stakeholders regarding the protection of human health and the environment from a release of contaminants. Regulatory direction is provided through professional advice and recommendations on matters pertaining to the human and ecological risk assessment of contaminated sites, risk-informed regulatory expectations and contaminant risk management to protect receptor health. The position provides regulatory direction for complex guideline modifications and site specific risk assessment where sites conditions that do not conform to standard assumptions underpinning provincial guidance.

The position provides technical analysis of site-specific guidelines, contaminant management and exposure control plans such that regulatory expectations and desired outcomes are met. Acting as a technical resource and subject matter leader for matters relating to risk-informed regulatory compliance, and the advancement of non-standard contaminated sites through to closure, the position requires significant scientific assessment capabilities to evaluate risk at contaminates sites that is evidence-based and practical.

With broad knowledge of toxicology, contaminant fate, chemistry, biology and contaminant guideline derivation, the position supports an array of subject matter experts in various program areas. The position applies knowledge of the policy documents that are part of the Remediation Regulation and the Contaminated Sites Policy Framework and their

relationship to supporting legislation (Environmental Protection and Enhancement Act and Water Act).

This is a senior position that guides the implementation and interpretation of the Contaminated Sites Policy Framework for unique situations (rare or emerging contaminants, site conditions that fall outside normal situations envisioned by Government policies) and makes recommendations and decisions that have long term physical, financial and legal implications. This position is also responsible for supervising and developing junior risk assessors to maintain consistent regulatory direction.

Responsibilities

1) Regulatory Direction for Management of Contaminated Sites
The Contaminated Sites Risk Assessor provides regulatory direction to advance management of contaminated sites consistent with the Government of Alberta's Contaminated Sites Policy Framework and the Environmental Protection and Enhancement Act. Regulatory advice is guided by the Regulatory Assurance Framework with emphasis on achieving regulatory outcomes through pragmatic and systematic advancement of site management that is protective of human health and the environment.
- Provides professional advice and recommendations to internal and external stakeholders;
- Evaluates risk assessment submissions to determine if adequate actions have been taken to manage risks to receptors (humans, wildlife, freshwater aquatic life, crops, etc.);
- Communicates risk-informed regulatory expectations to stakeholders;
- Applies experience in contaminated sites management to guide stakeholders through an iterative and adaptive approach to site management to ensure desired outcomes are met;
- Represents the department in stakeholder meetings;
- Use the compliance assurance framework to shift stakeholder behaviour through appropriate use of education through to compliance and enforcement; and
- Serves as a subject matter expert at the Environmental Appeal Board as required.

2) Technical Evaluation of Site-Specific Risk Assessments and Site-Specific Remedial Objectives
The risk assessor leverages a broad understanding of toxicology, environmental and biological sciences, and guideline derivation procedures to review complex scientific submissions to evaluate risk to human health and environment to determine safe exposure limits to chemicals that do not have provincial guidelines, or non-standard modifications to site-specific remedial objectives. The risk assessor often uses a weight of scientific evidence to make determinations where solutions are partially known due to policy or knowledge gaps; these decisions could have long-term implications (e.g., closure of a contaminated site).
- Evaluate the scientific and technical basis for conclusions or recommendations submitted to the government produced by stakeholders to support contamination management;
- Maintain current awareness of academic literature and research related to contamination and risk assessment practices;
- Cultivate and maintain professional contacts with peers in research and academic organizations;
- Analyze and evaluate data and other information on contaminated sites policies from a variety of sources (e.g., academic journals, administrative publications, government studies, books, newspapers, etc.);
- Be able to evaluate and interpret complex science and original research to test adherence to policies, suitability for intended use (related to site management and/or closure); and
- Understand the limitations and risks associated with science underpinning reports submitted to the government, and make a risk-informed decision to accept or reject the conclusions, where the decisions have significant financial implications for companies and could have long-term risks for society.

3) Mentorship and Internal Training
The risk assessor provides expert knowledge and guidance to team members on issues related to risk assessment (and vapour assessment) to build team capacity and improve consistency. The senior risk assessor also serves as a mentor for junior staff to develop their technical skills and proficiency in risk assessment work.
- Develop and provide internal training as required to build capacity and improve consistency
- Maintain current awareness on literature, emerging federal policy and science that can impact our

understanding of contaminant risk.
- Cultivate and maintain professional contact with peers in policy, Alberta Health, the AER and research organizations that impacts our decision making.
- Build open and positive relationships with colleagues and stakeholders such that questions are encourages and communication is supportive and useful.

4) Operational Policy
The risk assessor contributes to the development of operational policies to provide clarity to stakeholders on the delivery of contamination management in Alberta. This position also provides subject matter expertise and operational perspective to support the development of new and amend existing contaminated sites policies, and may also support evaluation of scientific reports submitted to the government used to inform policy development.
- Identifies policy gaps and opportunities for improvement in program delivery;
- Works collaboratively to implement innovative solutions;
- May lead the development of operational policy to provide specific direction to stakeholders to enable better compliance with regulatory requirements;
- Participate in and provide scientific support to multi-stakeholder committees, workshops and initiatives that provide opportunities for public and stakeholder input into departmental activities and policy development processes (e.g., provide scientific, technical and regulatory foundation to support discussions or broader societal and economic considerations brought by other participants);
- Identify policy gaps, issues and unintended consequences based on policy implementation, as well as metrics and performance indicators. As required, work with other groups to evaluate options and solutions;

Problem Solving

Typical problems solved:

Evaluate appropriateness of scientific information applied to characterize contaminants where contaminants have no applicable provincial guidelines. These situations are typically seen for rare, non-standard, and emerging contaminants.

Evaluate and provide recommendations on risk assessment, unacceptable risk and appropriateness of proposed risk management strategies that are appropriate to site characteristics, including exposure control and site-specific remedial objectives.

Applies pragmatism, technical knowledge and risk ranking to guide site management recommendations that are aligned with desired outcomes rooted in receptor protection for active pathways.

Using a risk approach, guides proponents forward on contaminated site management life-cycle, identifying opportunities and bringing clarity for policy misinterpretation.

Identify technical gaps in the understanding of risk assessment discipline or application of risk assessment within our policy framework. Build resources to close gaps or lead informal education for colleagues and stakeholders.

Types of guidance available for problem solving:

Environmental Protection and Enhancement Act, the contaminated sites policy framework and associated policies and guidelines, The Canadian Council for Ministers of the Environment guidance documents; Health Canada guidance documents; the US EPA toxicology evaluations; academic peer reviewed journals

Direct or indirect impacts of decisions:

Decisions have large financial costs for industry (including assessment work and long term monitoring)

Decisions affect risk to human health and the environment and could have long term consequences to these receptors

Accepting derived guidelines for site closure may results in the transfer of liability from the company to

government if future knowledge requires further actions

Decisions may set precedent for other regulator agencies such as the Alberta Energy Regulator

May trigger policy and guideline updates

Decisions influence staff development and their technical understanding of risk, knock-down effect to other decisions.

Key Relationships

Major stakeholders and purpose of interactions:

Supports internal colleagues, Environmental Protection Officers, Environmental Enforcement, Regulatory Assurance Approval Coordinators; and Policy units including Lands Policy and Water Policy

Works closely with the Alberta Energy Regulator for issues that overlap both the AER and EPA mandates

Works closely with Alberta Health for issues that overlap both the Alberta Health and EPA mandates

Works with external stakeholders ranging from small, family run businesses with limited financial resources relative to the environmental liability being managed to large, corporations and environmental consultants

Works with other regulatory agencies such as municipalities, and the Government of Canada where scope of work overlaps different jurisdictional mandates.

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Master's Degree	Science	Other	Other

If other, specify:

P.Biol, P.Eng, or other profession recognized by the Contaminated Sites Policy Framework

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

Based on CSR's understanding of the work, we would expect the candidate to have a relevant graduate degree and a minimum of 6 years applied experience conducting environmental analysis on contaminated sites, including risk assessment (preferred). Recruitment standards will be finalized once we know the classification.

Behavioral Competencies

Competency	Level A B C D E	Level Definition	Examples of how this level best represents the job
Systems Thinking	○ ○ ○ ◉ ○	Integrates broader context into planning: • Plans for how current situation is affected by broader trends • Integrates issues, political environment and risks when considering possible actions • Supports organization vision and goals through strategy • Addresses behaviours that challenge progress	Provides professional advice and recommendations taking on a long-term view of environmental liability. Ability to assess current information, regulatory trends and weigh the significance of data gaps on informed decision making. - Applies multiple lines of evidence or supporting information where policy limitations or gaps (e.g. emerging contaminants) preclude certainty. Relies

			on strong cross-function thinking and technical knowledge to gather and present supporting information. - Applies original research and scientific principles to support evidence-based recommendations across a range of environmental health topics.
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	- Uses pragmatism, objectivity, and evidence to evaluate and rank contaminant risk where problems and solutions may be partially known. - Integrates primary or applied research to bring evidence-based perspectives to contaminant risk evaluation or mitigation. - Through collaboration with industry, colleagues, and experts, develops practical and protective risk management advice. - independently evaluate new information (including methodologies, data, contaminants, etc) to ensure alignment with policy objectives.
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	Applies technical knowledge to guide industry and other stakeholders; builds off past experience to inform guidance and maintain consistency; ability to influence where there is no direct control; particulary to influence stakeholder behaviour; courageously and respectfully take stand to guide industry behaviour - Breaks down complex problems into component parts to promote clarity.

			- Identifies pervasive submission issues and engages to reduce errors across submissions. - Focusses communication on desired outcomes - Assists in risk ranking for file triage to prioritise files with highest need.
Build Collaborative Environments	○ ○ ◉ ○ ○	Collaborates across functional areas and proactively addresses conflict: • Encourages broad thinking on projects, and works to eliminate barriers to progress • Facilitates communication and collaboration • Anticipates and reduces conflict at the outset • Credits others and gets talent recognized • Promotes collaboration and commitment	Builds on the skills of others; engages with others to think broadly about an issue and the impacts of actions; builds open and ongoing communication; demonstrates respect; anticipates conflict and builds and encourages 2-way communication; appropriately credits the support of others; promotes collaboration and positive relationships
Develop Self and Others	○ ○ ◉ ○ ○	Plans according to career goals and regular development: • Aligns personal goals with career goals • Leverages strengths; attempts stretch goals • Provides feedback and openly discusses team performance • Values team diversity, and supports personal development	recognizing this is a senior technical position rather than management - reflects on own learning; proactively engages in own development; takes initiative to stay current on relevant topics; contributes to team learning; actively coaches and mentors relative to day-to-day work Uses technical base to develop team training for identified gaps; provides technical resources to team members and supports others on interpretation and self development; proactively engages in own development and shares learning with team; takes on a technical leadership role for others to bounce ideas

			and discuss tehcnical concepts.