Legal update

Alberta issues guidance on site-specific risk assessments for contaminated sites

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Energy
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Alberta Environment and Parks (AEP) has published a draft Supplemental Guidance for Site-Specific Risk Assessments in Alberta for public comments. It provides important clarification and guidance on AEP’s requirements for site-specific risk assessments (SSRAs) for managing contaminated sites.

An SSRA is an assessment of human health and ecological risks posed by contamination. An SSRA may enable a person responsible for contamination to efficiently focus and prioritize their delineation, monitoring, management and cleanup efforts on specific risks and areas of a contaminated site and, in some cases, may demonstrate that leaving contamination in the ground poses an acceptable risk, thereby mitigating costly cleanups altogether. As such, the Guidance is a welcome and important document to anyone responsible for a contaminated site in Alberta. It explains the regulator’s expectations for assessing risks.

The Guidance is an important part of the Government of Alberta’s Contaminated Sites Policy Framework.

Legislative requirements

Under the Environmental Protection and Enhancement Act, a person responsible for the release of a substance that causes or has the potential to cause an adverse effect is under a legal duty to report to the regulators (i.e., AEP or the Alberta Energy Regulator) and take all reasonable measures to clean up the spill as soon as they know or ought to have known about it.

The Remediation Regulation requires the person to achieve regulatory closure for the site by remediating the spill in accordance with the criteria in the TIER 1 and 2 Soil and Groundwater Remediation Guidelines. The TIER 1 Guidelines are simple tabular remediation values for various substances. They are generic and conservative from a risk perspective and can be applied at all contaminated sites. The TIER 2 Guidelines are more flexible as they consider site-specific conditions, allow for removing some variables that are not applicable to the site and allow an SSRA to be used to support regulatory closure.

A third option under the Remediation Regulation is exposure control where administrative or physical controls are used at a contaminated site to manage ongoing risks. The exposure control option also uses an SSRA to assess the risks and to determine monitoring and control requirements. Regulatory closure is not available for sites subject to exposure control.
Adherence to the Guidance is not formally required by the Remediation Regulation, but once the Guidance is finalized it is expected that compliance will be required by AEP’s policies if the person responsible is managing a contaminated site using the TIER 2 Guidelines or the exposure control option. The Guidance can also be used to support risk management plans and remedial action plans.

An SSRA may be used to assess pre-remediation contaminant concentrations or residual, post-remediation conditions to determine the scope and nature of the risks and ascertain whether they are acceptable. An SSRA may identify pathways or receptors requiring protection and the need, if any, for further remediation or risk management. An SSRA may also determine relevant contaminant concentrations for monitoring purposes.

Further details on the Remediation Regulation can be found here and on remedial action plans here.

Scope

SSRAs can fall within a spectrum of complexity, ranging from risk screening to a detailed quantitative risk assessment, but always must include a human health risk assessment (HHRA) and ecological risk assessment (ERA). HHRAs and ERAs consider the contaminants of potential concern at a site, potential human and ecological receptors, how those receptors might be exposed to the contaminants and what the toxicity or effects of such exposure might be. In short, an SSRA studies what pollution is present, who and what might be impacted by it, how they might be exposed to that pollution and what the impacts may be on their health and well-being. An SSRA is a tool to assess and characterize risk, and thereby determine management options, including whether contaminants can be left in place or whether they must be wholly or partially cleaned up.

An SSRA can be very important in managing a contaminated site, especially if a person responsible is intent on minimizing their costs and potential liabilities. An SSRA may result in significant cost savings to a person responsible for contamination if it can demonstrate that the risks are acceptable with respect to the person’s contamination management plan.

Technical details

The Guidance sets out the technical expectations of the regulators with respect to data collection, site characterization, toxicological reference values, hazard indexes and ratios, human health and ecological protection endpoints, contaminant fate and transport modelling, exposure estimates and parameters and the use of lines of evidence and weight of evidence approaches, among other things. It is a technical document to be used by professionals, including biologists, engineers or foresters, required to sign off on reports submitted to regulators.

AEP will be accepting any comments on the draft Guidance until September 25, 2020.

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