

# Implementation of *Atlantic Risk Based Corrective Action (RBCA) for Impacted Sites in Atlantic Canada User Guidance Version 4.0* and *Atlantic RBCA Environmental Quality Standards (EQS)/Pathway Specific Standards (PSS)*

## **Background:**

Since 1997, Atlantic PIRI Regulators have endorsed the use of Atlantic RBCA for the management of petroleum hydrocarbon impacted sites in Atlantic Canada.

This document recognizes the release of an updated version of the *Atlantic RBCA for Impacted Sites in Atlantic Canada User Guidance Version 4.0 (July 2021)* and the *Atlantic RBCA Tool Kit for Atlantic Canada Version 4.0* and clarifies implementation procedures for use in Atlantic Canada. The Version 4.0 software includes updates to the chemical toxicity database to reflect the most recent toxicity reference value (TRV) updates for benzene, toluene, ethylbenzene, and xylene (BTEX). The chemical toxicity database has also been expanded to include selected chlorinated volatile organic compounds (CVOCs). The Atlantic RBCA Tool Kit Version 4.0 also includes an option to consider oxygen-limited biodegradation in the calculation of volatilization factors for petroleum hydrocarbons (PHCs) in subsurface soil, soil gas, and groundwater.

In 2017, the four Atlantic Provinces expressed interest in harmonizing environmental quality standards (beyond petroleum hydrocarbons) for use at impacted sites located within Atlantic Canada. This harmonization effort was led and coordinated by Atlantic PIRI, on behalf of the four Atlantic Provinces.

Atlantic PIRI retained contractors who were involved with the original Nova Scotia Environment (NSE) Environmental Quality Standards (EQS) process, to review and update the current set of NSE EQS and Pathway Specific Standards (PSS). This involved changes and updates to the 2014 NSE EQS and PSS (to ensure that the adopted Atlantic RBCA PSS/EQS values reflect more recent regulatory guideline values developed by the source agencies and departments), generation of separate tables presenting human health and ecological based guideline values, as well as updates to the 2014 NSE Rationale Document. The revision and update effort focused on the same environmental media, exposure pathways, receptor types, land use categories, groundwater use conditions, and soil texture categories that were originally addressed in the 2014 NSE EQS and Rationale Document.

This document recognizes the release of the 2021 Atlantic RBCA EQS/PSS (with associated rationale document) and clarifies implementation procedures. It is noted however, that the four Atlantic Provinces may independently determine how and when to apply and implement the 2021 Atlantic RBCA EQS/PSS within their individual Provincial impacted site management processes, programs, and policy frameworks. At the discretion of the individual Atlantic Provinces, this may include modifications to the Atlantic RBCA EQS/PSS.

The *Atlantic RBCA for Impacted Sites in Atlantic Canada User Guidance Version 4.0* and the 2021 Atlantic RBCA EQS/PSS can be downloaded from the Atlantic RBCA website ([www.atlanticrbca.com](http://www.atlanticrbca.com)) or provided by Atlantic PIRI Regulators upon request. The *Atlantic RBCA Tool Kit for Atlantic Canada Version 4.0* is also available for purchase on the Atlantic PIRI website. Atlantic PIRI Regulators contact information is available under the “Contact Us” link on the Atlantic RBCA website ([www.atlanticrbca.com](http://www.atlanticrbca.com)).

## Implementation Procedure

Effective **immediately**, Atlantic PIRI Regulators will require assessment, remediation, and closure reports to utilize the *Atlantic RBCA for Impacted Sites in Atlantic Canada User Guidance Version 4.0 (July 2021)* and/or 2021 Atlantic RBCA EQS/PSS (as adopted in ministerial protocols and other relevant guidance and regulatory instruments developed by the four Atlantic Provinces) with the exception of the following circumstances:

1. **Environmental Site Assessment** was completed using ARBCA Version 3 and/or other regulatory guidelines/standards predating the release of Atlantic RBCA Version 4.0 and 2021 Atlantic RBCA EQS/PSS, but a report was not submitted to the Regulator. In these cases, assessment reports must be submitted to the Regulator on or before December 31, 2021. If not received prior to this deadline, the Regulator will require a re-evaluation using Atlantic RBCA (Version 4.0) and/or 2021 Atlantic RBCA EQS/PSS, as warranted within applicable regulatory jurisdiction.
2. **Remediation was completed** using ARBCA Version 3 and/or other regulatory guidelines/standards predating the release of Atlantic RBCA Version 4.0 and 2021 Atlantic RBCA EQS/PSS, but a report was not submitted to the Regulator. Similarly, in these cases, assessment reports must be submitted to the Regulator on or before December 31, 2021. If not received prior to this deadline, the Regulator will require a re-evaluation using Atlantic RBCA (Version 4.0) and/or 2021 Atlantic RBCA EQS/PSS, as warranted within applicable regulatory jurisdiction.
3. **Remediation is on-going** using ARBCA Version 3 and/or other regulatory guidelines/standards predating the release of Atlantic RBCA Version 4.0 and 2021 Atlantic RBCA EQS/PSS. Site Professionals and Person(s) Responsible may utilize either version and/or other regulatory guidelines/standards, but ensure the site is evaluated and remediated using only one version. Regardless, ongoing remediation using ARBCA Version 3 and/or other regulatory guidelines/standards predating 2021 Atlantic RBCA EQS/PSS must be completed and reported by July 31, 2022. Otherwise, Atlantic RBCA (Version 4.0) and/or 2021 Atlantic RBCA EQS/PSS (as warranted within applicable regulatory jurisdiction) must be used for site remediation.

4. If site remediation is completed and acknowledged by the Regulator using ARBCA Version 3 and/or other regulatory guidelines/standards predating 2021 Atlantic RBCA EQS/PSS, but requires a future re-evaluation, such re-evaluation must be completed using regulatory guidelines/standards applicable at the time of re-evaluation. Site Professionals are required to ensure Person(s) Responsible, site owners, and subsequent owners are made aware of this issue in closure documentation. Examples of this situation could involve land transactions which require reassessment of site conditions or changes in land use.