

Field-Scale Research Trial to Demonstrate Ex Situ Remediation of Bromacil in Soil

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The Soil Sterilants Program (SSP) was launched in 2019 as a 5-year program to establish proven, technically sound, and cost-effective strategies and best management practices for managing soil sterilants, with the goal of more effectively achieving regulatory site closure of impacted sites. The program includes eleven applied research projects focused on site assessment, risk assessment and management, and remediation.

A key element of the SSP is the integration of approaches and learnings from projects within the program. This presentation will focus on a field-scale demonstration of ex situ remedial technologies for treating bromacil, one of the most common soil sterilants in Alberta. The outcomes of three complementary SSP projects that will be integrated into the field demonstration will also be presented, including:

1. Bench-scale screening and optimization of remediation technologies;
2. Evaluation of the sorption effectiveness and longevity of activated carbon (one of the technologies) in retaining bromacil through leaching experiments and artificial weathering; and
3. Development of an analytical technique for assessing the labile fraction of bromacil.

The presentation will provide an overview of the approach for selection and optimization of remedial technologies used in the research trial, maintenance and monitoring, and analytical techniques for evaluating the success of remediation. The information generated through the project will be used to develop recommended best practices to support practitioners in the remediation of bromacil in soil.