Use of Novel Methodology and Diagnostic Ratios for the Determination of Chloride Sources on Contaminated Sites

Groundwater and soil may become impacted by salt through several sources including road salts, agricultural impacts, produced water exposure, brine releases or natural salt deposits in the ground. All sources contribute to elevated levels of chloride in the groundwater, but differentiating between the sources can become challenging. Often the chloride must be remediated to meet regulatory standards.

Bureau Veritas has developed a methodology using inductively-coupled plasma with mass spectrometry (ICP-MS) to determine concentrations for chloride, bromide and iodide in water and soil samples. Using this method, key diagnostic ratios from environmental literature can be calculated and plotted, and the region of occupied space in the plot provides details on the potential source of chloride contamination.

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Brody Andersen is a highly accomplished professional with extensive expertise in environmental sciences, analytical chemistry, and research. He holds Bachelor of Science degrees in both Chemistry and Physics and brings over a decade of experience spanning government, academic, and private research in environmental chemistry and biochemistry.

Since joining Bureau Veritas in 2019, Brody has played a key role in supporting our Western Canadian laboratories, where he leads business development and provides environmental chemistry expertise to both staff and clients. In his role as Technical Account Manager, he is responsible for building and maintaining strong client relationships while ensuring the successful delivery of Bureau Veritas' services.