Wellsites Groundwater Metals – Best Management Practices

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Current analytical techniques allow for convenient and simultaneous analysis of a wide range of metals in environmental groundwater samples. Perhaps for this reason, groundwater monitoring programs at upstream oil and gas wellsites in Alberta have historically often tracked a large number of individual metals. The range of background concentrations of many of the metals commonly analyzed in shallow groundwater in Alberta overlaps the Alberta Tier 1 groundwater guideline value. However, only a subset of these metals have a likely anthropogenic source at oilfield wellsites. False positive guideline exceedances of metals concentrations in groundwater are therefore a common occurrence in groundwater monitoring programs. This project developed a set of Best Management Practices to identify the groundwater metals that have a plausible anthropogenic source at oilfield wellsites.

This presentation will summarize and provide a brief rationale for the Best Management Practices developed in the project, indicate where the Best Management Practices report is available, and provide guidance in using the Best Management Practices report to support regulatory applications.

Miles Tindal

Miles Tindal specializes in using risk assessment techniques to develop cost-effective closure solutions for the most complex contaminated sites. Over the last 25 years he has managed a range of applied research programs funded through PTAC and other organizations to collect data to support regulatory initiatives such as the *Green Area Subsoil Hydrocarbon Guidelines and the Native Prairie Protocol for Salts*. He has authored a wide range of regulatory guidance documents related to contaminated sites management for the CCME and provincial regulatory agencies including the Alberta Tier 1 and Tier 2 guideline documents. Miles holds master's degrees in Natural Sciences from Cambridge University and Hydrogeology from London University.