

TITLE: SITE EVALUATION AND DESIGN CONSIDERATIONS FOR IN-SITU REMEDiation SUCCESS!

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So you are managing a contaminated site and are considering an in-situ approach as opposed to more traditional remedial technologies, but you are not entirely sure your site is a good fit. You are in luck! This presentation will provide guidance on how to thoroughly evaluate a site's potential as an in-situ remediation candidate and how to properly design your in-situ remediation program.

A review of site evaluation considerations will be provided including historical assessments, soil and groundwater chemistry, site infrastructure, buried facilities, soil lithology, hydraulic conductivity, data gaps, health and safety requirements, and the need for a bench scale evaluation. Once you have the confidence that your site has a high potential for success utilizing in-situ remediation techniques, we will take a closer look at how to design your project for success.

Design considerations will be provided including amendment selection (chemical oxidation vs. in-situ chemical reduction), application techniques and technologies, real-time monitoring, post remediation monitoring and verification sampling. A brief overview will be provided of the various amendment products currently on the market and their effectiveness in remediating specific contaminants. We will also provide a detailed discussion on the various amendment application techniques including low pressure vs high pressure injections, direct push injections, injection well installation, and infiltration galleries. Finally, we will discuss real time monitoring during the in-situ remediation program and provide some considerations for post remediation monitoring and verification sampling.





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SPEAKER: BARRY RAKEWICH, P.AG., EP, GENERAL MANAGER –
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Barry Rakewich, P.Ag., EP, is the general manager (environmental) for Nichols Environmental (Canada) Ltd., working out of the head office in Edmonton, Alberta. Barry is a professional Agrologist, registered in both Alberta and British Columbia, with 18+ years of consulting and industry experience. He is a born and raised Edmontonian, who obtained his Bachelor of Science degree in Environmental and Conservation Sciences from the University of Alberta. His areas of expertise include soil and groundwater assessments and investigations; site remediation evaluation, design and implementation; in situ remediation and chemical oxidation; and spill response and clean-up. Barry also takes great pride in sharing his experiences/expertise through numerous presentations he has completed over the past several years across North America, and his committee-based work with the Northern Alberta Institute of Technology (NAIT) and the City of Edmonton.

Corporately, Nichols Environmental has been in business since 1997 and currently employs a team of professionals and technologists with education and experience in engineering, geology, biological and earth sciences, with offices in Edmonton, Calgary, Whitecourt and Saskatoon. Nichols Environmental has completed over 3,500 environmental site assessments and remediation projects throughout Western Canada.



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