NAVFAC Naval Facilities Engineering Command

Technology Transfer Update

This e-mail is supported by NAVFAC's Alternative Restoration Technology Team (ARTT) to provide links to Technology Transfer (T2) tools and the latest information on policies, guidance, and training related to innovative technologies. The T2 topics highlighted in this issue will help support the ARTT's chartered goals of promoting the use of innovative technologies, removing barriers to implementing new technologies, and reducing cleanup costs, while remaining protective of the environment and human health.

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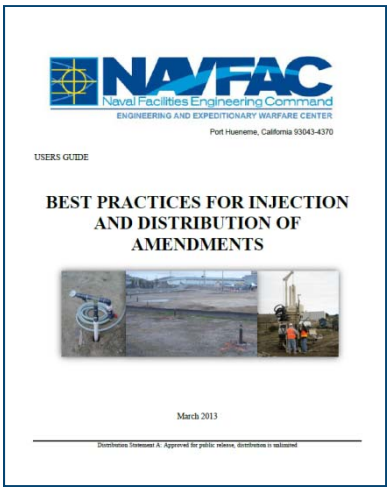
Best Practices for Injection and Distribution of Amendments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USERS GUIDE

BEST PRACTICES FOR INJECTION AND DISTRIBUTION OF AMENDMENTS

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Over the last two decades, many in situ environmental restoration technologies have been developed including in situ chemical oxidation (ISCO), in situ chemical reduction (ISCR), and enhanced in situ bioremediation (EISB). The use of these technologies has increased and will continue to be applied with growing frequency into the foreseeable future. These technologies have successfully achieved remedial action objectives at many sites. However, there have been sites where the concentrations of constituents of concern (COCs) were not reduced significantly or a greater number of anticipated amendment applications were required, resulting in increased cost and time to achieve site cleanup. There are many reasons for the sub-optimal performance of in situ technologies. However, one common underlying cause appears to be an inability to achieve adequate distribution and contact between the reagents, substrates, and COCs. The objective of this document is to present current "best practices" for introducing liquid- and solid-phase amendments into aquifers and to improve the likelihood that these amendments are adequately distributed. Best practices and lessons learned through evaluation of past applications of these technologies are provided.

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