

Decision Guide for Selecting Remedies for Chlorinated Solvent Releases

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Abstract. The US DoD has funded development of two documents that will assist parties with selecting remedies for chlorinated solvent source zones (ER-0530). The first, “Frequently Asked Questions (FAQs) Regarding Management of Chlorinated Solvents in Soils and Groundwater” is complete. The second, “A Decision Guide for Selecting Remedies for Chlorinated Solvent Releases is now in draft. The focus of this presentation is the content and themes of the decision guide. The decision guide is organized into six sections. The first section is an executive summary highlighting key concepts for those with limited time. Next, the reader is guided through key attributes of chlorinated solvent releases that need to be considered to make sound decisions. A key theme is that chlorinated solvents occur as vapor, DNAPL, aqueous, and sorbed phases in transmissive and low permeability zones. This results in fourteen subsurface compartments that need to be considered. The distribution of contaminants in the compartments is dependent on the setting and the age of the release. The third section advances the theme of established objectives that are both attainable and beneficial. The absence of either of these attributes diminishes the probability of success. Next, an overview of the effectiveness of remedial technologies is provided using the fourteen compartment model. Concise descriptions of what proven technologies do and don’t do are provided. Having realistic a priori expectations for what can be accomplished is essential to selecting applicable technologies. Lastly, the process of packaging applicable technologies into comprehensive site remedies (including final land use, contingency plans, and pragmatic endpoints) is explored.