

3.0 THE CHALLENGE

As described in Section 2.0, chlorinated volatile organic compounds can be found at most of the hazardous waste sites across the country. These forms of halogenated organics, once released to the environment, present several unique challenges to the owners of contaminated sites as well as to the environmental remediation industry.

Many of these compounds are listed hazardous wastes, and therefore, are subject to RCRA's Land Disposal Restrictions. Off-Site disposal at a permitted hazardous waste landfill or at an incinerator are options that are often too costly; whereas, many on-site and in-situ remediation technologies have been inconsistent over varying site and subsurface conditions. Many popular conventional in-situ technologies often reach a point of diminishing returns prior to achieving cleanup objectives and end up exceeding preliminary budgets and schedules. The recalcitrant nature of CVOCs along with their variability in partitioning and distribution in the subsurface environment often make it difficult to predict the success of any one remediation technology.

Remedial designers are faced with the task of selecting a treatment approach that will meet the cleanup objectives, while staying within a fixed budget and meeting an aggressive schedule. The treatment approach must account for the characteristics of both the contaminant and site. Contaminated site owners would like nothing more than to eliminate all liability by achieving clean closure with the most cost effective and timely approach possible.

With the large number of chlorinated solvent sites still remaining across the United States, CBA saw a dire need to develop a technology that could provide effective and cost sensitive treatment options for CVOC contaminated soils. In recognition of this, CBA has worked very closely with chemical manufacturers and industrial equipment companies to develop patented treatment technologies that have been instrumental in the clean up of CVOC impacted sites.



Some in-situ technologies require a large initial capital investment and occupy the majority of the site. Additionally, most conventional in-situ technologies are limited by the characteristics of the soils, and although in-situ, may still restrict access and use of the site. Remediation professionals should be realistic when evaluating time vs. cost analysis for in-situ methods and should also consider more aggressive treatment alternatives.