



Chlorinated Hydrocarbon Treatment

newterra treatment solutions for treating CHC compounds

About Chlorinated Hydrocarbons (CHC)

Chlorinated Hydrocarbons (CHC) or organochloride compounds are a set of organic compounds where one or more hydrogen elements is replaced with a chlorine element. The most common CHCs found on contaminated groundwater remediation projects in North America are Trichloroethylene (TCE) and Tetrachloroethylene (PCE). TCE and PCE are both used as cleaning solvents and have been used in the dry cleaning industry for many years contributing to many contaminated sites. Other CHCs found in groundwater projects can include: vinyl chloride, dichloroethylene (DCE), dichloroethane (DCA), dichloromethane (DCM) trichloroethane (TCA), tetrachloroethane, chlorobenzene (MCB), dichlorobenzene (DCB), trichlorobenzene (TCB), and Chloroform (TCM).

newterra would typically deploy the following technologies when treating CHC compounds in a remediation project.

DNAPL Oil Water Separators

CHCs are typically heavier than water which make them more difficult to treat on groundwater contaminated projects. When CHC compounds are present in high enough concentration to form free product they will form Denser than water Non Aqueous Phase Liquid (DNAPL). Removing the free phase liquids as a first step is critical to optimizing system performance and reducing overall treatment costs. **newterra** DNAPL Oil Water Separators provide an economical method of removing free product with specific gravities less than 0.9 and greater than 1.1. In applications where free product is mixed with solids separators will be designed to operate without packing media to prevent O&M challenges.

Activated Carbon Sacrificial Media

newterra offers a wide range of coconut shell and coal based activated carbon medias to target specific compounds and maximize media performance in custom designed hydrocarbon treatment plants. We can offer interchangeable lead, lag and parallel filter configurations with manual and automated valve trees depending on the project needs.

Air Strippers

newterra will integrate QED low profile air strippers into chlorinated hydrocarbon treatment systems when targeting removal of volatile compounds with high henrys law coefficients. This approach is typically applied when treating Chlorinated hydrocarbons and enables the compounds to be stripped out of the water into an air stream. The main advantage gained from air stripping is a cost advantage of treating the compounds in an air stream rather than a water stream. In some areas of North America regulators allow easily degradable compounds to be discharged to the environment without vapor treatment. When vapor treatment is required vapor phase activated carbon is **newterra's** most common tool for removing these volatile organic compounds from the air stream off the air stripper. While liquid phase carbon may remove compounds at a range of 2% by weight, the vapour phase carbon can remove these same compounds at a range of 20% by weight which can drastically reduce carbon consumption on remediation projects.

