

C³

Case Study:

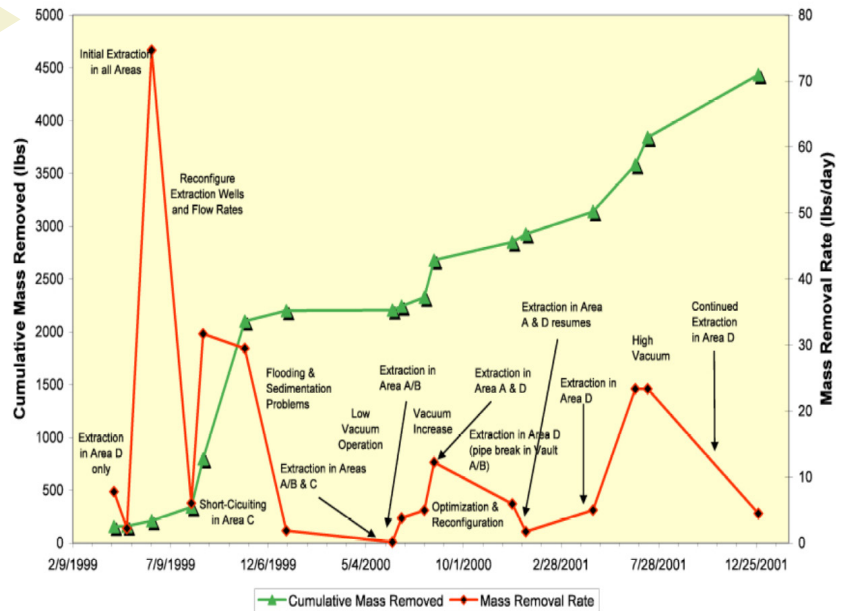
Soil Vapor Extraction and Treatment of Halogenated Compounds and CFCs

California | 2002

Site History

The project site is located in Northern California and was leased and operated as a chemical storage and solvent recovery operation from late 1972 through April 1993. During an earlier period, the site may also have been used as a waste transfer station. Previous investigations indicate that soil and groundwater at the site, and groundwater down-gradient (westward) from the site, have been impacted by halogenated solvents and chlorofluorocarbons (CFCs).

Mass Removal in Extracted Soil Vapor



Site Geology

Based on soil boring logs, shallow site stratigraphy consists of the following units: •Dry fill material from the surface to approximately 2 to 4 feet below ground surface (bgs). •Moist or damp silty clay from the base of the overlying fill materials to depths of 11 or 12 feet bgs. This unit is interpreted to be the top of the Newark Aquiclude. •Saturated, primarily silty sand from 11 or 12 feet bgs down to depths of 18 to 30 feet bgs. This unit is of relatively high permeability. •Clay from approximately 30 feet bgs down to depths of 43 to 49 feet bgs. This clay unit forms the lower portion of the Newark Aquiclude. •Saturated sands, silty sands and silts of the Newark Aquifer are first encountered at depths ranging from 43 to 49 feet bgs. •The relatively high permeability unit (approximately from 11 or 12 feet bgs down to depths of 18 to 30 feet bgs) is referred to as the Shallow Groundwater Zone. In borings penetrating the Shallow Groundwater Zone, flowing groundwater is typically first encountered at approximately 11 feet bgs. •Static water levels generally equilibrate at depths of 5 and 7 feet bgs, and vary seasonally by a few feet.

Project Overview

Location: Northern CA	System Flow: 100 SCFM
Duration: 30 months	Contaminants: CFC-12 CFC-113
Vapor Extraction Wells: 16	PCE TCE MC 1, 1, 1 TCA
Contaminant Mass Recovery: 4,860 lbs	1, 1 DCA 1, 1 DCE cis-1, 2 DCE