

Project 90081

RESULTS TO DATE: Field work was completed in March 2004 to collect soil borings from 4 background locations. Samples are presently being analyzed for VOC concentrations, grain size mineralogy and microbial populations. Results are not yet available from these activities. Analysis is ongoing to characterize a DNAPL sample collected from the M-area settling basin. Previous results suggested that the interfacial tension of this sample was very low and the acidity high. Recent observations and analysis have lead to a revised hypothesis regarding the role of inorganic constituents that partition into the DNAPL as it was disposed with many other waste products. A white precipitate can form when the volume of DNAPL is high relative to the volume of water. This precipitate accumulates at the DNAPL-water interface causing the low interfacial tension. As far as I know, this is the first research available that identifies the important role of inorganic constituents in a DNAPL on interfaial behavior of DNAPLs in the subsurface.