



Storm Drain 5 South (SD-5S) Groundwater Plume

Where did this groundwater plume come from?

The source of the SD-5S groundwater plume is the Storm Drain 5 site on the MMR, which historically received runoff of chlorinated cleaning solvents and fuel constituents from various military and industrial activities on the base.

The primary contaminant in the SD-5S plume is trichloroethene (TCE). This chemical is a volatile organic compound (VOC), that was typically used as a cleaning solvent. The maximum concentration for TCE is 38.9 parts per billion (ppb). The state and federal maximum contaminant level (MCL) for TCE is 5 ppb. The MCL (as listed on the plume map) is a standard established by the U.S. Environmental Protection Agency (EPA), under the Safe Drinking Water Act. It represents an acceptable level of a chemical that ensures the safety of a public drinking water supply. The Massachusetts Department of Environmental Protection (DEP) has established safe drinking water standards as well. If there are differences between federal and state levels for a given chemical, the more stringent (lower) value is applied.

What is the current status of the source area?

Excavation of contaminated soils at the SD-5N source area began in April 2001. Almost 6,500 tons of soil were removed and taken off-site for proper disposal at a state-permitted landfill. In August 2002, a soil vapor extraction (SVE) system was installed at the site. It was turned off in March 2003. For more information, please see the SD-5N plume fact sheet.

What is the current status of the plume?

Treatment System: In June 1999, AFCEE began operation of two recirculating wells in the main SD-5S plume body. Recirculating wells treat groundwater at the well site instead of pumping to a separate treatment plant. In January 2000, AFCEE installed an extraction well to capture additional contamination. In December 2000, AFCEE, with concurrence from EPA and the DEP turned off one recirculating well because the groundwater in the vicinity was below MCLs. By April 2003, the second recirculating well was shutdown.

In February 2004, AFCEE, with concurrence from EPA and the DEP, shutdown the extraction well. At the time of system shutdown, over 600 million gallons of groundwater had been treated, removing almost 11.6 pounds of contaminants.

A Proposed Plan will be issued for public comment in Fall 2005 to finalize plans for the SD-5N and SD-5S plume.

Monitoring Program: Even though the treatment system for this plume has been shutdown, AFCEE continues to monitor the SD-5S plume area by sampling monitoring wells. AFCEE also samples surface water from Johns Pond.

Past studies have shown that SD-5S discharges to Johns Pond. However, no plume contaminants have been detected above the drinking water standard in Johns Pond surface water. According to the latest report, the Massachusetts Department of Public Health deemed Johns Pond safe for swimming, wading, and boating.