Fort Ord Cleanup Fact Sheet: Sites 2/12: Groundwater Cleanup

History:

Sites 2/12 is the location of one of four groundwater contamination areas on the former Fort Ord. The groundwater contamination at Sites 2/12 is associated with the improper disposal of solvents from former automotive and other repair facilities. The groundwater contamination is limited to the Upper 180-Foot Aquifer and moves westward from Site 12 toward the ocean.

As part of the Superfund cleanup of Fort Ord, the Army, with regulatory oversight by federal and state regulatory agencies (listed at the end of this fact sheet), implemented a program to clean up the contaminated groundwater and stop further contamination of the aquifer. This program included removal of the contaminated soil from Site 12 and the 1999 construction of the groundwater treatment facility (photo above) which extracts, cleans the groundwater of contamination, and reinjects the clean water back into the aquifer at Site 2 and at Site 12.

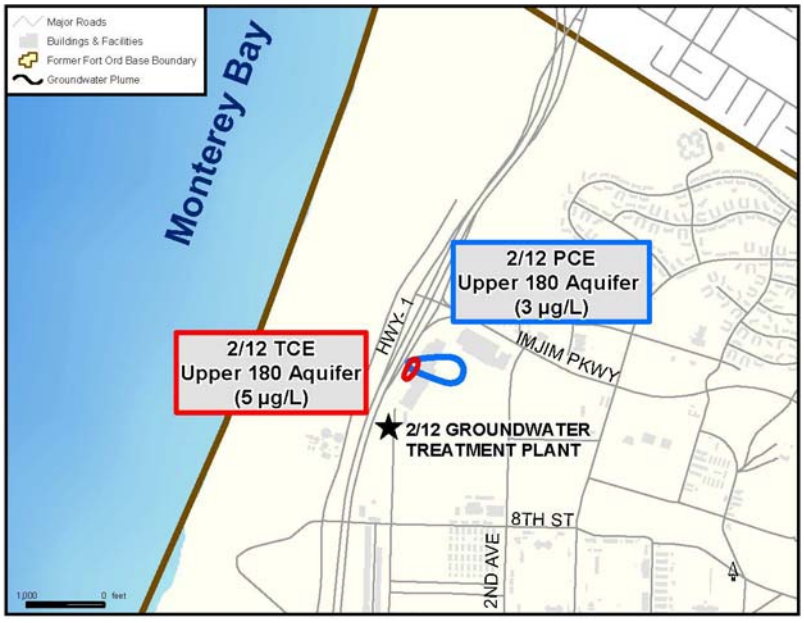
What Chemicals Have Been Found in the Groundwater Related to Sites 2/12

Eight chemicals of concern (COCs) were identified during the Army's investigation of groundwater: chloroform, 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene (DCE), 1,3-dichloropropene (total), tetrachloroethene (PCE), vinyl chloride, and trichloroethene (TCE). COCs are chemicals present in soil or groundwater at concentrations that could detrimentally affect human health or the environment. trichloroethene (TCE) and tetrachloroethene (PCE) are the primary COCs because they are detected at the highest concentrations across the greatest area of impacted groundwater and are the most toxic.

A soil gas investigation was recently conducted at Sites 2/12 by the Army. Soil gas, also known as soil vapor, is being evaluated for contamination. The Remedial Investigation / Feasibility Study Addendum ,which includes additional details about this investigation, will be available later in 2014.

How Far Does the Groundwater Contamination Extend?

The map at the right outlines the current footprints for areas of TCE contamination (outlined in red) and PCE contamination (outlined in blue) at Sites 2/12 based on the September 2013 sampling results. Since April 1999, the 2/12 groundwater treatment system has pumped and treated over 1.7 billion gallons of water. Over 460 pounds of contaminants have also been removed since 1999. All clean water is returned to the ground.



What is the Army Doing to Clean the Water?

A treatment plant (see photo on page 1) removes contamination from the groundwater. Groundwater is pumped from wells placed in the areas of contamination, and contamination chemicals are removed using carbon filtration and an air stripper. After startup, system modifications were immediately implemented due to the presence of vinyl chloride at concentrations greater than anticipated. System modification included construction of a pipeline to transport and combine treated water from Operable Unit 2 groundwater treatment plant with treated water from Site 12 before the cleaned water is returned to the ground.

The groundwater treatment system will continue to operate until the impacted groundwater meets cleanup standards which are less than or equal to federal and state safe drinking water standards. This process will likely continue for several more years, based on current data. The treatment system is tested each week to confirm that it is operating properly. The Sites 2/12 treatment system is also periodically adjusted to maximize the efficiency of the groundwater cleanup. The Army samples groundwater wells every three months to assess the water quality in the aquifers and uses the data to determine if further changes to the system operations are needed.

Data indicate that very low concentrations of TCE have been found in three drinking water supply wells on the former Fort Ord. Although these wells are located far from Sites 2/12 and are associated with a different groundwater plume, concentrations of TCE in the supply wells are significantly below the Federal and State Safe Drinking Water Act maximum contaminant levels. Water pumped from the Marina Coast Water District supply wells on Fort Ord consistently meets the drinking water safety standards established by the U.S. Environmental Protection Agency and the California Department of Public Health. For details, see the Groundwater Cleanup Fact Sheet.

What Happens Next:

The Army will continue to monitor Sites 2/12 groundwater every three months and will continue to operate the Treatment System until the aquifer cleanup goals are met. For further assurance the groundwater cleanup remains successful, Monterey County has adopted an ordinance prohibiting new water supply wells in the areas of groundwater contamination including those at the Sites 2/12 area until cleanup is completed. The pumping of additional wells could have an effect on the efficiency of the on-going groundwater treatment, so new wells are prohibited.

To Learn More About the Fort Ord Groundwater Cleanup:

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