



News Release

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Groundwater cleanup begins in Depot community

MEMPHIS, TENNESSEE—The Memphis Depot Base Realignment and Closure Cleanup Team (BCT) and its environmental contractors will begin treating groundwater in the Depot community this fall.

The approved cleanup remedy for groundwater, as outlined in the Dunn Field Record of Decision (ROD), involves three components: using Zero-Valent Iron (ZVI) placed in the ground west of Dunn Field as a Permeable Reactive Barrier (PRB); injecting ZVI in areas where high concentrations of compounds are present; and treating lower-concentration areas using monitored natural attenuation (MNA).

As the groundwater flows through the ZVI, the concentrations of compounds, such as the solvents found in the groundwater beneath Dunn Field, are reduced through chemical reactions with the iron.

Based on the data collected during the Depot's offsite monitoring program, the environmental team has confirmed the boundary of affected groundwater that has moved off-site from Dunn Field and determined where solvent concentrations are the highest. The BCT recommended the early implementation of ZVI injection at two unoccupied sites adjacent to Dunn Field to treat the groundwater before the PRB is installed. The installation of the PRB is scheduled to begin in early in 2007.

"A PRB is formed by injecting ZVI into vertical fractures created in the aquifer. Repeated injections placed in linear pattern produce a wall of porous iron particles in the path of the natural groundwater flow. Groundwater in a large area is treated over time as the groundwater flows through the PRB," said Tom Holmes, Program Manager with the Depot's environmental contractor, MACTEC Environmental and Consulting. ZVI injection is a different approach that uses an iron powder injected directly into the aquifer to provide quick treatment of groundwater in those areas where high concentrations are present. The iron does not form a barrier but is spread throughout the aquifer in the injection area to form a treatment zone."

To monitor the effectiveness of the ZVI injection, seven monitoring wells will be installed beginning October 4, 2004, at the two sites:

- On vacant property owned by the City of Memphis and Memphis/Shelby County along Rozelle Street, near the corner of Menager Road;
- On the Memphis Light, Gas, and Water substation property on Menager Road.

In addition to the monitoring wells, ZVI injection borings will be installed in a roughly linear pattern at both sites to depths of 85 to 100 feet below ground surface. The ZVI injections will begin in October 2004. The Depot anticipates drilling no more than five days at each site to install the monitoring wells. The ZVI injection should take about 30 days.

The Depot's environmental team will be giving a presentation on the early implementation of ZVI injection at the Restoration Advisory Board (RAB) meeting on October 21, 2004. The meeting begins at 6 p.m. at the South Memphis Senior Citizens Center, 1620 Marjorie Street. The public is welcome to attend.

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