



Massachusetts Fort Devens

Facility and Location

Fort Devens currently consists of five land parcels totaling 5,300 acres in north central Massachusetts. The largest parcel is the 4,893 acre South Post Tactical Training Area. Three drinking water wells on South Post are operated as a small, non-community public water system. There are several groundwater monitoring wells on South Post associated with ongoing Defense Environmental Restoration Program investigations and long term monitoring requirements. Surface water and groundwater sites have been sampled prior to Fiscal Year 2007 for a variety of contaminants, to include perchlorate.

The other parcels are connected to a large municipal water system operated by a private entity. Fort Devens is a customer of that system. The wells that supply this system were formerly Army owned and operated until 1991 when the Base Closure and Realignment Commission (BRAC) closed Fort Devens as an Active Army installation and transferred them to civilian control.

All environmental groundwater monitoring responsibilities at the South Post were transferred from BRAC to the active garrison component at Fort Devens in 2011. All current groundwater impacts are associated with the ongoing active range activities at the South Post.

Media Sampled and Findings

Drinking Water — In 2011, two of three samples detected perchlorate at 0.07 and 0.12 ppb.

Groundwater — In 2011, two of two samples detected perchlorate at 47.5 and 89.2 ppb. In 2010, two of two samples detected perchlorate at 2.98 and 114 ppb. In 2009, four of four samples detected perchlorate from 1.5 to 305 ppb. In 2008, two of two samples detected perchlorate at 1.83 and 5.59 ppb. Prior to 2007, annual sampling for perchlorate was performed within the Solid Propellant Information Agency (SPIA) Program for two consecutive years at 12 monitoring wells, one well point, and one drinking water well. Collected for the first time in 2004, perchlorate was generally not detected or was detected at estimated concentrations that were below the laboratory's detection limit. The detection of 3.1 ppb in area of concern (AOC) 26 well 26M-92-04X (July 28, 2006) was the first exceedance of the current state maximum contaminant level (MCL) standard of 2 ppb. Perchlorate samples were collected solely from the SPIA perimeter wells in 2005 and detections were below 2 ppb. AOC well 26M-92-04X and well point 26WP-06-01 (installed in 2006) have been the only SPIA wells that have continued to be sampled for perchlorate since 2006.

Appropriate Actions

Groundwater samples were above the EPA and DoD Preliminary Remediation Goal of 15 ppb. Fort Devens is addressing perchlorate levels through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) long term monitoring requirements within an active South Post Impact Area (SPIA) program which is being transitioned to the active installation under the Operational Range Assessment Program. SPIA groundwater monitoring



will continue in order to ensure that groundwater contaminants do not migrate beyond the operational area boundary. The elevated groundwater perchlorate concentrations detected at well point 26WP-06-01 likely originated from ongoing training activities at the Zulu 1 and Zulu 2 ranges. The ordnance use logs covering the period of January 2004 through July of 2009 reveal over 1,800 hand grenades and several Claymore mines detonated at the Zulu 2 Range (closest to 26WP-06-01) during this period. In addition, over 60,000 explosive items (detonation cord, blasting caps, dynamite, fuses, etc.) were detonated at the Zulu 1 range. Soil samples collected from the two grids located over the Zulu 2 grenade training range reveal levels near 1 ppb. Perchlorate detected at the Zulu 1 range was below the Massachusetts standard of 2 ppb.

No evidence of perchlorate was detected at the location of the spent rocket casing discovered near well point 26WP-06-01. The lack of elevated perchlorate in the soil at AOC 26 and the groundwater travel time beneath the site indicate that the source of the elevated perchlorate detected likely originated from range activities conducted two to three years ago. Groundwater here was monitored on four separate occasions beginning in May 2009 with concentrations decreasing from 305 ppb to 114 ppb by September. The decreasing contamination trend and fairly rapid groundwater flow velocity supports the assertion that there is no ongoing perchlorate source emanating from the Zulu 1 or Zulu 2 training ranges. In addition, the lack of perchlorate detections in groundwater sampled downgradient of 26WP-06-01 indicates the perchlorate plume dissipates beyond the well point. The groundwater flow direction would confine any potential perchlorate plume to within the area. Newly installed well points 26WP-09-01 and 26WP-09-02 are located downgradient of well point 26WP-06-01 and should intercept elevated perchlorate concentrations if groundwater was moving away from AOC 26. Results from these well points have confirmed that contaminants have not impacted this area. Based on these results, a new sentry well (26M-10-09X) was installed and sampled in the fall of 2010. Results indicate levels just below the reporting limit. The Record of Decision calls for continued groundwater monitoring in areas where concentrations have decreased over time. Sampling will continue at these locations annually unless conditions warrant otherwise.

Data from all monitoring wells associated with the South Post Impact Area sampled prior to Fiscal Year 2007 confirmed no contaminants had migrated beyond the boundaries of the active operational range areas.