



New Mexico Environment Department

PROTECTING OUR ENVIRONMENT, PRESERVING THE ENCHANTMENT

Kirtland Air Force Base Aviation Fuel Leak Cleanup Project Newsletter July 29, 2018

Engineered Cleanup Technologies Achieve Major Milestones

The groundwater extraction and treatment system was installed by the Air Force three years ago to collapse ethylene dibromide (EDB) contamination plume and pull it back towards the Air Force Base. EDB is a toxic additive that was used in aviation gasoline. Recent monitoring data strongly suggest that the EDB plume footprint and contaminant concentrations are decreasing in the extraction area. More than 445 million gallons of groundwater have been extracted and purified. “The fact that we are seeing evidence of plume collapse three years into this project is consistent with modeling simulations that were run during the design of this treatment system,” said Environment Secretary Butch Tongate. “It will take many more years of extraction and treatment to fully collapse the plume, but these test results provide the strongest evidence yet that we are on the right path.”

The Air Force also has been conducting a field experiment stimulating natural groundwater bacteria to biodegrade the EDB. The bacteria were fed lactate and nutrients to encourage bacterial activity. Initial results show biodegradation of EDB. “These tests confirm that the aquifer contains bacteria that are capable of biodegrading EDB,” said NMED Chief Scientist Dennis McQuillan. “Based on this success, we will conduct additional bio-stimulation experiments, and it may not be necessary to inject specialized bacteria into the aquifer.”

