

Vega Alta Public Supply Wells

Puerto Rico

EPA ID#: PRD980763775

EPA REGION 2

Congressional District(s): 01

Vega Alta

Vega Alta

NPL LISTING HISTORY

Final Date: 9/1/1984

Site Description

The Vega Alta Public Supply Wells site covers 50 acres and consists of approximately 15 active and six inactive wells. The wells currently supply about 11 million gallons of water each day to Vega Alta and the surrounding residential areas. The Puerto Rico Aqueduct and Sewer Authority (PRASA) is responsible for operating and maintaining the public water supply system. The U.S. Geological Survey sampled the wells in 1983 and found volatile organic compounds (VOCs) in the Ponderosa well. Subsequently, this well and the GE 1 well were shut down due to contamination. Then PRASA constructed the Bajura 3 well to eliminate the water supply shortage. In 1989, GE 2 and Bajura 3 wells were shut down by PRASA because of non-compliance with drinking water standards. The Maguayo wells were constructed by PRASA to compensate for the shortage. In 1984, an air stripper was installed at the Ponderosa well by PRASA, which removed contaminants by forcing a stream of air through the water. This process continued until 1985, when technical problems with the air stripper arose. Approximately 27,600 people live near the site.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions

Threat and Contaminants

Groundwater, and soils are contaminated with various VOCs. People who accidentally ingest or come into direct contact with the contaminants in the affected wells may be at risk.

Cleanup Approach

This site is being addressed in two long-term remedial phases focusing on cleanup of the entire site and groundwater cleanup. Under an Unilateral Administrative Order, the PRPs placed in operation a groundwater treatment system at the Ponderosa well in July 1994 with a treatment rate of 600 gallons/min.

The OU-II ROD was signed in September 1997; it selected soil vapor extraction to address the soil contamination within the PRIDCO industrial park.

Response Action Status

Groundwater: In 1987, the EPA selected a remedy to clean up the groundwater by: (1) installing individual treatment systems for PRASA wells GE 1, GE 2, and Bajura 3 and discharging the treated effluent into the PRASA distribution system; (2) treating the Ponderosa well by air stripping and discharging the treated effluent into Honda Creek; (3) shutting down the Monterrey 2 and G & M private wells and hooking up the affected residents to the PRASA distribution system; and (4) conducting an investigation to fully assess and evaluate the source of the contamination. In 1989, EPA modified the 1987 remedy at the urging of the Environmental Quality Board to discharge the treated water from all the wells to Honda Creek. Some of the parties potentially responsible for the site contamination designed the technical specifications for the well treatment systems which was approved in March 1992. Construction of the treatment system at the Ponderosa Well was completed on December 22, 1993, and groundwater treatment commenced in July 1994. Connection of the G&M private user to the PRASA distribution system was completed on October 28, 1993. The Bajura 3, GE 1 and GE 2 PRASA wells are no longer in appropriate locations to capture the plume due to a change in the plume configuration resulting from a change in groundwater pumping conditions. On September 29, 1994 an Explanation of Significant Difference was issued by EPA that modified the selected remedy by requiring the installation of an extraction well in a new location, in substitution for Bajura 3, GE1 and GE2 known as Well A. New developments and information caused EPA to reconsider the idea of placing Well A at the leading downgradient edge of the plume of contamination. It was initially determined that a preferable location for this well would instead be near the center of the plume and as such this well was known as Centroid Well (CAW). On December 5, 1997 an Explanation of Significant Differences was issued

by EPA that modified the selected remedy by requiring a well or a series of wells which will be known as the Source area Well(s). The SAW(s) will be located within close proximity to the source of contamination which has been determined to be within the PRIDCO Industrial Park. Final Remedial Design Work Plan submitted to EPA on November 25, 1998. Preliminary Remedial Design Report submitted to EPA on February 17, 1999. EPA's approval of the Preliminary Remedial Design Report granted and a Final Remedial Design Report submitted to EPA on January 13, 2000. Five year Review Report signed on April 19, 1999. The Final Remedial Design Report was approved on June 19, 2000. The Remedial Action Work Plan was submitted to EPA on September 29, 2000 and approved on December 2000. Initiation of field activities for the installation of the groundwater treatment system was initiated in April 2001. Construction of the Source Area Wells (SAW) system was completed in December 2001.

The Source Area groundwater extraction and treatment system has been operating continuously, with the exception of regional power outages or necessary system maintenance/repairs, since its startup in December 2002. Second Five Year Review Report signed on August 18, 2005.

Soil: On September 30, 1997 a Record of Decision was signed to select a remedial alternative for the cleanup of the remaining source of contamination in order to avoid further migration of contaminants to the groundwater. A Soil Vapor Extraction System was selected as the remedial alternative for the cleanup of the contaminated soil. Unilateral Administrative Order issued on September 30, 1998. The Remedial Design Work Plan was submitted to EPA on December 18, 1998. EPA's comments provided to PRPs and a revised work plan received by EPA on September 15, 1999. EPA's approval to proceed with the Preliminary Remedial Design report granted to GE on February 15, 2000. EPA's approval of Preliminary Remedial Design Report (30%) granted on September 13, 2000. The Final Remedial Design Report (100 %) was submitted to EPA on September 29, 2000 and approved by on December 2000. Construction of the Soil Vapor Extraction System (SVE) was completed in December 2001.

The SVE System was brought on-line full time in December 2002 and is comprised of 10 nested wells in Area A and 6 nested wells in Area B/C. The wells are screened at various intervals (shallow clay, deep clay, weathered limestone), at lateral locations designated as Area A, B and C, depending upon the location of contamination.

Site Facts: . General Electric, Motorola, Harman Automotive, The West Company, and the Puerto Rico Industrial Development Corporation were issued a Unilateral Order by the EPA in 1989 to clean up groundwater contamination at the site. This Administrative Order was amended in December 5, 1997.

A second Unilateral Administrative Order was issued by EPA in August 1990 to General Electric, Motorola, Harman Automotive, The West Company, and Puerto Rico Industrial Development Company to investigate the contamination source and groundwater plume that migrated from the treatment area. Another Unilateral Administrative Order was issued on September 30, 1998 for the implementation of OU-II ROD.

Cleanup Progress

After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Vega Alta site while long-term groundwater cleanup activities were designed and are currently in progress. Approximately 20,000,000 gallons of water are treated each month. As of January 2002, approximately 1.4 billions gallons of contaminated groundwater have been treated and discharged to Honda Creek.

Site Repositories

USEPA, Reg II, Caribbean Env. Protection Div., Centro Europa Building, 1492 Ponce de Leon Avenue, Suite 417, Santurce, P.R. 00907-4127