

Bellevue Gasoline Contamination
Robinson Road and US Highway 441
Bellevue, Florida
County: Marion
District: Central
Site Lead: Bureau of Waste Cleanup
Approved for Cleanup: October 30, 1986
Delisted: November 15, 1994
HWC # 040

Site Description and History

The Bellevue Gasoline Contamination site is located at the intersection of Robinson Road and US Highway 441 in Bellevue in Section 36, Township 16S, Range 22E at 29° 03' 33.8436" N, 82° 03' 15.6705" W. In August 1982, the City of Bellevue discovered that gasoline had contaminated its water supply. Subsequent investigation revealed that an underground storage tank at McGregor's Union 76 Station, located 600 feet from the city well field leaked 10,000 gallons of unleaded gasoline between October 1979 and March 1980.

Threat

The City of Bellevue had to abandon its well field due to petroleum contamination of the drinking water aquifer. Subsequent remediation of both soil and groundwater was completed in December 1993.

Response Strategy and Status

The City of Bellevue has secured an alternative water supply. Using a HUD grant, the city drilled a new well and purchased an existing agricultural well. Included in the work was 24,000 feet of water main that connected the wells to the city distribution lines. City residents used bottled water for the nine months required to complete construction.

An initial investigation by the EPA did not conclusively determine the location of the source of contamination for enforcement action. A follow-up Florida Department of Environmental Regulation (FDER, now DEP) investigation identified McGregor's Union 76 as the source. The responsible parties were unwilling to address the groundwater problem, and Court action was begun in October 1986. A mediation meeting between the responsible parties and the FDER was held in October 1989. A tentative agreement was reached and signed in March 1990. In June 1990, the responsible parties (station owner K.W. Baxley, and Union Oil of California) paid \$700,000 to the State for remediation of the site.

Environmental Science and Engineering was assigned to conduct a Contamination Assessment in 1984. A total of 13 monitor wells were installed to determine the extent of groundwater contamination and the Contamination Assessment was completed in May 1987.

This site was the location for a demonstration project of a new cleanup technology. The system, owned by Terra Vac, Inc., is a vacuum extraction process which removes gasoline vapors and free product from the vadose zone. By removing the gasoline from the vadose zone, the groundwater below will not be continuously exposed to gasoline. The Bellevue-Union 76 location was chosen because of the approximately 50 feet of soil overlying the Floridan Aquifer. Terra Vac submitted a final report on the vacuum extraction study in August 1987. The report concluded that the majority of the contaminants had been extracted from the soils.

The site was also the location for an EPA innovative technology study entitled *Field Evaluation of Vacuum Extraction, Corrective Action Technology at a Florida LUST Site*. Work began in September 1987, and a final report was submitted in December 1987.

A design to recover and treat contaminated groundwater in the Floridan Aquifer was completed in November 1988. In October 1989, the contract was awarded to the lowest bidder, Anderson Columbia Company, Inc. (ACCI). In November 1989, the contract was executed and contract time commenced. Construction in the field began in February 1990, and the initial construction was completed in May 1990. Due to heavy concentrations of dissolved solids, a pre-treatment system was determined to be necessary to avoid fouling of the treatment system. In December 1990, the pretreatment system was installed, and system operation and maintenance began. Due to the low system flow rate and a work suspension issue, an amendment was issued to extend the cost and time of the construction/OEM contract with ACCI. In September 1991, FDER directed CDM to terminate GW cleanup activities, since a sinkhole assessment was being conducted. In February 1992, the contract time for ACCI had expired. FDER tasked Camp Dresser & McKee (CDM) to continue O&M at the Bellevue site. FDER staff began reviewing historical water quality data and site lithology to determine future action needed at the site. In October 1992, CDM conducted soil sampling at the Union 76 Station in response to a tank leak discovered by the DEP district. Soil contamination was verified and CDM was recommended for soil and groundwater sampling.

Laboratory analysis revealed that contamination was limited to soils only. In January 1993, the groundwater treatment system was removed when further removal of groundwater contamination could not be achieved. In February 1993, CDM conducted a contamination assessment at the Union 76 Station. This assessment included soil, groundwater and soil vapor analysis for total hydrocarbons. Results from the soil vapor analysis were determined on site and used to locate the vapor plume. This data allowed, CDM to install an operational SVE system within two weeks of sampling.

In November 1993, total hydrocarbon levels approached asymptotic levels and DEP requested CDM to perform another soil vapor analysis. Results of this analysis concluded that the SVE system had removed soil hydrocarbon vapors to below detection limits. O&M of the system was discontinued in December 1993 and the system was then dismantled.

One year of Quarterly groundwater sampling and soil vapor analysis indicated that the site remediation was complete. The DEP delisted the site from the State list of active hazardous waste sites in November 1994.