

Jethro Boyd Property
3421 Moncrief Road
Jacksonville, Florida
County: Duval
District: Northeast
Site Lead: Waste Cleanup Program
Approved for Cleanup: June 20, 2000
ERIC ID # 3910

Site Description and History

The Jethro Boyd Property is located in the vicinity of the intersection of Moncrief Road and 25th Street in Jacksonville, Duval County in Township 02S, Range 26E, Section 02 at 30° 21' 34.0681" N, 81° 40' 31.1029" W. The site is located in a heavily developed, urban area that includes other commercial and residential land use. A large building located on the property formerly housed two drycleaning operations, Horne's Cleaners and Shirley's Cleaners, which operated from 1976 through 1978 and 1979 through 1984, respectively. The entire building is currently vacant.

Threat

Shallow groundwater contamination extends offsite. Contaminated groundwater is a potential health threat to local residents through direct contact and use of private surficial aquifer wells. Additionally, contaminated groundwater is a potential threat to the City of Jacksonville, Fairfax Street Wellfield. This wellfield includes eight municipal supply wells and is located between 0.5 and 1.0 miles west of the site. The well field uses the underlying Floridan Aquifer as its water source.

Response Strategy and Status (July 2021)

In 1988, elevated concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) were detected in the groundwater at a gas station across Moncrief Road. In February 1990, it was determined that the E&J Wash-O-Mart facility was a possible source for the chlorinated solvent contamination. In May 1996, Ecology & Environment, Inc. (E&E) was contracted by the DEP to determine the source of the chlorinated solvent contamination. A passive soil gas survey, conducted along with confirmatory sampling, identified the Jethro Boyd property (Horne's/Shirley's Cleaners) and Jackson's Garage as potential contaminant sources. Jackson's Garage is located southeast of the site. Elevated concentrations of chlorinated solvents were detected at the Jethro Boyd property and Jackson's Garage. Unsaturated soil samples collected from potential source areas at both the Jethro Boyd property and Jackson's Garage exhibited PCE contamination. Based upon water level elevation data, it was determined that shallow zone groundwater flow is primarily to the northwest and west toward the Amoco/Baron No. 7 property.

The Jethro Boyd site was placed on the State-Action List in June 2000. In February 2001, E&E began soil and groundwater assessment activities at the site to complete delineation of both the onsite and offsite soil and groundwater contamination. Assessment activities were completed in December 2001, and a Site Assessment Report (SAR) was submitted to the DEP in January 2002. In February 2003, E&E submitted a Remedial Alternatives Evaluation (RAE) to the DEP detailing possible remedial alternatives for the site.

In March 2005, E&E conducted additional assessment activities, which indicated the groundwater contaminant plume continued to decrease in size. A Remedial Alternatives Evaluation (RAE) was completed resulting in a biostimulation pilot study. The biostimulation pilot study began in February 2008 and was completed in August 2008. E&E concluded the pilot study was successful and recommended approval of a full-scale remedial action plan to implement biostimulation as the selected remedy. The DEP approved biostimulation as the selected remedy.

Groundwater analytical data demonstrated that the contaminant plume continued to shrink. Based on the additional groundwater analytical data, E&E submitted a revised Remedial Action Plan in May 2012. Implementation of the Revised RAP began in November 2012 and included injection of a carbon source amendment to stimulate anaerobic reductive dechlorination of the contaminants within the identified source area. The implementation was completed in December 2012.

The site was purchased for redevelopment in April 2013 by the Northwest Jacksonville Community Development Corporation (NJCDC). The NJCDC expressed the desire to rehabilitate the existing structure resulting in the loss of up to five source area injection wells.

Based on post injection groundwater sampling results, biostimulation was successful in some, but not all parts of the contaminant source area. Four groundwater samples were collected and analyzed for Gene-Trac DHC and VC reductase in order to determine if the proper strain of DHC bacteria is present throughout the site. The January 2014 groundwater sampling event indicated that groundwater conditions had returned to close to background. The results of the Gene-Trac DHC and VC reductase sampling indicated that DHC was not present, resulting in the observed incomplete degradation of PCE and its daughter products. The report concluded the biostimulation event was successful and that additional injections should be performed in conjunction with bioaugmentation.

Additional soil and groundwater assessment was completed by Geosyntec Consultants between October 2014 and April 2015. The data collected by Geosyntec combined with historical data has not indicated that there is a residual source of chlorinated solvents beyond the site boundaries. However, soil data indicates the potential presence of a low concentration source along the south side of the site.

The interim source removal to address soil above the cleanup target level for leachability onsite has been completed. Following the completion of the removal event, a RAE was submitted to the FDEP to address contaminated groundwaters. Following review of the RAE the Department requested additional site assessment to facilitate future potential remedial action of the groundwater at the site.

Schedule

The Department has been informed that the property owner is planning to begin an extensive development project and will work with the property owner to protect or abandon wells in the site monitoring well network.