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FACT SHEET REGARDING UPDATE ON ENVIRONMENTAL ACTIONS IN AZALEA PARK
NEIGHBORHOOD NTC ORLANDO FL
9/1/2013
NAVFAC SOUTHEAST



Update on Environmental Actions In Azalea Park Neighborhood

Naval Training Center Herndon Annex Orlando, Florida



This fact sheet was prepared to inform interested citizens about the former Naval Training Center (NTC) Orlando environmental program. Fact sheets are distributed as needed to update the community on clean up progress. Additional information may be obtained by calling David Criswell, Navy BRAC Environmental Coordinator at (843) 743-2130.

Environmental Studies in the Azalea Park Neighborhood

Environmental studies at the Herndon Annex of NTC Orlando and in the Azalea Park Neighborhood to the east (see Figure 1) have identified benzene and other chemicals in groundwater deep below the ground surface. Groundwater contaminants have migrated east of the Herndon Annex site under nearby residential properties. Studies completed to date do not show any health concerns associated with the contamination and the Navy is continuing to monitor the groundwater to further ensure the health and safety of the community.

This fact sheet has been prepared to share the results of these environmental studies, briefly summarize the history of investigations, share information about upcoming activities, and invites you to contact us with any questions or concerns.

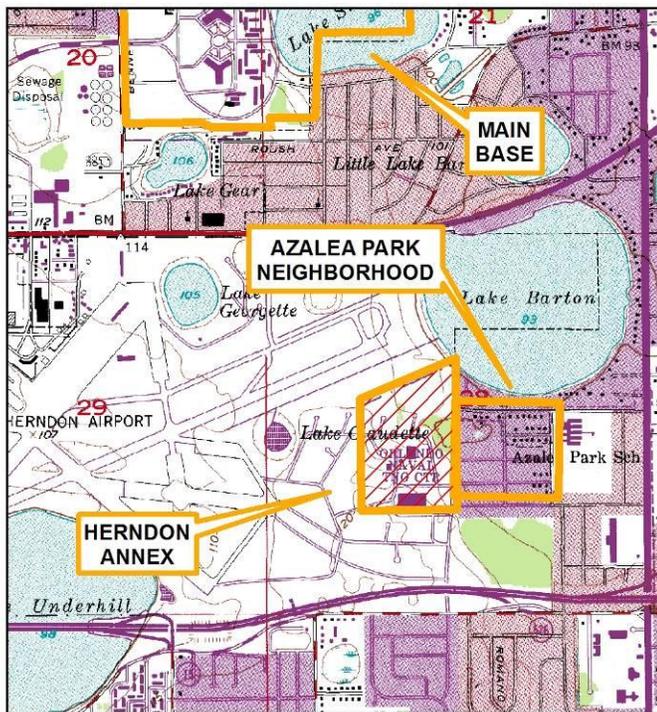


Figure 1. Location Map

Location of Cleanup

The areas being studied (Herndon Annex and the Azalea Park Neighborhood) are shown on Figures 1 and 2.

History of the Site

The U.S. Army Air Corps acquired the undeveloped Herndon Annex property in 1943 and used it for aviation-

related activities including runways, hangars, and airplane parking pads. In 1947, the U.S. Air Force assumed command of the facilities and the property became known as the Orlando Air Force Base. Portions of Herndon Annex were used as sanitary landfill areas by the Air Force in the 1950s and early 1960s. In 1968, the Air Force ceased operations and the property was operated by the U.S. Navy. The Navy constructed several buildings at the Herndon Annex for various uses, including warehouse space, offices, and laboratories and the property became part of the NTC Orlando.

In 1993 NTC Orlando was listed for closure under the Defense Base Closure and Realignment Act (BRAC). As part of base closure activities, environmental studies were performed to determine potential impacts from past site operations.

The site screening investigation, performed from 1994 through 1998, included geophysical surveys to define the limits of two landfill areas, soil sampling, and groundwater sampling. Benzene was found in groundwater at concentrations exceeding the State of Florida Groundwater Cleanup Target Level (GCTL) of 1 microgram per liter ($\mu\text{g/L}$) in the southeastern corner of the Herndon Annex and in the Azalea Park neighborhood at depths ranging from 40 to 62 feet below ground surface (bgs). The groundwater table averages about 6 to 12 feet bgs in the vicinity of the groundwater contaminant plume, and no contaminants have been identified in shallow groundwater (less than 40 feet bgs).

What are Benzene, PCE, and TCE?

Benzene is a colorless liquid that smells like gasoline. It evaporates at room temperature and burns easily. Benzene occurs naturally in coal tar and petroleum. It is also found in commonly used products like paints, inks, gasoline and other motor fuels, and insecticides.

Tetrachloroethene (PCE) is a manufactured chemical used for dry cleaning and metal degreasing.

Trichloroethene (TCE) is a nonflammable, colorless liquid used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, and spot removers.

Additional investigations completed in 2005, revealed a deeper area of groundwater contamination, including tetrachloroethene (PCE) and trichloroethene (TCE) along

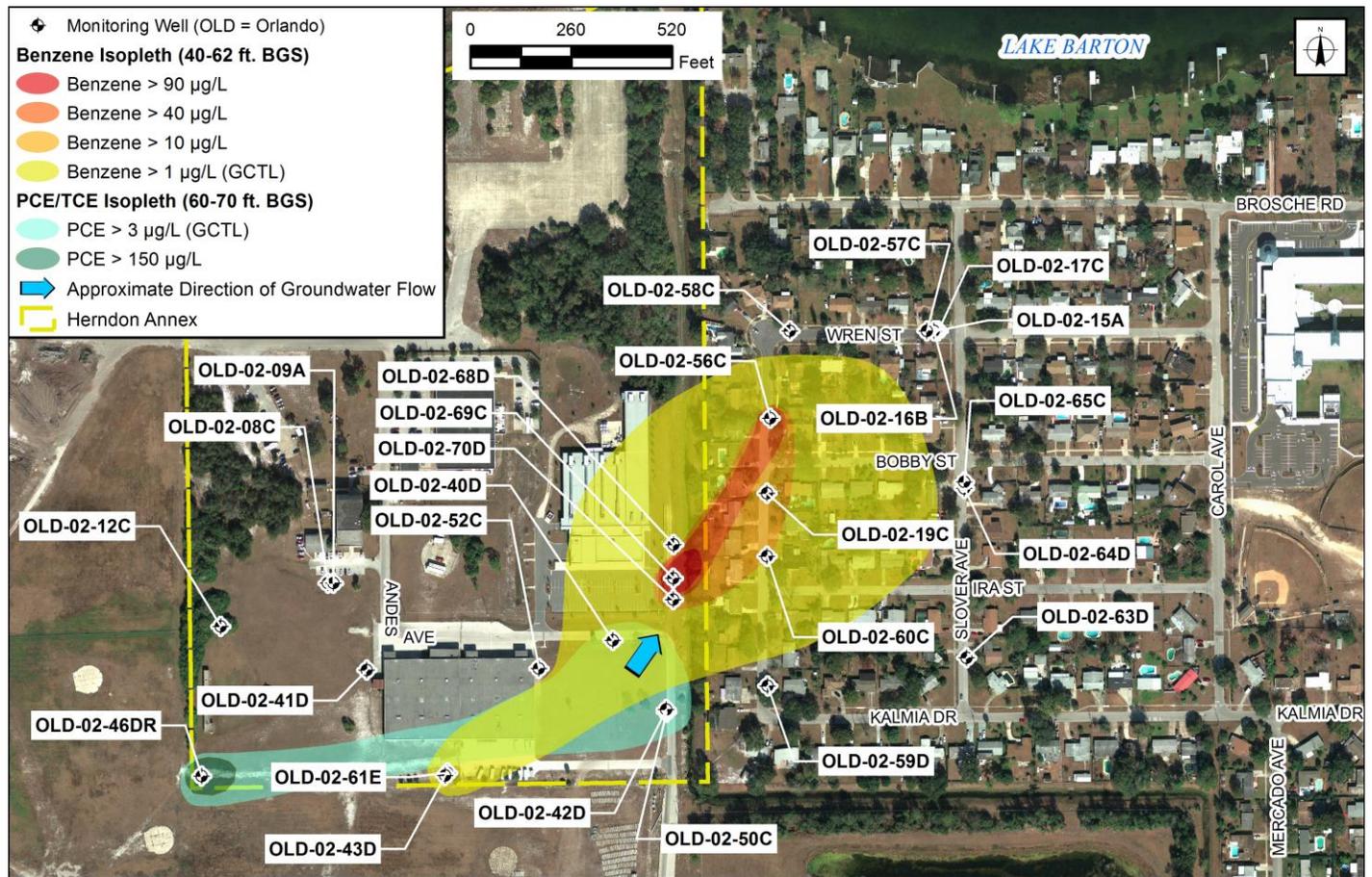


Figure 2. Estimated extent of benzene and PCE/TCE in groundwater (December 2012)

the southern portion of the Herndon Annex at depths of approximately 60 to 70 feet bgs. The PCE/TCE plume has not been detected at concentrations exceeding the GCTL of 3 $\mu\text{g/L}$ in the groundwater beneath the neighborhood. Investigations concluded that the benzene and PCE/TCE groundwater contamination is the product of a former removed source.

Cleanup Technologies

The Navy began a quarterly groundwater sampling program in 1999. In 2001, the Navy initiated a treatability study in an effort to speed up cleanup. Oxygen Release Compound (ORC), a trade name for magnesium peroxide, was injected into the ground at a depth of approximately 55 feet. This effort was designed to stimulate microorganisms in groundwater to naturally break down benzene; however this treatment had little effect.

A PHOSter[®] remediation system was installed on Navy property in 2004 to enhance the natural degradation (also called natural attenuation) of contaminants in groundwater. Natural degradation is a process by which some contaminants, including benzene, PCE, and TCE, biologically break down to form harmless chemicals. PHOSter[®] treatment involves injection of oxygen, nitrate, and phosphorous into the groundwater. A full scale treatment system ran until 2008. The system performed as designed and contaminants decreased overall. The PHOSter[®] system was dismantled in 2008 in order to construct the Police Training Facility at the site. With

concurrency from FDEP, the quarterly groundwater monitoring program required during system operation was reduced to a semi-annual frequency in 2010.

Current Conditions

Currently, the benzene plume is more than 40 feet below ground surface in the neighborhood, and appears to be stable with decreasing tendencies. The deeper PCE/TCE plume has not been detected in the neighborhood. The area of groundwater contamination is located below a clean surficial aquifer which limits the potential for vapor intrusion. Residents in the Azalea Park neighborhood have been advised not to use groundwater for irrigation or potable uses.

What's Next?

The semi-annual groundwater monitoring program is expected to continue for several more years. The Navy will continue to evaluate the benzene and PCE/TCE plumes to confirm that the natural degradation process is working.

For More Information

If you have questions about the Navy's action in the Azalea Park Neighborhood or the environmental program at the former NTC, Orlando in general, please contact David Criswell Navy BRAC Environmental Coordinator at (843) 743-2130. Reports on the work at the NTC can be reviewed at the Orange County Public Library, Orlando Branch (4th floor), 101 East Central Boulevard, Orlando, Florida 32801.