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FACT SHEET ENVIRONMENTAL ACTIONS AT OPERABLE UNIT 3 (OU 3) NTC ORLANDO
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NAVFAC SOUTHERN



Update on Environmental Actions at Area C

Naval Training Center (NTC) Orlando, Florida



This fact sheet was prepared to inform interested citizens about the ongoing environmental program at the former Naval Training Center (NTC) Orlando, Florida. Fact sheets are distributed periodically to keep the community updated on our overall clean up progress. Additional information may be obtained by calling Art Sanford at (843) 743-2135.

Environmental Studies at Area C of the Former NTC

Environmental studies and cleanup actions are ongoing at Area C of the former Naval Training Center (NTC) Orlando (see Figure 1). These studies have identified volatile organic compounds (VOCs) in soil and groundwater (water below the ground surface). The VOC detected at Area C is tetrachloroethene (also known as PCE). PCE is a common industrial chemical used nationwide in dry cleaning and degreasing operations. While the studies completed to date do not show any immediate health concerns associated with this site, the Navy is completing additional studies to further ensure the long term protection of human health and the environment.

This fact sheet has been prepared to share the results of these environmental studies, share information about upcoming activities, and provide you with a point-of-contact for any additional questions or concerns.



Figure 1. Location Map

Location of Clean up

The area being studied is shown on Figure 1. A dry cleaning facility, operated by the former NTC Orlando, was located at Area C south of the Audubon Place City Condominiums along Plaza Terrace Drive. Lake Druid is located west of the former dry cleaning facility.

History of the Site

Building 1100 was constructed in 1943 and used as the base laundry. Dry cleaning began in approximately 1958, and the common dry cleaning chemical PCE was used there for many years. As part of base closure, an environmental investigation was performed at the property in 1994. PCE contamination associated with historical dry cleaning operations at the site was found at that time.

Initial investigations identified contamination migrating westward with the flow of the uppermost groundwater zone (surficial aquifer), reaching as far as Lake Druid. The primary contaminant found was PCE. PCE naturally degrades in the ground over time, which produces other chlorinated solvents as byproducts.

From 1997 to 2000, the Navy installed and operated a recirculation well system between the old laundry facility and the lake to intercept the VOCs and their byproducts. In 2001, the efficiency of these wells was upgraded and they were incorporated into a groundwater extraction and treatment system to protect the lake; this system continues to operate. Several other treatment technologies have also been used to help clean up the site and additional investigations have been performed.

In 2004, Building 1100 was demolished allowing direct access to the location where solvents were originally spilled. When soil and groundwater were tested beneath the old dry cleaning building, additional contamination was found. The results of these investigations prompted further studies. In 2006, soil and groundwater were tested to greater depths than previously investigated to provide information about the subsurface geology and the depth of the contamination.

What is tetrachloroethene (PCE)?

PCE is a nonflammable, colorless liquid with a sweet odor. It is classified as a volatile organic compound (or VOC). VOCs are chemicals that evaporate easily. Because of its solvent characteristics, PCE is used as an ingredient in consumer products such as spot removers and fabric finishers, and is also used in dry cleaning and degreasing operations. People who work with PCE have the greatest chance of exposure to it. It can be released to air and water by evaporation or emissions from industrial and dry cleaning plants, and from landfills. PCE is not very soluble in water and is denser than water (sinks).

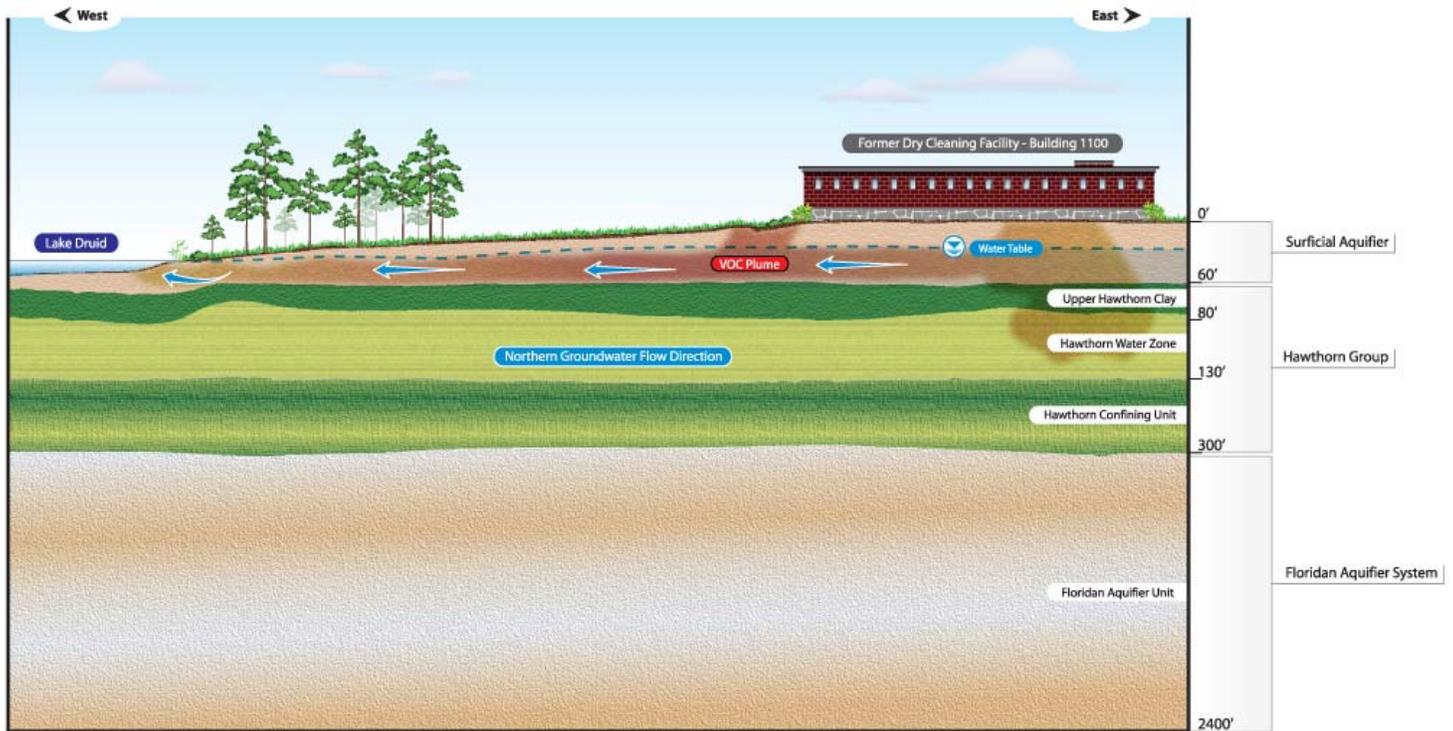


Figure 2. Water-bearing Zones and Subsurface Soil

Studies identified three distinct zones of groundwater. The uppermost is the shallow surficial aquifer approximately five to 60 feet below ground surface. Below this zone is a layer of silty clay, underlain by a second zone of water from 80 to 130 feet below ground surface. A layer of very thick (more than 150 feet), dense clay separates the top two zones of groundwater from the much deeper Floridan aquifer below. The Floridan aquifer, which begins more than 300 feet below the ground surface, is a source of drinking water. The depth of groundwater contamination at Area C has not been found greater than 135 feet below ground surface.

Because PCE has a higher density than water, some of the PCE migrated more than 60 feet down to the layer of silty clay soil. Eventually the PCE penetrated through this layer and entered the Hawthorn water zone beneath it (approximately 80 feet below ground surface). Figure 2 shows the zones of water and subsurface soil at the site.

Unlike the groundwater flow in the shallow surficial aquifer that flows west toward Lake Druid, the Hawthorn zone of groundwater has carried contaminants northward, in the direction of its flow. Groundwater flow in this zone is very slow – less than 9 feet per year. Contaminants have been detected at a depth of approximately 110 feet below ground in Hawthorn groundwater sampled from monitoring wells located near the northern property boundary of Area C. It is suspected that groundwater contamination extends north beyond the former Navy property, but to what extent is not known at this time. The groundwater contaminants migrating northward are approximately 110 feet below ground and the affected Hawthorn groundwater is not used as a drinking water supply.

What's Next

The Navy is currently planning an additional investigation to further define the area of contaminated Hawthorn groundwater. This will require installing additional wells including off-base locations north of the Area C property (see Figure 1). More soil testing on the former Navy property (the soil beneath the old laundry facility) is also planned. When soil testing is complete, any localized areas of contaminated soil will be addressed. The Navy will continue to provide updates to the community as these investigations progress.

For More Information...

If you have questions about the Navy's action at Area C or on the environmental program at the former Naval Training Center, Orlando in general, please contact:

Navy Point of Contact

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Detailed reports on the work at the former Naval Training Center can also be reviewed at the Orange County Public Library, Orlando Branch (2nd floor), 101 East Central Boulevard, Orlando, Florida 32801 (407) 425-4694.