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FACT SHEET REGARDING STUDY AREA 36 NTC ORLANDO FL
3/1/2010
NTC ORLANDO



Naval Training Center Orlando Florida



Study Area 36 (SA 36)

This fact sheet was developed to inform interested citizens about the Naval Training Center (NTC), Orlando environmental program. Fact sheets will be distributed periodically to keep the community informed. Additional copies of these fact sheets can be obtained by contacting Art Sanford at (843) 743-2135.

NTC Orlando's Environmental Program

Environmental studies and cleanup actions are currently underway at the former NTC, Orlando as part of the Department of Defense's Installation Restoration (IR) Program. Through this program, areas of known or suspected contamination from past practices and operations are being identified, evaluated, and, if necessary, cleaned up.

Study Area 36 Location and History

One area where work is being performed is SA 36. The property is located in the southwest corner of the former main base at NTC Orlando as shown on Figure 1.

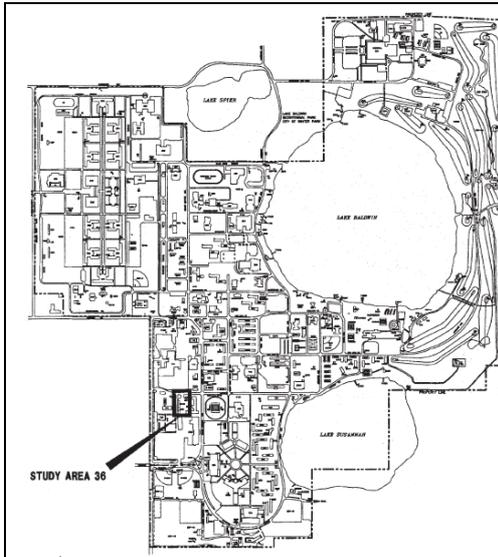


Figure 1: NTC Orlando Base Map with Study Area 36 highlighted

Study Area 36 previously contained Buildings 2121 and 2122 and the western half of the public works yard. The areas to the east and south of Building 2121 were used to store a variety of items including pipes, fire hydrants, bricks, and hazardous materials such as waste oil drums, transformers, and batteries. Building 2122 was the paint shop. Paints and paint thinner were stored inside the building. A flammable materials storage cabinet was located at the north end of the building.

In 2002, the Navy transferred the property to the City of Orlando as part of the Baldwin Park housing development. Residences and a small park have been constructed Study Area 36.

Site Investigation and Monitoring History

An initial site screening investigation was conducted by Harding Lawson Associates (HLA) in 1997. Metals, total recoverable petroleum hydrocarbons (TRPH), and polynuclear aromatic hydrocarbons (PAHs) were detected in soil samples exceeding screening criteria. The investigation also detected volatile organic compound (VOC) concentrations in groundwater samples above screening criteria.

Subsequently, additional investigations in 1998 were performed to evaluate and characterize the VOC contamination at the site. Concentrations of trichloroethene (TCE) and tetrachloroethene (PCE) were detected in the groundwater that exceeded Florida's Groundwater Cleanup Target Levels (GCTLs). In addition, arsenic, barium, mercury, TRPH, and benzo(a)pyrene were found in surface soil at concentrations exceeding the regulatory screening criteria. This surface soil was removed from the site.

The results of the groundwater investigation at the site indicated that TCE and PCE concentrations in groundwater exceeded the GCTL in an area of approximately 5,000 square feet. Chlorinated solvent detections exceeded screening criteria to a depth of 35 feet below land surface. As a result of the TCE/PCE contamination detected at the site, the Orlando Partnering Team (OPT) requested an additional site investigation in order to determine a remedial action for the TCE/PCE contamination.

Following this investigation, the OPT requested the implementation of an interim remedial action (IRA) at the site consisting of enhanced biodegradation using vegetable oil. Microorganisms exist in the oxygen-poor, or anaerobic, environment beneath SA 36. The injection of vegetable oil provides organic carbon, an energy source, for these microorganisms. In the process of digesting the vegetable oil, the microorganisms help

break down the TCE. This is an example of enhanced bioremediation, in which the natural processes that break down TCE are enhanced by adding energy sources for the microorganisms in the soil, in this case, vegetable oil. Two injections of vegetable oil were performed in January and November of 2001.

Due to the Baldwin Park property development, the existing monitoring wells and injection points were properly abandoned by the developer's environmental consulting firm in December 2001. The monitoring wells were re-installed in March and April 2002 in their current locations. The groundwater monitoring activities resumed after the well re-installation. A groundwater use restriction is in place to protect human health, and will remain in place until cleanup standards are met.

What's Next?

The data collected to date indicate that the presence of vegetable oil in the aquifer at the site has created a reducing environment. The vegetable oil injections completed in November 2001 have enhanced the biodegradation process by ensuring a continued source of organic carbon. Based on the sampling data obtained to date and its associated trends, groundwater monitoring will continue on a semi-annual basis.

What are TCE and PCE?

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.

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

More information about these contaminants can be found at the following website:

<http://www.atsdr.cdc.gov/>

For More Information

The public is invited to submit any questions or comments on the remedial action described in this fact sheet. Comments should be directed to Art Sanford at (843) 743-2135. Reports on the work conducted at SA 36 can be reviewed at the Orange County Public Library, Orlando Branch (4th Floor), 101 East Central Boulevard, Orlando, Florida 32801.

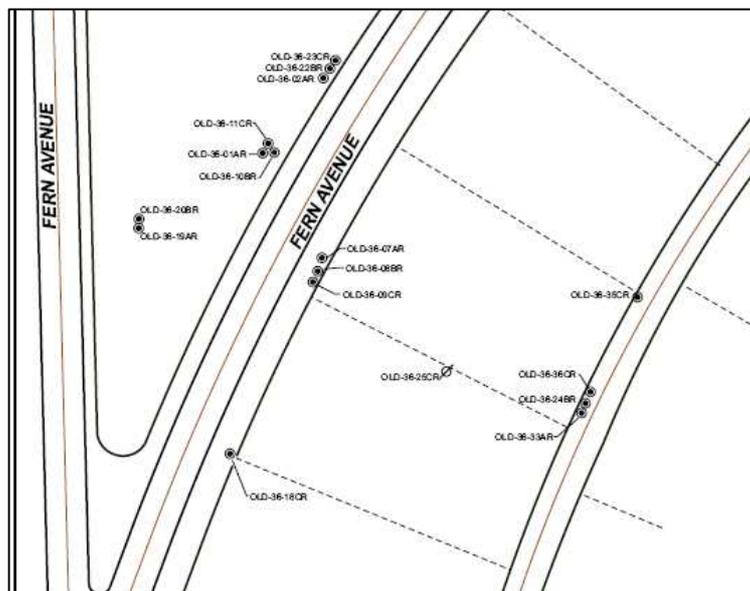


Figure 2: Study Area 36 Site Map indicating locations of new wells