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# FACT SHEET ENVIRONMENTAL ACTIONS AT OPERABLE UNIT 3 (OU 3) NTC ORLANDO FL

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# Update on Environmental Actions at Operable Unit 3

## Naval Training Center
## Orlando, Florida

*This fact sheet was prepared to inform interested citizens about the former Naval Training Center (NTC), Orlando environmental program. Fact sheets will be distributed as needed to keep the community updated on program developments. Additional copies of these fact sheets can be obtained by calling Barbara Nwokike at (843) 820-5566.*

### 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.

### Operable Unit 3 Location and History

One area where work is being performed is NTC's Main Base (Figure 1), of which Operable Unit 3 is a part. Operable Unit 3 consists of two separate areas, *Study Area 8 and Study Area 9*. SA 8 and SA 9 lie about 600 feet apart on the southeast shore of Lake Baldwin, as shown on Figure 1. SA 8 is the former greenskeeper's storage area and SA 9 is the former pesticide handling and storage area for the golf course that used to be on the property. Much of the property at the Main Base is currently under residential development, the buildings that once were located at SA 8 and SA 9 have been demolished.

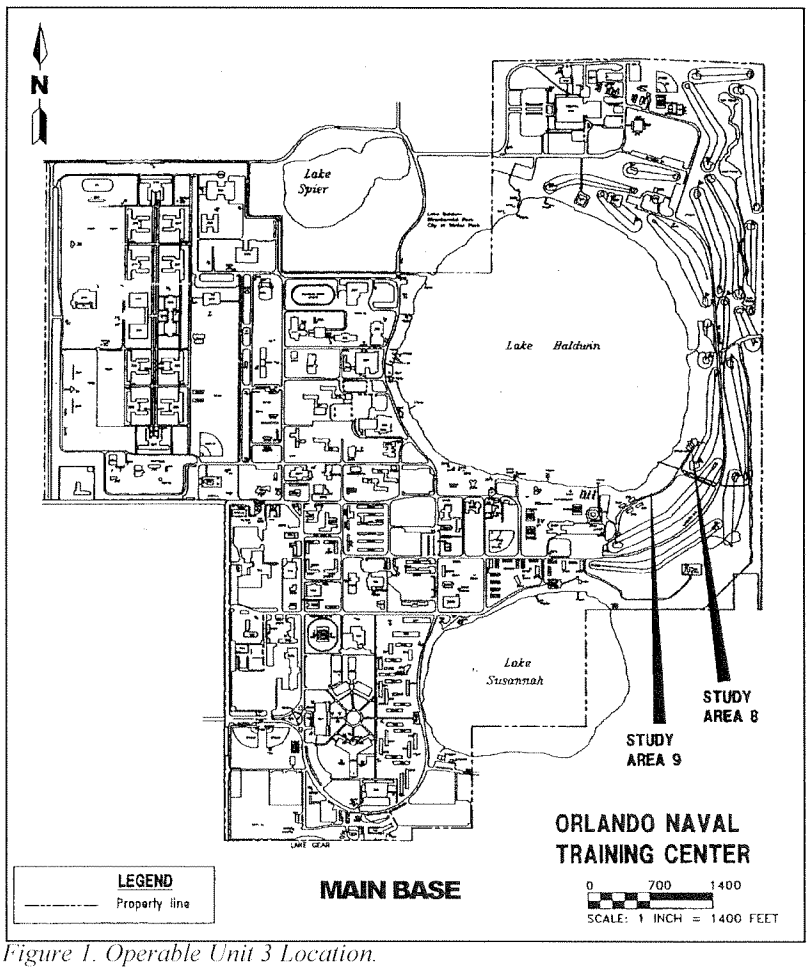


*Figure 1. Operable Unit 3 Location.*

The environmental investigations and studies conducted at OU 3 to evaluate the soil and groundwater conditions from past chemical handling, storage, and disposal practices found several pesticide-related chemicals, particularly arsenic, were present in the shallow soil and groundwater. The most likely cause for the contamination was determined to be spillage or disposal of pesticides and herbicides on the ground at SA 8 and SA 9. The groundwater contamination is attributed to the leaching of contaminants from the soil. The contaminated soil was excavated and removed.

### Groundwater Investigation Results

Despite the removal of contaminated soil, the groundwater remains contaminated with arsenic and other chemicals at levels that pose unacceptable cancer and noncancer risks to human health. Arsenic is the most prevalent contaminant with 13 of the 32 wells at OU 3 containing arsenic above the current Federal Maximum Contaminant Level (MCL) and the current Florida Groundwater Cleanup Target Level (GCTL) of 50 parts per billion (ppb). The U.S. Environmental Protection Agency (EPA) has approved a change to the regulation to reduce the public health risks from arsenic in drinking water. The new regulation will revise the current drinking water standard for arsenic from 50 ppb to 10 ppb effective in January 2006. In the samples collected in July 2001, the arsenic exceedances at OU 3 of the new 10 ppb standard ranged from 25 to 2,230 ppb.

## Groundwater Cleanup

The primary chemical of concern at SA 9 is arsenic. The possibility exists for arsenic to contaminate Lake Baldwin. In April 2002, the Navy plans to install a permeable adsorptive barrier (PAB) between the contaminated groundwater and Lake Baldwin to treat the contaminated groundwater. The PAB is a trench approximately 100 feet in length and 25 feet in depth that will be filled with a mixture of coarse grain sand and an adsorptive material called activated alumina. Activated alumina is a highly porous, granular form of aluminum oxide with an adsorptive capacity for moisture and liquids. As the contaminated groundwater naturally flows through the ground toward Lake Baldwin the activated alumina will adsorb the arsenic from the groundwater. Should this technology prove successful, the PAB can be extended to treat the remaining contaminated groundwater. New wells will be installed after the PAB is constructed to monitor the success of the PAB. The monitoring will continue for one year and will be completed in the summer of 2003.

Groundwater samples were collected from direct push borings to better locate the area of contaminated groundwater to determine where to construct the PAB. The proposed location for construction of the PAB and the area of contaminated groundwater are shown on Figure 2.

## What is Arsenic?

*Arsenic is a chemical that occurs naturally in the earth's crust. When rocks, minerals, and soil erode, they release arsenic into water supplies. When people either drink this water or eat animals and plants that drink it, they are exposed to arsenic. For most people in the U.S., eating and drinking are the most common ways that people are exposed to arsenic, although it can also come from industrial sources. Arsenic is commonly found in insecticides and weed killer. The insecticides and weed killers used at the former golf course most likely contained arsenic. Studies have linked long-term exposure of arsenic in drinking water to a variety of cancers in humans. To protect human health, an EPA standard limits the amount of arsenic in drinking water. In January 2001, EPA decreased the standard from 50 parts per billion (ppb), to 10 ppb, effective January 2006.*

## For More Information...

If you have questions about the Navy's action at Study Area 9 or on the environmental program at the former NTC, Orlando in general, please contact Barbara Nwokike at (843) 820-5566. Reports on the work at the NTC can be reviewed at the following location:

**Orange County Public Library**
**Orlando Branch** (2nd floor)
101 East Central Boulevard
Orlando, Florida 32801
(407) 425-4694

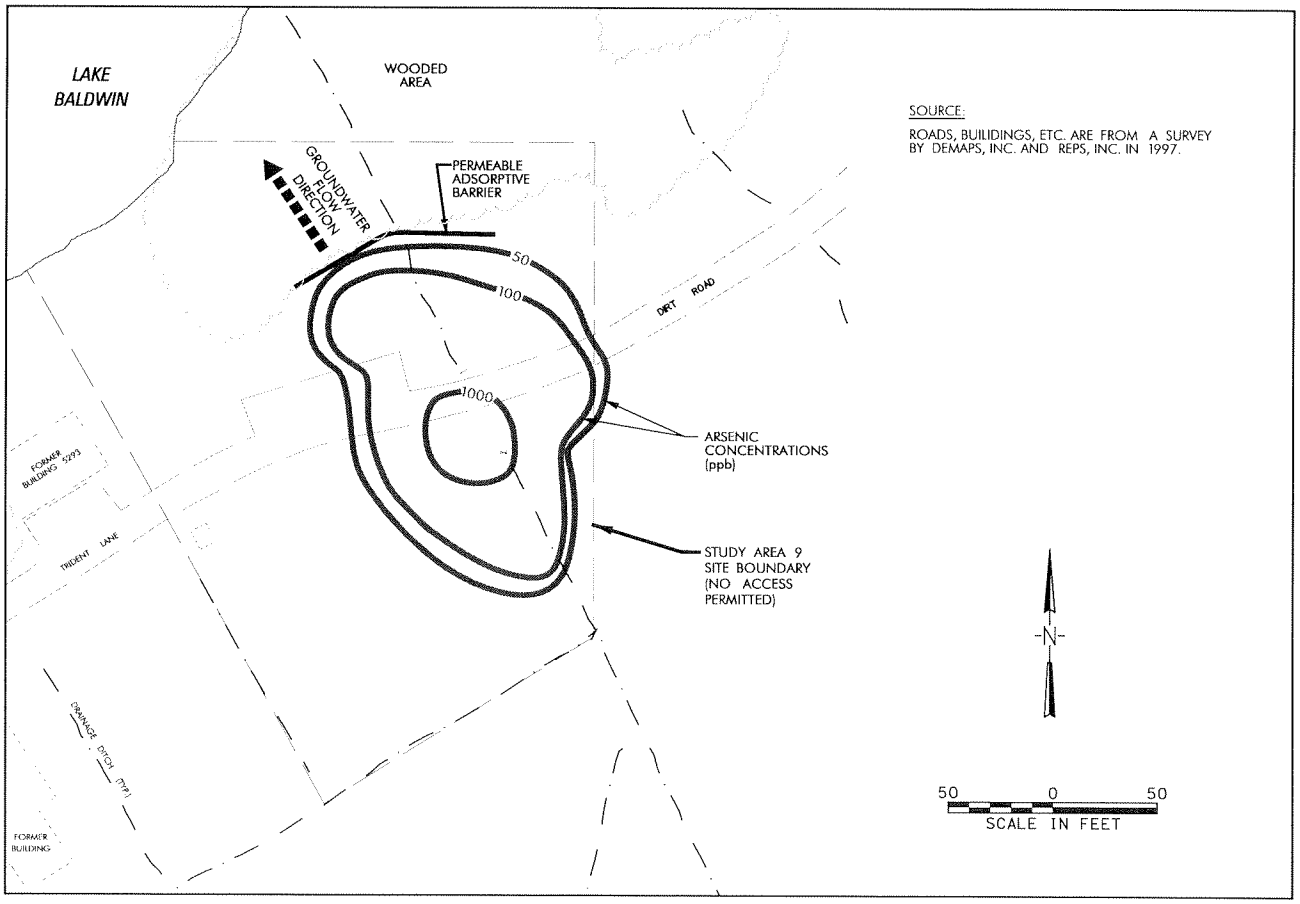


*Figure 2. Treatability Study Layout at Study Area 9.*