

N65928.AR.001019
NTC ORLANDO
5090.3a

FINAL DECISION DOCUMENT FOR STUDY AREA 52 NTC ORLANDO FL
4/1/2000
TETRA TECH

DECISION DOCUMENT

STUDY AREA 52

**NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

Contract No. N62467-94-D-0888

Contract Task Order 0024

Prepared by:

**Tetra Tech NUS, Inc.
Foster Plaza 7
661 Anderson Drive
Pittsburgh, PA 15220-2745**

Prepared for:

**Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29419**

April 2000

05101.02.0002
00518

0400-A050

April 25, 2000

Ms. Barbara Nwokike (Code 1873) (IRP RPM)
P.O. Box 190010
2155 Eagle Drive
North Charleston, SC 29419-9010

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 0024

Subject: Study Area Decision Documents
Naval Training Center, Orlando, Florida

Dear Ms. Nwokike:

Enclosed are the final Decision Documents for Study Areas 2, 21, 25, and 52. The documents include changes received from the Orlando Partnering Team at the March meeting. Please note the signature block (in each of the documents) to be signed and dated by Wayne Hansel.

If you have any questions regarding the documents, please contact me at (865) 220-4730.

Sincerely,

Steven B. McCoy, P.E.
Task Order Manager

SBM:ckf

Enclosures

c: Mr. Rick Allen, Harding Lawson
Mr. Michael J. Campbell, Tetra Tech NUS
Mr. David Grabka, FDEP
Mr. Wayne Hansel, SOUTHDIV (2 copies)
Mr. Allan Jenkins, Tetra Tech NUS
Mr. Mark Perry/File, Tetra Tech NUS (unbound)
Ms. Nancy Rodriguez, USEPA Region 4
Mr. Steve Tsangaris, CH2M Hill
Ms. Debbie Wroblewski, Tetra Tech NUS (cover letter only)
File/Edb

Introduction

A site screening investigation has been completed for Study Area (SA) 52 at the Navy's McCoy Annex property. The results of the investigation and the actions selected by the Orlando Partnering Team (OPT) to clean up environmental contamination associated with the site are described in this Final Decision. The OPT, which was assembled to address environmental issues at the Naval Training Center (NTC), Orlando, consists of representatives from the Navy and its contractors, the Florida Department of Environmental Protection (FDEP), and the U.S. Environmental Protection Agency (USEPA). The OPT determined that SA 52 shall be limited to nonresidential use.

Site Background

McCoy Annex is one of four facilities that comprised the NTC, Orlando (Figure 1). The other three facilities are the Main Base, Area C, and Herndon Annex. McCoy Annex is located approximately 8 miles south of the Main Base and immediately west of the Orlando International Airport. The Beeline Expressway lies north of the Annex, and most development near the expressway consists of motels, restaurants, and other businesses related to air travel. The area west of McCoy Annex is zoned for industrial use but is sparsely developed. Undeveloped woodlands lie south of the Annex.

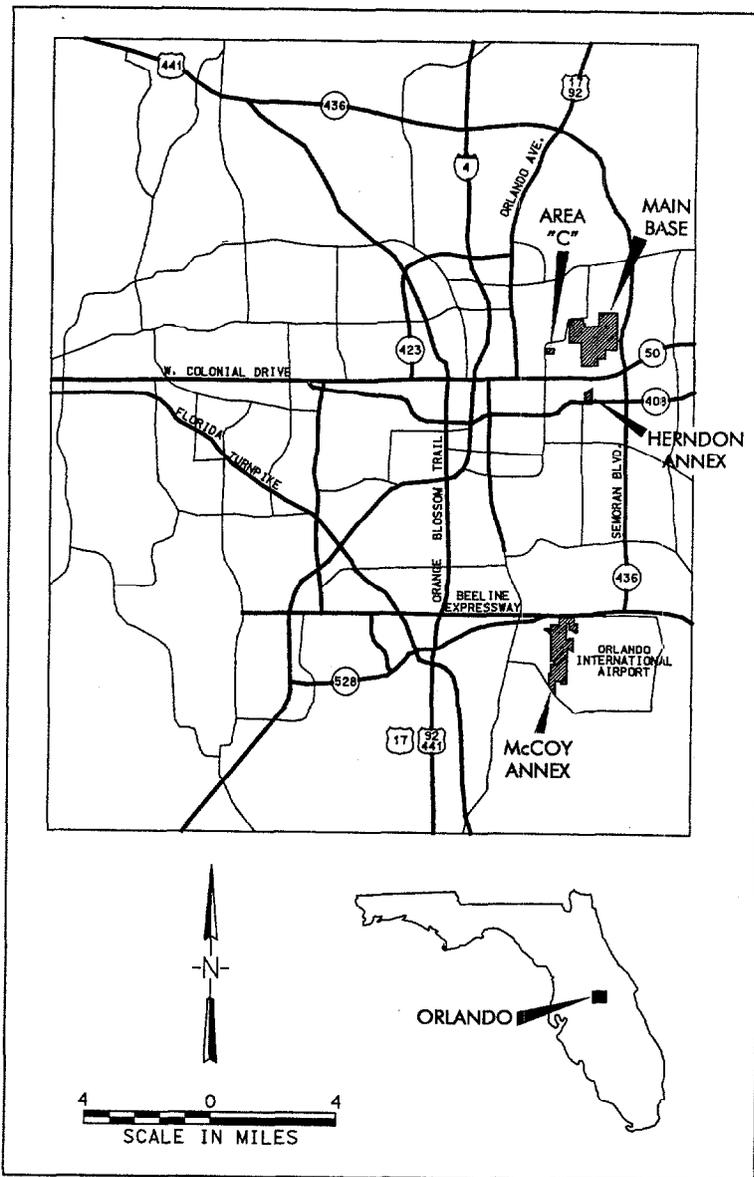


Figure 1. McCoy Annex Location

Beginning in 1940, the facilities were known as the Orlando Army Air Base and were operated under the command of the U.S. Army Air Corps. Between 1947 and 1968, the U.S. Air Force commanded the facilities at Orlando and the facilities were renamed the Orlando Air Force Base. McCoy Annex consisted of undeveloped wetlands until the Army Air Corps opened a new airfield on the property in 1943. The airfield was deactivated at the end of World War II and reactivated as Pinecastle Air Force Base during the Korean Conflict. The base was renamed McCoy Air Force Base until its closure in 1973. NTC acquired the property at that time and changed its name to McCoy Annex. The City of Orlando retained title to the runways and large hangers formerly used by the Air Force and incorporated them into the Orlando International Airport. NTC, Orlando was closed in April 1999 as part of the Defense Base Realignment and Closure Act of 1990.

SA 52 lies in the west-central part of the McCoy Annex at the NTC (Figure 2). SA 52 includes an area surrounding the former location of Building 7261. Building 7261 was built between 1956 and 1962 and was demolished in the early 1980s. At various times it served as an entomology laboratory, pesticide mixing area, covered storage, and maintenance shop. The building was 1616 square feet in size, constructed with a concrete foundation and floor and wooden walls. SA 52 is currently scheduled for industrial reuse by the Greater Orlando Aviation Authority.

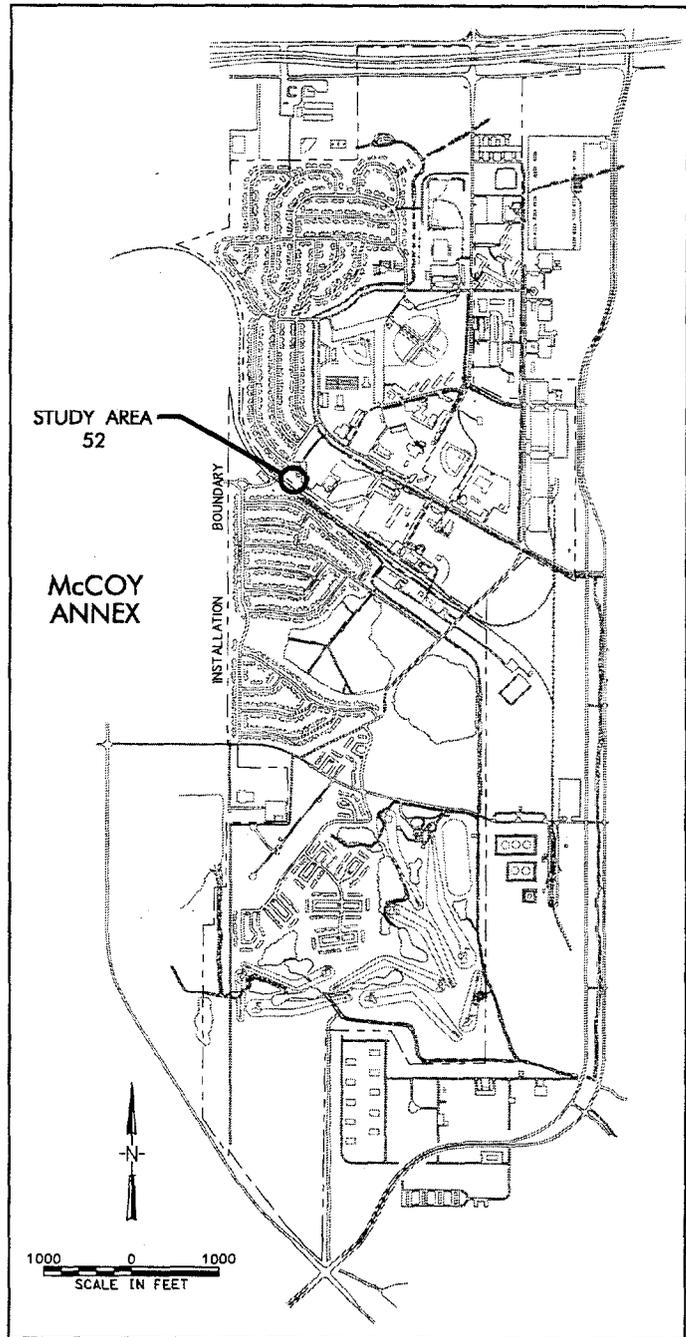


Figure 2. Study Area 52 Site Location Map

Investigation Summary

The objectives of the investigation at SA 52 were to evaluate the nature and extent of any releases to the environment that occurred at the site. The results of the investigation were documented in the *Environmental Site Screening Report, Interim Remedial Action, Study Area 52* (Harding Lawson Associates, March 1999). The investigations included:

- Visual inspection of the site.
- Review of historical documents.
- Geophysical surveys to locate large, buried, metal objects or debris, if present.
- Installation of monitoring wells for collecting samples and defining the groundwater flow direction.
- Collection and analysis of soil and groundwater samples.

The investigation of SA 52 began in March 1996 with geophysical surveys employing a magnetometer, a time domain metal detector, and ground-penetrating radar. The footprint of former Building 7261 was not located and no demolition debris was identified.

In April 1996, surface soil samples were collected and analyzed. Some pesticides were detected at concentrations exceeding their screening levels. Arsenic was detected at a concentration exceeding its basewide background concentration, but less than regulatory criteria for an industrial reuse scenario.

Groundwater samples from two temporary wells were also collected in April 1996 and analyzed. The pesticide Dieldrin was detected in both wells at concentrations exceeding its Florida Groundwater Cleanup Target Level and USEPA criteria. These results led the OPT to perform additional sampling to determine the extent of pesticide contamination.

In December 1996, 75 soil samples were analyzed for pesticides in the field using immunoassay (IA) test methodology. The IA samples were collected on a grid extending approximately 120 feet south to north and east to west. At three IA testing locations, samples were tested at 1-foot intervals to a depth of 4 feet. One soil sample was submitted for Toxicity Characteristic Leaching Procedure (TCLP) testing to determine if soil excavated from the area would be considered a Resource Conservation and Recovery Act hazardous material. Only moderate contamination was detected in subsurface soils, and TCLP testing showed that excavated soil would not be classified as hazardous.

Three temporary piezometers and five "microwells" (wells OLD-52-06 through OLD-52-10) were installed for groundwater sampling and water level measurements. Samples collected from these wells were

submitted to a Florida-certified laboratory for pesticide analysis. Four pesticides were detected at concentrations exceeding their screening levels in monitoring well OLD-52-10. The direction of groundwater flow was determined to be generally to the northeast. Three additional monitoring wells, (OLD-52-11 through OLD-52-13) were installed, with monitoring well OLD-52-13 placed in the zone with the highest Dieldrin concentration. Wells OLD-52-06, -11, -12, and -13 remain at the site and their locations are shown in Figure 3.

Interim Remedial Action – Soil Removal

The OPT determined that pesticide-contaminated soil needed to be removed to

- Eliminate the risk of exposure to the soil
- Remove the source of the pesticides leaching into the groundwater

The upper 2 feet of soil were removed in an area approximately 120 by 80 feet, as shown by the shaded area in Figure 3. IA tests were conducted as excavation proceeded to locate areas in which additional excavation was required (excavation approximately 4 feet deep). Where necessary, additional soil was removed until the IA test kits detected concentrations below 600 µg/kg or the water table was reached. Confirmatory soil samples were collected from the bottom and sides of the excavation and submitted for pesticide analysis by a Florida-certified laboratory.

The contaminated soil was transported by rail car for approved disposal at the Michigan Disposal

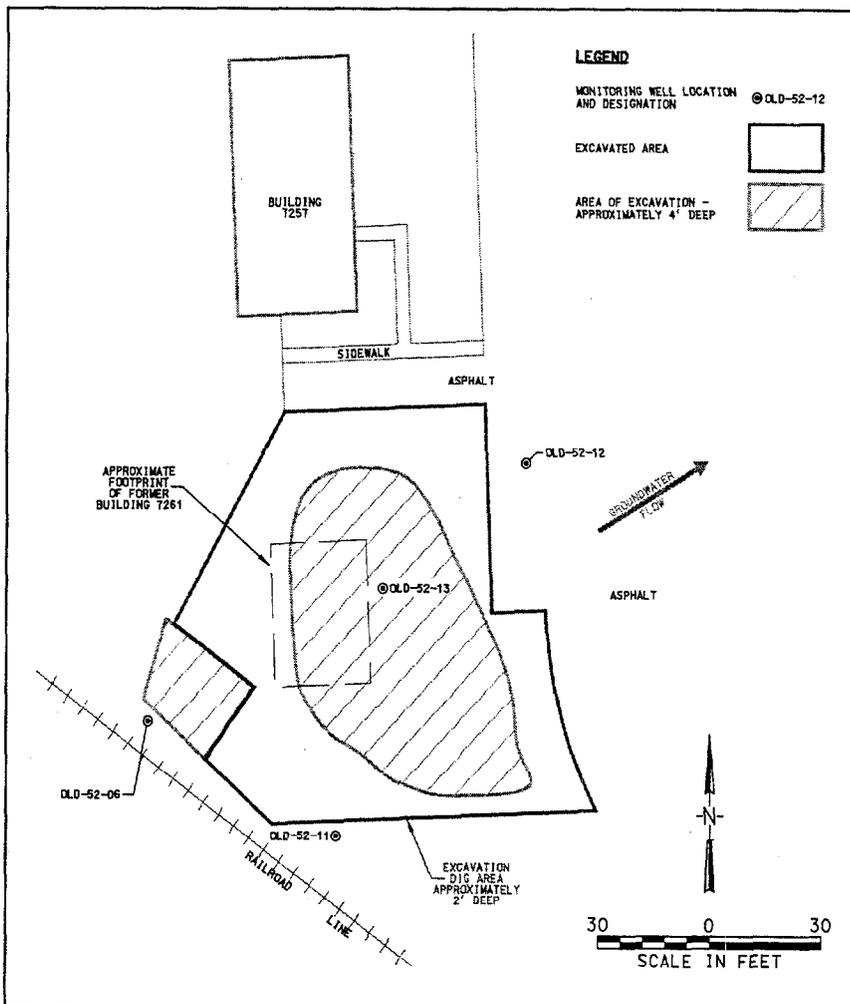


Figure 3. Study Area 52 Site Plan

Waste Treatment Plant. The excavation was backfilled with certified clean soil, regraded, reseeded, and mulched with straw.

As a result of the interim remedial action, the pesticide concentrations in surface soil at SA 52 no longer exceed industrial criteria. In addition, the source of the pesticides leaching into the groundwater has been eliminated.

Selected Remedy

The remedy for the contamination at SA 52 is a combination of natural attenuation with groundwater monitoring and institutional controls. The steps to be taken for each medium are described below and institutional controls to be implemented at SA 52 are discussed further in the following section.

Surface Soil. The surface soil at SA 52 contains residual pesticides at concentrations above residential criteria but below the State of Florida criteria for industrial use. As a result, the site will be restricted to nonresidential use.

Groundwater. The selected remedy for the pesticide-contaminated groundwater consists of

- Natural attenuation with groundwater monitoring
- Implementation of temporary groundwater use restrictions for the surficial aquifer

Natural Attenuation. Over 2 to 3 years, the pesticide concentrations are expected to decrease or attenuate through natural processes. A quarterly groundwater monitoring program will be performed to verify that natural attenuation does, in fact, occur at a satisfactory rate. Samples will be analyzed for pesticides, and the resulting data evaluated to determine trends in pesticide concentrations, specifically, decreases or increases over time. After 1 year, the monitoring program will be reevaluated to determine if additional remedial measures are necessary.

Groundwater Use Restriction. A temporary groundwater use restriction will be imposed for the surficial aquifer as shown in Figure 4. The groundwater use restriction will include an advisory to the St. Johns River Water Management District, the Orange County Environmental Protection Division, and the City of Orlando recommending that no wells in the surficial aquifer be permitted while the restriction is in place. The institutional controls to be implemented at SA 52 are described in greater detail in the following section.

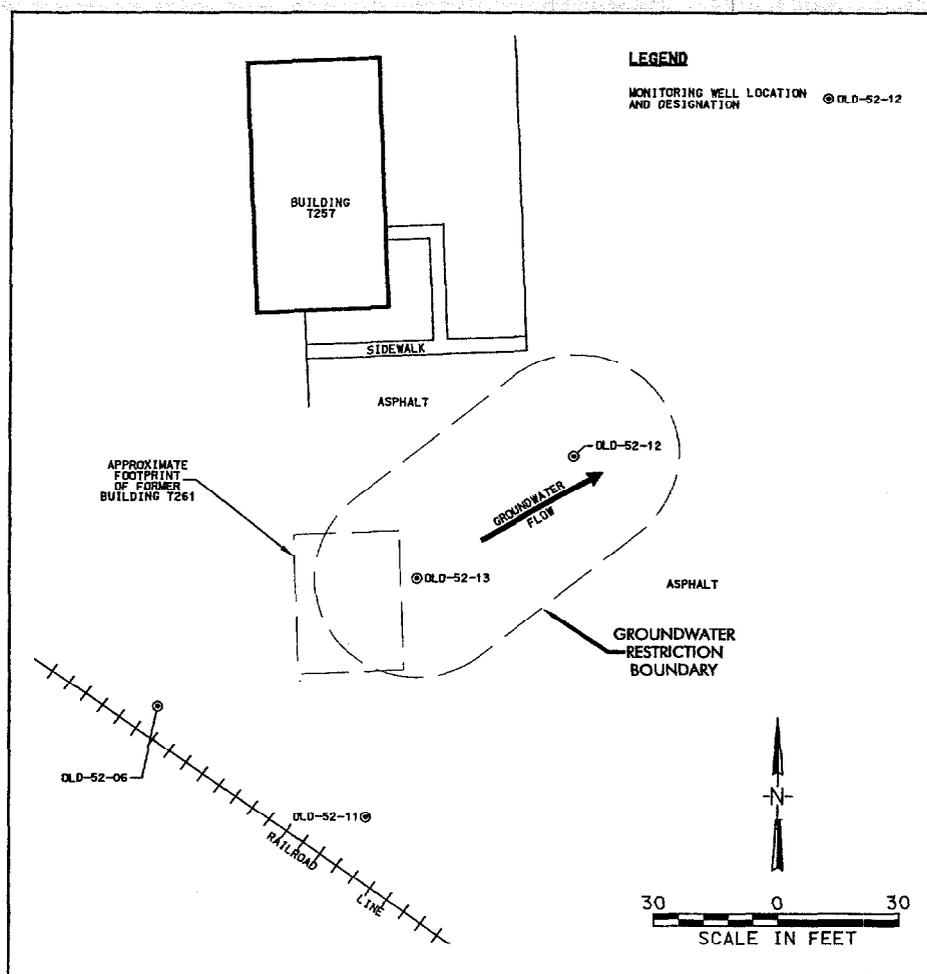


Figure 4. Groundwater Use Restriction at Study Area 52

Institutional Controls

The goals of the institutional controls at SA 52 are to protect human health and the environment by

- Preventing the exposure/consumption of groundwater that exceeds State standards and groundwater cleanup target levels, or Federal drinking water standards.
- Maintaining the integrity of remediation/monitoring systems.
- Restricting the site to nonresidential reuse.

Institutional controls at SA 52 will consist of administrative measures taken to prevent exposure of human receptors to contaminated groundwater in the surficial aquifer. These institutional controls will be established at the time of property transfer, employing deed restrictions, notices, and agreements in a

layering strategy to mutually reinforce the goals of the institutional controls. To provide for enforceability of the institutional controls, a Restrictive Covenant shall be applied to the property implementing those groundwater use restrictions. The Restrictive Covenant shall grant the FDEP a perpetual conservation easement on the property that shall run with the land and the title to the property and that will be binding on all subsequent owners of the property. The Restrictive Covenant shall also be enforceable by the FDEP through injunctive relief or other available remedies. The Restrictive Covenant shall only be released with FDEP concurrence.

The use of groundwater within the groundwater restriction boundary (see Figure 4) shall be prohibited (including drinking and irrigation) through the Restrictive Covenant until released by the FDEP. The installation of new wells for any purpose other than assessing groundwater quality or remediating groundwater contamination shall be prohibited through the covenant. The disturbance of existing groundwater remediation systems, including monitoring wells, will also be prohibited.

The Navy will issue a groundwater use advisory to the St. Johns River Water Management District, the Orange County Environmental Protection Division, and the City of Orlando that no surficial wells should be permitted while the restriction is in effect. The groundwater restrictions shall remain in place until such time that groundwater cleanup goals are met and the restrictions have been removed by the Navy with FDEP concurrence.

Zoning and redevelopment activities at SA 52 must be consistent with land use and groundwater restrictions. The above-mentioned restrictions shall remain in place until such time when groundwater cleanup goals are met and land use restrictions have been removed by the Navy with FDEP concurrence.

Community Acceptance

Community acceptance of the selected remedy was evaluated through presentations to the facility's Restoration Advisory Board (RAB). RAB meetings are open to the public and their bimonthly meetings are publicized in *The Orlando Sentinel*. The public was invited to comment on the remedy selected for SA 52 in a notice published weekly in *The Orlando Sentinel* between June 26 and July 16, 1999. The public was also invited to attend the RAB meeting on July 21, 1999, to discuss SA 52 and the proposed monitoring plan. A fact sheet summarizing the selected remedy was distributed at the meeting. There were no unresolved comments from the public on the selected remedy.

Declaration

Based on the administrative record compiled for this corrective action, the Navy has determined that the remedy selected for SA 52 is appropriate and protective of human health and the environment and complies with Federal and State regulatory requirements. The OPT concurs with the selected remedy.

Signature

Wayne Hansel, P.E.

Date

Base Realignment and Closure Environmental Coordinator
