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PLAN OF ACTION ADDENDUM UNDERGROUND STORAGE TANK N-12 MILLINGTON  
SUPPACT TN  
03/17/1998  
ENSAFE

1072

**ADDENDUM TO PLAN OF ACTION  
UNDERGROUND STORAGE TANK N-12  
NAVAL SUPPORT ACTIVITY MEMPHIS  
MILLINGTON, TENNESSEE**

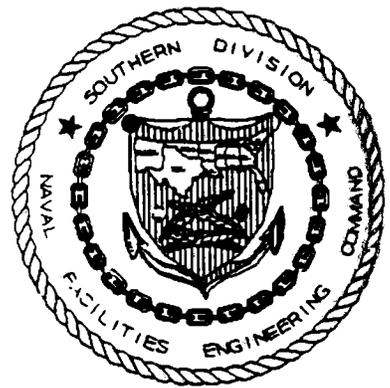


**SOUTHNAVFACENGCOM  
Contract Number: N62467-89-D-0318**

**CTO-136**

**Prepared for:**

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



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## **1.0 INTRODUCTION**

At the request of the Navy, Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), EnSafe Inc. (EnSafe) completed the proposed Plan of Action (POA) in January 1998 to determine the nature and extent of contamination at the underground storage tank (UST) N-12 at Naval Support Activity Memphis (NSA Memphis [Figure 1-1]). The tank, a 7.5 gallon (gal) UST which had stored diesel, was removed in September 1996. It was east of Building N-12 and had a broken fill pipe. Soil samples collected at the time of the tank removal indicated that contamination was present. Sampling results of the January 1998 field effort showed contaminant levels to be present at significantly lower levels than those reported in September 1996.

As an addendum to the Plan of Action performed in January 1998, this document serves as the current work plan for additional investigation of the N-12 facility UST. This work plan will further address the subsurface soil and groundwater contamination and support the contamination assessment report for the Facility N-12 UST. Sampling rationale, sample locations, and analyses are described below.

### **1.1 Sampling Rationale**

As part of the Facility N-12 UST investigation and contamination assessment, additional soil and groundwater sampling will be performed at the site. Soil samples will be collected from within the area of the UST cavity, as well as downgradient of the cavity area. Groundwater samples will be collected downgradient of the UST cavity. Analyses of the samples will provide additional data to better estimate the degree of contamination at the site.

### **1.2 Sample Locations**

A total of four soil borings will be advanced using direct push technology (DPT) methods (See Figure 1-1). One soil boring will be advanced at the western end of the UST cavity; a second



TI STREET

1558

N-12

Sheet Metal

N12G03LS

N12G06LS

N12G04LS

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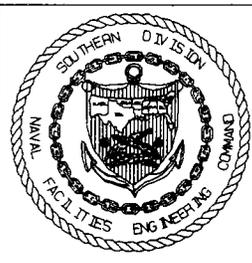
Monitoring Well



Soil Boring (DPT) Location



UST N-12 Cavity Location



Facility Investigation  
UST N-12  
NSA Memphis

FIGURE 1-1 Soil Sampling  
Locations N-12 UST Cavity

borings will be advanced at the eastern end of the UST cavity. These borings will be completed to the approximate depth of the UST excavation, approximately 7 feet. Two additional borings will be advanced downgradient of the former UST's location: one approximately 10 to 15 feet west of the cavity, and a second approximately 20 to 25 feet west of the cavity.

At each location, continuous two- to four-foot split spoon samples will be obtained. Each boring within the UST cavity will continue to the depth of the UST cavity, at approximately 7 to 8 feet bgs (below ground surface). Borings located downgradient of the cavity will continue to a depth of approximately 15 feet bgs, at least 10 feet into the saturated zone. From each split spoon, soil samples will be collected for analyses in accordance with the procedures outlined in the December 1997 *Plan of Action, Underground Storage Tank N-12, December 1997*. Groundwater samples will also be collected using the DPT equipment at the downgradient borings. Upon completion of the borings, they will be abandoned by backfilling with high solids bentonite pellets.

Following collection, all samples will be properly labeled, in accordance with the work plan, and preserved on ice at 4°C. All sampling activities and sample IDs will be documented in a field log book. Following the field effort, the samples will be carefully packed and hand delivered with a completed chain of custody form to the contract laboratory.

### **1.3 Analyses and IDW (Investigation-Derived Waste)**

At the request of the Navy, groundwater samples will be collected from the DPT borings. As stated in the POA, the groundwater samples will be submitted to the laboratory for the following analyses:

- VOCs
- MTBE
- TPH-GRO
- TPH-DRO

In accordance with the POA, soil samples will be analyzed for the following parameters:

- Total VOCs
- MTBE
- TPH-GRO
- TPH-DRO

Auger cuttings (IDW) are not expected from the DPT investigation.