



ENSAFE INC.

ENVIRONMENTAL AND MANAGEMENT CONSULTANTS

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July 14, 1998

Commanding Officer
Attn: Mark Taylor/1861MT
SOUTHNAVFACENGCOM
2155 Eagle Drive
P.O. Box 190010
North Charleston, SC 29419-9010

Subject: CTO-136; NSA Memphis, Millington, Tennessee

Document Transmittal – *Final Contamination Assessment Report for Underground Storage Tank N-12, July 14, 1998*

Reference: Contract N62467-89-D-0318 (CLEAN II)

Dear Sir:

Please find enclosed one copy of the *Final Contamination Assessment Report for Underground Storage Tank N-12, July 14, 1998*. Copies have been distributed to members of the BRAC Cleanup Team as shown on the enclosed NSA Memphis RFI Distribution List. A chronology of events at the site is listed below.

- At the request of the Navy, Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), EnSafe Inc. (EnSafe) completed the proposed Plan of Action (POA) to determine the nature and extent of contamination at the underground storage tank (UST) N-12 at Naval Support Activity Memphis (NSA Memphis). The UST previously at Facility N-12 was a 7.5-gallon tank and had stored diesel fuel. Because its capacity was less than 500 gallons, the UST is not regulated by the TDEC Division of Underground Storage Tanks. The assessment was to be handled under the auspices of the TDEC Division of Solid Waste. However, because it was a petroleum tank, the investigation was performed in accordance with the TDEC Division of Underground Storage Tanks requirements.
- The UST had a broken fill pipe and was subsequently removed in September, 1996. Two soil samples collected at the time of removal indicated the presence of contamination. Overexcavation was limited by underground utilities and adjacent buildings.
- The January, 1998 investigation, conducted by EnSafe Inc., included the installation of four shallow (loess) monitoring wells; both groundwater and soil sampling were performed. Four additional borings, via DPT methods, were advanced in March, 1998: two borings directly

west of the UST cavity, and two borings flanking the west and east sides of the UST tank cavity, respectively. Confirmatory soil and groundwater samples were collected at that time.

- Analytical results indicate that one or more petroleum releases have occurred in the past at Facility N-12, impacting both site soil and groundwater. In addition, vinyl chloride was detected in the groundwater above its MCL at one DPT sampling location. Groundwater beneath the site is considered a "non-drinking" water source.
- A site ranking was completed in accordance with the TDEC Division of Underground Storage Tanks requirements. A score of 343 was calculated, which is below the ranking (500) that requires corrective action. A production well is located within 400 feet of the site, but it is completed in the Ft. Pillow not in the loess deposits. Sampling of the Memphis Sand wells during the ongoing RCRA facility investigation (RFI) has found that VOCs are absent in deeper groundwater.
- In the RCRA facility investigations, chlorinated solvents have been detected in the groundwater of the loess and fluvial deposits in the Northside. Tank N-12 is within Area of Concern A (AOC A), which has undergone an RFI. The RFI identified multiple areas with chlorinated solvents in the loess and deeper fluvial deposits groundwater that warrant corrective action. Corrective measures associated with AOC A will address the multiple solid waste management units (SWMUs)/sites within it, including the area of N-12. Therefore, EnSafe recommends, with BCT concurrence, that the groundwater be transferred to the Northside Loess Groundwater Corrective Measures Study and no further action for the soil.

If you have any questions or comments of a technical nature, please contact me at 901/372-7962.

Sincerely,
EnSafe Inc.

Allison Harris

By: Allison Harris
Task Order Manager

Enclosures: As Stated

cc: SOUTHNAVFACENGCOM: Mr. John Karlyk/Code 1846 without enclosure
NSA Memphis: Mr. Randy Wilson without enclosure
Ms. Kimberly Reavis, Code 0233KR SOUTHNAVFACENGCOM without enclosure
Mr. Mark Thomas, TDEC Division of Solid Waste without enclosure
Mr. Gatta Murr, TDEC Division of Underground Storage Tanks without enclosure
Project File: CTO-136 without enclosure
Other: See attached NSA Memphis RFI Distribution List

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