

N00639.AR.001951
NSA MID SOUTH
5090.3a

TECHNICAL MEMORANDUM SOLID WASTE MANAGEMENT UNIT 15 DIRECT-PUSH
TECHNOLOGY INVESTIGATION WORK PLAN MILLINGTON SUPPACT TN
11/17/1999
ENSAFE

TECHNICAL MEMORANDUM

To: James Reed/Mark Taylor/David Porter, SOUTHDIV
Brian Donaldson, EPA Region IV
Jim Morrison/Clayton Bullington, TDEC
Tonya Barker/Randy Wilson, NSA Mid-South
Jack Carmichael, USGS

From: John Stedman, EnSafe Inc.

Date: November 17, 1999

Re: SWMU 15 DPT Investigation Work Plan

INTRODUCTION

Underground storage tank (UST) closure documentation for the tanks previously at the N-94 Underground Tank Farm (SWMU 15) indicates petroleum-contaminated soil above the state's most stringent total petroleum hydrocarbons (TPH) action level (100 mg/kg) may still be present. This closure documentation is included as Appendix A of the *Assembly C RFI Report* (EnSafe, June 1999). Except for one sample (015S0023 with 181 mg/kg), subsurface soil samples collected during the SWMU 15 RCRA Facility Investigation (RFI) were found to be below this standard (EnSafe, June 1999). Subsequently, the BRAC Cleanup Team (BCT) decided that additional samples should be collected at the tank farm to help determine if soil contamination should be addressed in the Northside Loess Soil and Groundwater Corrective Measures Study (CMS). This Work Plan identifies objectives and describes methods/procedures that will be used during the investigation.

OBJECTIVES

The following objectives have been identified for this direct-push technology (DPT) investigation.

- Confirm petroleum soil contamination found during tank closures.

- If present, determine if petroleum-contaminated soil exceeds state action levels.

- If present, determine the extent of contamination.

PROPOSED ACTIVITIES

To satisfy the objectives listed above, a minimum of 20 borings will be installed using DPT to a maximum depth of 20 feet below land surface or when groundwater is reached whichever is encountered first. The borings will be sampled continuously and field-screened with a flame ionization detector (FID). Two samples from each boring will be selected for laboratory analysis: one from the interval with the highest FID response and the other from the deepest interval sampled. A site map with proposed boring locations is included as Attachment A.

Based on field screening results, additional borings and samples may be collected to determine the extent of soil contamination. Field procedures used in this investigation will be consistent with those outlined in the *Comprehensive RFI Work Plan* (EnSafe/Allen & Hoshall, 1994).

Laboratory results in the UST closure reports for tanks previously at SWMU 15 indicate no significant volatile organic compound contamination; however, elevated concentrations of low and high boil hydrocarbons were found in excavation and stockpile soil samples. The Tennessee Department of Environment and Conservation has replaced the low and high boil hydrocarbon methods with the gasoline range organics (TN-GRO) and extractable petroleum hydrocarbons (TN-EPH) methods. Therefore, samples submitted for laboratory analysis will be analyzed using these methods.

Results of this investigation will be presented in a memorandum and submitted to the BCT with a recommendation for either no further action or further evaluation in the CMS.

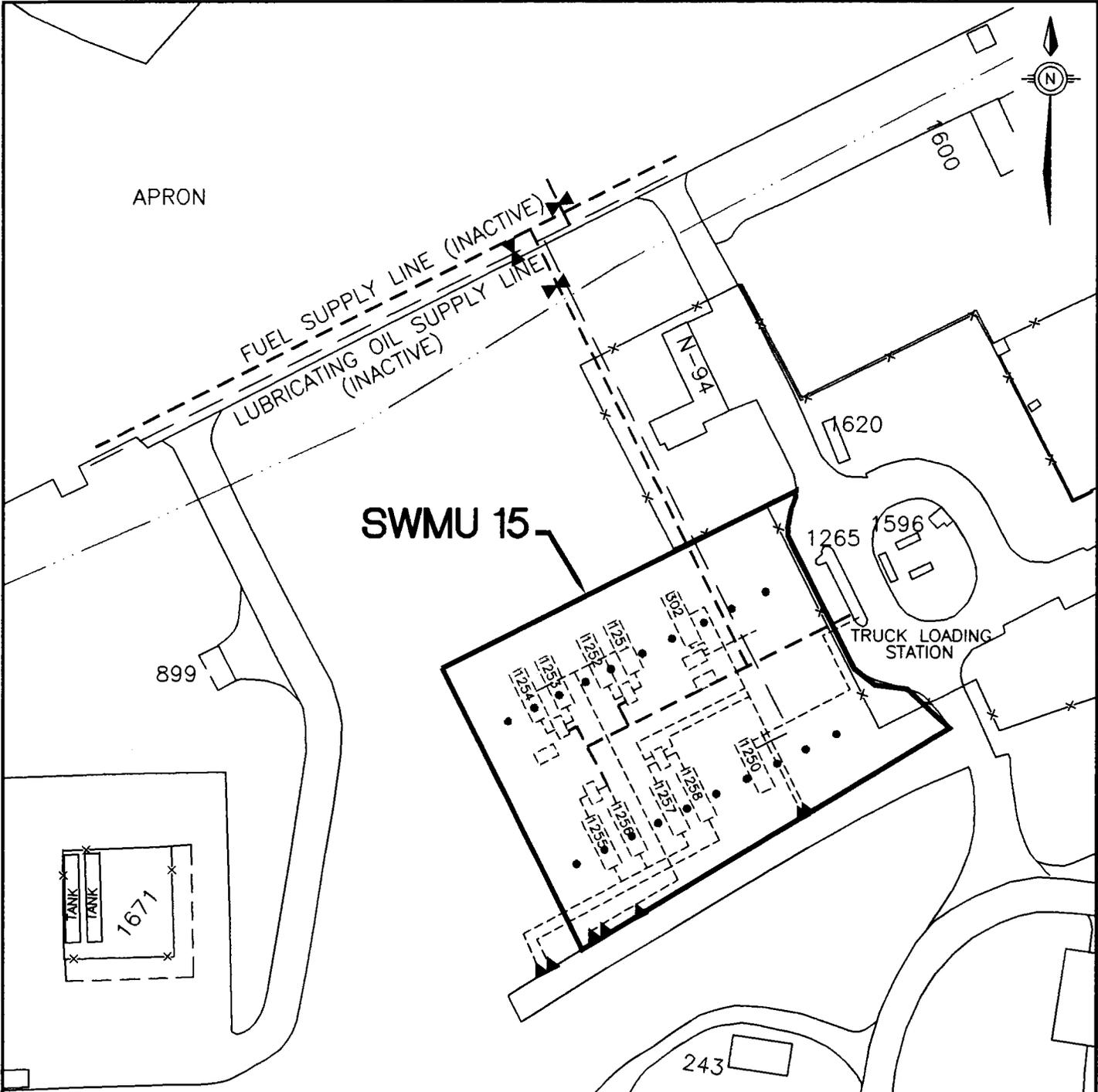
REFERENCES

EnSafe/Allen and Hoshall (1994). *Comprehensive RFI Work Plan — Naval Air Station Memphis*.
E/A&H: Memphis, Tennessee. October 6, 1994.

EnSafe (June 1999). *Assembly C RFI Report Naval Support Activity Mid-South, Millington, Tennessee*. EnSafe: Memphis, Tennessee.

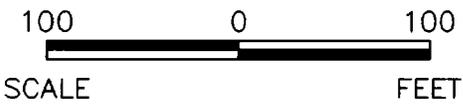
ATTACHMENT A

PROPOSED DPT BORING LOCATIONS



LEGEND

-  - FORMER UST AND PIPING
-  - PROPOSED DPT BORING LOCATIONS



CORRECTIVE MEASURES
 STUDY
 NSA MID-SOUTH
 MILLINGTON, TENNESSEE

SITE MAP
 N-94 UNDERGROUND TANK FARM
 SWMU 15