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NSA MID SOUTH  
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LETTER REGARDING THE TRANSMITTAL OF THE CONFIRMATION SAMPLING  
INVESTIGATION REPORT ASSEMBLY F SOLID WASTE MANAGEMENT UNITS 20, 22, 30  
AND 39 MILLINGTON SUPPACT TN

7/31/1998  
ENSAFE INC



ENSAFE INC.

ENVIRONMENTAL AND MANAGEMENT CONSULTANTS

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July 31, 1998

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

Subject: CTO-106; NSA Memphis RCRA Facility Investigation, Millington, Tennessee  
Document Transmittal – *Confirmatory Sampling Investigation Report - Assembly F - SWMUs 20, 22/63, 30, and 39; Rev: 2, July 31, 1998*

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

Dear Sir:

Please find enclosed one copy of the NSA Memphis *Confirmatory Sampling Investigation Report - Assembly F - SWMUs 20, 22/63, 30, and 39; Rev: 2*. All comments on Revision 1 received from the USEPA and TDEC have been addressed, as shown in the Response to Comments, which is included with the document. As requested, copies have been distributed as shown on the attached NSA Memphis RFI Distribution List.

If you have questions or comments of a technical nature, please contact me at 901/372-7962. Comments or questions of a contractual nature should be directed to Debra Blagg at 901/386-9344.

Sincerely,

EnSafe Inc.

  
By: Robert P. Smith, CHMM  
Task Order Manager

Enclosures: As Stated

cc: Contracts File: CTO-106 (w/out enclosure)  
Project File: 0106-001-22-132-00 (w/out enclosure)  
SOUTHDIV: Ms. Kim Reavis/Code 0233KR (w/out enclosure)  
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**Response to Comments**  
**Confirmatory Sampling Investigation Report**  
**Assembly F – SWMUs 20, 22/63, 30, and 39**  
**NSA Memphis – Millington, Tennessee**

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***Comment 1 (USEPA)***

*Page 2-2, 2<sup>nd</sup> paragraph - "alluviam" should be alluvium and "latterly" should be laterally.*

**Response 1**

Alluviam has been changed to alluvium and latterly has been changed to laterally.

***Comment 2 (TDEC)***

*Page 4-3, line 8 - States that a surface sample was collected for FSA at each SWMU. Table 4.1 indicates that no surface sample was collected for a full scan analysis (FSA). Even though the two SWMUs were investigated as one site, the USTs at SWMUs 22 and 63 served different purposes. Explain why there was no FSA sample collected at SWMU 63.*

**Response 2**

Although the USTs at the two SWMUs served different purposes, it was decided during the development of the Assembly F - CSI work plan that they would be addressed under a single work plan as if one site. The work plan for SWMUs 22 and 63 required that two surface soil samples collected for FSA. The FSA data would be used to conduct a preliminary risk evaluation (PRE).

FSA samples were collected at locations where surface spills were more likely to have occurred, not necessarily near a UST, since UST releases have very little, if any, impact on surface soil.

The second paragraph on page 4-3 was changed to include the following statements: In addition to the screening samples, two surface soil samples were collected at SWMUs 20, 22, 30 and 39 and analyzed for full scan analysis (FSA). No FSA surface soil samples were collected at SWMU 63, because SWMUs 22 and 63 were investigated as one site and locations were selected where surface spills were likely to have occurred and not where USTs were located.

***Comment 3 (TDEC)***

*Page 4-3, line 23 - Explain in each SWMU section what "fewer loess groundwater samples" means and offer an explanation as to why fewer loess groundwater samples were collected.*

**Response 3**

For clarification, the Field Investigation section for each SWMU has been supplemented by including the number of proposed loess groundwater samples, the number actually collected, and the number and purpose of the saturated soil samples collected. The proposed number of loess samples and the number actually collected has been added to Section 4.1.

**Comment 4 (TDEC)**

*Page 7-23, 1<sup>st</sup> paragraph - Nickel was not listed as a COPC for SWMU 20, even though nickel concentrations exceeded both its RC and SSL. Include nickel as a COPC and check other section to make sure there were no other COPCs omitted.*

**Response 4**

Nickel has been added to the list of COPCs on page 7-23. The PRE discussions for all other SWMUs has been checked to make sure there were no other oversights.

**Comment 5 (USEPA)**

*Page 7-26 - 1,1 Dichloroethane should be included as a COPC.*

**Response 5**

1,1-dichloroethane has been added to the list of COPCs on page 7-26. All other COPC lists have been checked to make sure no others were missed.

**Comment 6 (USEPA)**

*Section 7.1.5 - The Fate and Transport section does not include a discussion for groundwater (this comment applies to all of the SWMUs). Please include a groundwater fate and transport.*

**Response 6**

Fate and transport of site contaminants in groundwater will be addressed in the RFI report.

**Comment 7 (TDEC)**

*Page 7-35 1<sup>st</sup> paragraph - How were the contents of UWT at SWMU 63 removed? Where and how was it disposed of? This question also applies to the UWT at SWMU 20.*

**Response 7**

The available historical information regarding the removal of the UWT at SWMU 63 and at SWMU 20 has been reviewed. There is no mention of how either tank was removed. Closure Method section in Revision No. 3 of the NAS Memphis RFA, states "not applicable" for SWMU 63, and "unknown" for SWMU 20.

**Comment 8 (TDEC)**

*Page 7-36, line 3 - Explain why it was determined that the 9- to 11-foot interval would not provide any useful information.*

**Response 8**

The base of the tanks were estimated to be approximately 15 feet below ground surface. Collecting samples from depths shallower than the base of the tank pits would provide little useful information regarding a tank release. Additionally, the 9- to 11-foot sample interval at locations 022SGB05, 022SGB06, and 022SGB07 would have been within the fill material of the backfilled tank pits. These rationale have been added to the report.

**Response 12**

The tech memo has been included with the revised report.

**Comment 13 (TDEC)**

*Page 7-71, line 11 - Confirm the matching concentrations reported for samples 030SGB0101 and 030SGB0401.*

**Response 13**

The TPH-DRO results for samples 030SGB0101 and 030SGB0401 have been checked and they are correct.

**Comment 14 (TDEC)**

*Page 7-90, Conclusions and Recommendations - The septic tank receive effluent from buildings that performed aircraft and ground vehicle maintenance between the years of 1917 and 1942. Explain why the none of the few detected compounds exceeded any action levels.*

**Response 14**

The use of chlorinated solvents was limited prior to World War II (TCE was patented around 1945). If degreasers had been used at either of the maintenance facilities discussed above, they may have been petroleum distillates, ketones, alcohols or biologically produced products. In the early 1900's acetone and butanol were manufactured using a bacteriological fermentation process. The reactions involved in the fermentation process are reversible; therefore the compounds produced by this type of process are more readily broken down in nature than chlorinated compounds. Petroleum compounds and wood alcohols are also more susceptible to biodegradation than chlorinated solvents. Assuming that floor drains or shop sinks were tied into the septic system and based on the above, it is possible that over the past 56 years, any degreasers that were probably introduced into the septic system may have been biodegraded.

**Comment 15 (USEPA)**

*Page 7-91, 1<sup>st</sup> paragraph - States "TPH concentrations exceed the more conservative TDEC cleanup standard (100,000 µg/kg), but do not exceed the less stringent standard (1,000,000 µg/kg)." According to the data, the highest TPH hit a SWMU 30 was 14,000 µg/kg which is below TDEC's most stringent standard.*

**Response 15**

The text has been changed to say "TPH concentrations do not exceed the most conservative TDEC cleanup standard of 100,000 µg/kg."

**Comment 16 (TDEC)**

*Page 7-92, 1<sup>st</sup> paragraph - How long did the dry cleaning facility operate at Building S-74?*

**Response 16**

The EBS for NAS Memphis states that S-74 was built in 1943 and used as a laundry facility until 1981 (38 years). Building S-212 was constructed in 1947 and was used to store solvent for S-74. This information has been added to the CSI report.

***Comment 17 (USEPA)***

*Page 7-122 - States that the ILCR and HI were not exceeded. The ILCR is between the 10E-4 to 10E-6 and the HI is below 1. (This comment applies to other SWMUs)*

**Response 17**

This text refers to the cumulative thresholds specified in the PRE guidance. Comment 17 apparently requests that the statement be clarified. The document has been changed to read:

**Carcinogens:** Cumulative soil cancer risk estimates for the residential and industrial scenarios were below the cumulative risk threshold of 1E-4 for PREs, indicating that the site is suitable for lease.

**Noncarcinogens:** Cumulative soil noncancer risk estimates for the residential and industrial scenarios were below the cumulative HI threshold of 1.0 for PREs, indicating that the site is suitable for lease.

***Comment 18 (USEPA)***

*Page 8-2 - States "there is no quality habitat available at SWMU 30." Isn't this also true for the other SWMUs?*

**Response 18**

It is probable that the statement applies to all other SWMUs. As stated on page 8-1, line 10, the other SWMUs will be addressed as part of the follow-up RFI. It is likely that the conclusions of the ERA are that there is no quality habitat available at SWMU \_\_.