

N00639.AR.002425  
NSA MID SOUTH  
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LETTER REGARDING U S EPA REGION IV REVIEW AND COMMENTS OF THE  
STATEMENTS OF BASIS FOR SOLID WASTE MANAGEMENT UNITS 2, 5, 7, 9, 17, 19 AND  
49, 20, 23, 24, 30, 41, 43, 45, 46, 47, 48, 59, 61, 63, 65 MILLINGTON SUPPACT TN  
05/03/2006  
U S EPA REGION IV



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GA 30303-8960

May 3, 2006

4WD/FFB

TDEC - Division of Superfund  
Attn: Roger Donovan, RPM  
5th Floor, L & C Annex  
401 Church Street  
Nashville, TN 37243-1538

Subject: Statement of Basis for SWMUs 2, 5, 7, 9, 17, 19/49, 20, 30, 23, 24, 41, 43, 45, 46, 47, 48, 59, 61, 63, and 65, Naval Support Activity Mid-South, Millington, TN.

Dear Mr. Donovan,

The Environmental Protection Agency (EPA) has completed review of the subject documents. EPA's comments for the Statement of Basis documents are enclosed.

If you have any questions or comments please contact Turpin Ballard at 404-562-8553.

Sincerely,

Jennifer Tufts  
Remedial Project Manager

Enclosure

cc: Rob Williamson, Public Works Office  
Roger Donovan, TDEC - Nashville  
John Stedman, Ensafe - TOM  
Jack Carmichael, USGS  
Robb A. Unger, Spectra Tech

## General Comment

1. The selected remedy for several of the SWMUs is restriction of groundwater use for the loess and/or fluvial aquifers. Where the selected remedy is groundwater restriction, some of the SoBs (but not all) specify that “The installation of wells in the Memphis Sand or deeper aquifers must be double-cased to prevent any downward migration of contamination.” This statement should be included for each SoB where groundwater use is restricted.

## Specific Comments

### SWMU 5

2. Although the northside fluvial aquifer will be addressed as part of AOC A, the text should discuss whether any contaminants of concern (COCs) were identified in the fluvial aquifer. A risk summary table should be provided that quantifies the human health risk for soil, loess groundwater, and fluvial groundwater.

### SWMU 7

3. Although the fluvial aquifer will be addressed as part of AOC A, a brief discussion of the condition of the fluvial aquifer and the COCs should be included in the groundwater discussion.
4. A risk summary table should be provided that illustrates the human health risk for soil, loess groundwater, and fluvial groundwater.
5. Page 4. TCE was detected above the groundwater threshold of 5.3 ppb which indicates volatile organics in groundwater could pose an indoor air quality risks to occupants. If the building continues to be occupied as classrooms and office space, additional groundwater samples should be collected at the building to determine if concentrations continue to exceed the threshold. If the concentrations exceed the groundwater threshold, soil vapor intrusion sampling should be conducted adjacent to the building to ensure a health hazard is not present. See *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Draft Vapor Intrusion Guidance)*, EPA530-F-052, November 2002.

### SWMU 19/49

6. Page 3. Space should be provided for Table 1 so that spelling of the headers is correct.
7. A risk summary table should be provided that quantifies the human health risk for soil, loess groundwater, and fluvial groundwater.

## **SWMU 46**

8. Page 4. TCE was detected above the groundwater threshold of 5.3 ppb which indicates volatile organics in groundwater could pose an indoor air quality risks to occupants. If buildings are constructed on the property in the future and will be occupied by workers eight hours or more per day, then groundwater and/or soil vapor samples should be collected before construction. If groundwater concentrations continue to exceed the threshold or soil vapor samples indicate potential risk, then the building should be designed and constructed to minimize exposure to volatile organic contaminant vapors. See *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Draft Vapor Intrusion Guidance)*, EPA530-F-052, November 2002.
9. The text states that groundwater at SWMU 46 is being addressed as part of SWMU 14. The proposed remedy for SWMU 14 is land use controls prohibiting use of groundwater and residential use. Because groundwater is being addressed with SWMU 14, groundwater conditions at SWMU 14 should be discussed. Groundwater restrictions implemented for SWMU 14 should be implemented at SWMU 46 as well. Please specify which aquifer(s) will be restricted at SWMU 46.
10. A risk summary table should be provided that quantifies the human health risk for soil, loess groundwater, and fluvial groundwater.

## **SWMU 46 SLERA**

11. The headers on pages 2, 3, and 4 should be "14 and 46". The first sentence in the "Screening Level Ecological Risk Assessment" section should refer to SWMUs 14/46 rather than SWMU 65.

## **SWMU 24**

12. Page 3. The text states that two surface soil samples exceeded the residential risk-based screening criterion for arsenic. The risk discussion says there are no risks associated with soil, but the risk should be quantified since there was an exceedance above the PRG. A sentence or a table should be added in the *Soil Risk to Human Health* section that quantifies the risk based on the detection of arsenic.

## **SWMU 47**

13. Page 3. The text states that one soil sample exceeded the residential risk-based screening criterion. The risk discussion says there are no risks associated with soil, but the risk should be quantified since there was an exceedance above the PRG. A sentence or a table should be added in the *Soil Risk to Human Health* section that quantifies the risk based on the detection of dieldrin.

### **SWMU 48**

14. Page 3 states that because SWMU 48 is within the SWMU 17 RFI area, SWMU 48 groundwater was addressed with SWMU 17. Because SWMU 48 groundwater is addressed with SWMU 17 groundwater, a brief description of groundwater conditions at SWMU 17 should be included in the groundwater discussion. Groundwater restrictions implemented at SWMU 17 should be implemented at SWMU 48 as well. Please specify which aquifer(s) will be restricted at SWMU 48.
15. A risk summary table should be provided that quantifies the human health risk for soil data collected at SWMU 48 and loess and fluvial groundwater data collected at SWMU 17.

### **SWMU 59**

16. A table should be provided that quantifies the human health risk for soil, loess groundwater, and fluvial groundwater from soil data collected at SWMU 59.
17. Page 3. The text states that pesticides, TPH and lead were detected above screening criteria in groundwater. Later in the document (page 5) the risk associated with groundwater is discounted because of the absence of pesticides in groundwater in a later sampling round. However, detection of TPH and lead in groundwater were not mentioned. Please clarify why these constituents were not considered in the risk assessment. If these constituents were detected at similar concentrations in subsequent sampling rounds, land use restrictions for groundwater use should be implemented.

### **SWMU 61**

18. A table should be provided that quantifies the human health risk for soil samples collected at SWMU 61.
19. The soil excavation areas are not shown on Figure 2 as stated on page 4. Please add the excavation areas to the figure.

### **SWMU 63**

20. *Human Health Risk* section page 3 recommended that groundwater at SWMU 63 be addressed as part of SWMU 39. The proposed remedy for SWMU 39 is land use controls prohibiting use of groundwater and residential use. Because groundwater is being addressed with SWMU 39, groundwater conditions at SWMU 39 should be discussed briefly. Groundwater restrictions implemented for SWMU 39 should be implemented at SWMU 63 as well. Please specify which aquifer(s) will be restricted at SWMU 63.

21. A table should be provided that quantifies the human health risk for soil and groundwater samples collected at SWMU 63.

#### **SWMU 9**

22. Page 3, 6. Groundwater samples were collected using direct push technology. The text doesn't state which aquifer the samples were collected from, nor does the groundwater restriction specify which aquifer is restricted. Please clarify which aquifer will be restricted.
23. A risk summary table should be provided that quantifies the human health risk for soil, sediment, surface water, groundwater and fish tissue samples collected at SWMU 9.

#### **SWMU 17**

24. A risk summary table should be provided that quantifies the human health risk for soil and fluvial groundwater samples collected at SWMU 17.
25. It appears that groundwater samples were collected from the fluvial aquifer only at SWMU 17. The selected remedy for SWMU 17 is institutional controls prohibiting use of groundwater. The text should specify which aquifer is restricted based on sampling results.

#### **SWMU 20**

26. A table should be provided that quantifies the human health risk for soil and fluvial groundwater samples collected at SWMU 20.
27. Groundwater samples were collected from the fluvial aquifer only at SWMU 20. The selected remedy for SWMU 20 is institutional controls prohibiting use of groundwater. The text should specify the fluvial aquifer as being restricted based on sampling results.

#### **SWMU 43**

28. A risk summary table should be provided that quantifies the human health risk for soil and fluvial groundwater samples collected at SWMU 43.

#### **SWMU 2**

29. Page 4. Please update Table 2 with the September 2005 groundwater data.
30. A risk summary table should be provided that quantifies the human health risk for soil, sediment, surface water, and groundwater samples collected at SWMU 2 (similar to the table provided for SWMU 3).

31. Page 7. The selected remedy for SWMÚ 2 should include maintenance of the landfill cover system.

#### **SWMU 41**

32. A risk summary table should be provided that quantifies the human health risk for soil and groundwater samples collected at SWMU 65.
33. Page 3. The selected remedy is to restrict site groundwater use. Please specify loess groundwater as the zone that will be restricted based on sampling data.

#### **SWMU 65**

34. A risk summary table should be provided that quantifies the human health risk for soil, sediment, and groundwater samples collected at SWMU 65.

#### **SWMU 45**

35. A table should be provided that quantifies the human health risk for soil and loess groundwater samples collected at SWMU 45.
36. It is not clear if loess groundwater was included in the human health risk assessment for a residential user (page 4). The statement is made that 'while xylenes were detected in shallow groundwater at a single location above the USEPA's groundwater screening criteria, the loess groundwater is considered a non-drinking water source due to the lack of yield and naturally occurring metals'. Although the water yield is low for the loess groundwater, if a risk exists for a residential user, a land use control should be implemented to prohibit use of the loess groundwater regardless of yield. Please clarify.