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LETTER REGARDING U S EPA REGION IV COMMENTS ON DRAFT REMEDIAL  
INVESTIGATION FOR OPERABLE UNIT 3 (OU 3) NTC ORLANDO FL  
9/2/1998  
U S EPA REGION IV

UNITED STATES ENVIRONMENTAL PROTECTION  
REGION 4



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61 Forsyth Street  
Atlanta, Georgia 30303-3104

September 2, 1998

4WD-FFB

Mr. Wayne J. Hansel  
Southern Division  
Naval Facilities Engineering Command  
P.O. Box 190010  
Charleston, SC 29419-9010

SUBJ: Draft Remedial Investigation Report for OU-3, Naval Training Center, Orlando, Florida.

Dear Mr. Hansel:

The United States Environmental Protection Agency (EPA) has completed the review of the Draft Remedial Investigation Report for OU-3, Naval Training Center, Orlando. OU-3 consists of Study Area (SA) 8, the Greenskeeper's Storage Area, and SA 9, the Former Pesticide Storage and Handling Area. EPA's comments on the subject report are as follow:

**Exclusion of subsurface soil**

Because of field conditions at the site, subsurface soil could not be addressed. None of the subsurface soil is in the vadose zone, but is immersed in the water of the shallow aquifer. The aquifer substrate may be the source of the contamination observed in groundwater. Active remediation of groundwater may not succeed because as chemicals are removed from the water, more chemicals may leach from the aquifer substrate.

**Inclusion of all carcinogenic PAHs**

Despite the text, risk was apparently assessed separately for the carcinogenic polycyclic aromatic hydrocarbons (cPAHs). This procedure is incorrect. Table 6-7 presents separate exposure point concentrations for the carcinogenic PAHs. The EPC should be calculated in terms of benzo(a)pyrene equivalents.

Relative potency factors for the various cPAHs should be used to determine a cPAH concentration in benzo(a)pyrene equivalents at each sampling location. cPAH concentrations

expressed in this way should be treated as a single chemical with an oral carcinogenic slope factor of 7.3 per (mg/kg-day).

Because of this incorrect procedure, the risks presented in the document may be underestimated and risk from cPAHs and total risk should be recalculated.

### **Inclusion of Iron**

Region 4 does not consider iron in the class of essential nutrients. Iron should be included in the risk assessment.

### **Beryllium**

USEPA no longer considers beryllium a carcinogen by the oral route. For COPC screening, the RBC should be recalculated based on the noncancer effects in a child residential receptor. This screening level is approximately 150 ppm.

### **COPC Screening**

EPA considers screening on organoleptic criteria, or indeed, any non-health based criteria inappropriate for COPC screening. Primary or secondary drinking water standards or other non-health based criteria should not be used for COPC screening.

### **Groundwater EPCs**

Table 6-8 presents EPCs for groundwater as averages of all wells at SA-8 and SA-9 respectively. The EPC should be the average of the wells in the center of the plume. For SA-8, the arsenic EPC should include wells OLD8-01, OLD8-02, OLD8-03, OLD8-04, OLD8-08, OLD8-09, OLD8-10, OLD8-11, OLD8-13 and OLD8-17. The average arsenic concentration in these wells is approximately 146 µg/L.

For herbicides represented by MCP, the wells should include OLD8-08, OLD8-10, OLD8-11, OLD8-14, and OLD8-15. The MCP concentration on average in these wells is 734 µg/L.

At SA-9, arsenic and herbicides appear to be co-located. The wells used to calculate EPCs should be OLD9-02, OLD9-04, OLD9-05, OLD9-07, OLD9-11, and OLD-12.

### **Other Comments**

- 1) Table 6-1. It is not clear from whence the screening concentrations in the table came. Please provide details of their derivation.
- 2) Manganese. The RBC for manganese has been changed due to a change in the reference dose. IRIS should be checked for the reference dose and the document changed as appropriate.

- 3) Page 6-48, first full paragraph. The last sentence states:

*Therefore, the risks calculated are presumed to be reasonably accurate with respect to the different valence states of arsenic.*

This sentence is unclear and should be removed.

- 4) The risk summary refers to cancer risk for the @total@ receptor. The correct term is the Alifetime@ receptor. A lifetime residential receptor scenario consists of 6 years as a child and 24 years as an adult for a 30 year exposure duration.

Please note that these comments only include human health aspects. A review of the ecological risk assessment is in progress, and comments will be forthcoming. If you have any questions regarding these comments, please call me at (404) 562-8536.

Sincerely,

Nancy Rodriguez  
Remedial Project Manager

cc: Dave Grabka, FDEP  
Rick Allen, HLA  
Lt. Gary Whipple, NTC Orlando  
Barbara Nwokike, SouthDiv  
Steve McCoy, Tetra Tech NUS  
Bob Cohose, BECHTEL