



**TETRA TECH NUS, INC.**

661 Andersen Drive • Pittsburgh, PA 15220  
Tel 412.921.7090 • Fax 412.921.4040 • www.tetrattech.com

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NSWC CRANE  
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May 18, 2007

Project No. 112GN1245

Mr. Tom Brent  
NSWC Crane  
Code 09510 Building 3245  
300 Highway 361  
Crane, Indiana 47522-5009

Reference: CLEAN Contract No. N62467-94-D-0888  
Contract Task Order No. 0331

Subject: Draft Responses to IDEM Comments (May 10, 2007) on  
Draft Resource Conservation and Recovery Act (RCRA) Facility  
Investigation (RFI) Report for SWMU 8 (Building 106 Pond)  
Revised Response to Navy Crane Comments on Internal Draft RFI

Dear Mr. Brent:

Enclosed are the subject responses on the Draft Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report for SWMU 8 (Building 106 Pond).

Please contact me at (412) 921-8308 (email: [Ralph.Basinski@ttnus.com](mailto:Ralph.Basinski@ttnus.com)) or Joe Lucas at (412) 921-8882 (email: [Joe.Lucas@ttnus.com](mailto:Joe.Lucas@ttnus.com)) regarding any questions or comments.

Sincerely,

Ralph R. Basinski  
Task Order Manager

RRB/mig  
Enclosures

cc: Mr. Howard Hickey, NAVFAC MW (letter and response to comments)  
Ms. Debra Humbert, TtNUS, Inc. (letter only)  
Mr. Mark Perry, TtNUS, Inc. (letter and response to comments)  
Mr. Ralph Basinski, TtNUS, Inc. (letter and response to comments)  
Project File – CTO 0331 (letter and response to comments)

**RESPONSES TO COMMENTS PROVIDED BY DOUG GRIFFIN  
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM)  
DATED MAY 10, 2007 IN REGARD TO THE SWMU 8 (BUILDING 106 POND)  
DRAFT RFI REPORT HUMAN HEALTH RISK ASSESSMENT**

All IDEM comments are shown in bold font. All Navy responses are shown in regular font.

1. **Tom, Peter says you sometimes divide the numbers for carcinogens by 10 to be more conservative...I saw on the map that the numbers are supposed to be in ppb, but in ppb they are far below IDEM or EPA residential. I thought they were actually in ppm, which is more conventional for soil numbers...is it possible that these really are in ppb and for some reason you are using screening numbers that are really low?**

**Example: For Toluene, the number you have in the figure for screening is 590, the residential default for leaching to groundwater is 12 ppm in RISC and the R9 PRGs.**

Response: We divided risk-based concentrations for noncarcinogens by 10 for screening purposes. Also, we checked the units and concentrations for toluene that were mentioned in the comment and they were verified to be correct.

2. **Tom, I wanted to get the SWMU 8 RFI report off my list, so I pulled out the maps (I start my review by looking at the data, then the text) and the first map I look at has "Screening Values" that aren't even close to anything from IDEM or EPA. I assume these are some kind of site-specific numbers. I know we have had this discussion several times, but I will say it again...YOU CAN NOT SCREEN WITH SITE-SPECIFIC NUMBERS. This review is going to take much longer than it should have, and I have other projects that are higher priority, so I'm putting this on the shelf until I have the time to work on it.**

Response: No site-specific screening concentrations were used in the RFI report. To clarify the screening process, the procedures used to select COPCs for the human health risk assessment and for the tags maps are described below.

#### **Screening Levels for Human Health Risk Assessment**

Soil screening concentrations, based on the following criteria, were used to select COPCs for **quantitative risk evaluation**:

- U.S. EPA Region 9 PRGs for residential soil (U.S. EPA, October 2004).
- IDEM residential default closure levels for direct contact (IDEM, 2006).
- U.S. EPA generic soil screening levels (SSLs) for the inhalation of volatiles and fugitive dusts published online at [http://risk.lsd.ornl.gov/calc\\_start.shtml](http://risk.lsd.ornl.gov/calc_start.shtml), based on methodology from U.S. EPA's Soil Screening Guidance.

These values can be found, for example, in Tables 7-1 and 7-2 of the SWMU 8 RFI report. If the maximum soil concentration of a chemical exceeded these screening values, a **quantitative evaluation** of potential risks was performed. This process is discussed in Section 7.2.2.1 of the RFI report.

The data were also compared to the following U.S. EPA SSLs and IDEM default closure levels for transfers from soil to groundwater.

- U.S. EPA generic SSLs for migration from soil to groundwater calculated online at [http://risk.lsd.ornl.gov/calc\\_start.shtml](http://risk.lsd.ornl.gov/calc_start.shtml).
- IDEM residential default closure levels for migration from soils to groundwater (IDEM, 2006).

These values can be found in Table 7-2 of the RFI report. The migration to groundwater SSLs were **not used to select COPCs for quantitative risk evaluation**, but were presented to allow a qualitative evaluation of the potential for chemical migration from soil to groundwater.

The generic U.S. EPA SSLs were calculated online from the EPA's Soil Screening website. We did not use the generic values from the 1996 SSL Guidance presented in the U.S. EPA Region 9 PRG tables, but more current values. For example, the SSL for migration from soil to groundwater for toluene calculated on the website is 0.59 mg/kg (590 µg/kg) which is the value used in the SWMU 8 RFI report. These generic SSLs are presented in the soil COPC selection tables included in the Human Health Risk Assessment (Section 7). Please note that there are 2 soil COPC tables for each soil group, one for direct contact and one for migration (e.g., Tables 7-1 and 7-2, respectively). The migration SSLs are presented in the second table (Table 7-2). The Navy agrees that some of the soil-to-groundwater numbers are low. A table showing the Generic SSLs is attached to this Response to Comment document.

### **Screening Levels Used for Tag Maps**

The lowest value of the 5 types of criteria listed above was used to call out exceedances on the tag maps. To repeat, these include:

- U.S. EPA Region 9 PRGs for residential soil.
- IDEM residential default closure levels for direct contact.
- U.S. EPA generic soil screening levels (SSLs) for the inhalation of volatiles and fugitive dusts published online at [http://risk.lsd.ornl.gov/calc\\_start.shtml](http://risk.lsd.ornl.gov/calc_start.shtml).
- U.S. EPA generic SSLs for migration from soil to groundwater published online at [http://risk.lsd.ornl.gov/calc\\_start.shtml](http://risk.lsd.ornl.gov/calc_start.shtml).
- IDEM residential default closure levels for migration from soils to groundwater.