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LETTER AND COMMENTS FROM MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL
QUALITY REGARDING DRAFT REMEDIAL INVESTIGATION REPORT SITE 5 NCBC
GULFPORT MS
2/22/2008
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY



STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
TRUDY D. FISHER, EXECUTIVE DIRECTOR
22 February 2008

Art Conrad
Naval Facilities Engineering Command
Southern Division
2155 Eagle Drive
P. O. Box 190010
North Charleston,, South Carolina 29419-9010

Re: Draft Remedial Investigation Report for Site 5- Heavy Equipment Training Area,
Naval Construction Battalion Center Gulfport, Mississippi, August 2007.

The Mississippi Office of Pollution Control (OPC) has reviewed the above referenced Remedial Investigation. This document includes a Baseline Human Health Risk Assessment and a Screening Level Ecological Risk Assessment. The document is also under review by NOAA, U.S. Fish and Wildlife and the U.S. Environmental Protection Agency. Comments generated from those reviews to date (U.S Fish and Wildlife and U.S. EPA) have been reviewed by OPC. OPC concurs with these comments. Additional comments concerning the Ecological Risk Assessment are anticipated from NOAA. The following concerns were noted during the review of the document by OPC.

1. The text (ex. page ES-2, last paragraph, page 1-6, paragraph 2 and page 4-3, paragraph 3) frequently states that dioxin TEQ occurrences were "primarily OCDD" implying that no TCDD occurred, while other text discussions (ex. the discussion beginning on page 1-5, last paragraph and page 4-14, first paragraph) and concentrations reported in Table 4 indicate that significant levels of TCDD did occur in groundwater, surface water, sediments and subsurface soils. Lower concentrations were reported from surface soils that have been reworked by digging associated with heavy equipment training.

For example, the text (page 4-8, paragraph 4) states that the relative proportion of TCDD to the other congeners occurring in sediment samples was less than 42%, in support of the hypotheses that dioxin occurrences were not attributable to Herbicide Orange. Dioxin samples containing any TCDD (especially concentrations approaching 42% TCDD) would indicate potential Herbicide Orange contamination. No minimal relative proportion of TCDD to OCDD dioxin occurrences have been established (or agreed to) that would disqualify Herbicide Orange as a potential contaminant source.

Similar discussions about TCDD occurrences appear throughout the document (ex. page 4-11, paragraph 3, page 4-14, paragraph 1 and page 4-19, paragraph 3) and are presented in an apparent effort to diminish the association of detected TCDD concentrations in the various media with Herbicide Orange. These discussions should be removed, and TCDD occurrences (concentrations) should be clearly presented in the text and accompanying summary tables.

2. The text (page 2-3, paragraph 5) states that three Shelby tube samples were collected in order to evaluate the hydraulic conductivity of the landfill cover. This is an inadequate number of samples to evaluate an 8.3 acre landfill. Results of the test are not given. The text should state that the results indicated excessive permeability requiring installation of an engineered low permeability cover (presumptive remedy).
3. The text (page 2-3, paragraph 6) states that a landfill gas (methane) evaluation consisted of vadose zone gas samples from one location. This is an inadequate number of samples to evaluate an 8.5 acre landfill. The text should specify that an active landfill gas extraction system will be installed as part of the presumptive remedy.
4. The text (page 2-3, paragraph 3) states that 14 shallow and 2 intermediate depth (29 to 50 feet deep) groundwater samples were taken using DPT sampling for Phase 2 sampling. The discussion given on page 2-5 (paragraph 1) omits the 2 intermediate groundwater samples.

Similarly, the discussion of Phase 3 groundwater sampling (page 2-3, paragraph 4) indicates 20 sampling locations and 3 off site locations, while the discussion for Phase 3 sampling given on page 2-5 (paragraph 2) states that groundwater was collected from 21 DPT locations.

5. Data from previous investigations have been integrated into the Remedial Investigation (RI) and sampling results are inconsistently reported in text discussions, tables and on some figures. The data tables from previous investigations are separated from the RI and are included on a separate CD as Appendix E (page 4-3, paragraph 4). For example, the text (page 4-4, paragraph 4) references Table 4-1 for surface water samples collected in 2001 and to the CD containing laboratory data for the two samples collected in 1997.

Results of each previous investigation should be discussed in adequate detail and supported by illustrations and summary tables of detected concentrations from sampling events conducted during that particular investigation. Detected concentrations should be reproduced in the body of the RI as summary tables and text discussions pertinent to that particular study. Tables and figures should be cross referenced to text discussions of both the RI sampling results and Previous Investigations Section to show concentration trends and spatial relationships among the various sampling events.

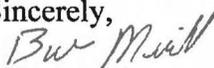
6. The text (page 4-4 through 4-6) should specify which (restricted or unrestricted) TRG values were used to evaluate surface water.
7. The text (page 4-8, paragraph 3 and page 4-9, paragraph 2) fails to acknowledge that the dioxin TEQ (6.83 ppt) exceeded the unrestricted TRG (as shown on Table 4-2) for sediment sample SWD-05-02, although other contaminant exceedances are specifically pointed out in the text. The two highest dioxin sediment occurrences (22.1 ppt in SWD 033 and 22.0 ppt in SWD 034) discussed on page 4-8 (paragraph 3) do not appear on Table 4-2.
8. Careful attention should be given to the use of the correct screening levels when reporting exceedances. For example, the restricted and unrestricted TRG values for cadmium shown on Table 4-2 (sediment) and Table 4-4 (subsurface soil) are incorrect. Similarly, TRG values for 2-butanone on Table 4-4 (subsurface soil) are incorrect.
9. The text (page 4-12, paragraph 3) indicates a problem with the reporting limits for PAHs (specifically benzo(a)pyrene and dibenzo(a,h)anthracene) due to the analytical method used. Appropriate analytical methods should be used that will evaluate chemical concentrations at and below applicable screening levels. If the appropriate analytical method was not utilized then the sample(s) results should be disregarded and PAHs should be re-evaluated using proper reporting limits.
10. It should be noted that the text (page 4-14, paragraph 1) acknowledges that four subsurface soil samples exceeded the TEQ screening level (TRG restricted of 4.26 ppt) at concentrations ranging between 7.14 ppt and 10.88 ppt with TCDD congener concentrations exceeding the TRG at concentrations ranging between 5.23 ppt and 13.52 ppt. These significant percentages of the congener TCDD (as well as concentrations above TRGs for this congener) in undisturbed subsurface landfill soils indicate that Herbicide Orange is a potential contaminant source (please see comment 1). The text should acknowledge that Herbicide Orange is a potential source of observed TCDD contamination.
11. Figure 4-4 shows the concentration of the duplicate for sample number DP-05-08 (10.99 ppt) rather than the sample (18.57 ppt) as reported in the text (page 4-14 paragraph 1) and on Table 4-4.
12. The text (page 4-15, last paragraph) references Table 4-4 (subsurface soil) for groundwater concentrations. This should read "Table 4-5".
13. Table 4-5 gives a dioxin TEQ groundwater concentration of 0.074 ppq for a sample from well GPT 05 14 but the concentration shown on Figure 4-5 is 80.83 ppq. The text (page 4-19, last paragraph) describes this as the maximum

groundwater concentration detected at Site 5 during a previous investigation, although the concentration detected during the RI (0.074 ppq) is reported on Table 4-5. Groundwater concentrations from previous sampling events should also be summarized in the Previous Investigations Section and concentrations detected above screening levels should be shown on summary tables for samples collected during the sampling event(s) conducted in support of that investigation. The results should also be integrated with findings from the current RI.

For example, the text (page 4-19, last paragraph) could reference Table X and accompanying text in the Previous Investigations Section for information about the sample with a TEQ of 80.83 ppq and Table 4-5 for the concentration (0.074 ppq) detected in a sample collected from the same well (GPT 05 14) during the current RI. Concentrations of sampling events shown on Figure 4-5 could indicate different sampling events of the same well by year, color coding, etc. Please see comment 5.

14. It was noted during recent discussions (ex. Tier 1 Partnering Meeting held 6 February 2008) concerning this report that the nature and extent of corrections will require re-writing of some sections of the report as well as corrections to maps and tables. After concerns expressed by all reviewers have been addressed, a draft final version of this document should be submitted for review prior to submittal of a final version.

Please feel free to contact me if I can be of further assistance.

Sincerely,

Bob Merrill

cc. Bart Reedy, USEPA