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LETTER AND COMMENTS FROM MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY REGARDING REMEDIAL INVESTIGATION REPORT SITE 4 NCBC GULFPORT MS
8/7/2009
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

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

7 August 2009

Robert Fisher
NAVFAC SE (OPG6)
PO Box 30, Bldg 903
NAS Jacksonville, FL 32212-0030

Re: Remedial Investigation Report for Site 4 (Golf Course Landfill), Naval Construction Battalion Center Gulfport, Mississippi, Draft, October 2007.

The Mississippi office of pollution control (OPC) has reviewed the above referenced document and offers the following comments. The report includes a Remedial Investigation (RI), Baseline Human Health Risk Assessment (BRA) and a Screening Level Ecological Risk Assessment (SLERA). Review of this document was postponed due to site prioritization by the Navy. Offbase areas of concern (AOCs), Site 5 and Site 8 (B and C) were placed in a higher priority status and evaluated ahead of Site 4. The following concerns were noted during review of the Remedial Investigation Report for Site 4.

1. The executive summary should contain more detail (concentration ranges and trends, etc.) about the findings of both the current Remedial Investigation and pertinent previous investigations. An evaluation of the nature and extent of contamination should be abstracted from the main body of the report.

2. The text (pages 2-2 and 2-3) should reference Tables 4-2 and 4-3 for subsurface soil and Table 4-4 for surface soil sample results.

3. Hydro geologic units underlying the site should be correctly identified and described. The text (page 3-8, paragraph 6) states that the Miocene Aquifers include the Citronelle Formation and the Graham Ferry formation (Pliocene). The term Miocene Strata indicates strata of Miocene age, which do not include strata of younger Pleistocene (Citronelle) or Pliocene (Graham Ferry Formation) age. Hydro geologic units typically acquire the names of formations comprising them but these units do not extend beyond formational time-stratigraphic boundaries to include other formations deposited at different times.

The thickness of the "thin gray clay layer" described in the report (ex. page 3-3, paragraph 1 and page ES-3) should be provided. The lithology of this unit should be verified because pure "clay" (containing no silt or sand) is rare in Coastal Plain strata. This unit is similarly identified (gray clay) on the cross section shown on Figure 3-5.

The geologic units should be identified on the "Geologic Cross Section" provided as Figure 3-5. Only generalized lithologic descriptions are given. This would permit identification and correlation of aquifers and stratigraphic units (described in the report) underlying the site.

4. The maximum site wide TCE concentration (130.0 ppb) given on page 4-12 (paragraph 1) is different from that shown on Table 4-6 and Figure 4-2 (120.0 ppb). The correct concentration should be determined and appropriate corrections made.

5. The text (pages 4-14 and 4-15) compares the results of filtered and non filtered groundwater samples. It should be noted that OPC does not utilize filtered groundwater samples in site evaluations and that only non filtered (slow purge) samples are typically used for screening purposes.

6. The text (page 4-19, last paragraph) states that TCDD was detected in all three sediment samples although the statement on page 4-17 (paragraph 5) reports the collection of eight sediment samples from Canal 1. Additional sediment and surface water sampling was requested in a comment letter (dated 2 March 2007) regarding the Draft Site 4 Remedial Investigation Report (dated October 2006) in order to determine the extent of contamination areas of Canal 1 located away from (upstream and downstream of) Site 4. Only three of the eight sediment samples collected during the RI were analyzed for dioxin.

   Dioxin was detected above the unrestricted screening level (4.26 ppb) at both of the two sediment sampling locations. These two locations comprise three samples, including a duplicate at location SD01. Total dioxin (TEQ) concentrations were 3.17 ppt in SD01, 4.36 ppt in SD01D and 32.5 ppt in SD08. Each of the three samples contained appreciable concentrations of 2,3,7,8 TCDD (1.3 ppt, 1.4 ppt and 8.0 ppt in samples SD01, SD01D and SD08, respectively).

   The text (page 4-20, paragraph 1) states that TCDD contributes less than one percent of the total concentration of substituted chlorinated congeners, which suggests that Herbicide Orange (HO) is not the major contributor of dioxins and furans in Site 4 Sediment. The relevance of this statement is unclear and needs clarification. A minimal amount of TCDD in sediment/soil samples that will determine the presence of HO alteration products has not been determined or agreed to by OPC.

Dioxin congener concentration ratios (TCDD/TEQ) indicate that 2,3,7,8 TCDD contributes 25% to 30% of the total TEQ dioxin sediment concentration. This would indicate that TCDD is a major contributor to the total sediment concentration. Please re-evaluate or clarify. The relevancy of whether TCDD (Herbicide Orange footprint) is or is not a major contributor to sediment contamination at this site is not clear, as 2,3,7,8 TCDD contamination (and the presence of TCDD in 100% of the samples taken) has been demonstrated.

7. It is noted that PAH concentrations exceeded ecological and human health screening levels. Elevated PAH and dioxin concentrations in sediment samples collected from Canal 1 indicate potential risk in areas of the stream located away from the landfills. Ecological and human health risk evaluations, as well as associated remedial plans, should address areas of Canal 1 located beyond (upstream and downstream of) stream segments located adjacent to the landfills (Sites 3, 4 and 5).

8. A heading should be inserted between paragraphs 3 and 4 of page 7-13 to indicate the transition from Step 2 to Step 3A of the Ecological Risk Assessment (ERA). It is noted that the Navy is concluding the ERA at the end of Step 3A. The ERA should be reviewed (and the decision to terminate the ERA at this stage should be evaluated) by all appropriate stakeholders (including U.S. Fish and Wildlife, EPA and NOAA) before the ERA is finalized.

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

Sincerely,

Bob Merrill

Bob Merrill

cc. Bart Reedy, USEPA