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LETTER AND RESPONSE TO U S NAVY COMMENTS TO DRAFT FEASIBILITY STUDY SITE 5 NCBC GULFPORT MS
6/13/2008
TETRA TECH NUS

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PITT-06-08-027

June 13, 2008

Project Number 112GN1813

Mr. Robert Merrill
Mississippi Department of Environmental Quality
Office of Pollution Control
515 Amite Street
Jackson, Mississippi 39201

Reference: Clean Contract No. N62467-94-D0888
Contract Task Order No. 0292

Subject: Response to Comments – Draft Feasibility Study for
Site 5 – Heavy Equipment Training Area (November 2007)
Naval Construction Battalion Center, Gulfport, Mississippi

Dear Mr. Merrill:

Attached please find the Response to Comments per your letter of May 7, 2008. The revisions described in the Response have been incorporated into the Feasibility Study.

If you have any questions or require further information, please contact me at (412) 921-7231.

Sincerely,

Joseph W. Logan, P.E.
Task Order Manager

JWL/clm

Enclosure

c: Art Conrad, NAVFAC SE
Gordon Crane, NCBC Gulfport
Robert Fisher, TtNUS Tallahassee
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NCBC GULFPORT
SITE 5 FEASIBILITY STUDY
RESPONSES TO MDEQ COMMENTS OF MAY 7, 2008

1. Detailed analyses of remedial technologies were not provided for alternatives retained (Table 3-1) in the preliminary screening presented in Section 3.0 (beginning on page 3-1). The section entitled Assembly and Detailed Analysis of Remedial Alternatives (Section 4.0 beginning on page 4-1) contained definitions of the nine general evaluation criteria but only two alternatives were evaluated in the Detailed Analysis of Remedial Alternatives (Section 4.3, page 4-6). Cost analyses were not provided for any of the alternatives prior to or after retainment of alternatives except for the chose remedy. The screening process used for eliminating the alternatives retained (Table 3-1) for evaluation does not appear in the document.

> Response: Detailed analyses of other remedial technologies were not developed because they are screened out by application of the presumptive remedy approach. The presumptive remedy approach is described in the Introduction, and a section heading for this information will be added.
>
> As noted on pages 1 and 2 of the Military Landfill RI/FS directive (December 1996), the presumptive remedy approach allows one to streamline and focus the FS or EE/CA by eliminating the technology screening step from the feasibility study process. EPA has already conducted this step on a generic basis in the *Feasibility Study Analysis for CERCLA Municipal Landfill Sites*, thus the FS analyzes only alternatives comprised of components of the containment remedy identified in Highlight 1. A list of reference documents for presumptive remedies is attached to the end of this response letter.
>
> However, as discussed at the May 13, 2008 Tier I meeting, two process options will be detailed in Section 3.0 Screening of Technologies and Development of Alternatives. Specifically, Excavation and Offsite Disposal; and Excavation, Onsite Treatment, and Onsite Disposal will be evaluated in Section 3.2 Detailed Screening of Remediation Technologies and Process Options. Table 3-1, Preliminary Screening of Remediation Technologies will also be revised. The additional text is attached to this response letter.

2. The text (ex. Page ES-3, paragraph 2, page 1-8, paragraph 3) refers to the primary remediation goal/TRG (MCL) for arsenic as 50 ppb. The MCL for arsenic 10.0 ppb. This became effective in 2006.

> Response: Agreed. The text will be revised.

3. A plan view map should be supplied showing locations of wells and labeled lines of section for the stratigraphic cross sections given as figures 1-3 and 1-4.

> Response: Agreed. The plan view (Figure 1-2) will be revised to show the wells and borings used to create the geological cross-sections.

4. The text (ex page 1-8, paragraph 5) tends to shy away from reporting actual concentrations (or percentages comprising the TEQ value) of 2,3,7,8 CDD in soils and provides discussions indicating that the observed concentrations fall below some minimal amount or percentage of TCDD required for indication that Herbicide Orange (HO) is the contaminant.

No minimal amount, concentration or percentage of 2,3,7,8 TCDD has been established for fingerprinting Herbicide Orange. Any amount of TCDD detected in any media is adequate for establishing HO as a potential contaminant. These discussions should be removed and the concentration ranges of TCDD should be provided for each media as reported for the other contaminants addressed in the document.

> Response: Agreed. The TCDD concentration range in surface soil samples will be added to the Nature and Extent of Contamination in Surface Soil section on page 1-8. The fifth paragraph on Page 1-8 will be deleted entirely. Similarly, the TEQ and TCDD concentration ranges in subsurface soil will be added to the Nature and Extent of Contamination in Subsurface Soil section on page 1-9. In addition, a similar sentence that discusses TCDD in the Nature and Extent of Contamination in Sediment section on page 1-10 will also be deleted. The revised text is attached to this response letter.

In addition to above the revisions described above, the following editorial changes are being made:

- Section 1.3.1, Site Description: The site area has been revised from 6.1 acres to 6.2 acres to be consistent with the calculation page in Appendix B.

- Section 1.3.5, Investigation History: The date of the BB-ES Surface Water and Sediment Dioxin Delineation Report has been revised from 1999 to 1997.

- Section 1.4.1, Nature and Extent of Contamination: The figure from the RI that shows the surface water and sediment results has been added to the FS as Figure 1-11.

ATTACHMENT

PRESUMPTIVE REMEDY REFERNCE DOCUMENTS (See Comment #1):

USEPA, 1993a. Presumptive Remedies: Policies and Procedures, OSWER Directive No. 9355.0-47FS. September

USEPA, 1993b. Presumptive Remedy for CERCLA Municipal Landfill Sites. EPA 540-F-93-035, Office of Solid Waste and Emergency Response, Washington D.C.

USEPA, 1994. Feasibility Study Analysis for CERCLA Municipal Landfill Sites. EPA 540-R-94-081, Office of Solid Waste and Emergency Response, Washington D.C.

USEPA, 1996. Application of the CERCLA Municipal Landfill Presumptive Remedy to Military Landfills (Interim Guidance). EPA-540-5-96-007, Office of Solid Waste and Emergency Response, Washington, D.C.

TEXT ADDED TO FS, Section 3 (See Comment #1):

3.2.4 Excavation

Waste material and contaminated soil can be remediated by excavation followed by on-site treatment or off-site disposal. The presumptive remedy notes that these process options are typically eliminated because of high costs. Based on an area of 6.2 acres and a thickness of 8 feet, the estimated volume of material that would be excavated is estimated to be 80,000 cubic yards.

3.2.4.1 Excavation and Off-site Disposal

In this option, soil and waste are excavated using conventional excavation equipment. Soil and waste would be sampled and analyzed for disposal characterization prior to excavation. The excavated material would be loaded onto trucks for off-site disposal. Based on the existing analyses, it is assumed that the material could be disposed of as a non-hazardous waste.

Effectiveness

This method would be very effective in removing hazardous substances and meeting RAOs. The technology is commonly applied to sites with contaminated soil.

Implementability

The depth of soil to be removed is shallow and the sandy soil is easy to handle. Standard excavating equipment could be used.

Cost

The cost for excavation and off-site disposal of the quantity of soil would be very high and is estimated to be $12,000,000 (See Appendix B). Because the waste would be removed, there would be no annual O&M costs.

Conclusion

Because of the very high capital costs, this process option is eliminated.

3.2.4.2 Excavation, On-site Treatment, and On-site Disposal

In this option, soil and waste are excavated using conventional excavation equipment. Soil and waste would be sampled and analyzed prior to and following treatment. Because the primary contaminants are dioxins and furans, the process option for treatment is assumed to be incineration. Based on the assumed effectiveness of the treatment, it is assumed that the treated soil can be placed back onto the site.

Effectiveness

This method would be very effective in removing hazardous substances and meeting RAOs. The technology has been applied to sites with contaminated soil.

Implementability

The depth of soil to be removed is shallow and the sandy soil is easy to handle. Standard excavating equipment could be used. However, obtaining a permit for on-site incineration will be difficult. Obtaining permits of incineration projects, particularly dioxin projects, is a time-consuming process.

Cost

The cost for excavation, on-site treatment, and on-site disposal of the quantity of soil would be very high and is estimated to be $24,000,000 (See Appendix B). Because the contaminants would be removed, there would be no annual O&M costs.

Conclusion

Because of the very high capital costs and permitting issues, this process option is eliminated.

TEXT ADDED TO FS, Section 1 (See Comment #4):

Surface Soil

Figure 1-8 shows the surface soil exceedances. No VOCs, SVOCs, polychlorinated biphenyls (PCBs), or herbicides were detected in the surface soil samples. All detected pesticide concentrations in surface soil were below the applicable Mississippi Tier 1 restricted and unrestricted Target Remediation Goals (TRGs). One inorganic, arsenic, was detected in all samples at concentrations greater than the unrestricted TRG but less than the restricted TRG.

Dioxins and furans were reported at very low levels in each surface soil sample. TCDD concentrations ranged from 0.89 nanograms per kilogram (ng/kg) to 3.6 ng/kg. The reported TEQs for the samples ranged from 1.2 ng/kg to 8.69 ng/kg. The average for the positive concentrations was 5.04 ng/kg, greater than the unrestricted TRG value of 4.26 ng/kg, but much

less than the restricted TRG of 38 ng/kg. There was no discernable pattern to the distribution of the total TEQ or the congener types in the surface soil samples.

Subsurface Soil

Figure 1-9 shows the subsurface soil exceedances. All detected VOC, SVOC, and pesticide/PCB concentrations in subsurface soil were below the applicable TRGs. Arsenic exceedances of the unrestricted TRG were the most widespread, occurring both on and off site and in all three sample depths (10-12, 18-20, and 28-30 feet bgs). All were less than the restricted TRG. Arsenic concentrations detected on and off site, as well as, on and off base, suggest that the presence of arsenic in subsurface soils may be due to naturally occurring concentrations. Dioxins were detected site-wide, but exceedances of unrestricted TRGs were limited to three locations, all on-site and north of the access road. TCDD concentrations ranged from 0.199 ng/kg to 13.52 ng/kg. The reported TEQs ranged from 0.0356 ng/kg to 18.57 ng/kg. All exceedances were less than the restricted TRGs.