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NCBC GULFPORT  
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LETTER AND COMMENTS FROM MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL  
QUALITY REGARDING FEASIBILITY STUDY SITE 4 NCBC GULFPORT MS  
9/18/2009  
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY



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

18 September 2009

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

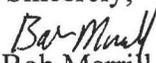
Re: Feasibility study for Site 4 (Golf course Landfill), Naval Construction Battalion Center Gulfport, Mississippi, Draft, November 2007.

The Mississippi Office of Pollution Control has reviewed the above referenced Feasibility Study (FS) received on 18 December 2007. The following concerns were noted during document review.

1. Groundwater monitoring is not included in text discussions concerning groundwater treatment technologies (pages 3-6 and 3-7, page 3-10, paragraph 5) or as an element of any of the remedial alternatives discussed in the document. Monitoring is only discussed with reference to soil sampling (page 3-4, paragraph 3). Groundwater monitoring should be included as both a short term and long term program conducted in order to demonstrate the integrity of the selected remedy. The CVOC plume should be contained by the monitoring well network and monitored periodically to insure that further migration does not occur after the proposed treatment technology described on page 3-6 (paragraph 4) is applied. If an alternative remedy is chosen, long term monitoring should still be conducted in order to determine the effectiveness of the selected remedy and to provide an adequate evaluation of the CVOC plume.
2. The text (page 3-8, last paragraph) states that the landfill cover will consist of a geosynthetic material that will be equivalent to an 18 inch thick cover material with a hydraulic conductivity of  $1E-5$  cm/sec. A geosynthetic cover material will provide a more desirable cap with a permeability of  $1E-6$  cm/sec. (or less), especially when used in combination with the layered system (including an infiltration zone and topsoil cap) described in the text. The text should state that this cover system will provide a landfill cap with a  $1E-6$  cm/sec. (or less) vertical hydraulic conductivity rather than the stated  $1E-5$  cm/sec. That ( $1E-6$  cm/sec.) value should be repeated when cover material is described elsewhere in the document.

3. A soil cover has been discussed for some abandoned landfills at NCBC Gulfport. Landfill closure (cover) requirements were specified in 40CFR for Subtitle D (non hazardous) landfills that operated after 9 October 1993. Landfill soil cover materials with a maximum hydraulic conductivity of  $1E-5$  cm/sec. were specified in 40CFR guidance for closing non hazardous (municipal solid waste) landfills that received municipal waste prior to 9 October 1991 if the permeability (vertical hydraulic conductivity) of the liner material was unknown, however this applied only to non hazardous waste landfills. This conceptual model can be applied to abandoned non hazardous waste landfills for selection of a cover material when appropriate. The geosynthetic cover material proposed in the FS would provide a more protective cap for Site 4 and would qualify as an appropriate element of a cover for disposal cells containing hazardous materials. It should be noted that the EPA Presumptive Remedy Guidance referenced in the FS addresses Subtitle C (hazardous waste) landfill closure evaluations (page 7, last paragraph) and provides references that are utilized to determine whether hazardous or non hazardous waste landfill closure criteria are relevant and appropriate (page 8, item 2). Given these considerations and the fact that the waste stream for Site 4 is not definitively documented, OPC concurs that the geosynthetic membrane material (discussed on page 3-8, last paragraph) should be incorporated into the cover system.
4. It should be noted that the FS does not identify the selected remedy. OPC appreciates the opportunity to participate in the development of the remedial design.

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

Sincerely,  
  
Bob Merrill

cc. Bart Reedy, USEPA