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NCBC GULFPORT
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LETTER AND COMMENTS FROM MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL
QUALITY REGARDING DRAFT NINETY PERCENT REMEDIAL DESIGN SITE 5 NCBC
GULFPORT MS
11/25/2008
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY



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

25 November 2008

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

Re: 90% Remedial Design for Site 5 - Heavy Equipment Training Area, Naval Construction Battalion Center Gulfport, Mississippi, Draft, September 2008.

The Mississippi Office of Pollution Control has reviewed the above referenced document. The following concerns were noted during document review.

1. Clarification is needed concerning the "infiltration layer". The text (page 3-5, third bullet) indicates that a "geosynthetic clay liner (GCL) is to be used as the infiltration layer, with permeability equivalency calculation provided in Appendix B". This indicates that the landfill design does not include an infiltration layer. Calculations presented in Appendix B do not specify the vertical hydraulic conductivities of an infiltration layer or a GCL lining material. The conclusion (sheet 2, Appendix B) states that "the GCL will achieve an equivalent reduction in infiltration as an 18 inch soil infiltration layer with a permeability of $1E-5$ m/sec". The GCL portion (lining) of the cover system should provide a vertical hydraulic conductivity of no greater than $1E-6$ cm/sec under one foot of hydraulic head.
2. Clarification is needed concerning the landfill cover lining or less permeable zone at the base of the infiltration zone. The hydraulic conductivities of the infiltration layer material and the GCS (lining) portions of the cover system should be reported. GCL materials typically provide vertical hydraulic conductivities of less than $1E-8$. The type of synthetic liner is specified as a "geosynthetic clay liner or GCL" (page 3-5, third bullet), which is a bentonite clay sandwiched between a geosynthetic screen, although recent discussions indicate that a single sheet synthetic cover system lining is planned.

OFFICE OF POLLUTION CONTROL

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If this is the case, the document specifies a material different than intended. The document should accurately characterize the planned cover system. A highly permeable material placed above the synthetic lining will result in erosion at the base of the infiltration layer.

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

Sincerely,

Bob Merrill

cc. Bart Reedy, USEPA