

US EPA ARCHIVE DOCUMENT

(E-mail) Memo from John Boyer to Joe Wiseman February 7, 2001
Camp Dresser, and McKee

RE: Buncombe County Alternative Liner

The original leakage rates shown in the text (1.12 gal/acre/day for regulatory liner and 0.53 for gal/acre/day for the alternative liner) are actually the correct ones to use, in the context of the State's alternative design document (Permitting Guidance for Alternative Composite Liner Systems, June 1, 1998). The CDM estimated leakage rates of 0.148 and 0.066 gal/acre/day for the regulatory liner and alternative liner respectively, were calculated based on the assumption of one "large" hole in the geomembrane per acre and 30 cm of head on the liner. Although the State indicates that the HELP model, a water balance model, or other method may be used to estimate the leakage rate, they strongly suggest the use of the conservative leakage rates as determined in the SWANA white paper, which are based on 8 "small" holes per acre and 30 cm of head on the liner.

The alternative liner's leakage rate is less than half that of the regulatory minimum liner. The modeling performed to complete the demonstration of the acceptability (and superiority) of the alternative liner involves inputting the leakage rates into EPA's MULTIMED model, which simulates the movement of contaminants leaching from a landfill. The output of the MULTIMED model reflects the fact that the alternative liner is more protective than the standard regulatory liner.

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