Appendix I

Equation (1) $D = N * (6.6 \times 10^{-9})$, where:

   $D =$ liner thickness (ft), not to exceed 5 feet.

   $N =$ time (seconds), calculated in procedure (3)

Equation (2) $T = D/AK$, where:

   $T =$ time (seconds)

   $D =$ thickness of geologic stratum (cm)

   $K =$ hydraulic conductivity of geologic stratum (cm/sec)

   $A =$ constant determined by type of geologic stratum where:

   $A =$ 2.0 for clay
   $A =$ 2.5 for silt
   $A =$ 3.5 for sand or gravel
   $A =$ 5.0 for fractured bedrock
   $A =$ the inverse of the porosity of the non-fractured bedrock material

Procedure:

(1)   Calculate T for each geologic stratum that is to be present between the uppermost aquifer system and the base of the recompacted soil liner using equation (2).

(2)   The values for T calculated in procedure (1) shall be summed to yield T for the entire section between the uppermost aquifer system and the base of the recompacted soil liner.

(3)   Subtract T from 7.9×10^8 seconds to get N (seconds).

(4)   Insert N into equation (1) to determine required liner thickness.