

Appendix A

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

$D =$ Liner thickness (ft), not to exceed 5 feet for facilities regulated in accordance with paragraph (C)(1)(j)(iii) of this rule and not to exceed 3 feet for facilities regulated in accordance with paragraph (C)(1)(j)(ii) of this rule.

$N =$ 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