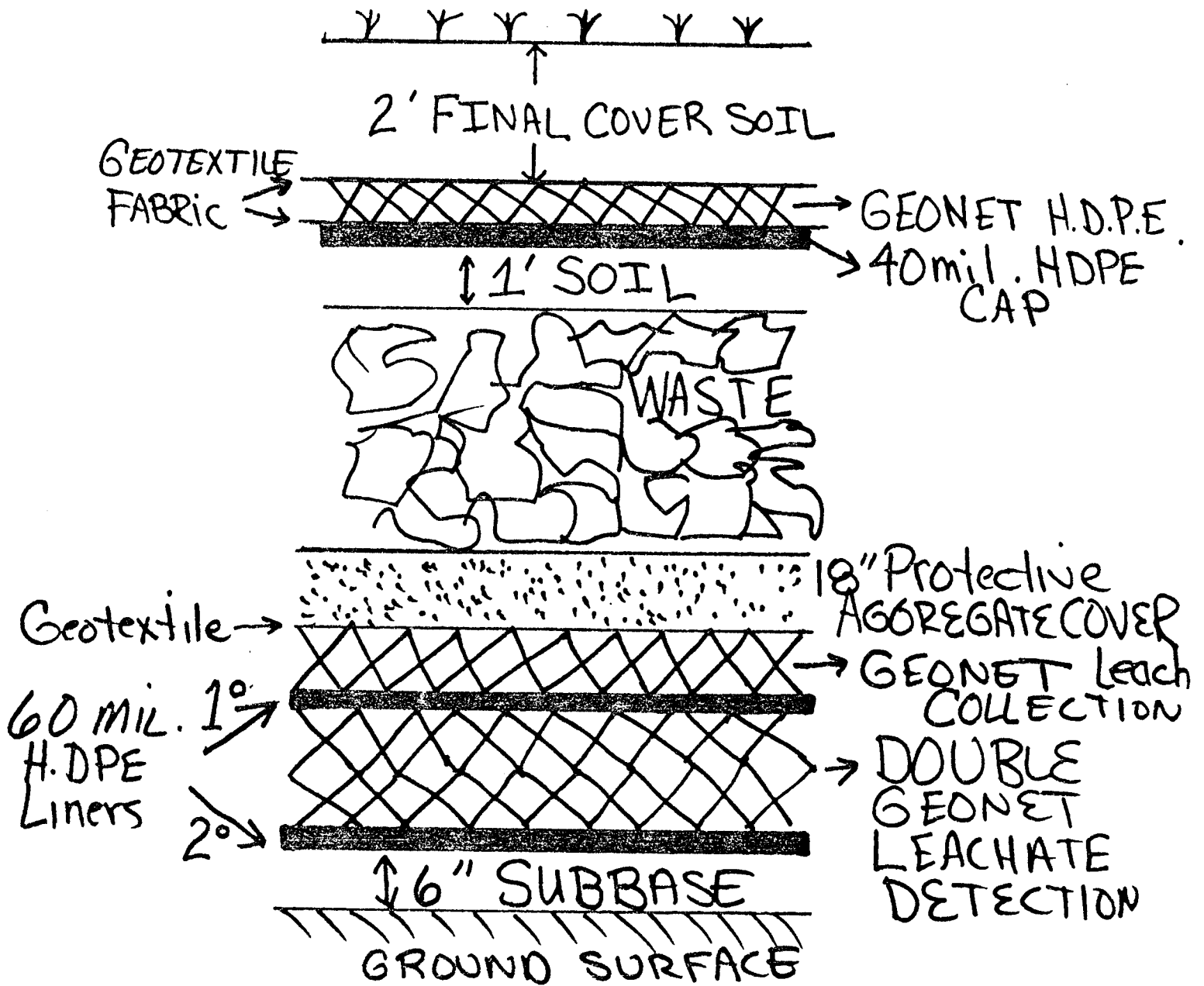


CONVERSION OF PHOTOGRAPH TO MODEL BY J. W. MILLER, JR.

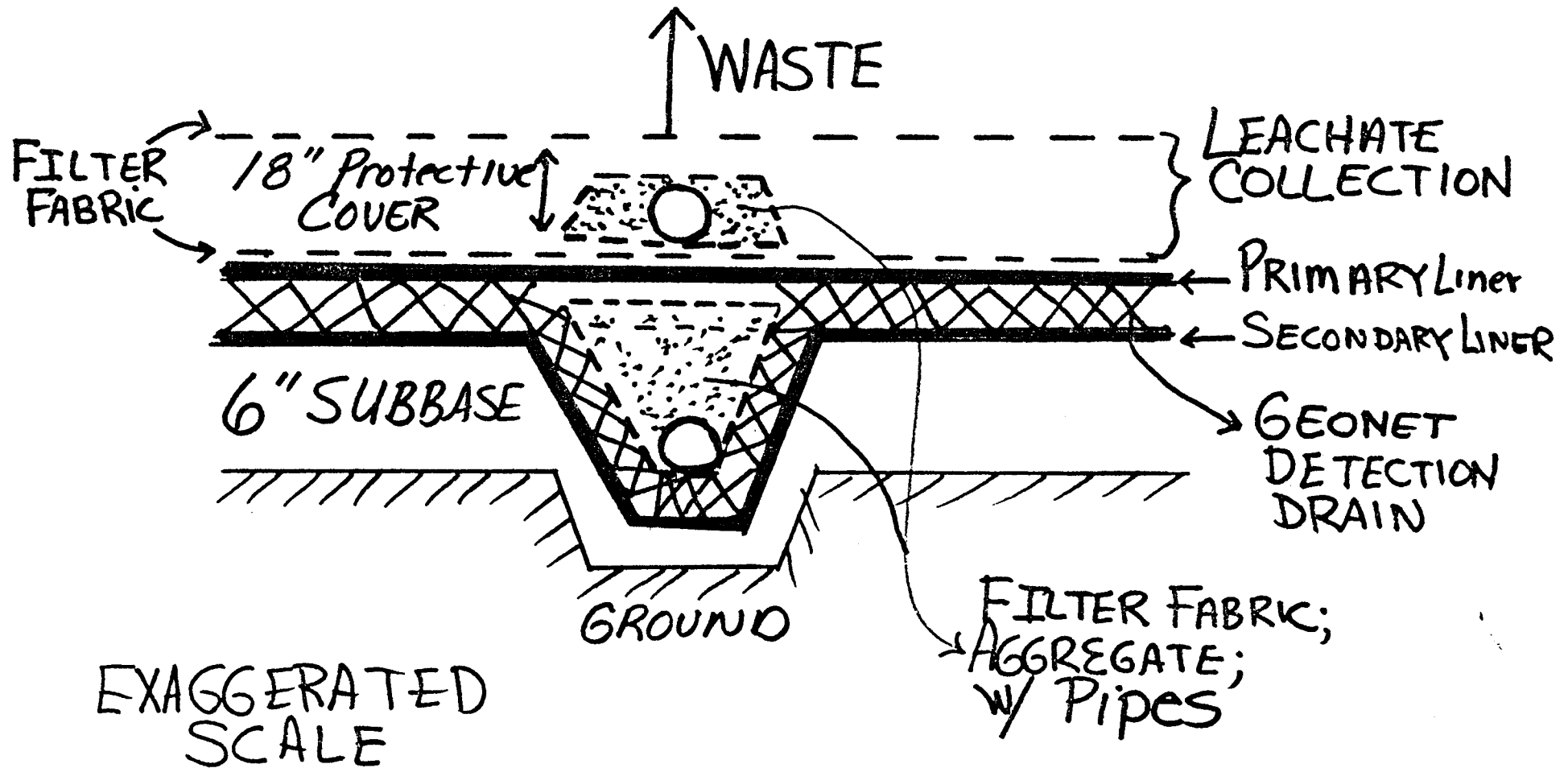
Plan view of contaminated ground water in bedding planes and fractures in a rock aquifer, caused by leachate from a landfill (Miller et al., 1974)

Contamination in a three-aquifer system.

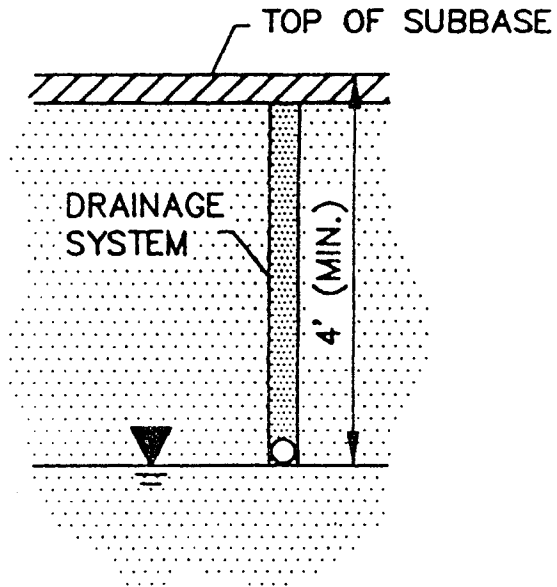
M.S.W. DOUBLE LINER



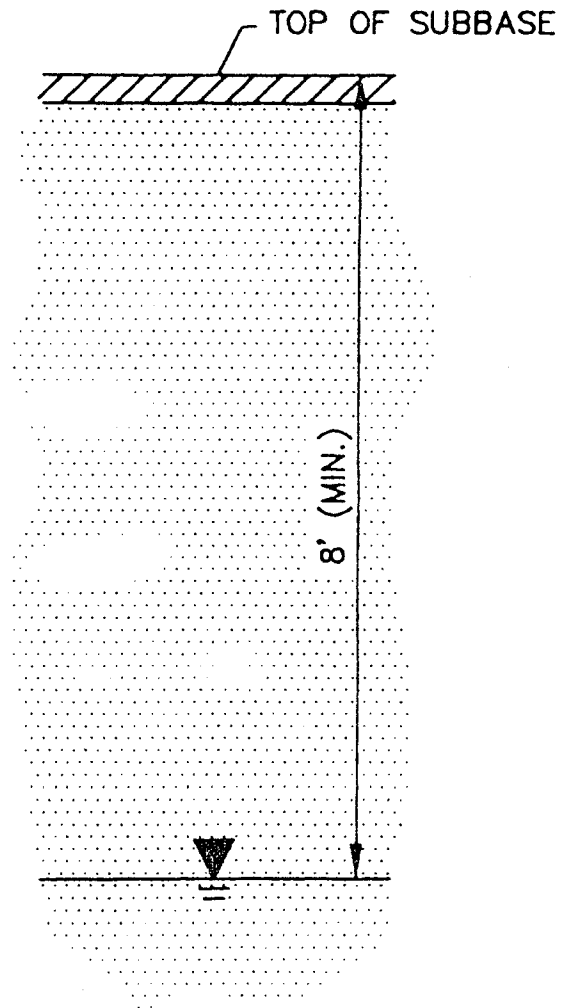
M.S.W. LINER SYSTEM



A. SEASONAL HIGH GROUNDWATER

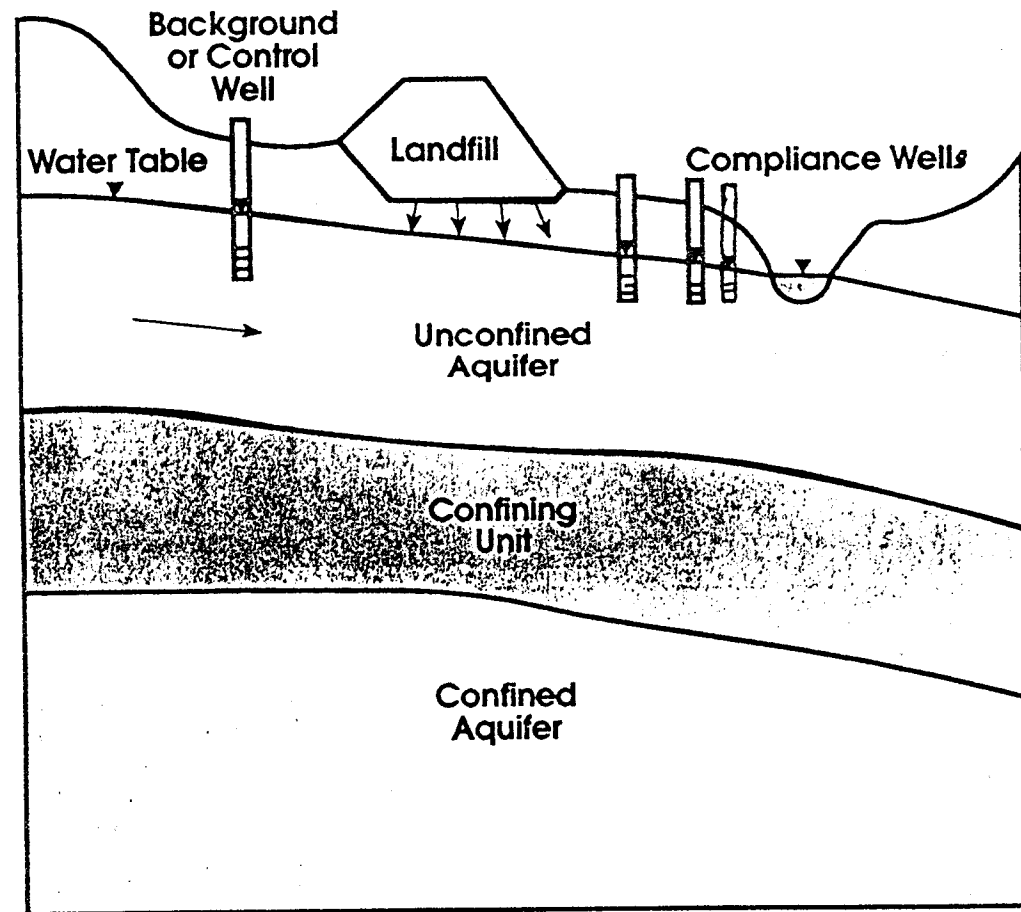


B. REGIONAL GROUNDWATER TABLE



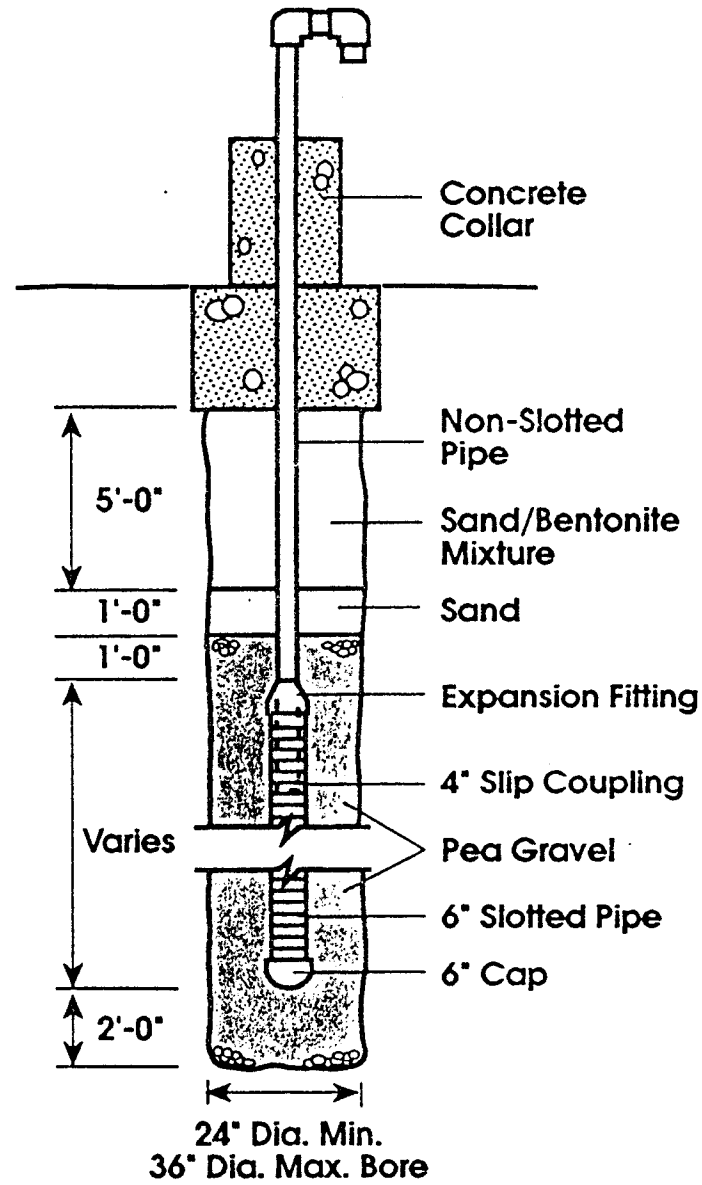
REQUIRED ISOLATION DISTANCE
BETWEEN LINER SYSTEM AND
GROUNDWATER TABLE

Groundwater Monitoring





Landfill Gas Vent



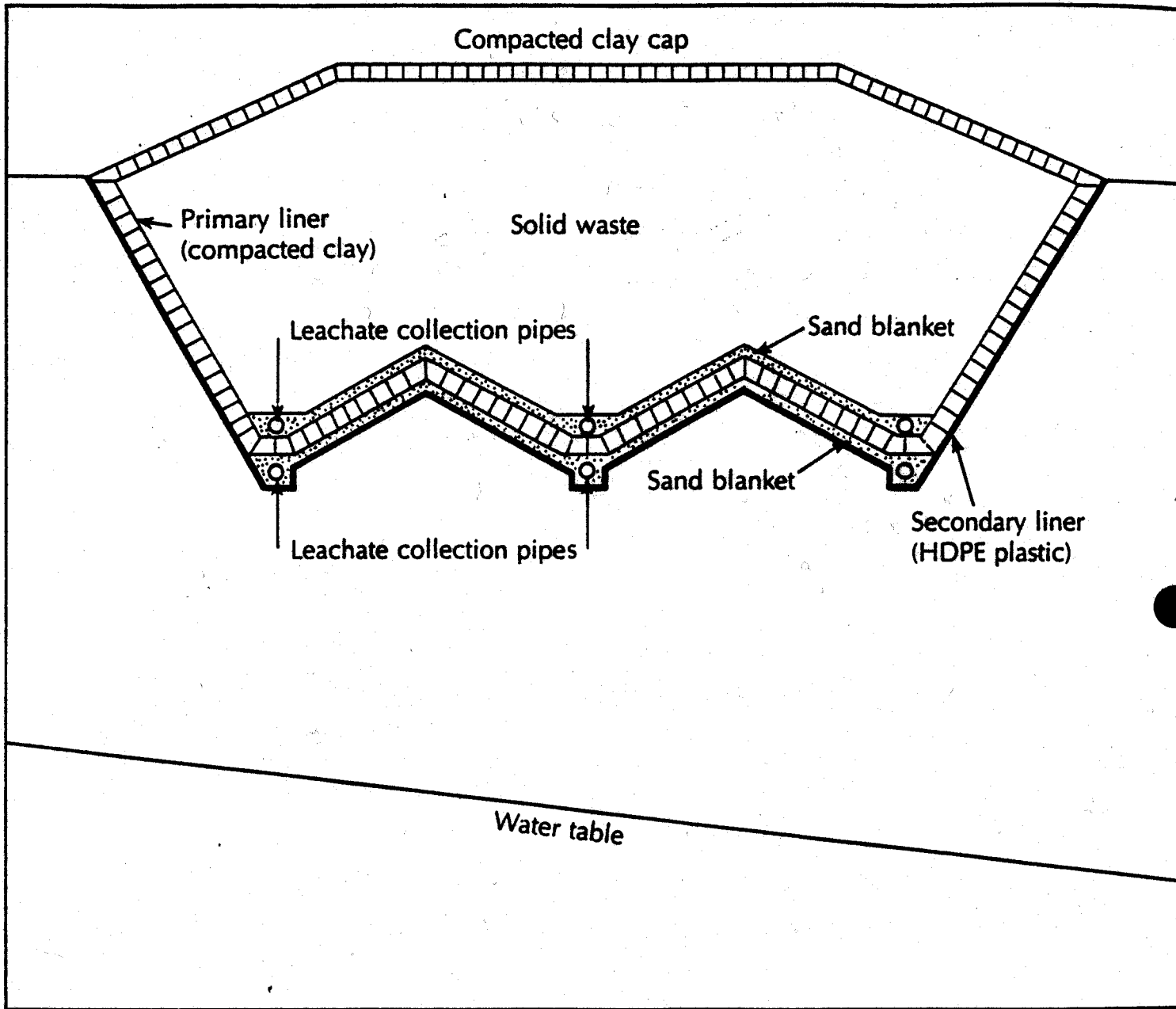


FIGURE 10.17 Double-lined landfill with leachate collection system. Primary liner consists of five feet of compacted clay soil with hydraulic conductivity of no more than 1×10^{-7} cm/sec. Secondary liner is flexible membrane such as 40 mil HDPE plastic. Leachate collection system consists of one-foot-thick sand layers with perforated pipes, which drain to a leachate collection tank.

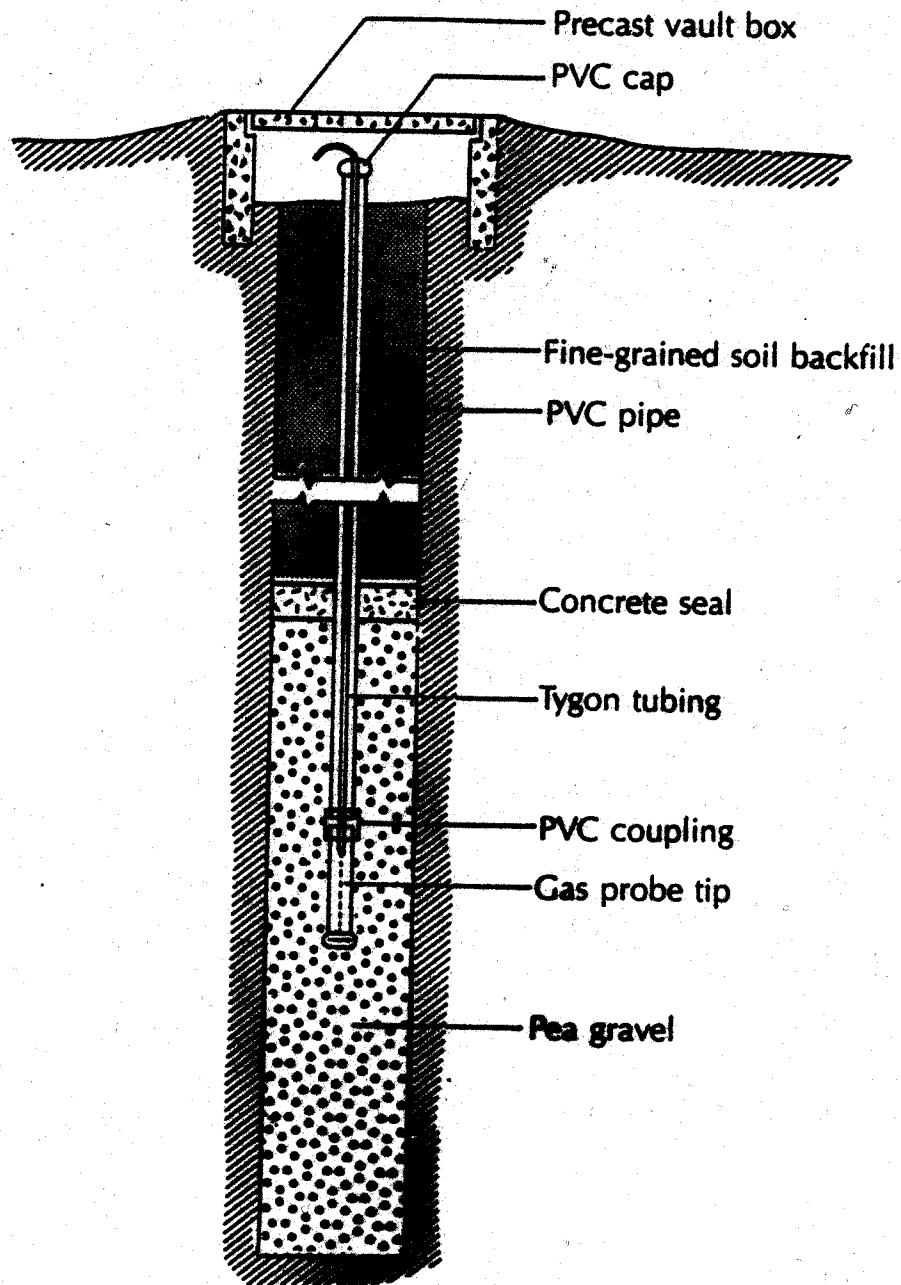


FIGURE 10.6 Gas monitoring well in vadose zone. Source: L. S. Wilson, *Ground Water Monitoring Review*, 3, no. 1 (1983):155-66.

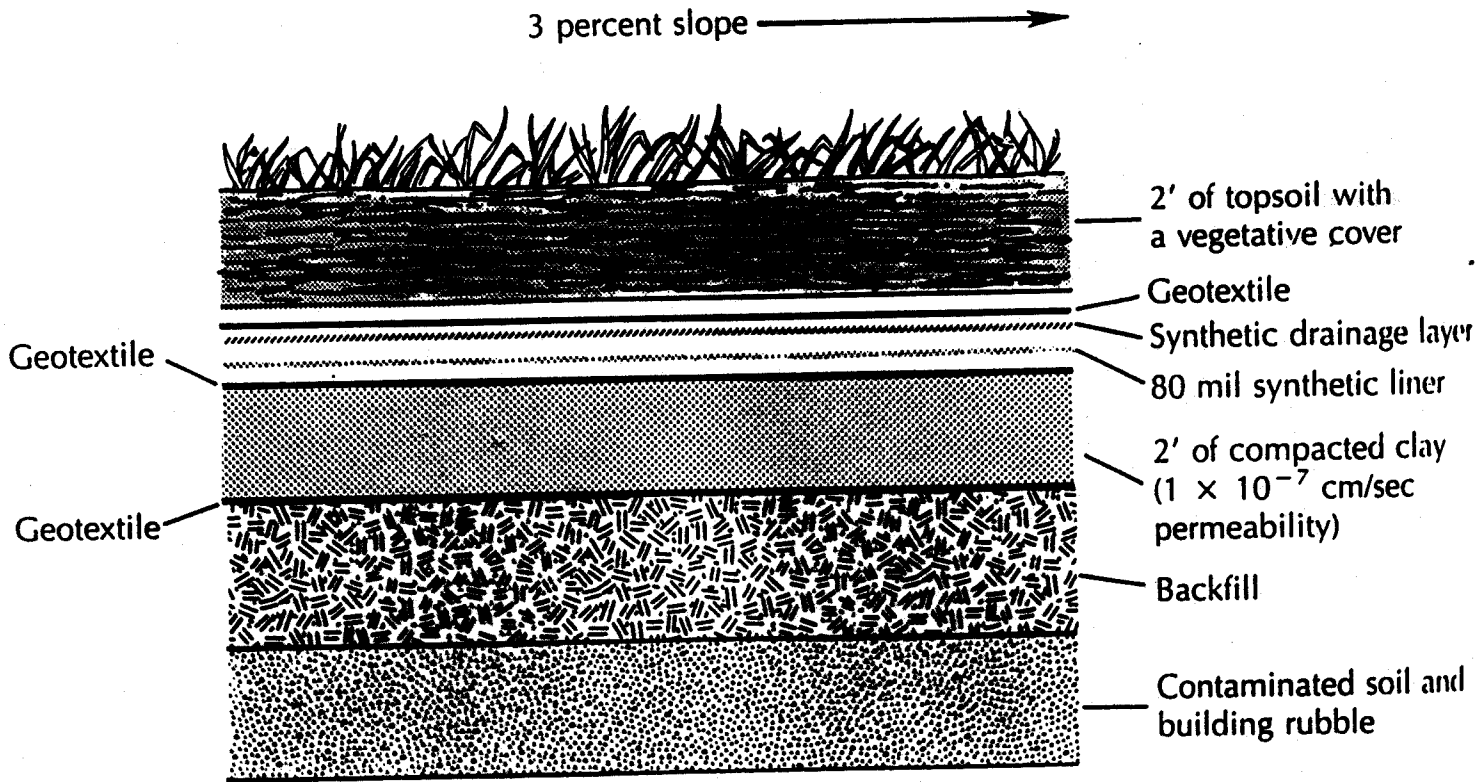
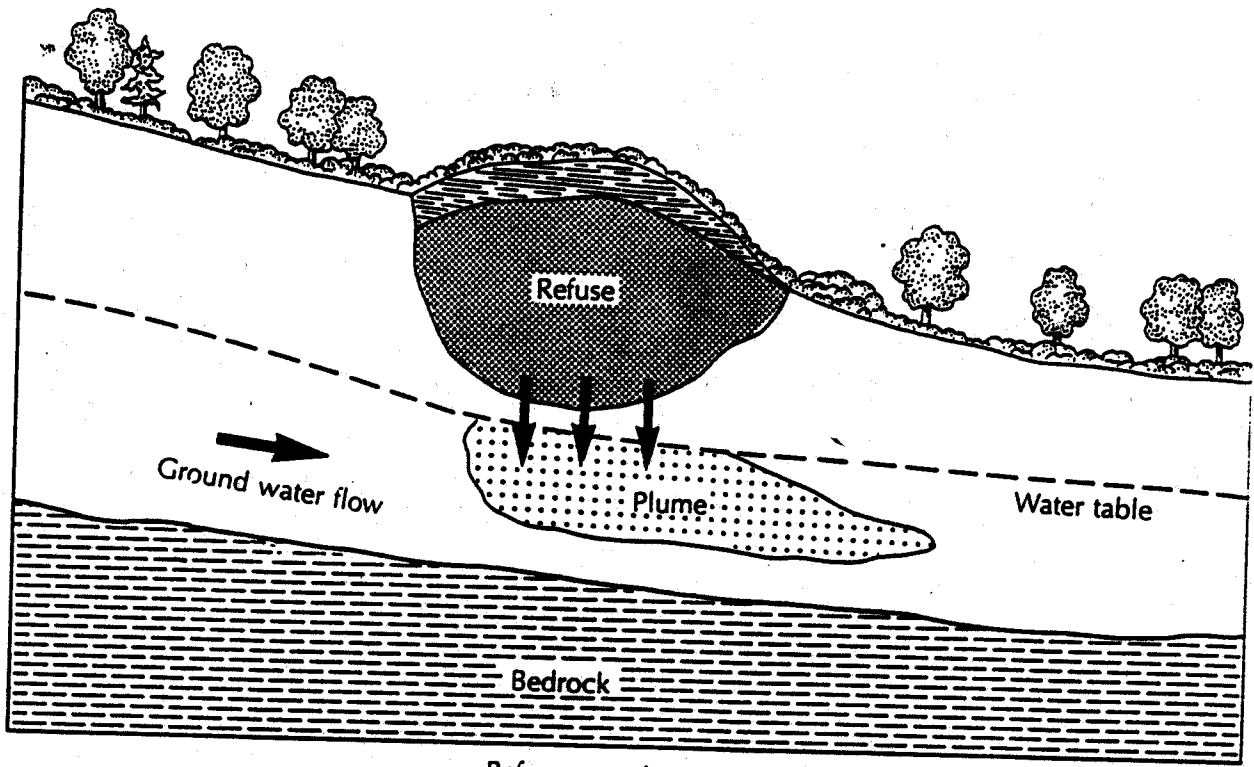
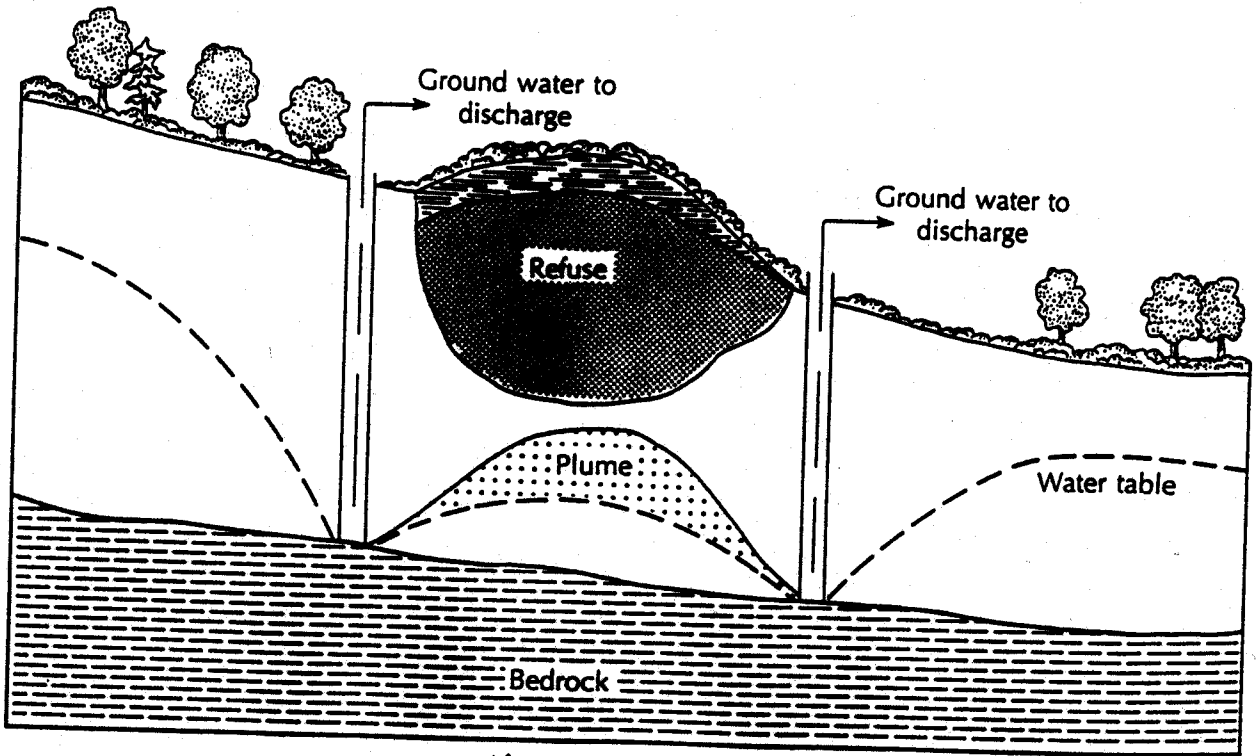


FIGURE 10.24 Design of a low-permeability multimedia cap to cover waste. Fill material is used above waste to create a 3 percent slope if the waste material or land surface over the waste material is not sloped.



Before pumping



After pumping

FIGURE 10.27 Use of extraction wells to remove contaminated ground water. Source: U.S. Environmental Protection Agency.