



Министерство образования и науки РФ  
Федеральное государственное бюджетное образовательное  
учреждение высшего профессионального образования  
Пермский национальный исследовательский  
политехнический университет  
Кафедра охраны окружающей среды

# Landfill Disposal Systems

Выполнил: студент группы  
ЗОС-18-1м, Зыков Дмитрий

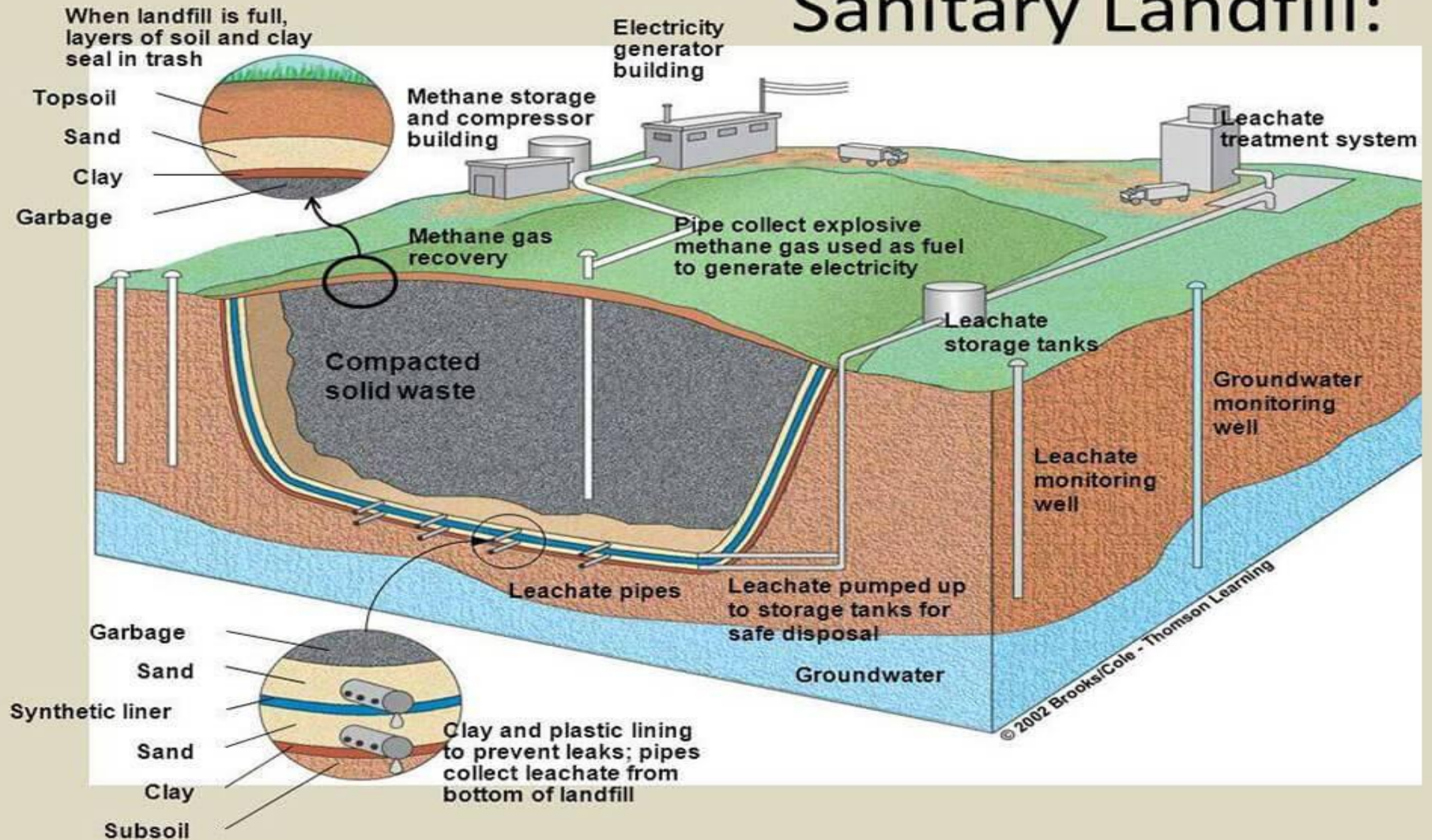
# General Types of Landfills

- ▶ Open Dump
- ▶ Sanitary Landfill
- ▶ Secure Landfill

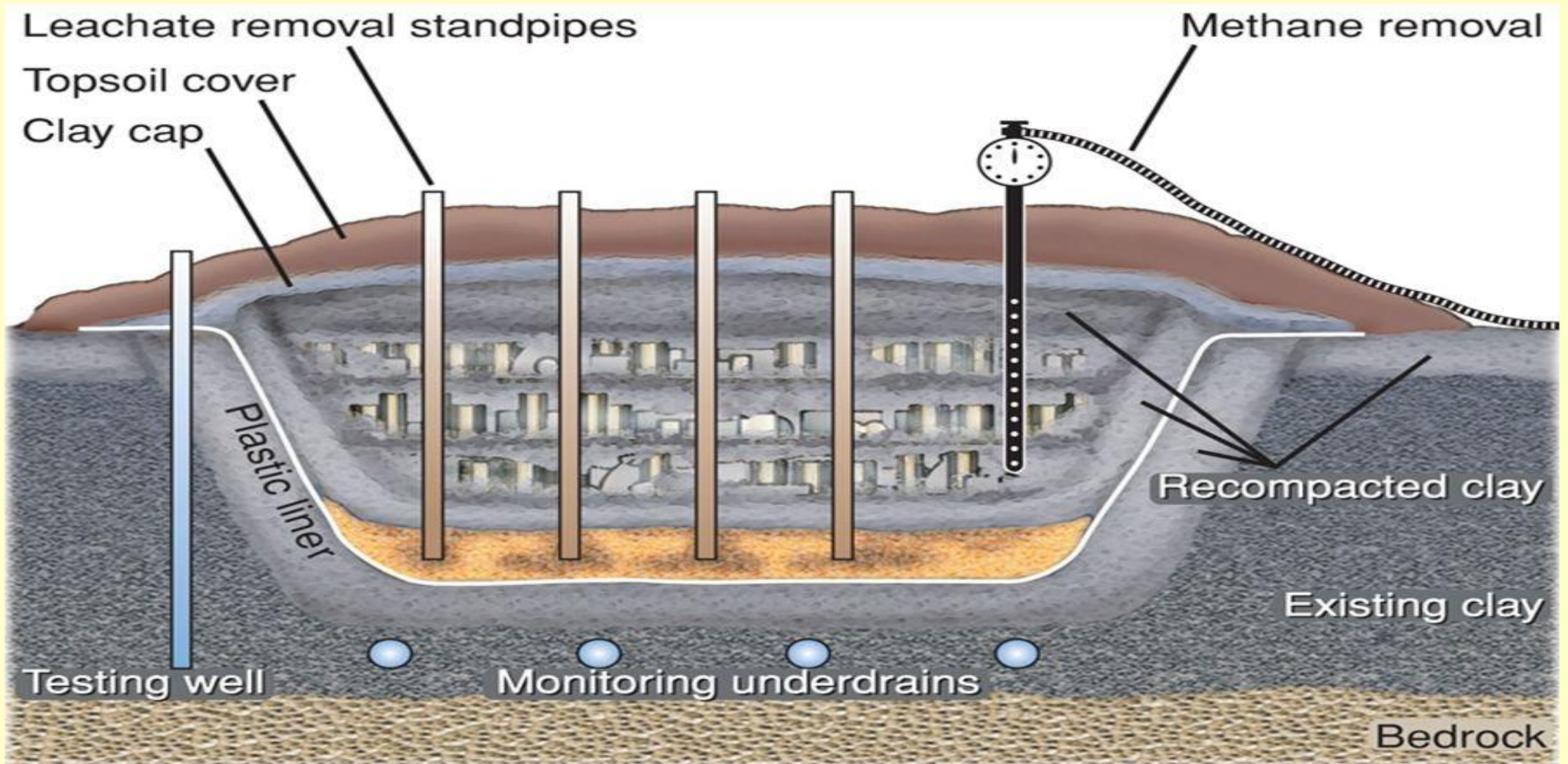
# Open Dump



# Sanitary Landfill:



# Secure Landfills



# Examples of Hazardous Waste Landfills

## Chromium Sludge Disposal Site

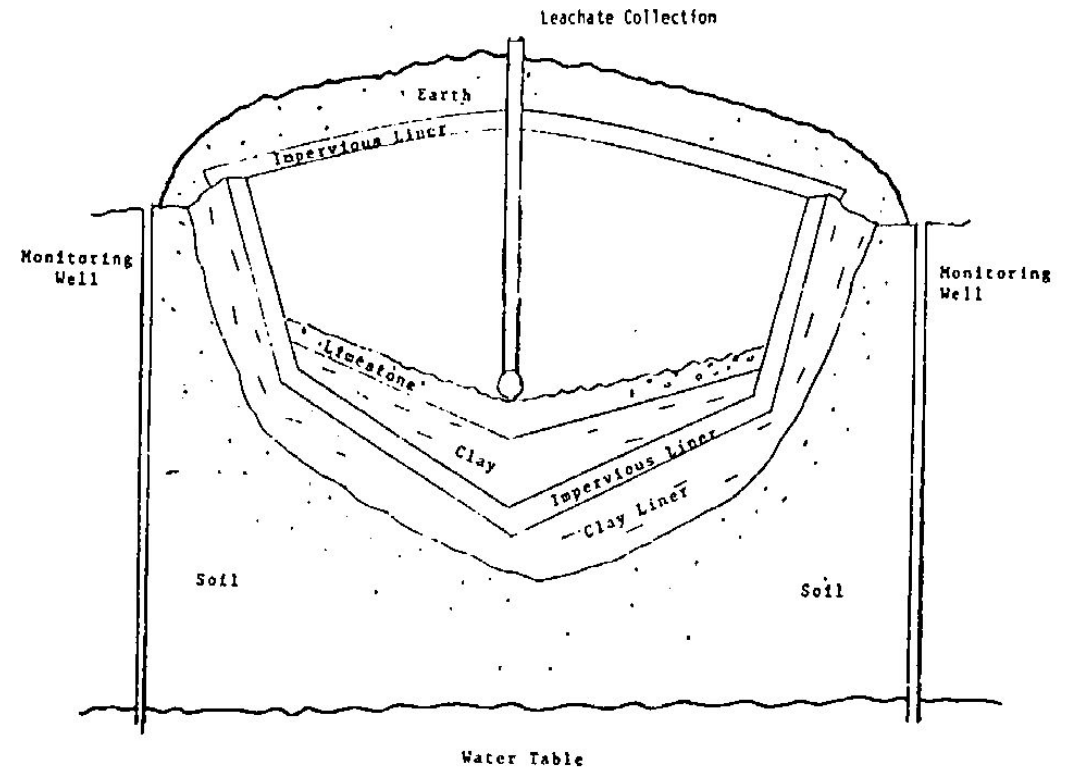
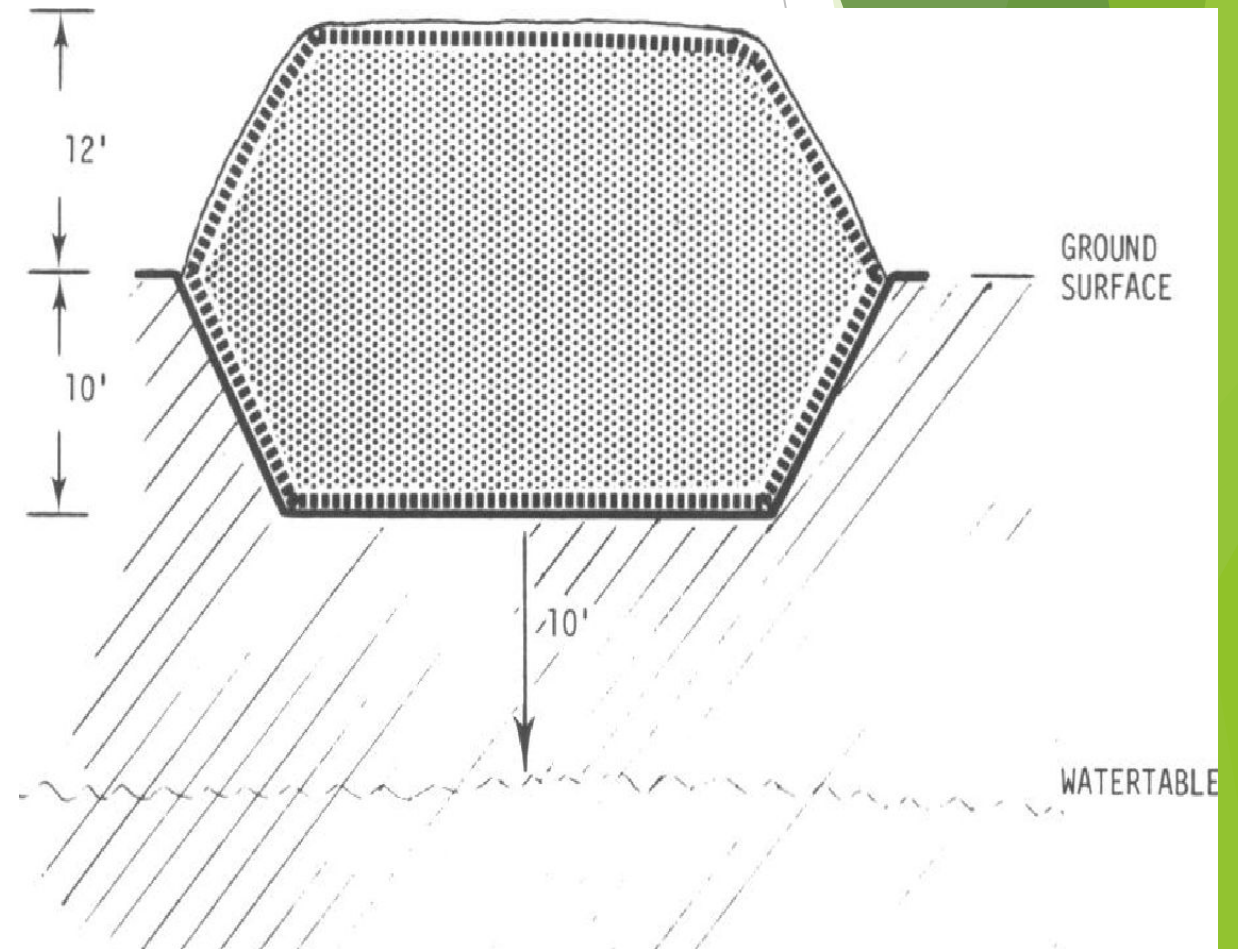


FIGURE 1. Secure landfill. Data of Farb (4).

# Examples of Hazardous Waste Landfills

## Battery Waste Disposal Site

Cross-sectional view of solid hazardous waste disposal landfill located in the northeastern U. S.



# Examples of Hazardous Waste Landfills

- ▶ Disposal in Concrete Silos





# Environmental Problems Associated with Hazardous Waste Landfills



# Summary

- ▶ There is a great deal of variability in design and operating parameters such as siting requirements, landfill design, and types of wastes accepted.
- ▶ Common problems with landfill disposal systems are leachate control, inadequacy of existing monitoring systems, eventual barrier failure, and difficulties in subsurface barrier repair.
- ▶ More research and development on landfill disposal is needed.