



SHORT COURSE ON SOLID WASTES
COLLECTION AND DISPOSAL

Damascus, 20-30 May 1968

EMRO 134

Lecture No. 14

Sanitary Landfill

Defined as "The method of combined refuse disposal whereby the refuse is thoroughly compacted and covered, resulting in the formation of refuse cells of one day's accumulation which are sealed off to prevent access to insects and rodents."

1. Fill volume requirements
 - a. Refuse volume to be disposed of
 - b. Refuse volume reduction
 - (1) Incineration
 - (2) Grinding
 - c. Volume computation (example)
2. General sanitary landfill site selection
 - a. Soil survey
 - (1) Soil characteristics
 - (2) Ground water location
 - b. Topographic features
 - (1) Drainage
 - (2) Surface developments
 - (3) Surface water

- c. Location of cover material
 - d. Accessibility
 - e. Isolation
 - (1) Natural or man-made
 - (2) Prevailing winds
3. General design factors
- a. Access roads and control
 - b. Development sequence
 - c. Final elevation and configuration
 - d. Selection of type of fill
 - (1) Trench
 - (2) Area
4. Specific design and operational factors
- a. Access roads
 - (1) Types of vehicles to be served
 - (2) Width of roadway
 - (3) Traffic pattern
 - (4) Type of surface
 - (5) Maintenance
 - (a) Dust
 - (b) Wet weather
 - (6) Drainage
 - b. Fencing
 - (1) Control blowing papers
 - (2) Control access

- c. Trench fill
 - (1) Width
 - (2) Depth
 - (3) Length
 - (4) Direction with respect to wind
 - (5) Slope
- d. Area fill
 - (1) Length of open face
 - (2) Height of lift
 - (3) Direction
 - (4) Slope
- e. Point of depositing refuse
 - (1) Top of slope
 - (2) Bottom of slope
- f. Compaction
 - (1) Depth of layers
 - (2) Depth of lifts
- g. Cover material
 - (1) Desirable characteristics
 - (2) Amount needed - min. depth 6" compacted
 - (3) Method of application
- h. Drainage of fill
 - (1) During operation
 - (2) When completed

1. Filling wet areas
 - j. Special problems
 - (1) Dust
 - (2) Odors
 - (3) Fires
 - (4) Water pollution
 - (a) Chemical
 - (b) Biological
 - K. Ultimate use of site
5. Costs
- a. Include all items involved
 - (1) Land
 - (2) Equipment
 - (3) Personnel
 - (4) Maintenance
 - (5) Development
 - b. Distribute over life of project
6. Equipment needed
- a. Excavation
 - b. Earth moving
 - c. Compaction