TPL208 INFRASTRUKTUR WILAYAH

INFRASTRUKTUR PERSAMPAHAN

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PERSAMPAHAN:

Sampah: Material sisa yang tidak diinginkan setelah berakhirnya suatu proses.

Sampah: dapat berada pada setiap fase materi: PADAT, CAIR, GAS

SAMPAH PADAT (SOLID WASTES)

- SUMBER (Sources of Wastes)
- PEWADAHAN (Waste Disposal)
- PENGUMPULAN (Waste Collecting)
- PENGANGKUTAN (Waste Transportation)

Sources of Solid Wastes:

- Residential (Single Fam, Multifamily, Dwelling, Appartment)
- Commercial (Stores, Restaurants, Market, Office Building, Shops, Services Station, etc)
- Institutional (Schools, Hospital, Prisons, Governmental Centers etc)
- Industrial (Construction, Fabrication, Manufacturing, Refineries, Plants, etc)
- Agricultural (Field, Vineyards, Dairies, Feedlots, Farms, etc)
- Municipal Services (Street Cleaning, Landscaping, Basin, Parks, Beach, Recreations, etc)

Types of Solid Wastes:

- Residential (Food, Paper, Plastics,Textiles, Leather, Wood, Glass, Tin Cans, Alluminium, Cardboards, Metals, Ashes, Leaves, Bulky, oil, tyres, electronics, batteries, hazardous)
- Commercial (Paper, Cardboards, Plastics, Wood, glass, hazardous)
- Institutional (Rubbish)
- Industrial (Scrap Material, Industrial Process Wastes, Construction)
- Agricultural(Spoiled Food Waste, Agr Wastes, Rubbish, Hazardous)
- Municipal Services (Rubbish)

Sumber Sampah:

- Sampah Alam
- Sampah Manusia
- Sampah Konsumsi
- Sampah Nuklir
- Sampah Industri
- Sampah Pertambangan
- Sampah Perkotaan

Komposisi Sampah (Perkotaan)

- Permukiman (54 %)
- Pasar (7 %)
- Pusat Perdagangan (5 %)
- Perkantoran (3 %)
- Jalanan Kota (5 %)
- Industri (23 %)
- Fasum/Fasos (1 %)
- Lain-lain (2 %)

KOMPOSISI SAMPAH:

- Organik (63 %)
- Kertas (10 %)
- Tekstil (2 %)
- Plastik/Karet (9 %)
- Pecah Belah (2 %)
- Logam (1 %)
- Lain-lain (12 %)

Sistem Pewadahan:

1. Pewadahan Terpisah (di sumber vs di pembuangan)
2. Pewadahan Tidak Terpisah (di sumber vs di pembuangan)

Pewadahan Terpisah di Sumber:

1. Tempat Sampah (Hijau, Kuning,Merah)
2. Bak Sampah (Organik, Anorganik)
3. Container (1 m3, 6 m3, 10 m3)
4. Tempat Sampah lain

Pewadahan Terpisah di Pembuangan:

1. Tempat Pembuangan Sampah Sementara (TPS) Terpisah
2. Tempat Pembuangan Sampah Akhir (TPA) Terpisah

Wadah Terpisah:

1. Organic Disposal (Food wastes, Paper, Cardbords, Plastics, Textiles, Rubber, Leather, Yard Wastes, Wood, etc): Degradable
2. Inorganic Disposal (Glass, Tin Cans, Aluminium, Other Metal, Dirt, Ash, etc): Undegradable

Sistem Pembuangan:

1. OPEN DUMPS
2. SANITARY LANDFILL
3. INCINERATION
4. ON-SITE DISPOSAL
5. PIG FEEDING
6. COMPOSTING
7. RESOURCES RECOVERY SYSTEMS

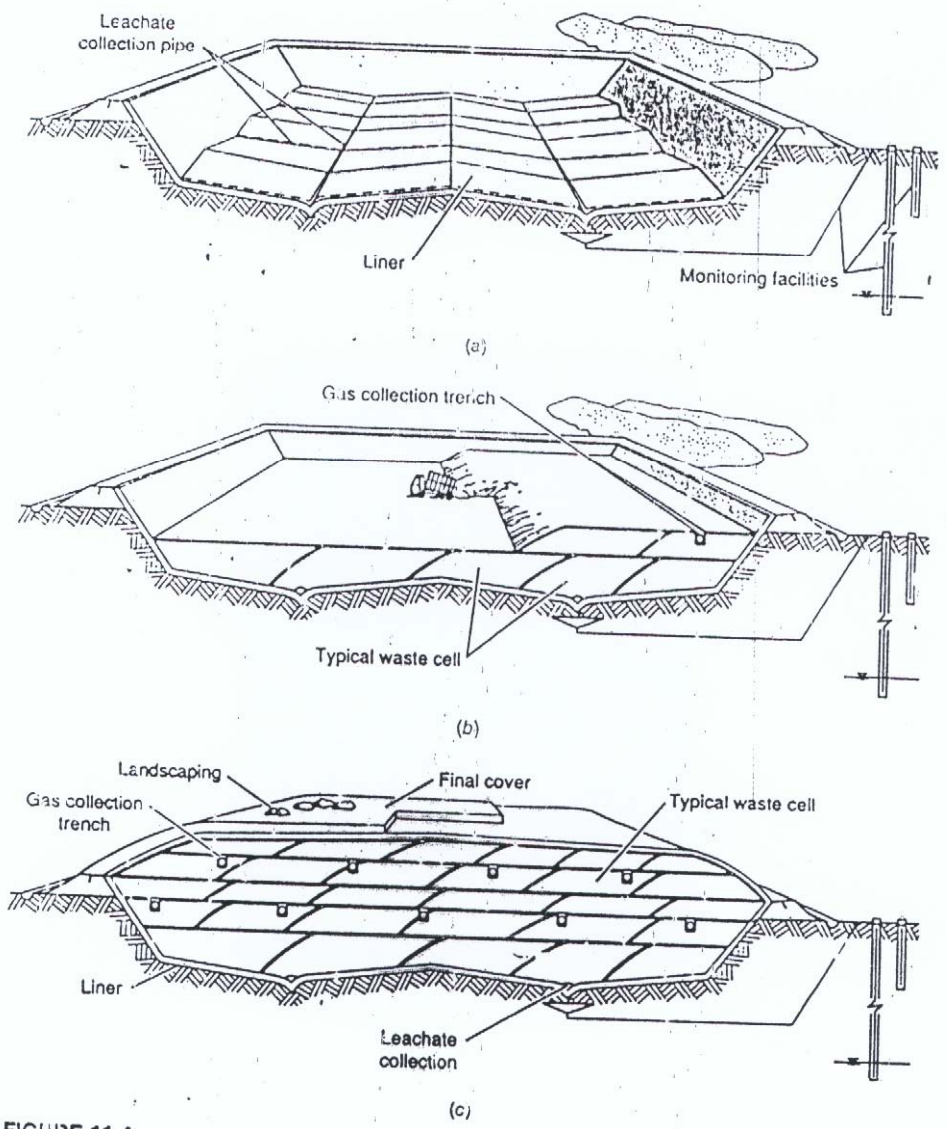


FIGURE 11-4
Development and completion of a solid waste landfill: (*a*) excavation and installation of landfill liner, (*b*) placement of solid waste in landfill, and (*c*) cutaway through completed landfill.

RESOURCES RECOVERY SYSTEMS :

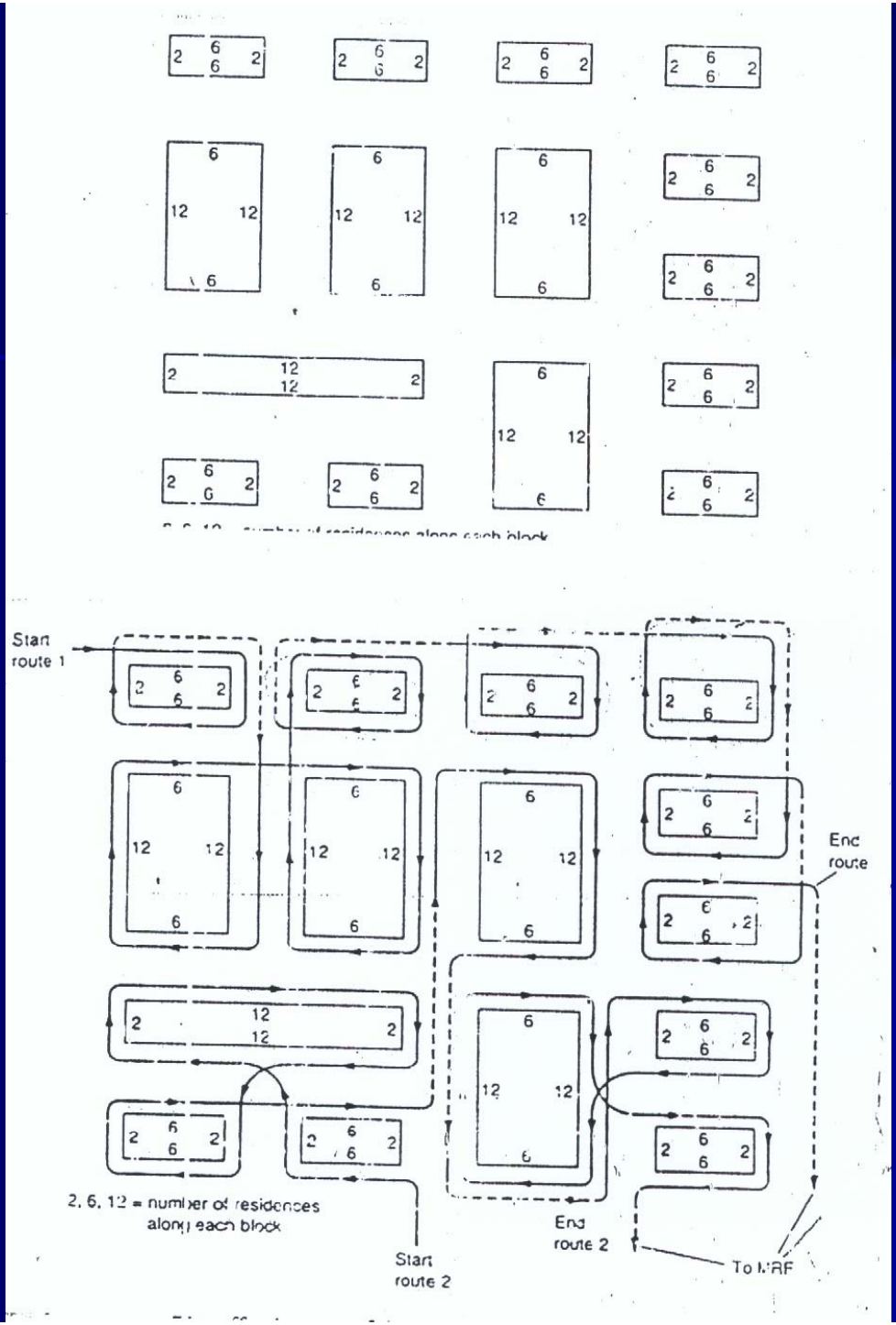
1. Traditional ‘Rag-Picking’
2. Selective Waste Collections Systems
3. Resouces Recovery Plants (Magnetic Separator)

Waste Collecting:

1. Individual
2. Masyarakat (Community)
3. Private/Swasta
4. Pemerintah (Dinas Persampahan)

Waste Transportation:

1. Angkut Sendiri
2. Gerobak Dorong
3. Roda Tiga
4. Truk Sampah
5. Kontainer Sampah
6. Kombinasi Truk vs Kontainer

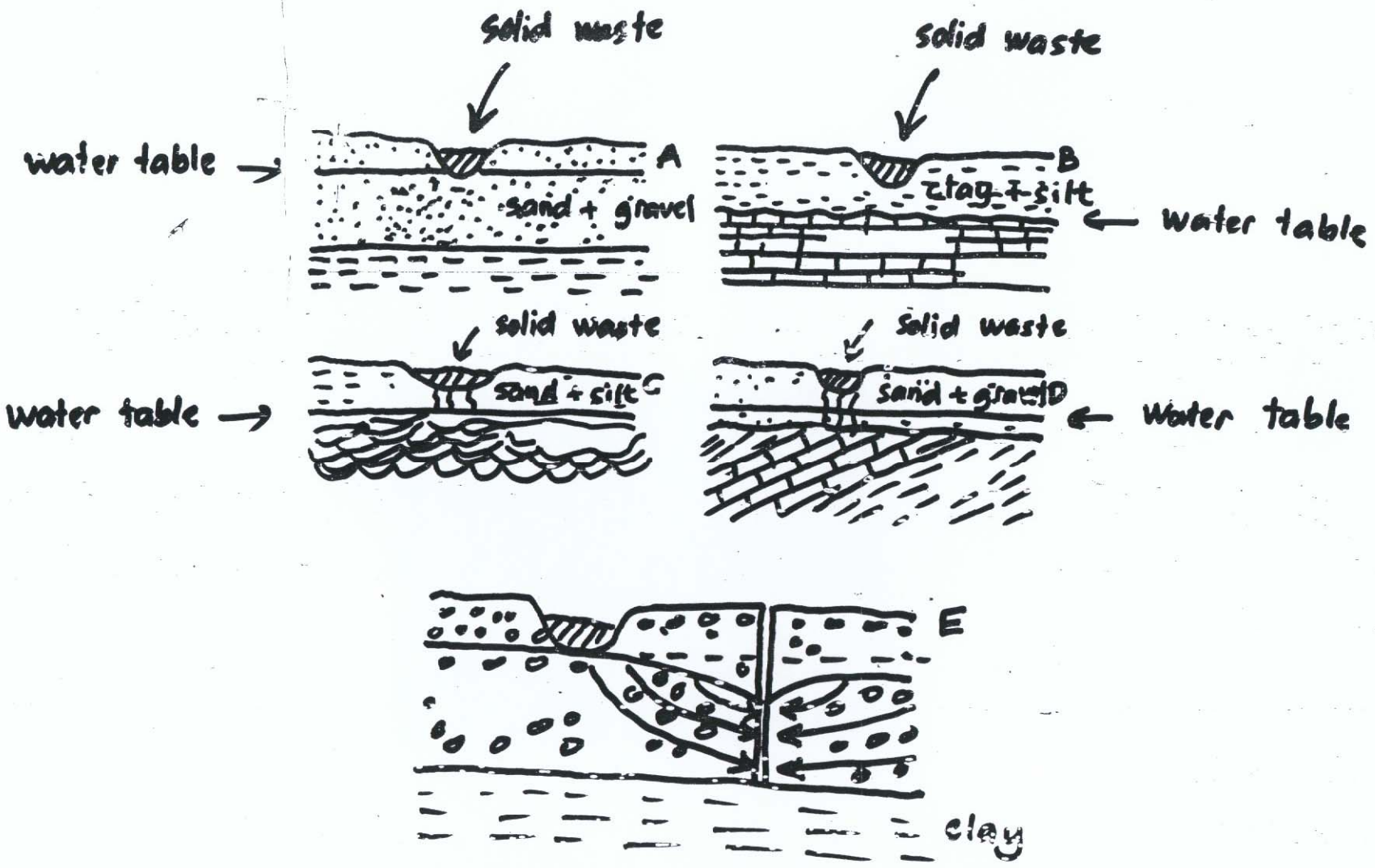

Start route 1
End route
2, 6, 12 = number of residences along each block
Start route 2
End route 2
To MRF

Transportation Guideline:

1. Point & Frequency of Collection must be identified
2. Crew Size & Vehicle Types must be coordinated
3. Routes should be laid out
4. Begin & End Near Arterial Streets
5. Topographical & Physical Barriers as Route Boundaries
6. In Hilly Area (Routes should start at the top of grade & proceed downhill)
7. The last container on the route is located nearest to the disposal site
8. Traffic-congested locations should be collected as early as possible.
9. Large quantity should be serviced the first part
10. Scattered point should be serviced during one trip

Lokasi TPA/TPS:

1. TGL: Jauh dari Pemukiman
2. Akses: Terjangkau Prasarana Transportasi
3. Fisik: Mempunyai Bufferzone
4. Waktu: Jangka Panjang
5. Permukaan Air Tanah: DALAM
6. Kualitas Air Tanah: RENDAH
7. Visual: Tidak Sensitip (Tertutup pandang)
8. Lokasi: Jauh dari Batas Kota
9. Geologi: Bukan Resapan
10. Biologis: Tidak mengganggu Spesies
11. Budaya: Tidak Daerah Bersejarah



EFEK PEMBUANGAN SAMPAH PADA KONDISI GEOLOGI YANG BERBEDA

C + D : PERMEABEL

Solusi Persampahan:

1. Reduksi Kemasan yang tidak perlu
2. Produk tahan lama (tidak membuang)
3. Produk Daur Ulang (Recicling product)
4. Menggunakan Sedikit Sumber Daya
5. Tingkatkan Material Daur Ulang
6. Zero Waste production

Referensi:

1. Sara,Martin: Standard Handbook for Solid and Hazardous Waste: Facility Assessment. Lewis Publishers. Boca Raton: 1994.