

Appendix 8

**Estimation of the current volume remaining in
the non-hazardous waste landfills at the
beginning of the season**

**Estimation of the volume of the non-hazardous
waste on site at the beginning of the season**

Memo to Harry Flaherty

Superintendent, Resolution Island project

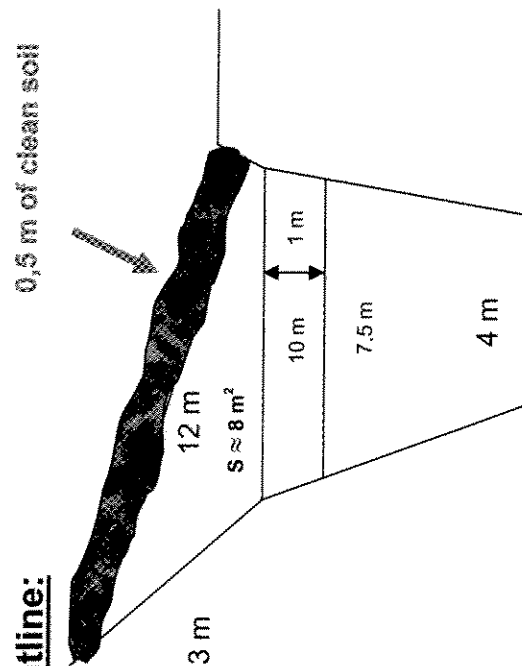
From : Celine Mercier

Date : July 7th 2005

Object : Estimate of the current volume remaining in the beach and camp landfills

NON HAZARDOUS WASTE LANDFILL – BEACH AREA

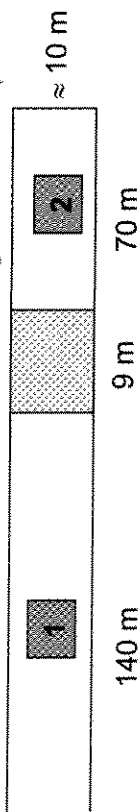
Outline:



Road leading to the beach

Non hazardous waste non compacted almost full + slope

Non hazardous waste: 2 m height available + slope



1

Volume inside the ditch:
 $140 \times 10 \times 2,5 = 3\,500 \text{ m}^3$,

Almost full but not compacted; gain of volume when compacted: $\approx 1 \text{ m}$ depth
Thus volume still available inside the ditch:

$$((7,5 + 10)/2) \times 140 = 1\,200 \text{ m}^3$$

Volume available on the slope:
 $8 \text{ m}^2 \times 140 \text{ m} = 1\,120 \text{ m}^3$

2

Volume inside the ditch:

$$((10 + 4)/2 \times 2) \times 70 = 980 \text{ m}^3$$

Volume available on the slope:
 $8 \text{ m}^2 \times 70 \text{ m} = 560 \text{ m}^3$

Assumption of the current volume remaining in the beach non-hazardous waste landfill:
3 860 m³

2



NON HAZARDOUS WASTE LANDFILL – CAMP CORE

Fuel tank Depth available: 2,5 m – 0.5 m clean soil		Dump more than half filled with not compacted waste. Initial volume: $\pi D^2/4 \times H \approx 1\,100\text{ m}^3$ Assumption of the current volume remaining in the beach non-hazardous waste landfill: Less than 500 m³
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NON HAZARDOUS WASTE LANDFILL – CAMP CORE (S4 BUILDING DEMOLITION DEBRIS)

New trailers 70 m Available depth: 2 m 2,5 m Road in front of the 2 billboards		$\approx 1/4$ volume still available Initial volume: $70 \times 2,5 \times 2 = 350\text{ m}^3$, Assumption of the current volume remaining on the S4 building debris landfill: About 100 m³ if used as a non hazardous waste dump, a sign has to be set up
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Memo to Harry Flaherty

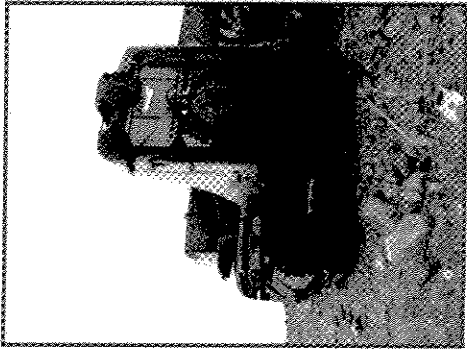
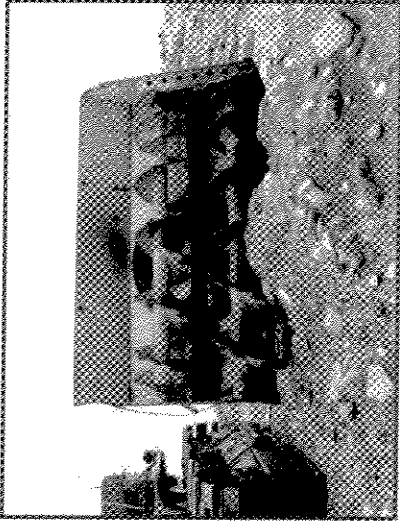
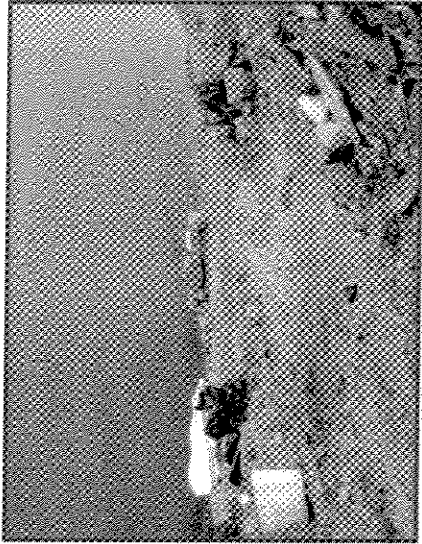
Superintendent, Resolution Island project

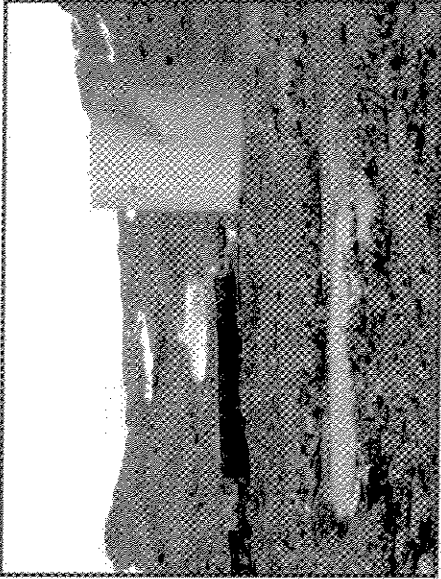
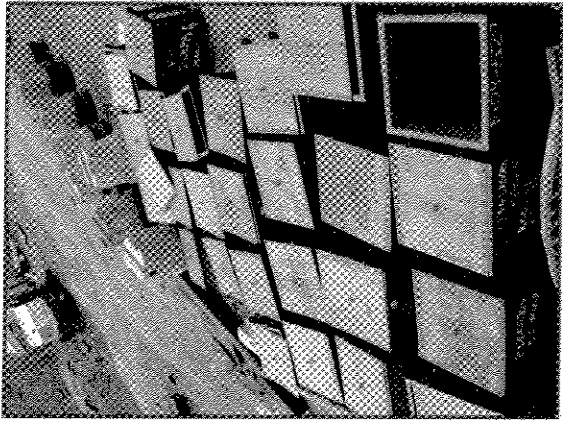
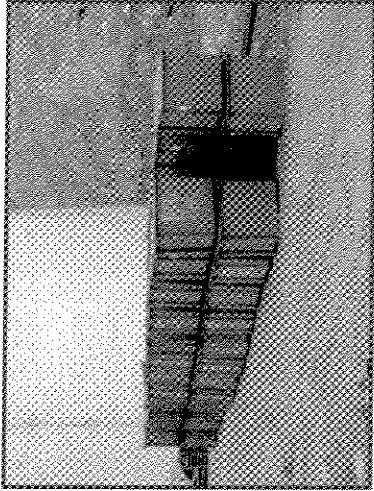
From : Celine Mercier

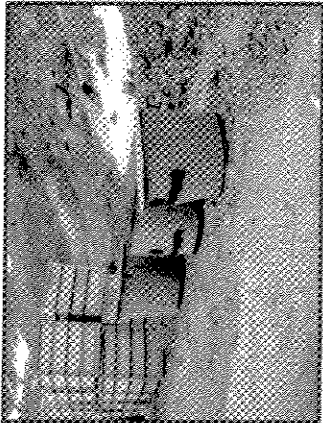
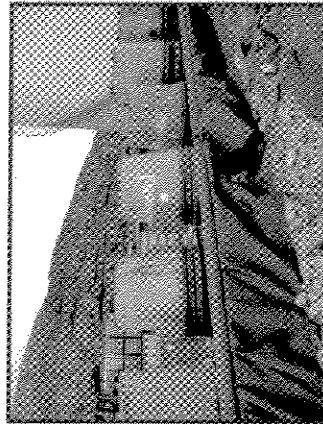
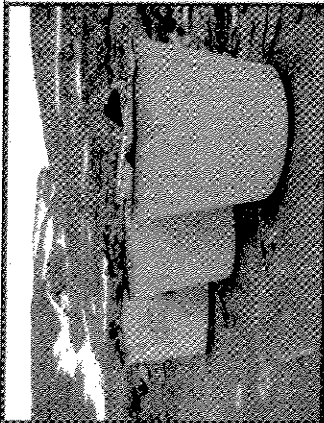
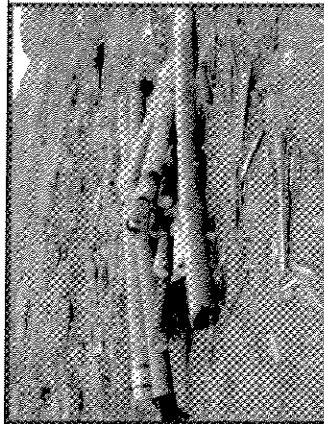
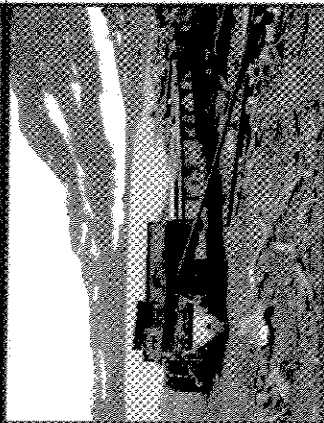
Date : July 9th 2005

Object : Estimated volume of non-hazardous remaining debris to be landfilled

BEACH AREA

On the right side of the road leading to the beach dump Tier I/II: - one bulldozer, - one snow blower			Overall dimensions: Bulldozer: $6,7 \times 3,7 \times 3,9$ = 95 m³ Snow blower: $4,4 \times 3,3 \times 3$ = 45 m³ Estimated overall dimensions volume: 140 m³
In the beach dump Tier I/II: 4 bulldozers			Overall dimensions: One bulldozer: $6 \times 3,3 \times 3$ = 60 m³ Three bulldozers: $5 \times 4 \times 4$ = 80 m³ Estimated overall dimensions volume: 300 m³

2 empty POL tanks		Overall dimensions: Diameter = 18 m Height: 13 m Volume = $\pi D^2/4 \times H = 300 \text{ m}^3$ Volume when torn down = 5 to 10 % thus $\approx 200 \text{ m}^3$ Estimated overall dimensions volume for the 2 tanks: 400 m^3
Red vaults by the POL tanks The red vaults filled with Tier II have to be emptied; all the containers will be landfilled in the non hazardous waste landfill. (if confirmed below Tier I level) 26 empty + 53 to be emptied	 	Dimensions: $1,35 \text{ m} \times 1,25 \text{ m} \times 1,25 \text{ m}$ Overall volume: $2,10 \text{ m}^3$ Volume of all the red vaults: $2,10 \times 79 = 170 \text{ m}^3$

Small containers by wooden boxes 9 piles			Overall dimensions of the piles: Diameter = 1,60 m Height = 2 m Overall volume $\approx 9 (\pi D^2/4 \times H)$ = 36 m³ Dismantled before landfilled Volume after dismantlement = 10 % $\times 36 \text{ m}^3 = 4 \text{ m}^3$ Volume of containers $\approx 4 \text{ m}^3$
South east of the non hazardous waste landfill: 3 flower pots full of metal debris, metal poles, piece of heavy equipment, metal pipes			1. $3 \times 4 \text{ m}^3 = 12 \text{ m}^3$ 2. $4,5 \times 3 \times 0,5 = 7 \text{ m}^3$ 3. trailer: $10 \times 2,5 \times 0,5 = 12,5 \text{ m}^3$ Estimated volume = 32 m³
Two metal pipes between the 2 empty POL tanks			About 200 m of 0,25 m pipe $\Rightarrow \text{volume} = \pi D^2/4 \times L = 10 \text{ m}^3$ About 200 m of 0,10 m pipe $\Rightarrow \text{volume} = \pi D^2/4 \times L = 1,5 \text{ m}^3$ Volume of the 2 POL pipes between the 2 POL tanks = 12 m³ Pile of $8 \text{ m} \times 5 \text{ m} \times 2 \text{ m} = 80 \text{ m}^3$ After shredding: volume = 10 % $\times 80 \text{ m}^3 = 8 \text{ m}^3$
Metal drums to be shredded in front of the shredder			