

Appendix C

Landfill Monitoring - South Landfills – East and West

**The Collection of Landfill Monitoring Data at the PIN-3 Lady
Franklin Point Site – 2006 Report**

APPENDIX C South Landfill

C.1 South Landfills – East and West

C.1.1 Landfill Summary

The South Landfill consists of an eastern and western portion and is located approximately 1.5 km south of the main facilities area. The area of the south shore landfill has an area of approximately 40,000 m² with an estimated depth of 1.0 m. The location of the landfill is shown on Figure C-1.

The original landfills consisted of 4 “lobes” – 3 lobes north of the access road and 1 lobe south of the access road. Based on a previously completed evaluation, the landfills north of the access road have been classified as a low to moderate potential environmental risk and the lobe south of the access road was classified as a moderate potential environmental risk. The lobes north of the access road were remediated by regrading and placing additional granular fill overtop. The lobe south of the access road was completely excavated. No evidence of contaminated soil was detected after remediation.

C.1.2 Visual Monitoring

Based on the visual inspection, the south landfills appear to be in reasonably good condition and is consistent with the condition depicted in the photographic documentation from last years inspection. The granular covers over the three lobes of the landfill showed no visible signs of problematic settlement or erosion. The landfill profiles are very low, on the order to 2 to 4 meters above the natural topography and the granular covers slope gently onto the adjacent marshy terrain. There are a few erosion rills on the slopes along the margins of the landfill. However, the cover is relatively coarse and therefore stable.

The Eastern Cell and the two Western Cells have water ponded along the perimeter toe (refer to Photographs 2, 9, 10, 11, 12, West 7 and West 11). Several areas of known or suspected seeps were also observed along the perimeter toe of the East landfill cell. Areas of possible seepage were specifically noted adjacent to the northeast, southwest and southeast portions of the East landfill cell (refer to Photographs 4, 13 and 9, respectively) and along the eastern perimeter of the larger West Cell (refer to Photographs West 6, 7, 9). The areas of ponded water appear to be the result of construction-related disturbances (e.g. displaced muskeg) along the perimeter of the granular cover, coupled with a high water level in the surrounded muskeg terrain. The areas of suspected seepage are not considered problematic because the landfill waste has been classified as low to moderate environmental risk and the approved granular cover was not designed to prevent infiltration.

The site inspection record for the landfill is appended as an attachment to this section. Overall performance of the landfill is considered acceptable; however, the water quality of the ponded water and in the areas of suspected seepage was not sampled, as directed by DCC.

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C.1.3 Soil Sampling

Soil sampling was not scheduled for the 2006 monitoring year. The next soil sampling event will be 2007.

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Figure C-1 South Shore Landfill

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Appendix C Attachments

C1 Site Condition/Visual Inspection Records

C2 Geotechnical Inspection Photographic Records

C3 Field Notes

Appendix C1

Site Condition/Visual Inspection Records

Appendix C2

Geotechnical Inspection Photographic Records

Appendix C3

Field Notes