

Appendix D

Landfill Monitoring - West Landfill

The Collection of Landfill Monitoring Data at the CAM-M
Cambridge Bay Site – 2005 Report

APPENDIX D West Landfill

D.1 West Landfill

~~3.4.1~~D.1.1 Landfill Summary

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The west landfill is located approximately 600 m northwest of the main facilities. The area of the landfill is approximately 4,500 m² with an estimated depth of greater than the 1.5 m. The location of the landfill is shown on Figure D-1. The DCC has classified this landfill as a low potential environmental risk. Remediation of this landfill included re-grading with the placement of additional granular fill.

D.1.2 Visual Monitoring

Based on the visual inspection, the West Landfill area appears to be in good condition overall. There are no visible signs of frost action. However, as previously observed and noted, near the top of the slope at the northwestern margin there is an area with an circular imprint with a tension crack about 10 m in length and 0.2 m wide. This is shown in photographs WLF 8 and WLF 8A. The geometry of the failure suggests that the feature is the result of settlement, perhaps as result of buried snow. There is no evidence of abnormal deformation or instability in the adjacent sideslope of the landfill. The performance of the landfill is deemed marginal in relation to this feature.

There are erosion rills on the slopes along the margins of the landfill, as shown in photograph WLF 7, but the slope condition appears unchanged from the previous inspection. Vegetation cover consists of short herbaceous plants, but is very sparse. A few fragments of dead scrub were observed at the toe of the eastern corner of the landfill. The erosion channel observed in 2004 on the east side of the landfill appears unchanged, as illustrated in Photograph WLF 2 section. The metal debris noted at the east corner of the landfill appears unchanged per photograph WLF 4. A tire remains visible in the lake to the east of the landfill. The site inspection record is appended at the end of this section. While the overall performance of the landfill is considered acceptable, the noted settlement feature is considered to be marginal.

D.1.3 Soil Sampling

Soil samples were collected at the designated locations of CM-5, CM-6, and CM-7. The sampling locations are shown on Figure D-1. At each location wherever possible two samples were collected at approximately 0.10 m below ground and between 0.40-0.50 m below ground. A photograph of each test pit for each location sampled is shown in Appendix D3. The analytical results and sample depths are tabulated in Table D-1 and the laboratory reports are provided in Appendix G.

No staining or free product was observed during the sampling event. There were no odours documented during the sampling event at the Western Landfill.

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Low concentrations of Total Petroleum Hydrocarbons (TPH) (C10-32) were detected in the shallow sample from soil sample location CM-6. The concentrations noted are not considered to be of significance, however the sample should be evaluated in the context of the Landfill Monitoring Plan.

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Figure D-1 West Landfill

Appendix D Attachments

- D1 Site Condition/Visual Inspection Records**
- D2 Geotechnical Inspection Photographic Records**
- D3 Soil Testpit Photographic Records**
- D4 Field Notes**

Appendix D1

Site Condition/Visual Inspection Records

Appendix D2

Geotechnical Inspection Photographic Records

Appendix D3

Soil Testpit Photographic Records

Appendix D4

Field Notes