

Appendix C

Monitoring Program Station No. ALT-4

Year: 2010 (As of issuance of licence: Aug. 4, 2010.)

Name: Main Station Landfill

Description: **Runoff and Leachate.**

Results:

No available results for the 2010 Monitoring Program season of the Main Station Landfill. Please see Notes section below for explanation.

Notes:

The Department of National Defence (DND) experienced timing issues during the 2010 Monitoring Program season between the monitoring requirements established in **3BC-ALT1015**, that was issued on August 4, 2010, and the seasonal conditions experienced at Alert, Nunavut. The seasonal conditions at Alert, Nunavut, were no longer suitable after issuance of **3BC-ALT1015** to collect runoff and/or leachate samples.

Runoff is produced seasonally by snow melt experienced in the month of June when ground temperatures reach 0 degrees Celsius and above, and peak temperatures are typically experienced in mid-to-late July which generates subsurface seepage flow. As Alert is located in a polar desert environment, this location receives limited precipitation per year (climate normal 1971-2000 for precipitation: 153.8 mm; Environment Canada, 2010). By the August and September months, evaporation has dominated the landscape producing little to nil runoff and subsurface seepage. In mid-to-late September, where air temperatures fall below 0 degrees Celsius, water and moisture present in the soil active layer begins to freeze with complete frozen conditions experience by the end of the month.

As there were insufficient volumes, and no presence, of runoff and seepage after August 4, 2010, the Department of National Defence (DND) was unable to obtain and collect practical samples of Runoff and Leachate required for laboratory parameter analysis for **3BC-ALT1015, Part J, Item 6**.

It should be noted that DND does not anticipate future timing issues regarding the 2011 Monitoring Program season, and is taking measures to establish a sampling schedule to capture runoff and seepage seasons based on Alert's climate conditions.

Reference:

Environment Canada. 2010. Canadian Climate Normals (Precipitation) 1971-2000 for Alert, Nunavut. Accessed online on February 21, 2011, at:
http://climate.weatheroffice.gc.ca/climate_normals/index_e.html