



## **Appendix A**

### **Best Management Practices for Contaminated Excavated Material and Soil**

As a landowner, Parks Canada is responsible for the sound management of contaminated soil and must ensure that it is managed in accordance with regulations.

- A1. Prior to drilling or excavating, the applicant must submit to Parks Canada for approval a contaminated soil management plan (including a detailed description of work methods prior to mobilization).
- A2. Excavated soil and wastewater must be managed in accordance with applicable federal, provincial, and municipal laws and regulations on contaminated soil management, especially in terms of temporary storage, characterization and disposal or recovery.
- A3. Upon off-site disposal of soil, the applicant will be required to keep any document or transport manifest attesting to its disposal at sites authorized by the MELCC according to its degree of contamination. The applicant will be required to submit to Parks Canada the disposal slips, the certificates of analysis provided at the disposal site, and any work report.
- A4. The temporary storage of contaminated soil must be done in accordance with standards recognized by the MELCC. Necessary precautions must be taken to avoid any contamination of underlying and adjacent soil chiefly:
  - a. Segregate the soil according to its level of contamination, or according to the observed stratigraphy.
  - b. Store the soil on polyethylene tarpaulins, covering it with the same material, or in any other type of airtight containment device. The tarpaulins must be firmly fastened to keep them from being lifted by the wind.
  - c. Return the soil to its original location as soon as possible according to the originally observed contamination levels or initial stratigraphic profile.
  - d. At all times, ensure that the soil does not migrate to other areas, either by air, runoff, or vehicle transit.
- A5. Avoid excavation during heavy rains or strong winds.
- A6. At the request of Parks Canada, the applicant will be required to cover the contaminated soil with a minimum of 30 cm of clean soil, thus replacing the original top layer. Surplus soil will then have to be managed and disposed of off-site at the expense of the applicant.
- A7. The excavated soils cannot be reused elsewhere on the site unless certain conditions are met and Parks Canada gives its authorization. Under no circumstances can excavated soil be backfilled on top of better quality soil (increasing contamination of the sector).
- A8. Where surface soils are to be replaced, a geotextile membrane must be installed between the undisturbed soil and the new material.





- A9. The applicant must provide information relating to the restored surfaces (e.g. depth, area, geolocation).
- A10. Any soil imported to the property of Parks Canada must be suitable for cultivation and meet the latest municipal standards as well as those of the Bureau de Normalisation du Québec. The applicant must demonstrate that the imported soil is clean (with a level of contamination lower than criterion A of the MELCC) and free of undesirable species.
- A11. When the work is completed, the proponent must clean up and restore the site and the pathways used during the work, including the laying of ground cover (ex: grass, asphalt).
- A12. New material (e.g. topsoil, controlled backfill) should be compacted to avoid sagging, minimize erosion and promote the recovery of vegetation.
- A13. The applicant must ensure that waste water is recovered, confined, sampled and treated (where applicable) to meet applicable discharge standards. If a treatment system (sedimentation tank, filters, or other such facilities) is to be used, it must prevent contaminants and sediments from dripping into sewers and waterbodies. Use the means necessary to define the adequate mode of disposal of the collected sediments and the waste water.
- A14. Effective measures to limit the input of sediment from the site to the aquatic environment (e.g. sediment barrier, berms, sediment trap, sedimentation basin, temporary stabilization of slopes, diversion of water to vegetation zones) must be implemented and maintained throughout the duration of the work. The measures must remain effective during the temporary closure of the work site and during periods of flooding or heavy rains.
- A15. The applicant must comply with all Parks Canada specific requirements for archaeological monitoring. In the case where Parks Canada establish that archaeological surveillance is not required for the works and an archaeological vestige (vestige of construction or development, object and fragment of object) is discovered accidentally during excavations, the applicant must suspend work in the immediate area of discovery and notify the Parks Canada Representative to validate the necessary steps to protect and conserve the archaeological remains.
- A16. At all times during the work, the applicant must carry a hydrocarbon recovery kit in order to intervene quickly in the event of a spill. In the event of an accidental spill, the applicant must immediately inform the Parks Canada authorities and report the event to Environment Canada's National Environmental Emergencies Center at 1-866-283- 2333 for land-based spill; or the Canadian Coast Guard 1-800-363-4735 for spills in water.
- A17. The refueling of the machinery must be carried out more than 30 m from the canal with a containment device to prevent spillage and soil contamination.
- A18. Biodegradable oil must be used for all machinery that runs near the canal or any waterbodies.
- A19. The application must ensure that the machinery is in good condition, does not leak, is clean and free from invasive species and noxious weeds when it arrives at the site and during the work. Machinery that has come into contact with contaminated soil should be cleaned properly before being used in other areas. At the end of the work, thoroughly clean the machinery that has come into contact with invasive exotic species to avoid dispersal in new areas.

