

Closure and Post-Closure Care Plan

The written closure/post-closure care plan is to include the following information in a **formal report**:

A) SITE DESCRIPTION:

- 1) A report describing the general and local geology and hydrogeology of the landfill site area.
- 2) Groundwater information indicating depth(s) and, if possible, water quality.
- 3) A landfill description, including:
 - a) how long the landfill was in operation; date the landfill opened; date the landfill closed
 - b) the types of waste accepted at the landfill (i.e. - household, commercial, construction and demolition waste, etc.)
 - c) the volume of waste on-site at the time of closure
 - d) the size of the actual fill area (indicate dimensions and show on a topographic map)
 - e) the size of the landfill property (indicate acreage and show on topographic map)
 - f) indicate existing structures (buildings, residences, sheds, etc), existing drainages, and water wells in the area (show on topographic map).

B) COVER PLAN:

- 1) Description of the cover material.
- 2) Indicate the source (borrow pit) of the cover material.
- 3) A construction quality assurance / construction quality control (CQA/CQC) plan for placement of the final cover.
- 4) What equipment will be utilized to apply the cover to the landfill and how it will be compacted to obtain the appropriate Proctor Density.
- 5) Thickness of the cover material.*
- 6) Indicate final contours** and grade (show on site topographic map)

Note: *Section 502.A.1.a and b. Under the 1994 Solid Waste Management Regulations, an infiltration layer of a minimum of 18 inches of earthen material having a saturated hydraulic conductivity less than or equal to the saturated hydraulic conductivity of any bottom liner system or natural subsoils present, or a saturated hydraulic conductivity no greater than 1×10^{-5} cm/sec whichever is less. An erosion layer consisting of at least 6 inches of earthen material that is capable of sustaining native plant growth. Alternative covers may be submitted but they must meet the criteria in the Regulations and receive approval from the Department.

**Section 502.A.1.d. The final contours must exhibit gradients in which the side slopes shall not exceed 25% grade and the top portion of the landfill shall have a gradient of 2% to 5% in order to prevent ponding of water and erosion of the cover material. The Department recommends a minimum 5% grade.

C) FINAL USE:

- 1) Define the vegetation plan, including:
 - a) the spreading method
 - b) species of vegetation to be planted
- 2) Final usage plan for the landfill site area.
- 3) Describe the methane monitoring plan. Methane monitoring is required in any buildings

adjacent to the fill areas and along property boundaries.

4) Upon completion of closure, file a detailed use description of the site, with a plat, with the county land recording authority. Provide a copy of the filed recording to the Department.

D) POST-CLOSURE CARE PLAN:

- 1) Describe the monitoring and repair plan to protect cover integrity from settlement, ponding, water and wind erosion, drainage, and vegetation maintenance over the 30 year post-closure period.
- 2) Description of the methane monitoring plan during post-closure.
- 3) Description of the groundwater monitoring system* plan during post-closure.
- 4) A schedule for completion of closure activities.

Note: *Groundwater monitoring system plans in accordance with Subpart VII of the Regulations are required for landfills closed after May 13, 1989, unless the landfill qualifies for a small landfill exemption under Section 110. However, those landfills with small landfill exemptions (with Department approval) must address groundwater monitoring.

E) MAPS AND DRAWINGS:

Maps that are required for closure/post-closure care plans are as follows:

- 1) U.S.G.S. 7.5 Minute Topographic Map: indicating the *landfill property boundary, cells (fill areas), wells, and structures* within and surrounding the landfill site
- 2) Plan Drawings (including Final Contour Grade Map) indicating:
 - (a) the *final contours and vegetation* in relationship to the surrounding land and any run-on and run-off control structures;
 - (b) *well location(s), depth to groundwater and flow direction (local and/or regional) and gradient;*
 - (c) the locations at which methane monitoring values are established.
- 3) Geological Map and Cross-sections: indicating the *surface geology* of the landfill site and surrounding site including *cross-sections* illustrating subsurface geologic structures (e.g. - faults, dipping strata, etc.).

F) FINANCIAL ASSURANCE:

Small landfills ("exempt" in accordance with Section 110 of the Regulations) that closed on or after October 9, 1997 and all other landfills that closed on or after April 9, 1997 are required to have Financial Assurance. The Secretary may have extended the compliance date up to April 9, 1998 for landfills meeting certain criteria. At this time, there should not be any landfills that meet these criteria. Therefore, all landfills are required to have Financial Assurance in place prior to closure / post-closure care plan approval. Also, all other Solid Waste Facilities should have Financial Assurance in place at this time. Contact the SWB Financial Assurance Officer to ensure that a Financial Assurance mechanism(s) (in accordance with the Regulations) has been executed.