

Normandy Dump Site Remediation

The staff of EDESSA was retained by the Lebanese Council for Development and Reconstruction (CDR) and Solidere (the Company in charge of the reconstruction of the Beirut Central District) to conduct an Environmental Assessment of the Normandy landfill, a non-engineered landfill located on the sea shore of Beirut Central District.

The Normandy landfill has been in operation as an uncontrolled landfill for over 17 years resulting in significant environmental impacts to the sea water and serious risk regarding the health and safety of on site workers and the local community. The investigation program included the drilling of gas and leachate monitoring wells and boreholes to assess the environmental and geotechnical condition of the landfill. Test pits were also excavated throughout the landfill and a surface gas probing survey was conducted to map the gas concentrations throughout the landfill.

Several emergency actions and remedial alternatives have been presented in the study prepared by the staff of EDESSA in order to reduce the risk, optimize the biodegradation rates and speed up this process whenever possible. The recommended remediation will consist of treating the waste on site, then mixing it with crushed demolition material from the buildings being razed downtown. Such treated fill is considered suitable for reuse for reclamation purposes.

In addition, the staff of EDESSA was also retained to conduct a number of design studies. These included:

- Design of a gas venting system to protect nearby development from the methane gas generated on the landfill,
- Design of a landfill gas extraction and recovery system that included about 20 gas extraction wells connected to each other and to a filtering, pumping and flaring system in order to dispose of the extracted gases in a safe and environmental way,
- Pilot treatment for the bioremediation of excavated municipal waste from the landfill,
- Supervision of excavation and sorting of a portion of the waste from the southern part of the landfill.

EDESSA has worked on this site for a period of over 5 years.

