

Technical Assistance for the Construction, Operation and Capping of a Municipal Solid Waste Landfill in Bulgaria

Project Details

Bulgaria, municipal landfill construction

Client:

Confidential

Project Budget:

Confidential

Key staff:

Piet Wens
Paul Verkaeren
Uda Pannizzo
Luis Hens

Duration:

2011 – on going

Provided services

- Feasibility Study and Conceptual Design
- Engineering Analysis
- Basic and Detailed Design
- Construction Supervision
- Training



Introduction

Client is a joint venture company between a private company and a municipality. The main purpose of the Client is to build and operate a regional sanitary landfill for disposal of solid waste from the municipality, in conformity with the regulatory requirements of the Republic of Bulgaria and the European Union Directive.

Global description

The landfill comprises six cells for non hazardous MSW, one cell for construction waste and one cell for inert waste. The total capacity of the landfill is 840.000 m³.

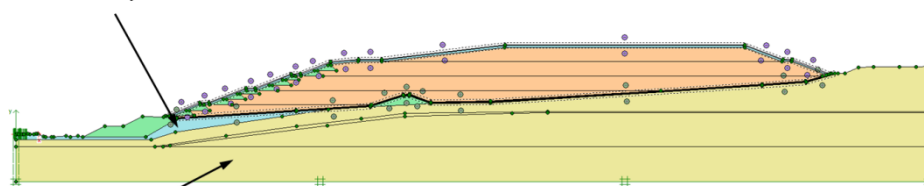
The basic and detailed design was carried out in conformity with the Bulgarian legislation, by a Bulgarian registered designer.

The first cells were constructed in 2011.

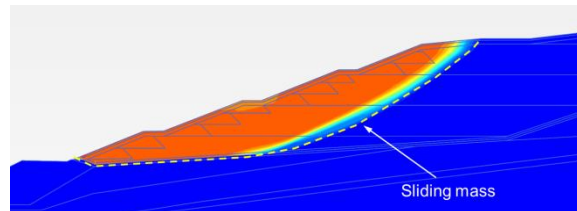
Landfill operations started in 2012.



Delluvial clay: Soil 1A



Pliocene clay : Soil 2



Delivered Services

Pollux Consulting is involved in the project for delivering technical assistance during construction, operation and capping of the landfill, as well as for leachate treatment and treatment/valorization of landfill gas.

Pollux Consulting delivers the following services:

Control of the construction works of the cells: Pollux Consulting is responsible for the site quality control of the installation of the mineral barrier, HDPE geomembrane and leachate drainage system.

Drafting of the Landfill Operational Plan, including the design notes, landfill gas management, leachate management, waste acceptance, handling and disposal, material and human resources, maintenance, monitoring and Health & Safety Plans.

Feasibility Study and Design Notes concerning the improvement of the existing design, improvement of the disposal capacity to more than 850.000 m³.

Stability Analysis of the improved design, using Slide and Plaxis Software.

Drawings of the improved design, using Rhino 3 D and AutoCad Civil 3D Softwares.

Calculation of the Biogas potential of the landfill, using the Pollux Consulting Biogas Software and the GasSim Software.

Design of the biogas extraction and collection system, using Pipeflow, Rhino 3 D and AutoCad Civil 3D Software.

Training in landfill management and landfill operations, to Bulgarian landfill management staff