Deliverable B2-1

Technical report with stabilization experiments and Engineered Soil characterizations

December2018

This Deliverable constitutes product of the implementation Action B2 Lab-scale neutralization/stabilization experiments.

The performance of various industrial minerals either raw or after proper treatment is evaluated in laboratory scale experiments in terms of their sorption stability and capacity, in order to determine the qualities that are most effective for use as PRS stabilizers. Furthermore, blends of minerals of various proportions are examined.

The end of this phase leads to the creation of the optimum stabilized mixture: Valorised Sludge Mixture –VSM. The VSM properties are examined: organic and inorganic matter, density and surface area, thermal analysis as well as morphology and surface topography examination.

The first application of VSM is also tested for the production of Engineered Soil, which is suitable to be used on landfill sites as construction and restoration material.

Scale-up experiments concerning the mixing method also took place. The time, moisture level, viscosity and mixing intensity are examined with different equipment: screw mixer and extruder.