

SOIL REMEDIATION: AN OVERVIEW OF EXISTING TECHNOLOGIES

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ABSTRACT

In Sweden, excavation and landfilling are, at present, the most prevailing ways of handling contaminated soil. This presentation will provide examples of different remediation methods that result in the destruction of contaminants, or when it comes to metals, ways to greatly minimise the volume of the contaminated soil. All the examples of the methods given here have the following in common: all have been commercialised in Sweden, and all technologies result in soil clean enough for re-use. The presentation clearly demonstrates the broad spectrum of concepts available for treating a variety of contaminants in soil in an environmentally sustainable way.

The presented examples have been selected based on the steady and high frequency of objects polluted with PAH-s, chlorinated solvents, nitroaromatic compounds, and metals. The following treatment methods are described in the presentation:

- for PAH-s – biological field treatment, bio-reactor treatment, continuous wet chemical treatment, thermal destruction.
- for chlorinated solvents – cyclical biological treatment, evaporation and capturing (*in situ*), thermal destruction.
- for nitroaromatic compounds – cyclical biological treatment, physico-chemical destruction.
- for metals – wet chemical treatment performed in batches or by continuous-flow technology.