

ISTD/ I-22-06

BONHEIDEN (BE)

Context & Project Description

The site is a disaffected building which faith is to be rebuild for housing and is contaminated with chlorinated solvent. The contamination has been emitted by an aluminum refining process. The site is composed of two distinct rooms for a total of 60m². A 2m soil layer has been excavated from one of the rooms and then has been backfilled with sand cement/concrete. Even there's a 2m layer of clean soil, for such shallow depth, the heat has to start from 0m. therefore, the parameters are the same in both rooms (i.e. from 0 to 4m).

The treatment objective is to reach less than 1ppm of chlorinated solvent in the soil. To do so, the temperature of the soil has to reach 100°C.



Equipment

32 Gas Smart Burners working with propane gas and an activated carbon tank

Treatment target

95°C in the soil and less than 1ppm

Monitoring

6 temperature probe wells at cold points (at depths 2m and 4m)

3 pressure points

Gas reading at the vent for exhaust gases

Planning

January to June 2022

Conclusion

The thermal treatment was a success. The project ends up after 25 days of heating and the target of 1ppm was reached in the whole.

Emission standards were respected throughout the treatment.

Key words

Contaminant
TCE
(trichloethylene)

Max. concentration
Max : 23 000 mg/kg-drysoil
Average: 200 mg/kg-drysoil

Volume
250 m³

Tonnage
425 T

Nb of heat ng tubes
32

Temperature Target
95°C

Project duration
20 days

Treatment targets
Less than 1ppm

Locat on
Bonheiden, Belgium

Future Use
Housing

Client
OVAM

Partner
Verhoeve

Consultant
Van Vooren

Date
2022