

ESTD/ E-25-10

RITSONA (Gr)

Context & Project Description

The project was located in Ritsona, Greece, and was carried out in partnership between Antipollution / V Group and Haemers Technologies. The objective of the project was the remediation of contaminated soil using Ex-Situ Thermal Desorption (ESTD) technology by conductive heating. This first phase, corresponding to the first pile, was part of a larger project involving approximately 20,000 tons of soil.

The treatment pile consisted of approximately 600 tons of soil mainly contaminated with mercury (Hg), originating from industrial waste and polluted materials handled on site, with an average mercury concentration in the soil of 390 mg/kg DM. The treatment process consisted of heating the excavated soil through a network of heating and vapor extraction tubes in order to vaporize and extract contaminants, which were then treated through dedicated vapor and condensate treatment systems.

Equipment

- 26 Diesel Smart Burners
- Vapor Treatment Unit
- Condensate Treatment Unit
- Granulated Activated Carbon

Treatment target

- 330°C at cold points
- Concentration of mercury after treatment: 50mg/kg dm

Monitoring

- 4 temperature probe wells in the Bottom (at depths 3 m, 8 m, and 13 m)
- 2 temperature probe wells in the Middle (at depths 3 m, 7 m, and 11 m)
- 4 temperature probe wells in the Top (at depths 3 m, 6 m, and 10 m)
- 4 pressure points to monitor pressure in the pile
- 1 Gas analyser (CO, CO₂, O₂, T°, NO, NO_x, SO₂, C_xH_y and CH₄)
- 1 Mercury analyser VM-3000

Key words

Contaminants
Hg

Max. concentration
1534 mg/kg-dry soil

Volume
440 m³

Tonnage
600 T

Nb of heating tubes
26

Temperature Target
330°C

Project duration
65 days

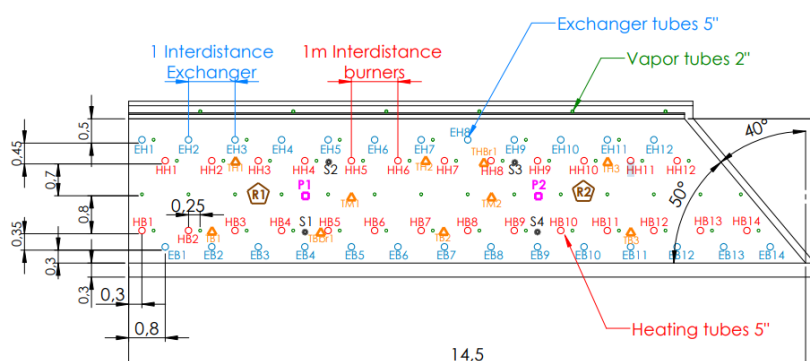
Treatment targets
50mg/kg-dry soil

Location
Ritsona, Greece

Client
HELPE

Partner
Antipollution

Date
29/09/25



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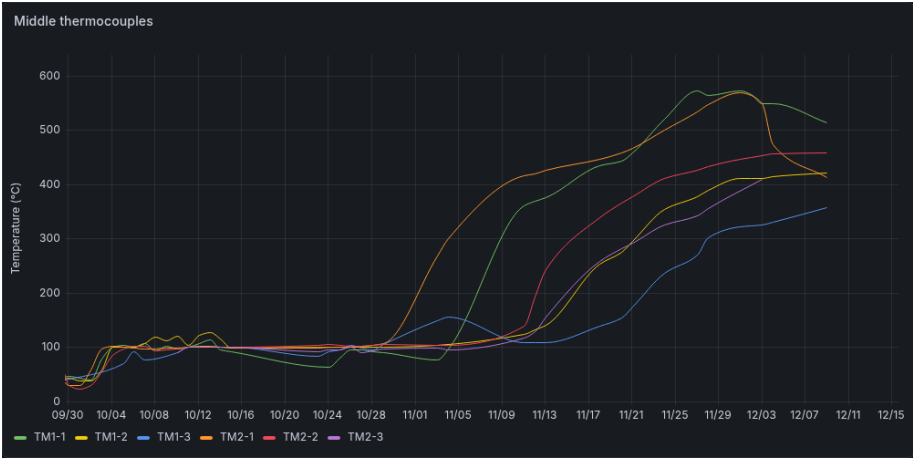
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Heating Duration

The heating phase started on 29/09/25 and ended on 02/12/25, lasting 65 days. The main factor contributing to the duration of the heating phase was the soil moisture content, which reached 40%. Most of the time was therefore spent evaporating the water.



Conclusion

The treatment of the 600-ton pile was successfully completed. The soil was treated within the stipulated timeframe, and the target concentrations for clean soil were achieved.



Figure 1. Pile 600t in Ritsona, Greece