

# Crucial choice of the remediation technology secures huge cost savings

**Customer:**  
The Capital Region of Denmark  
**Location:** Virum, Denmark  
**Technology:**  
Thermal Conduction Heating (TCH)

## Clean up requirements determine technology and company

There were only two scenarios to reach the pretty stringent cleanup criteria of 0.1 mg TCE/kg around and beneath a fully functioning office building: In-situ thermal remediation vs. excavation of more than 7 000 m<sup>3</sup> contaminated soil, followed by rehabilitation of the infrastructure. The first one is by far more cost and time effective, but requires an utmost safe and flexible technology, as well as an experienced company able to conduct such a delicate project through all its phases.

## Safe and sound operation in the delicate urban settings

The book printing shop and the medical lab located in the two-story building, stayed in operation during all the remedy, making safety the highest priority.

We started with extension of the old foundation, replacement of the old sewers, isolation of high-voltage underground cables and other proactive measures. Heaters were installed in extremely tight spaces in the basement, in the functioning garage and in the neighbors' garden.

With the TCH technology, nothing was added to the soil but heat. The remediation performance and discharge values were constantly monitored and evaluated through our advanced V-survey suite of software solutions.

## Outstanding results

The results of more than 250 hot soil core samples demonstrated the average post-treatment concentrations below 0.04 mg/kg, which was far beyond the cleanup criteria.

Choosing the versatile and robust in situ TCH technology, our Client has saved years of construction works, millions of kroners and above all things – a threatened groundwater resource.



*“Krüger’s thermal concept runs smoothly. Thermal remediation has gone exactly according to the plan, and we experienced Krüger as exceptionally proficient in employing this clean-up method.”*

*Henrik Østergaard, Chefkonsulent  
The Capital Region of Denmark*



**Contaminant:**  
TCE



**Geology:**  
Till clay  
7 400 m<sup>3</sup>



**Above and below  
the water table**



**Target temp.:**  
100 °C



**Heating period:**  
6 months



**Verified  
by Client**

## Site impressions: Virum, Denmark



### How can we help you?

Enhance environmental safety and value of your land property by contacting us today:

- experience thermal in situ remediation live
- get a conceptual design and price estimate for your site
- learn about the technology from our detailed case studies
- meet our thermal experts and be inspired by our presentation

Krüger designs and executes robust and transparent solutions with the base in thermal remediation. We have an unbeaten track record of our clean-ups with respect to remedial goals, timely manner, budget and safety.



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**SOIL REMEDIATION**