

Rotary Kiln

R-01-05 / CLACKAMAS

THERMAL DESORPTION OF 7,500 TONS OF PCB
CONTAMINATED SOIL BY MEANS OF THERMAL DESORPTION

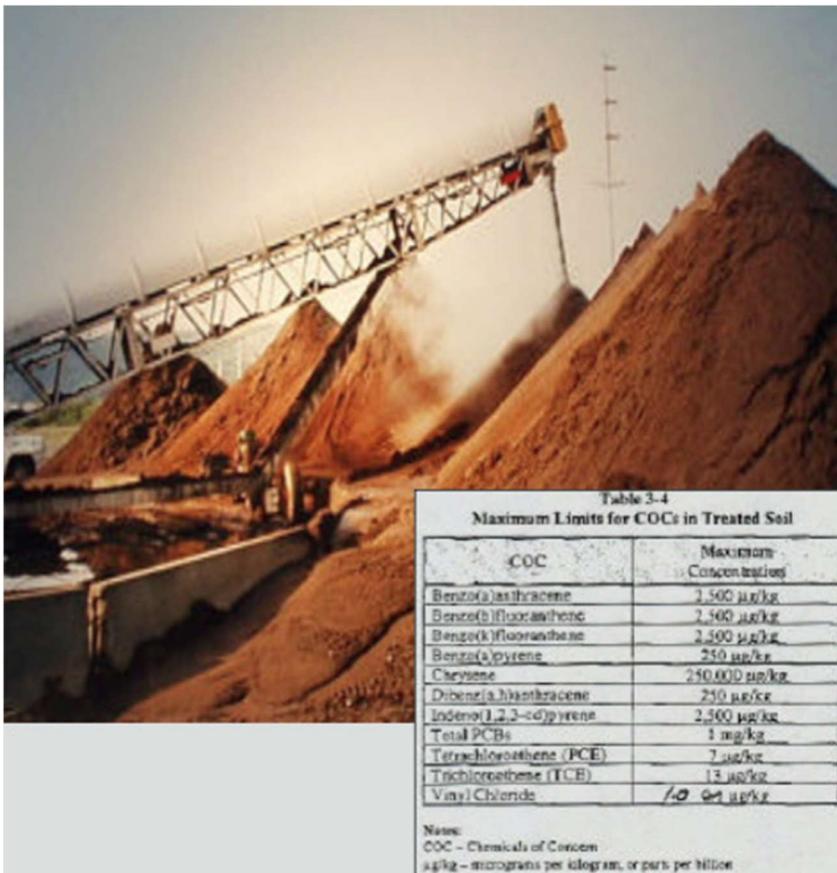
Context

The history of the clean-up site was an underground pipe manufacturer. During initial site evaluation, the primary contaminants were identified as PCB's, TCE, PCE, and PAH's. A pilot test burn was conducted at Haemers technologies' facility to determine the achievable cleanup levels for the public Record of Decision (ROD) using thermal desorption technology. Excavation and pre-screening took place on location, and the contaminated soil to be thermally treated was transported to Haemers technologies' facility approximately 12 miles away.

Haemers technologies Involvement

Haemers technologies was involved in the initial pilot test burn to demonstrate that thermal desorption could achieve reasonable clean up levels for the project. This was the only technology that satisfied EPA's requirements.

Haemers technologies then proceeded to the actual site cleanup, establishing a facility protocol for receiving, handling, processing, and testing of the soil for thermal desorption treatment, as well as the set-up of all environmental, health and safety procedures for the operation of the thermal unit.



Key facts

Contaminants
PCB

Max. Concentration
15000

Volume
4650

Tonnage
7500

Number of Heating Tubes

Temperature Target

Heating duration

Treatment Targets
<100

Location

Future Use

Client

Partner

Consultant

Date
2001





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Equipment

The project was performed by means of a parallel flow thermal desorption unit, with a nominal capacity of 50 t/h, equipped with an oxidizer, gas coolers, and baghouse. Production was limited due to the moisture content and the soil processing temperature.

Treatment/Clean Up Targets

The soil to be treated was highly contaminated with PCB's below 50 ppm, TCE, PCE, PAH's, had a high clay content, and a relatively high moisture content.

Clean up levels to achieve on these contaminants are shown in Table 3.4.

Other petroleum related contaminants were also found in the soil. The clean-up levels were 100 mg/kg for the heavy petroleum. All processed soil was returned to the site of origin as required by the ROD.

