

Case Study



Remediation System



Heat Exchangers



Vapour Conditioning System

Steam Enhanced Extraction Dichloromethane Emergency Response—ERM

The Challenge

- **11 Tonnes DCM Release**
 - ⇒ Emergency response
 - ⇒ Risk to adjacent river
 - ⇒ On-going business activities including vehicle and forklift movement
 - ⇒ Cost of vapour treatment

The Solution

- ⇒ ERM remediation design developed following on-site pilot testing
- ⇒ Evaluated in line with UK guidance and the EA's Remedial Targets Methodology as well as UK sustainable Remediation Forum (UK SuRF)
- ⇒ 30 Steam injection wells
- ⇒ 101 Soil vapour extraction wells
- ⇒ 4 treatment zones (strategically placed for site activities to continue)
- ⇒ Suitably placed thermocouple temperature monitoring.

Cornelsen's Role

- ⇒ Design, install & commission steam enhanced extraction system to ERM's specification.
- ⇒ Design included all pipework, pres-

sure regulation and safety systems.

- ⇒ Operation & maintenance of system.
- ⇒ Designed an innovative pre-treatment vapour conditioning system to reduce relative humidity and moisture content and vastly increase activated carbon adsorption capacity.

Results

- ⇒ 25 weeks operation
- ⇒ >95% DCM reduction across the whole treatment zone
- ⇒ >95% uptime

Process Plant

- **Steam Boiler**
- **Insulated steel pipework, pressure regulators, pressure relief & condensate drains**
- **Cooling condensation plant**
- **Pre-treatment RH & moisture reducing vapour conditioning system**
- **2000 m³/hr SVE System**
- **Vapour Aqueous Treatment Plant**

