

ISTD/ I-18-05

BEIJING (CH)

Context & Project Description

The site was in a major former steel and coking factory, covering an area of 8.63 km², located in the west of Beijing (China), for which the industrial activity was stopped in 2006. These types of sites present a big issue in terms of ground pollution, due to the industrial activity, and therefore space reversion. In this case, the former industrial site is to be transformed into a brand new park for the next Winter Olympics of 2022.

The first phase of the project was to build a pilot unit to treat an area of 100 m² at a depth of up to 9 m below ground, so a total of 900 m³ of soil. The pilot was executed in 60 days of heating time and delivered successful results in terms of remaining concentrations of hydrocarbons in the soil. Based on this, the full scale treatment started in March 2018 and ended in December 2018. The whole area to cover was about 32,900 m², with a total volume of 64,850 m³ of soil. The very challenging aspect of this project was to complete the remediation phase in less than a year, which required to operate with a very large number of heating unit.



Conclusion

The ISTD demonstrated to be a fast and reliable approach for the remediation of more than 1 ha of contaminated soil in a reasonable short time frame, using more than 450 heating elements working at the same time, in hardly accessible areas, as most of the former steel and coking factory buildings and facilities were still standing.

Key words

Contaminants
NSO heterocycles, TPH, PAH,
BTEX, TCE, PCE, NPP

Max. concentration
TPH: 73.200 mg/kg DM
PAH: 38.000 mg/kg DM
TCE/PCE: 250 mg/kg DM

Volume
44.975 m³

Tonnage
80.955 Tons

Nb of heating tubes
1623

Temperature Target
270°C

Project duration
270 days

Treatment targets
Benzene: 57 mg/kg
Benzo(a)pyrene: 6.2mg/kg
TCE/PCE: 1.0 mg/kg

Location
Beijing, China

Future Use
2022 Olympic Games, public park

Client
CONFIDENTIAL

Partner
ZUBLIN

General Contractor
CENTER INT.

Date
2018