

Bonfol remediation: hazardous waste safely and sustainably removed by train

Indaver was an important partner in the remediation of the Bonfol hazardous waste landfill in Switzerland. The waste was transported to Indaver's treatment facility by rail in secure containers. This modal shift is becoming more prevalent with Indaver which is opting for sustainable, safe and cost-conscious transport by rail or by water rather than by road.



In Bonfol, near the Swiss city of Basel, a landfill was in operation during the 1960's and 1970's. According to the regulations in effect at the time, local and international chemical industries were allowed to dump their waste there. The site expanded to a surface area of 20 000m², where about 140 000 tonnes of waste was deposited to a depth of 15 metres. In the late 1990's the Basel chemical industry, united under BCIAG decided to remediate the landfill. In 2007, this led to an agreement with the Swiss construction consortium Marti-Züblin and Indaver Germany. Indaver is responsible for the pre-treatment, transport and final processing of the contaminated soil.

Bonfol waste converted into energy

The excavation work started in 2010. The waste extracted from a specially built 'excavation hall', covering an area of 10 000m², was transferred to a pre-treatment

zone where Indaver employees were testing and screening the soil, and then loading it into containers. About 180 tonnes of waste were excavated and transported daily by rail for processing in Indaver's rotary kilns in Biebesheim, Hamburg and Antwerp. These facilities incinerate waste at high temperatures and thus ensure the complete destruction of all hazardous and critical substances. The energy that is released during the processing is converted into steam and energy, in a way that the Bonfol-waste gets a safe and useful application.

Small carbon footprint

An in-depth study was conducted prior to selecting the mode of transport for this remediation project. An equilibrium had to be found between the costs, the technical feasibility, safety and speed. Indaver ultimately opted to remove the waste by rail in special portal containers. These portal containers comply with the ADR

regulations for hazardous waste: they can be completely sealed, they do not leak and they are equipped with an active carbon filter for ventilation. Upon arrival at the railway terminal, a special container vehicle takes the portal containers to the rotary kiln. Transport by rail offers an interesting additional benefit: it has little environmental impact. Indaver strive to keep its carbon footprint as small as possible. The use of environmentally-friendly solutions is one of our priorities when both processing and transporting waste. In order to remove by road the 42 000 tonnes of waste in 2012, 5 000 trucks would have been needed. Ever since the start of the excavation work 70 000 tonnes have been removed out of the estimated total of 140 000 tonnes of soil. The full remediation of the landfill in Bonfol will take approximately 4 years.



More information ?

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