

Renaturation of two Drilling Mud Landfill Sites of a former Natural Gas and Oil Company in Bavaria



Client: Wintershall Inc., Petroleum Plant, Barnstorf

Engineering Design and Supervision: Institute of Applied Hydrogeology, Garbsen

Scope of works: Removal and recycling of TPH/PAH contaminated drilling mud residues and operation residues

Contract Period: June 2003 to November 2003



Drilling mud landfill site in Arlesried after excavation of the contaminated material.

The Project:

Approx. 35,000 tons of TPH/PAH contaminated soil were observed on the two landfill sites in Arlesried and Berdernau.

The Site:

Starting in 1966 natural gas and oil had been extracted and refined by a company consortium under the leadership of Wintershall Inc. The residues deriving from those activities had been landfilled at two company owned polder sites.

The Result:

The contaminated material which had to be excavated was kept in 9 m deep basins. Therefore an excavator equipped with a special 15 m long boom was needed in addition to the usual construction equipment. All excavators were equipped with filter and safety ventilation cabins.



In order to make the excavated material suitable for transport a binding agent was used.

and the use of personal protective equipment for the staff on site were standard. In addition Wintershall Inc. applied its own benchmarks for work safety, as well as for health and environment protection on site, which resulted in additional requirements for BMU personnel.

The excavated polder sites were refilled to their original level and finally covered with top soil.

The remediated area will be used as agricultural land in the future. Thus Wintershall Inc. actively contributes to land recycling.



To excavate the polder basins a special excavator with a 15 m long boom was employed on site.

As the excavated material was only marginally compressed, the admixture of a binding agent became necessary for transport and the subsequent utilisation. After a setting period of 24 hours the material was ready to be loaded and removed from site. For recycling purposes, the TPH/PAH contaminated material was transported to different locations, of which some were in more than 500 km distance. Substantial suitability proofs



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