

7. Purification Methods for Oil Contaminated Soil and Measures against Environmental Influence -Bioremediation, Washing Treatment and Heating Processing-

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The regulation standard as a soil pollution about oil contamination is not defined. It is usual in land dealings that one of the items in soil pollution survey is examined, since oil contamination has the characteristics such that it can distinguish easily through smell and oil film.

There were three typical purification methods, bioremediation, soil washing treatment and heating processing, for oil contaminated soil. During these treatments that will be carried out on the site, it is necessities of the measure against environmental influence like that suppress to generate the oil smell and oil film.

It is clarified that the processing period of about three to six months is required for bioremediation and that there is an effect using a smell control agent as a measure against a bad smell. Moreover, it is shown that the washing treatment is difficult for an oil contaminated soil with hydrophobicity, and that application both of coagulation process and ultra filtration method is effective in the oil contaminated water processing. Furthermore, heating processing shows the high purification effect for high concentration polluted soil by heavy oil, and the measure against an exhaust gas such as benzene etc. is indispensable during processing.

In this paper, the examples of purification work which applied these treatments and the measurement results about environmental influence is also reported.

Key Words : oil contamination, the measure against environmental influence, bioremediation, washing treatment, heating processing