INDUSTRIAL LIQUID WASTE DISPOSAL STUDY

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ABSTRACT

The project is the studied of the liquid waste disposal that is being practiced in Malaysia. For the available time of the project, we concentrate on two types of liquid wastes that are used motor oil and used cooking oil. They are classified under Types 'A' waste (Mineral Oils Waste) based on Akta Kualiti Alam Sekeliling 1974 (Akta 127) and (organic oil and oil waste) based on and Environmental Protection Agency (1990) 40 Code of Federal Regulation, Washington D.C.

We have collected the information through industrial visits, referred books, journals, and Department of Environment Malaysia (DOE) annual reports. We also personally interviewed DOE representative.

From this information, we understand that the mineral oil wastes are recycled by sedimentation and filtration. Sedimentation is the physical treatment applied to used motor oils at the first stage. In this process, the sludge is separated from sludgy oils. After that, some of the free sludge oil is directly used by the licence incinerator operator such as cement industry and steel manufacturing industry. The remaining free sludge oil is applied re-refining process and used as low grade motor oil lubricant.

Meanwhile the typical physical treatment to the used cooking oil is by filtration. After that, the sludge directly sent to Waste Management Centre (WMC), Kualiti Alam Sdn. Bhd. for disposal. The filtered oil is processed through whitening process so that it can be re-used again. This "whitening process" is the process that is the colour changer from dark dirty to pure virgin oils.

Incineration is the best ways to dispose because of its high carbon content and provide more heat. The availability of these wastes requires more incinerators.

Finally we concluded that the disposed process of the mineral oil waste is well treated and controlled. The present acts are enough for controlling the disposal.

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