

ABSTRACT

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Petroleum industry has been playing an important role in the social, cultural and economic growth of a nation in myriad ways. Environmental impacts from the petroleum industry derive from recovery, transport, refining and product usage. Contamination of soil is a serious problem especially in a country as densely populated as India. Moreover, rapid urbanization and industrialization have severely augmented the growing burden of chemical contaminants upon the soil. Major classes of organic contaminants of aquatic and terrestrial ecosystems are polycyclic aromatic hydrocarbons (PAHs).

These compounds affect the microflora and pose a serious threat to human health due to their genotoxic, mutagenic, and carcinogenic potential. Solid wastes generated from refinery are oily sludge from crude oil storage tank bottom, sludge tank bottoms and effluent treatment plant basins. The quantity of oily sludge is minimized by hot gas oil circulation before cleaning the crude oil storage tanks and operation of melting pits.

Disposal of refinery sludge is a difficult problem in the overall waste treatment management program of refineries. Even the most advanced method gives residues that are no longer amenable to cost effective treatment. The current methods of disposal are landfill, land farming, incineration etc.