

REMEDICATION OF PETROLEUM CONTAMINATED SOIL THROUGH SOIL WASHING

By Shiw S. Singh and Tarun R. Naik

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ABSTRACT

Over the years, a large number of underground storage tanks (USTs) as well as above ground storage tanks (AGTs) have been installed at various locations and facilities. The majority of these tanks were not adequately designed, installed, and maintained to avoid leakage. Consequently, a significant number of these tanks have leaked, releasing their contents including petroleum products and other hazardous chemicals. These leakages have caused damages to our soil and water that provide a threat to public health and welfare. In order to minimize the leakage, federal, state, and local regulations have been introduced. Under current regulations, owners and operators of petroleum storage tanks are required to (1) replace or upgrade their tanks to meet minimum design standards, (2) test their tanks for leaks and provide controls for spills, and (3) clean up environmental damage that has resulted due to past leaks/spills. Several technologies exist for remediation of petroleum contaminated soil. In general, technologies for soil cleanup can be divided into two major classes. The first class of remediation technologies are designed to treat or remove contaminants. The second class of technologies are designed to restrict movement of contaminants. This work was undertaken to evaluate soil washing technology for remediation of petroleum contaminated soil. A brief description of petroleum products is given below.