

# **Oil Removal on Seawater Using Coal Fly Ash**

A Thesis Presented to Faculty of Environmental and Sanitary Engineering  
College of Engineering, Architecture and Technology  
De La Salle University – Dasmariñas  
Dasmariñas City, Cavite



In Partial Fulfillment of Requirements for the Degree  
Bachelor of Science in Environmental and Sanitary Engineering

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October 2014

## Abstract

Oil spill is considered as one of the most common problem not only in the Philippines but also globally. Removal of oil on seawater is difficult and time consuming. There are several methods of removing oil from seawater but the most common are found to be time consuming and uneconomical.

One possible method of removing oil from oil contaminated water is by using treated coal fly ash as an adsorbent. The purpose of this study is to determine the effectiveness of acid-treated coal fly ash to adsorb diesel fuel oil from seawater in terms of percentage removal without having the risk of damaging the environment any further. Coal fly ash is considered hazardous and dangerous specially when not used or handled properly. In the past, fly ash was generally released into the atmosphere, but due to the pollution it contributes, it is generally stored at coal power plants or placed in landfills. The most common usage of fly ash is to be an additive to cement for more protection from wet conditions and chemical attacks.

Heat and acid treatment increase the adsorptive capacity of coal fly ash and lower its heavy metal concentration suitable for environmental applications. Upon completion of this study, the researchers concluded that the acid-treated coal fly ash can adsorb a certain amount of oil, depending on the amount of fly ash used, which can be recovered and reused for other purposes.

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