

Analysis of Industrial Effluents Before Their Discharge into the Sea. Case Of the Guinea Bauxite Company (CBG)

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ABSTRACT

Guinea, like any developing country, is highly dependent on its natural resources: water, flora, fauna, soil and subsoil. This dependence, linked to inadequate exploitation practices and an increasingly growing population, often leads to environmental degradation. In order to protect natural resources against chemical pollutants, from the 1960s, multilateral agreements on the protection of the environment appeared. CBG, being an indexed partner of Guinea, has endeavored to respect these agreements. In 2014, it installed an effluent treatment station within it. The effluent treatment station in the Kamsar plant is subject to effluent and discharge treatment objectives. But the fact is that the discharges contain a lot of oils and fats. This is likely to create major consequences for the aquatic environment. With this in mind, it is a question of carrying out studies on the samples of effluents taken at the point of discharge. Seventy-two effluent samples were taken over an eight-month period. These samples were analyzed in order to determine the traces of Total Oils and Fats (THG) using the "Infra Cal TOG/TPH Analyzer" type incubator. The results showed that the effluents contain a high proportion of oil and grease films whose values vary according to the seasons (85 ppm on average per day in the dry season: 178 ppm on average per day in the rainy season), with an annual average of (132 ppm). All these values are beyond the threshold limit authorized by the International Finance Corporation (15 ppm). A high concentration of THG in these waters gave non-biodegradable water. An effluent treatment scheme has been drawn up. This new treatment protocol will allow the elimination of oils and fats in the water.

Keywords: Industrial effluents, Treatment place, Kamsar factory

