

Lixiviados en plantas de residuos. Una contribución para la selección del proceso de tratamiento.

Abstract

Leachate from waste landfill or treatment plants is a very complex and highly contaminated liquid effluent. In its composition, dissolved organic matter, inorganic salts, heavy metals and other xenobiotic organic compounds, are found, so it can be toxic, carcinogenic and capable of inducing a potential risk to biota and humans. European law does not allow such leachate to leave the premises without being depolluted. There are many procedures that enable debugging, always combining different techniques. Choosing the best method to use in each case is a complex decision, as it depends on many tangible and intangible factors that must be weighted to achieve a balance between technical, cost, and environmental sustainability.

A hybrid method for choosing the optimal combination of techniques to apply in each case, by combining a multi-criteria hierarchical analysis based on expert data, obtained by the Delphi method, with an analysis by the method of VIKOR to reach a consensus solution is presented. This thesis will perform a sensitivity analysis on the weights of the criteria involved in the decision and performance values of the alternatives, expressed both in terms of the decision criteria.