

LEACHATE WASTEWATER CASE STUDY

Introduction

Case study for TDM treatment from leachate process wastewater. Landfill leachate is a mixture of percolated rainwater, water produced by the biodegradation of waste and the inherent water in waste, which contains large amounts of suspended solids, organic compounds, ammonia, salts and chlorides, heavy metals, among others.

Objective

The sample presented an orange coloration with floating particles and a strong odor of decomposing organic matter.

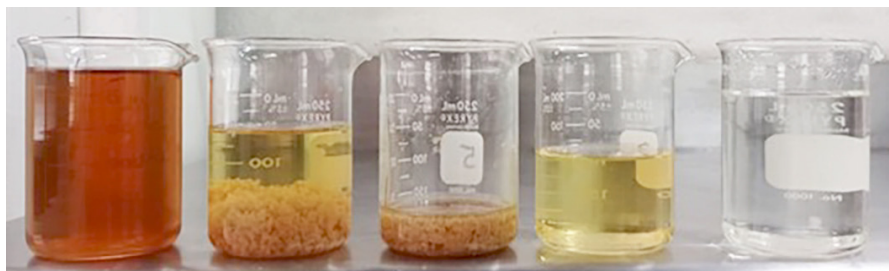
The customer was using an evaporation process to treat the water, but they could not comply with the government's regulations, so they needed to store wastewater in a landfill.

Therefore, the customers main objective is to comply with USA regulations for discharge.

Results

The wastewater provided by the client came from a leachate in the USA. A treatment with TDM was made where an ionization reaction and superoxidation effect take place, separating contaminants into simpler compounds and then precipitating by gravity. TDM achieved a quality of wastewater able to comply with governments regulations.

Variable	Inlet	Outlet	EPA Regulations
pH	7.58	8.02	6 to 8.5
Conductivity	16.67 mS/cm	12.33 mS/cm	-
TSS	82 mg/L	3 mg/L	20 mg/L
Turbidity	158 NTU	4 NTU	
COD	1000 mg/L	110 mg/L	125 mg/L
Color	Dark orange	Colorless	Colorless
Odor	Organic decomposing matter	Odorless	Odorless



Raw sample, treatment, sludge and outlet.



Field test with the client.