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ODOR EMISSION IN A SMALL WASTEWATER TREATMENT PLANT

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ABSTRACT

A comprehensive sampling and analysis program was set in order to evaluate influent's odor potential at the municipal Wastewater Treatment Plant of Kremasti-Rhodes, Greece. Odor potential evaluation was achieved by liquid measurements (temperature, pH, oxidation/reduction potential ORP, conductivity, chloride, total suspended solids, COD, BOD, nitrate, sulfate, alkalinity and dissolved sulfide concentration) gas measurements (hydrogen sulfide) and chromatographic fingerprinting by GC/MS of volatile and semi-volatile odor compounds. Based on experimental measurements, the USEPA models WATER8 and ISCST3 were used to determine hydrogen sulfide emissions from the plant units and the contour concentrations emitted from the main source of foul air (grit removal channel), which was simulated as a point source.