

Improvement of Operation of Wastewater Treatment Plant in Northern Italy

Due to fast growing residential and industrial developments within its catchment area, a major wastewater treatment plant could no longer treat the amount of sewage and effluent it was receiving to the standard required to meet its legal discharge criteria. An urgent action was required, as the company, which owned the plant, was under pressure from the environmental authorities. It had not forecast the level of demand it was experiencing on its facilities and was unable to complete a major extension within the required timeframe.



Global Advantech GreenChem carried out a study of the historical analyses of the water quality before and after the different processes in the treatment plant. This enabled identification of the main issue: the aerobic oxidation tanks were overloaded with organic and ammoniacal material that was now entering the plant (after completion of the new housing and industrial developments). Air was already being pumped into the oxidation tanks at the maximum rate possible for their design.

It was decided to stimulate the established bacteria in the aerobic oxidation tank aiming to increase the rate of oxidation of the organic and ammoniacal material entering into it. An automatic dosing system was set up to add Global Advantech GreenChem's Natural Biostimulant Effluent Treatment WT952 into the water flowing into the first

oxidation tank in the series. Within a few days analyses showed that the rate of degradation had increased in the oxidation tanks and within four weeks the plant was able to achieve the level of treatment required to meet its legal discharge criteria.

Global Advantech GreenChem's biostimulant wastewater and effluent treatment products contain natural molecules, which are proven to catalyse certain cell defence mechanisms and accelerate specific metabolic functions within micro-organisms. Their addition enables indigenous micro-organisms to utilise the hydrocarbons and otherwise toxic organic molecules as food sources, rapidly degrading them to carbon dioxide, and simple salts.

Global Advantech GreenChem Limited

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