

## Two-Point Chemical Dosage for Total Phosphorus Removal in a Wastewater Treatment Plant Process

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A new strategy for chemical dosage was proposed to enhance the treatment performance of phosphorous removal in a biological wastewater treatment process (WWTP). Two-point chemical addition is applied to the AAO process which contains primary clarifier followed by seven reactors in series and a secondary settler. The first two reactors are anaerobic, the third and fourth are anoxic and the last three are aerobic in nature. The chemical is simultaneously dosed in the primary clarifier feed and also just before the secondary settler. The objective is to control the phosphorous concentration in the effluent and nitrate concentration in the anoxic reactor, which can remove the effects of disturbances, existed in the WWTP while maintaining better effluent quality. This method achieves the most efficient use of chemical for phosphorus precipitation.

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