**Assessment Efficiency Evaluation of Al-Diwaniya Sewage**

**Treatment Plant in Iraq**

Awatif Soaded Alsaqqar, Basim Hussein Khudair, and Ahmed Makki Al-Sulaiman

**ABSTRACT**

This study aims to evaluate the performance of the sewage treatment plant in Al-Diwaniya, one of cities in the southern part in Iraq. This evaluation could be used to facilitate effluent quality assessment or optimal process control of the plant. The influent reaching the plant is considered a medium to strong in strength with BOD/COD ratio in the range 0.23 and 0.69 which can be considered an easily degradable sewage by the biological processes performed by the activated sludge unit. The quality of the effluent was found to be higher than the Iraqi standards for disposal to water bodies. The BOD5/COD ratios of the treated sewage varied over a wide range as low of 0.13 to 1.48 indicating operational problems in the plant. Regression analysis was performed to estimate the removal percentages of BOD5, COD, TSS and NO3 that the plant should perform by to reach the disposal limitations.