

## Abstract

The study of factors affecting the monitoring of hospital wastewater treatment plant: a case study in Nonthaburi province was a survey study. The objectives were (1) to study the level of knowledge and operating behavior for operate the wastewater treatment plant (2) to study the relationship between knowledge and operating behavior for operate the wastewater treatment plant and (3) to study the wastewater treatment efficiency of each hospital. Data was collected from 4 hospitals such as Pranungkiao hospital, Sainoi hospital, Bangyai hospital and Bangbaothong hospital by using the questionnaire survey with 11 operators. The 56 wastewater samples were sampling and analysis the influent and effluent characteristics. From the results found that factor affecting the monitoring of hospital wastewater treatment plant was training program while education level and working experience did not show the significant affect. The operators who took course in training program showed higher level score than the one who did not. The average score of knowledge level were 14.00 (SD=2.83) and 9.00 (SD=2.74) with the average score of operating behavior 34.00 (SD=6.20) and 29.60 (SD=4.77) respectively. In order to find the relationship between knowledge level and operating behavior, the Pearson Product Moment Correlation was used. From the calculation found that knowledge level was significantly correlated with operating behavior at significant level of 0.05 (P-value = 0.013). The Pearson Product Moment Correlation (r) was 0.715. It was indicated that knowledge level and operating behavior had a high correlation level which enhanced the operating and monitoring of wastewater treatment plant. The wastewater treatment efficiencies, from 4 hospitals, in terms of turbidity, BOD, COD, SS and TKN were 39.82% – 84.95%, 50.86% - 93.49%, 32.62% - 87.32%, 0 – 84.27%, and 63.27% - 81.09% respectively. The concentration of turbidity, BOD, COD, SS and TKN were in the range of 3.27 – 160.0 NTU, 8.0 – 232.0 mg/l, 17.0 – 223.0 mg/l, 6.0 – 93.0 mg/l and 0.3 – 42.1 mg/l respectively.