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KEY WORD : PELLET-FLOCS/ TURBIDITY/ PELLET-FLOC BLANKET HEIGHT/ CLARIFIER

PARINYA NA NAKORN : EFFECTS OF PELLET-FLOC BLANKET HEIGHT ON THE TURBIDITY ON THE TURBIDITY REMOVAL. THESIS DAVISOR : PROF.THONGCHAI PANSWAN,Ph.D, 117 PP. ISBN 974-581-554-3

The study was conducted to investigate the influence of the pellet-floc blanket height on the turbidity removal efficiency of the reactor using PAC1 as a coagulant.Experiments were carried out with various PAC1 doses (1,2,3,4 mg/1) and paddle spacing (5,10,15,20 cm) at each height of the pellet-floc blanket (70,90,110,130 cm). The anionic polymer concentration of 0.1 mg/1,the upflow rate of 40 cm/min, and the synthetic raw water turbidity of 50 NTU were kept constant throughout the study. Samples were taken hourly at 4 sampling outlets at different heights. The samples were then analyzed for turbidity, suspended solids. pellet diameter. settling velocity, and percent solids content. The experimental results led to the following conclusions.

1. PAC1 dose has no significant effect on the turbidity removal efficiency, the pellet size, and the settling velocity.

2. Paddles with smaller spacing were more effective than those with larger spacing.

3. The higher the blanket height was, the better the removal efficiency could be achieved. The blanket height of 130 cm. yielded the best results.