Cuatro Comunidades Case Study

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Interior of AguaClara water treatment plant at Cuatro Comunidades

In the summer of 2009, an evaluative study of the Cuatro Communidades plant was performed. At the time of the study, the Cuatro Communidades plant implemented the most recent AguaClara designs. These designs aimed to increase treatment efficiency while minimizing construction costs. The study focused on three components of the plant- the chemical dose controller (CDC), the flocculator and the sedimentation tanks although some aspects of the chlorination system were additionally examined.

Chemical Dose Controller

The chemical dose controller in the plant was the first generation model of the technology. The system was monitored and a new CDC was constructed. Theoretical and actual alum doses were compared for both models.

Flocculator

Settled water turbidity was compared at various locations along the flocculator.

Sedimentation Tanks

The Cuatro Comunidades plant was designed to accomodate a floc blanket but clear evidence of a floc blanket had not been observed. One sedimentation tank was shut off in an attempt to form a floc blanket. Also, the effluent turbidity from the plant was compared to the settled water turbidity at the end of the flocculator.

Chlorination System

Chlorine residual in the distribution line and the flow rate of the chlorine flow control module were examined.

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Source water from a river above the plant and clear water in the exit channel