Central Municipality

Use of Chlorine Dioxide Improves Taste and Odor and Controls THMs

The Challenge

This municipality disinfects between 12 and 36 million gallons per day of drinking water. The plant experienced taste and odor complaints at a rate of well over 100 per day. Chlorine gas was used as the primary disinfectant for the raw surface water entering the plant. Free chlorine is known to react with certain organic species present in the raw water to form trihalomethanes (THMs) as a disinfection by-product. The USEPA regulates the amount of THMs present in drinking water. This plant produced relatively high levels of THMs in the disinfected drinking water. An alternative primary disinfectant was required which would reduce the number of taste and odor complaints, inhibit THM formation, and adequately disinfect the drinking water.

Action Steps

A recommendation was made to the municipality to treat the raw water with chlorine dioxide, using a two-chemical flowpaced chlorine dioxide generator, at a feed rate of 1.75-2.0 mg/L. The injection point was moved 2,500 ft up the raw water line to minimize taste and odor and to achieve disinfection credit. Chlorine dioxide does not react with most organics and will not form THMs if applied properly.

The Solution

The chlorine dioxide program significantly reduced the number of taste and odor complaints to less than 2 per month and effectively lowered THM levels in the disinfected drinking water to well below the USEPA limits. Chlorine dioxide also allowed the plant to claim disinfection credit. The program has been in place since 1998 and the customer continues to be extremely satisfied with the results.

If you would like to experience similar results please call your local Siemens Water Technologies sales representative.

Facility	Central Municipality
Application	Potable Water Disinfectant
Technology	Chlorine Dioxide
Scope of Services	Site Evaluation Taste and Odor Control Compliance Technical Support

Case Study

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