

THE PROBLEM

The water distribution system was challenged with excessive biofilm and iron scale build up, causing water availability concerns. Further analysis was completed on the water and it was determined that there was a very high load of Microbial Equivalents (ME), which estimates total microbial occurrence suspended in water. There was also a high level of fluorescent compounds present, which represents the total presence of microbial produced compounds and decaying organic matter in the water.

The water system was being treated with an Advanced Oxidation Process (AOP) unit. The unit was turned off by the customer and they started using chlorine to try to overcome the problem. The Free Available Chlorine (FAC) could not make it through the system due to the excessive buildup of biofilm/mineral scale. Also, chlorine could not clean out the excessive buildup that was causing the problem. This is a common problem in water distribution systems.

THE SOLUTION

This operation is an organic egg producer so our product Clearacor II (approved for organic applications) was introduced to the water distribution system at a rate of 50 ppm (1 gallon per 20,000 gallons of water). During the first week of treatment there was a dramatic increase in the ME, which was due to the Clearacor breaking up the biofilm layers. The grower flushed the lines every 24-48 hours for the first week and then moved to flushing weekly from week 2 through week 4. At the end of week 2, the ME was negligible (more than 99.99% reduction).

The customer commented that the cartridge filters normally plugged up with biofilm and slime on a weekly basis, now they appear to have very little material on them and are lasting much longer. More importantly, water flow was restored to normal function and the water quality improved to a very high level.



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