

Medora Corporation

Potable Tank Mixing & THM Removal

USCOPW-LOC1080.001

Topics: potable, THM removal, TTHM, stratification/water age, chlorine



One of the three tanks, SN15 GridBee® Floating Spray Nozzle THM Removal System, and blower assembly

Customer: Information is available upon request from Medora Corporation. 866-437-8076 info@medoraco.com

Overview: This location consists of three potable water tanks serving the potable water needs of a city. These three tanks, Tanks 100, 110 & 120, are steel ground storage tanks with an average capacity of 2.4 MG, average tank height of 24 ft. and an average diameter of 134 ft. The average flow rate is 355,000 gpd with a peak flow rate of 948,000 gpd for each tank. The system disinfectant is chlorine.

Conditions / Objectives: Water quality problems included excessive trihalomethane (THM) concentrations and thermal stratification, creating uneven water age issues. To ensure full EPA compliance and to optimize the community's potable water quality, the community sought a reliable, affordable means for removing THMs.

Solution: One (1) GridBee® SN15 Floating Spray Nozzle THM removal system with one (1) supplemental GridBee® GS-12 submersible mixer are installed in each of the three tanks. The GridBee® SN15 Floating Spray nozzle THM removal system is designed to achieve 40-50% reduction of THMs in this system. The Customer installed their first THM Removal system on July 15, 2013. They were so satisfied with it's performance that they purchased GridBee® THM Removal Systems for their two remaining tanks a little over a year later.

Results: In initial testing of the performance of the GridBee® SN15 Floating Spray Nozzle THM system and the GridBee® GS-12 that were first installed in tank 110, the District set up two control tanks that did not contain any THM removal equipment, tank 100 and tank 120. The graph (on the right) depicts the

outstanding results of this comparison study and shows approximately a 77 % reduction in THM levels in tank 110 that had the THM removal system. The readings depicted by the red and blue bars were taken about 3 weeks apart. Note that there was a natural decline in the THM levels in the control tanks during that period. The District was extremely happy with the results, and they installed the same GridBee® THM reduction systems for tanks 100 and 120 a little over a year later. The District will serve as a positive contact for future deployments

