TTHM Reduction Downstream Of A 1MG GST

In-tank spray aeration systems can solve TTHM problems down the line.

Topics: 1MG Tank, TTHM Removal, SN Series

Location & Contact Information:
Further information may be available upon request. Please contact Medora Corporation by phone at 866-437-8076 or by e-mail, info@medoraco.com

System Overview: 90% of water in this system comes from a third-party water treatment plant and is pumped 8 miles to the H-36 Ground Storage Tank. From here the water is distributed to the western pressure zone where all Stage 2 DBPR THM sample sites are located. The system density is about 20 customers per mile and can take up to 10 days before the water is used.

Disinfectant Type: Chlorine

Tank / Reservoir Build Information:
Type: Ground Storage Tank (GST)
Construction: Concrete
Volume (gallons) : 1,000,000
Height (feet): 35
Diameter (feet): 70

Pre-Deployment Conditions: Several testing locations downstream of this tank were out of compliance and as high as 110 µg/l for total trihalomethane (TTHM).

Project Objectives: Achieve a 40% TTHM reduction based on a maximum usage of 1.5 million gallons per day and maximum tank fill rate of 2,500 gallons per minute.

Solution: Two (2) SN15 Spray Aerators, one (1) GF10000 Potable Water Mixer and two (2) 2HP blowers.

Results: The SN Series THM Removal System was deployed and put into service on April 22, 2016.

The results were immediate and to date, this system continues to see a 50% reduction on average throughout its downstream distribution.

Also reference the comparative data charts on page 2 of this case study.

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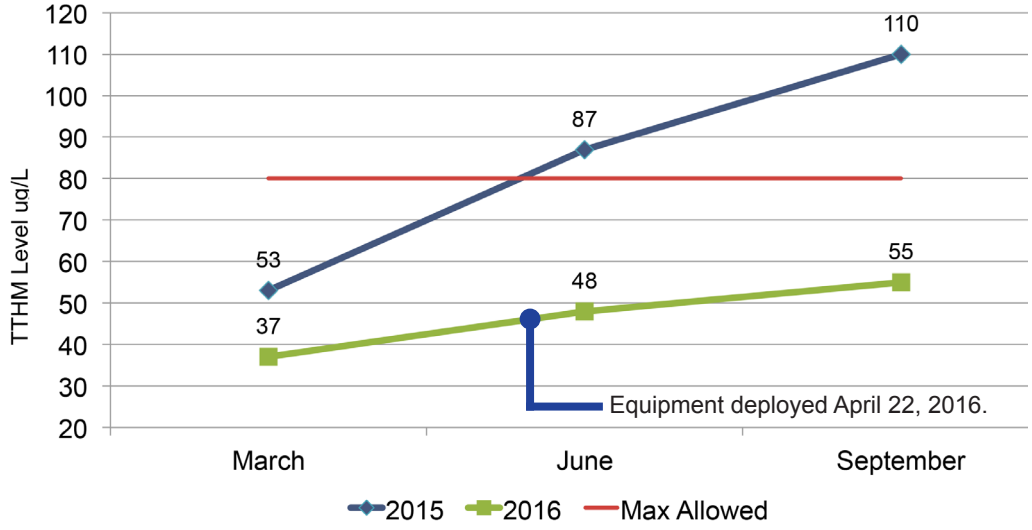
Yearly TTHM Comparative Data- Before (2015) & After (2016) Deployment



Results shown are quarterly average of all four Phase 2 TTHM sites.
"Max allowed" is EPA maximum contaminant level for annual running average.
Aeration system put online in April 2016.

TTHM Comparative Data- Spray Aeration "On" Versus Spray Aeration "Off"