Tres Rios Water Reclamation Facility Effectively Monitors THM Values With Real-time Online THM Analyzer


Photo courtesy of Pima County Regional Wastewater Reclamation Department.

The Pima County Regional Wastewater Reclamation Department in Arizona is using an online trihalomethane (THM) analyzer to continuously, accurately, and reliability monitor THM values in real-time at its Tres Rios Wastewater Reclamation Facility.

In December 2013, the upgraded Tres Rios Water Reclamation Facility was brought online. A five-stage Bardenpho process was used for ammonia, nitrate and nitrite reduction. However, reduced levels of effluent ammonia and the use of chlorine disinfectant increased Total THM formation potential in the discharged effluent. As a result, operations experimented with adding centrate as an ammonia source prior to chlorination to make chloramines because the disinfectant produces lower levels of THMs than chlorine.

The online THM-100™ analyzer, manufactured by AMS, was used to characterize and monitor THM formation because of this process change.

The self-calibrating online THM analyzer provided the operational staff with immediate and accurate daily reports on THM levels in the effluent. By monitoring the real-time formation of THMs, following the addition of ammonia, operations were better equipped to control its production and implement process optimization techniques accordingly.

Following the successful demonstration of the online THM monitor, the THM-100 instrument was placed into full-scale use at the Tres Rios Water Reclamation Facility.

Aerial view of the Tres Rios Water Reclamation Facility in Arizona.

THM-100 Online THM Analyzer

The THM-100 online THM analyzer enables users to protect the public from harmful disinfection by-products while controlling operational and treatment costs by quickly detecting changing THM levels with reliability and accuracy.

The THM-100 analyzer provides automated, unattended measurement of THMs levels; measuring chloroform or bromoform species as well as Total THM and THM Formation Potential of raw or treated water and wastewater. The THM-100 comes with a standard sampling schedule of every four hours; however, the sampling frequency can be changed to meet application specific needs.

Analytical results, system performance and analyzer health is remotely monitored, 24/7 by AMS to ensure the THM-100 instrument remains online and working under optimal conditions. This unique approach minimizes downtime and optimizes performance.

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