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Pima County Regional Wastewater Reclamation Department Purchases Online THM Analyzer to Monitor THM Formation

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The [Pima County Regional Wastewater Reclamation Department](#), Arizona has purchased and installed an online trihalomethane (THM) analyzer from [Aqua Metrology Systems \(AMS\)](#) to monitor daily levels of the disinfection by-product at their Tres Rios Wastewater Reclamation Facility.

In December 2013 the expanded and upgraded Tres Rios Wastewater Reclamation Facility was brought online. A five-stage Bardenpho process was used for ammonia, nitrate and nitrite reduction; maintaining effluent levels below 10 mg/l. However, reduced levels of effluent ammonia and the use of chlorine disinfectant increased Total THM (TTHMs) formation potential in the discharged effluent. As a result, operations experimented with adding centrate as an ammonia source prior to chlorination to make chloramines since the disinfectant produces lower levels of THMs than chlorine.

An online THM instrument, the [THM-100™](#), was piloted to characterize and monitor THM formation as a result of this process change. “During the demonstration, we undertook rigorous testing to validate the accuracy, reliability, and repeatability of the online THM analyzer by measuring it against results from independent laboratory analysis. The detailed analysis showed that the THM-100 online analyzer provided us with immediate and accurate daily reports on THM levels in our effluent. By monitoring the real-time formation of THMs, following the addition of ammonia, we were better equipped to control its production and implement process optimization techniques accordingly,” said Michael Kostrzewski, Senior Project Manager for the Pima County Regional Wastewater Reclamation Department.

The THM-100 is programmed with a standard sampling schedule of every 4 hours; however, the sampling frequency can be changed to meet application specific needs.

The system is also self-calibrating, with a daily validation and full calibration weekly. “During the evaluation period Aqua Metrology Systems remotely monitored, 24/7, the analytical results, performance, and health of the analyzer. Remote monitoring is a standard feature offered on every THM-100; ensuring the instrument remains online and working under optimal conditions,” said Rex Sistik, Regional Business Development Manager for Aqua Metrology Systems. “This value added feature provided the client with confidence that we would be able to immediately respond to any operational issue to help them maximize uptime of the instrument.”

Following the successful pilot of the [THM-100](#) online THM monitor, the instrument was placed into full-scale commercial use at the Tres Rios Wastewater Reclamation Facility.

To access the latest information about Aqua Metrology Systems visit our [Industry News Room](#).

AMS Boilerplate

Aqua Metrology Systems Ltd. (AMS) is a leader of online and offline analytical instrumentation for the detection of water contaminants, specifically disinfection by-products and trace metals, across municipal and industrial sectors. We believe high frequency data is essential for effective process control and optimization. As a result, our technical solutions are designed to provide reliable and repeatable information on water quality contaminants through continuous, real-time monitoring.

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