



YOUR **REAL-TIME NITRATE & NITRITE**
MONITORING TOOL



Going for Gold

Open season for swimming on the river Seine

The Olympic Games start on Friday 26th of July in Paris. The river Seine plays a central role to life in the capital and formed an important part of Paris's bid for the Games. The opening ceremonies and several of the marquee events - the swimming section of the triathlon and the 10-kilometre marathon swim - will take place on the river. The opening ceremonies will be like no other before, with 600,000 spectators and 10,500 athletes on a flotilla of 160 boats along a 6-kilometre route through the heart of the city.



When the current mayor of Paris, Anne Hidalgo, presented her winning bid for the 2024 Games back in 2016, she promised that the city, home to 11 million people in the greater urban area, would undergo a drastic environmental upgrade by 2024. Key to her bid was enabling Olympic athletes to swim in the river, as they did when Paris hosted its first Olympics in 1900. Before the games start, the mayor is planning to swim in La Seine on 17th July.

This is a dramatic turn in fortunes for the river where swimming was banned by authorities back in 1923 due to poor water quality. Aquatic life within the river had been reduced to a single species of fish.

What is behind the restoration of the Seine?

The French sanitation authority responsible for treating rainwater, wastewater, and industrial effluent in the Paris region has been in existence for more than 50 years. They operate several water treatment facilities in the Paris area for the 9 million inhabitants of the Île-de-France. This is equivalent to 2,5 billion liters in dry weather every day. These wastewater treatment plants are a critical piece of infrastructure for improving the quality of water in the river Seine.

Like most large modern plants, they employ a multi-step treatment process - screening, sand removal and degreasing, settling and biological treatment in several stages.

Innovation forms a vital part of improving the treatment process.

A constant challenge to improve water quality and operational efficiency within the treatment process allows the French sanitation engineers to explore novel means to treat wastewater. New upcoming regulation requirements in 2025 to monitor final effluent have required the operators to measure nitrite and nitrate autonomously.



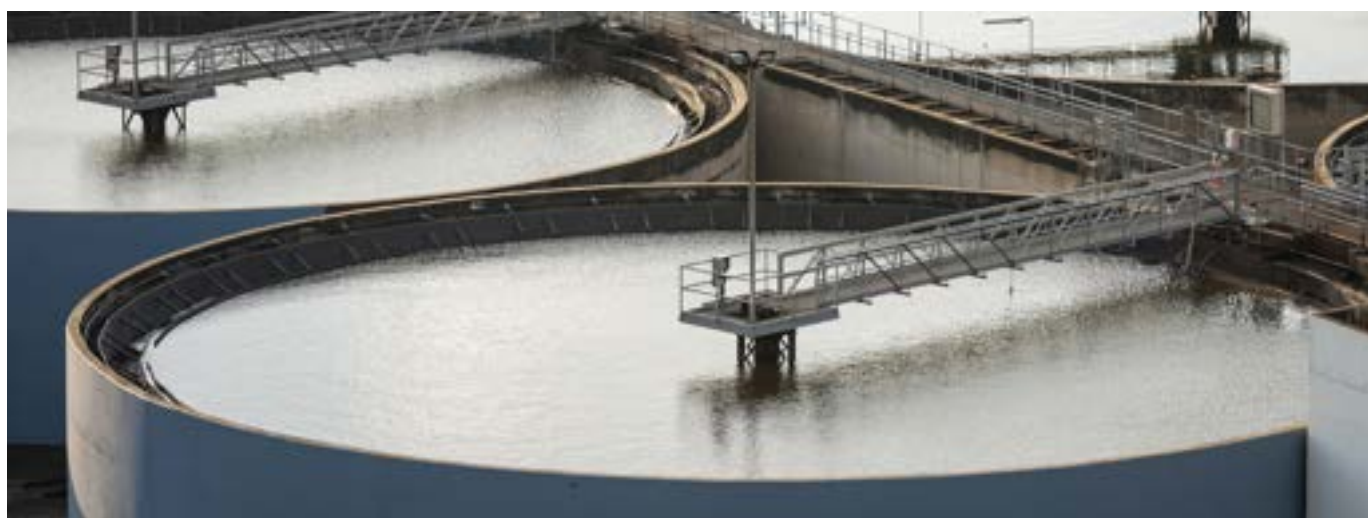
Compliance with Regulations

Many countries have strict regulations regarding nitrogen discharge into water bodies. Denitrification helps treatment facilities meet these regulatory requirements and ensures compliance.

Importance of Denitrification

Denitrification is an anaerobic biological process used in wastewater treatment to reduce nitrate and nitrite levels. Denitrifying bacteria use organic carbon as an energy source to reduce nitrate and nitrite to nitrogen gas. By adjusting the carbon dosage, often through methanol addition, operators can regulate the nitrogen concentration in the treated effluent. Proper dosing and monitoring are essential to optimise denitrification and prevent excess methanol usage. Measuring nitrite, an element that appears during denitrification, in the final effluent is a key for this proper dosing.

The challenge was to install an autonomous nitrate and nitrite analyser to accurately measure in the final effluent – a complex and difficult matrix to measure.



The installation process



The engineers installed the **NOx monitrix analyser series** for measuring nitrate and nitrite within their facility – particularly as part of their denitrification process. The **NOx monitrix analyser** uniquely employs rapid ion chromatography with patented UV-LED detection for selective and direct measurement of nitrite and nitrate in wastewaters.

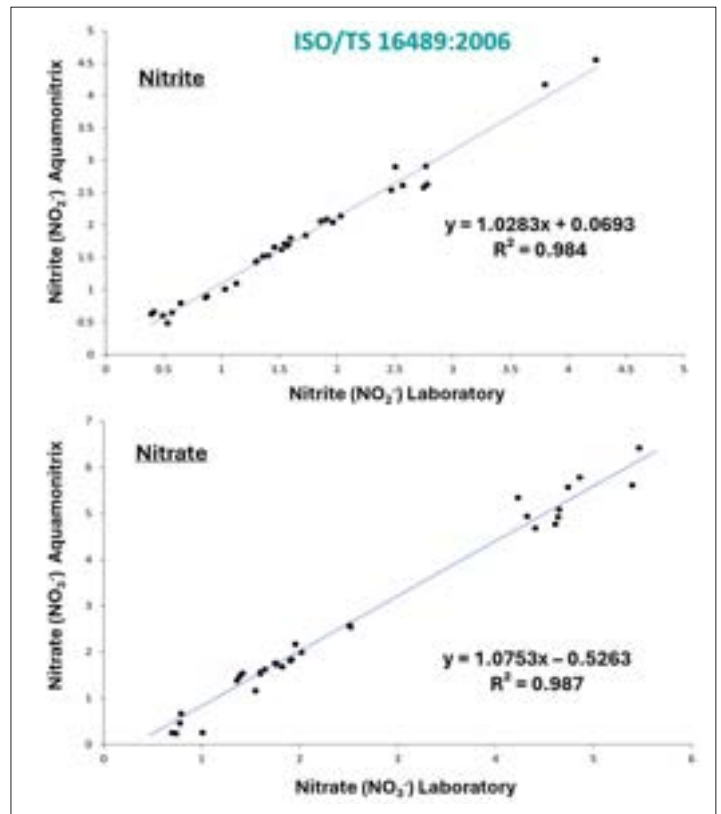
On-site maintenance analyser training was provided by the **Aquamonitrix®** service team to several of the on-site engineers.



Continuous nitrite and nitrate data reported in real-time from the analysers



Independent trial data provided by the client, confirmed that the **Aquamonitrix®** analysers demonstrated a strong linear correlation for both NO_2^- and NO_3^- against accredited laboratory data, highlighting the high levels of accuracy achieved by **Aquamonitrix®** in the field. Based on these positive results, the operators installed more NO_x monitrix analyzers.



Strong linear correlation for both NO_2^- and NO_3^- against accredited laboratory data

Positive Feedback



In a recent interview CEO of Aquamonitrix, Colm Lynch, commented on the success of the analysers in terms of robustness and accuracy in complex and challenging matrices leading to sales in France, the UK, the US and the Netherlands.

"As the installed product range increases across all territories we are finding different and varied applications for the technology from testing chloraminated drinking water in Los Angeles to aquaculture in Norway. One of our biggest opportunities is the work we are doing in measuring nitrate and nitrites within activated sludge to mitigate Nitrous Oxide gases and reduce energy consumption in wastewater."



Positive Feedback



Dr. Eoin Murray, Head of R&D with Aquamonitrix®, commented on the installation in Paris area:

"The in-depth site testing performed by the client, adopting the ISO 16489-2006 standard, was excellent and provided yet another comprehensive independent verification of the accuracy delivered by our technology in wastewater. The analyser has also undergone ISO 14034 verification by Scottish Water, the James Hutton Institute, and the US EPA."



Florent Lim, Technical-sales engineer at Equipements Scientifiques (Aquamonitrix distributor) was involved at every stage, including product qualification, monitoring, installation and training...

"I'm very pleased to be able to offer the Aquamonitrix range in our catalogue. It's a quality product, as demonstrated by the design of the product and the results obtained. The Aquamonitrix analyser offers users the guarantee of accurate and rapid measurement, thanks to its technology. In addition, I can emphasise that Aquamonitrix support was quick to respond to the various customer queries, which was the important point for the customer during the various tests. "



What's next

The Aquamonitrix team will be installing more **NOx monitrix analyzers** at the clients site and providing maintenance training to a further ten engineers.

See at Upcoming Exhibitions

Conference Name	Location	Dates	Exhibiting
WEFTEC	New Orleans, US	15-17.10.24	Aquamonitrix

Contact Us

 info@aquamonitrix.com

 **+353 59 9149097**

 www.aquamonitrix.com

 www.linkedin.com/company/aquamonitrix

Aquamonitrix Ltd.
Loughmartin Business Park,
Tullow, County Carlow, R93 N529,
Ireland