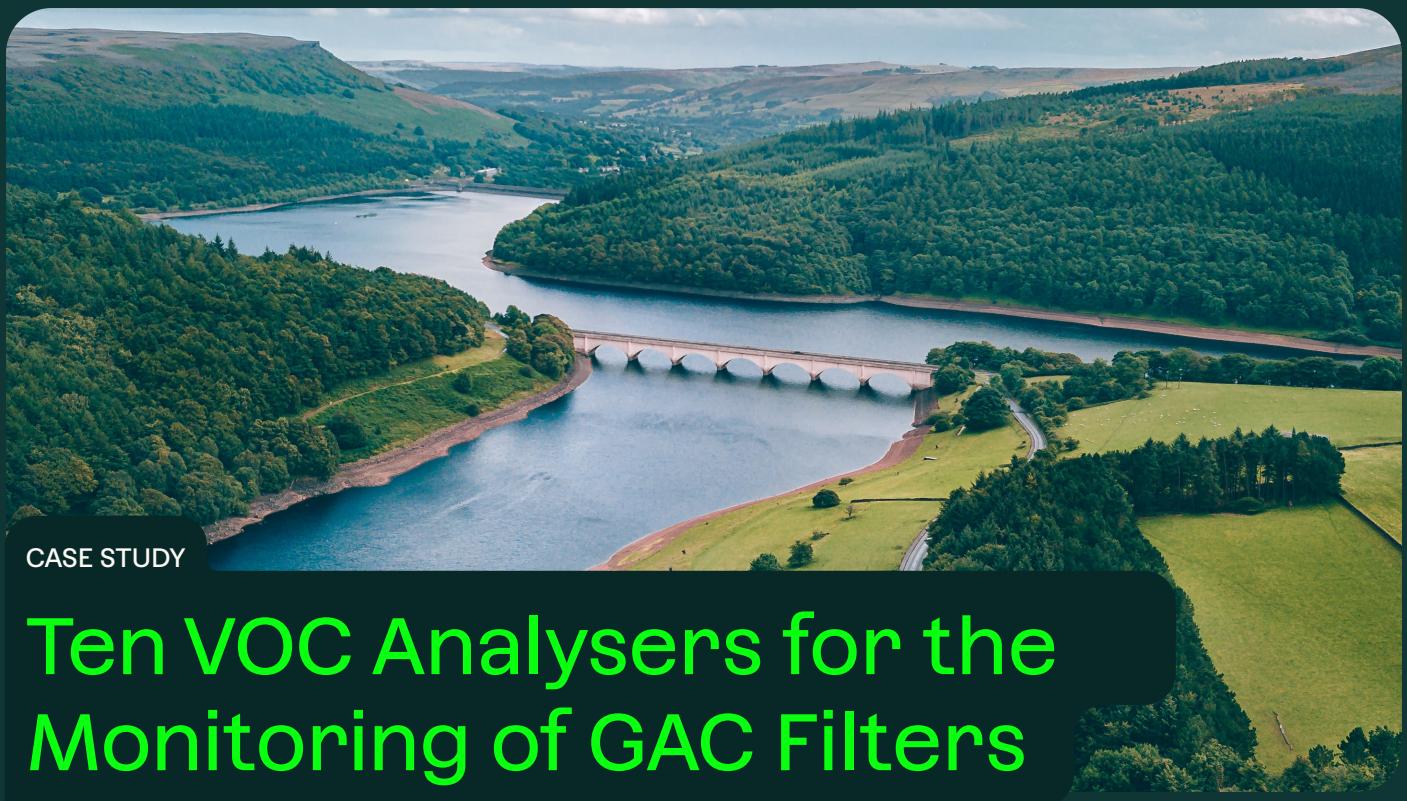
SENSING EXCELLENCE

Multisensor



CASE STUDY

Ten VOC Analysers for the Monitoring of GAC Filters at a Remediation Site

Application Dossier: No. XX

Application

Monitoring GAC Filters in Remediation Site Following a Fuel Spill

Product

MS1200 with touchscreen, 4-20 mA output

MS1200
Oil in Water Monitor

Application

Monitor the intake of a water treatment plant to provide early warning and monitoring of GAC filter performance to provide real-time measurements of removal efficiency.

Customer

US Government, USA.

Problem

Following an extensive leak of aviation fuel from a local fuel storage facility the water supply for a whole community was put under threat. The fuel had entered the aquifer and contaminated some of the wells. Remediation is now underway and will take several years to complete.

Product

On the site there are nine MS1200 with touchscreens and one MS1700 with touchscreen.

Installation Facts

In December 2021 Multisensor Systems was contacted by the US government to tackle a difficult application:

- 1940s underground fuel storage tanks
- Human error caused JP5 leakage
- 1,618 gallons leak into aquifer that serves the local city and a military base
- Hundreds of thousands of residents and military personnel were affected
- Military sends divers to skim oil sheen
- Water from the well is pumped at an initial rate of 20 MLD and filtered through carbon vessels and then released into the ocean

Moreover from a technical and commercial perspective these points needed to be considered:

- Military was familiar with florescence-based analyzers
- Maintenance cost was a concern
- Capital cost was an important factor
- Low range detection was important
- It was not known how high the VOC level could get

Following extensive discussions and in-depth technical review it was decided to install MS1200 oil in water analysers as they provided the overall best results and lowest cost of ownership, which was a major concern due to the long-term nature of the operation.

The remediation site is structured:

- Four trains of GAC influent and effluent filtration tanks (8 filters in total)
- Each GAC tank is monitored by an MS1200, 8 in total
- Well is pumping 20 MLD through system
- Effluent discharged to a channel that flows to ocean
- Two additional analyser are placed on the raw water feed to detect any peak of contamination

The analysers have been running for over 3 years and they are regularly maintained and serviced by our distributor.
Since installation the analysers have been providing useful data to operators and end users.

This case shows the importance of oil in water analysers and the capabilities of Multisensor Systems to perform on tight deadlines and in remote areas thanks to the support of a well-trained distribution network.

Did you know?

JP-5 is a military-grade jet fuel primarily used by the U.S. Navy due to its high flash point and low volatility. If JP-5 contaminates drinking water, it poses significant health risks due to its complex mixture of hydrocarbons, including benzene, toluene, and xylene. These compounds are known to be toxic and carcinogenic, meaning long-term exposure can lead to severe health effects such as liver and kidney damage, neurological impairments, and increased risk of cancer. Even short-term exposure to JP-5 in drinking water can cause symptoms like headaches, dizziness, nausea, and skin irritation.

One of the biggest concerns with JP-5 contamination is its persistence in the environment.
Using the MS1200 oil in water monitors ensures that remediation work is carried out correctly and filters are replaced when needed.

Why Multisensor?

The customer was looking for a reliable way to detect hydrocarbons at low concentrations with a stable and proven technology

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For more information

Visit: www.multisensor.co.uk
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Multisensor Systems is a developer and supplier of Water and Gas Analysers specialising in oil in water and hydrocarbon analysers, oil in water detectors, VOC monitors and THM analysers based in the United Kingdom.

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CHANGELOG

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