



CASE STUDY

VOC Detection in an Industrial Estate United Kingdom

Application Dossier: No. V

Application

VOC Detection in an Industrial Estate, United Kingdom

Product

MS1000, replaced by MS1200-AIR with 4-20 mA output to telemetry and a fan system to draw air from the drain.

MS1200

Oil in Water Monitor



Application

Monitoring of the drains at 6 different points to detect accidents and spillages.

Customer

Wastewater Company, UK.

Problem

Historically there have been chemical spillages which have polluted the drains and this has impacted the local river. Pressure has been applied by the local authority for monitoring of the site to locate and stop the pollution sources.

Product

MS1000, replaced by MS1200-AIR with 4-20 mA output to telemetry and a fan system to draw air from the drain.

Installation Facts

Following some contamination events 6 monitors have been installed at 6 different locations.

Air is drawn from the drain via a fan into the analyser and the system detects spillages.

The MS1200 helped to determine that an adhesive manufacturer was discharging high levels of chemicals and this encouraged them to improve their treatment processes, reducing contamination.

The systems are installed in cabinets that protect the analysers from the elements and are serviced every 6 months.



Units installed in cabinets. There are 6 of these cabinets on the industrial estate and include a heating system and connection to the telemetry system.

Did you know?

Volatile organic compounds (VOCs) are widely used in industrial zones for a range of processes, playing a crucial role in manufacturing maintenance, and production. Common VOCs such as benzene, toluene, ethylbenzene, and xylene (BTEX compounds) are heavily utilised in the petrochemical and automotive industries.

Benzene is a key ingredient in the production of plastics, resins, and synthetic fibers while toluene is often used as a solvent in paint thinners, adhesives, and chemical synthesis. Similarly, xylene is prevalent in the printing, rubber, and leather industries, where it acts as a cleaning agent or solvent.

Other VOCs, such as trichloroethylene and perchloroethylene, are integral to metal degreasing and dry-cleaning operations, respectively. These compounds are valued for their ability to remove grease, oils, and dirt from surfaces efficiently.

Formaldehyde, another commonly used VOC, is a building block in the production of resins, adhesives, and textiles. Acetone and methyl ethyl ketone (MEK), frequently found in coatings and varnishes, are used in the production of paints and lacquers due to their rapid evaporation rates. While essential to these processes, their volatility makes them prone to escaping into the environment if not properly managed.

Monitoring drains in industrial zones is vital because VOCs can enter water systems through spills, leaks or improper disposal during these processes.

Drains often serve as pathways for wastewater and runoff, carrying traces of VOCs into municipal sewage systems or natural water bodies. For instance, petrochemical facilities may discharge

BTEX compounds and degreasing plants could release trichloroethylene into the drainage system. These substances pose risks to aquatic ecosystems, can contaminate groundwater supplies and often release harmful vapours that are hazardous to nearby communities.

By keeping drains under strict surveillance, industries can prevent environmental contamination and ensure regulatory compliance.

Early detection of VOCs in wastewater allows for timely intervention, such as improved filtration, spill containment, or the adoption of cleaner production techniques. Regular monitoring also supports sustainable industrial practices by reducing the impact of hazardous emissions and preserving the health of surrounding ecosystems. Proactively managing VOCs not only safeguards the environment but also strengthens industrial accountability and fosters public trust.

Why Multisensor?

The contactless measurement meant the analysers require very little maintenance. Experience with the MS1000 gave the customer confidence that Multisensor could deliver both product and after sales service.



For more information

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CHANGELOG

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