CASE STUDY

CASE STUDY **PHARMACEUTICALS**

Sighs of Relief

Following increases in production, a large pharmaceutical company in the UK was *at risk of breaching* their **trade effluent consent agreement** on **flow rates**, **daily volumes** and **COD loads**.

The consent agreement permitted a highest flow rate of 11 litres/sec, a maximum daily volume of 672m³ and a COD load of 2950kg/day.

INDUSTRY

Pharmaceuticals

PRODUCTS & SERVICES

MSFM Flow Monitor
Multi Channel Data Logger
COD Analyser
Data Screening & Analysis

The company needed accurate data. If a breach of consent was proven, they would be liable to alter production methods, re-negotiate trade effluent consent terms, invest in water treatment methods or face the possibility of fines and bad news stories.

Auto spot sampling at the site was indicating that the consent was being breached on COD.

OBJECTIVES

- Continuously measure the flow rates, daily volumes and COD loads being discharged into the public sewer.
- Identify if the company was in breach of their trade effluent consent agreement.

DETECTRONIC

www.detectronic.org

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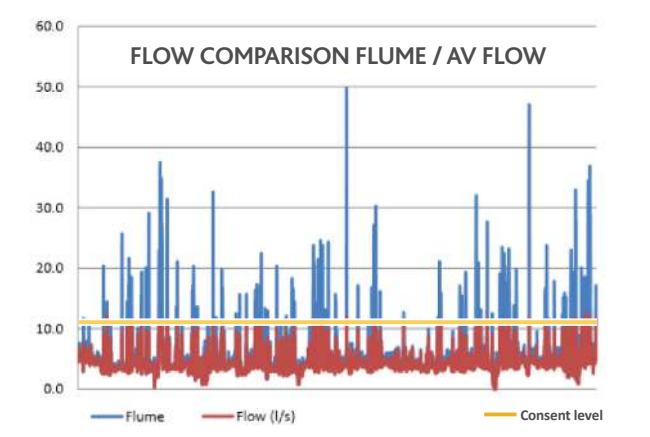
IMPLEMENTATION

Detectronic has been monitoring flow rates and volumes online at this site since 2010. In 2013 production increased and the primary flow measurement device being used was no longer fit for purpose. Peaks in effluent levels were drowning the rectangular flume.

Our site engineers installed an area-velocity flow meter (**MSFM**) to record flow rates and volumes, along with an online COD analyser to establish accurate COD load quantities, which would take readings every 5 minutes.

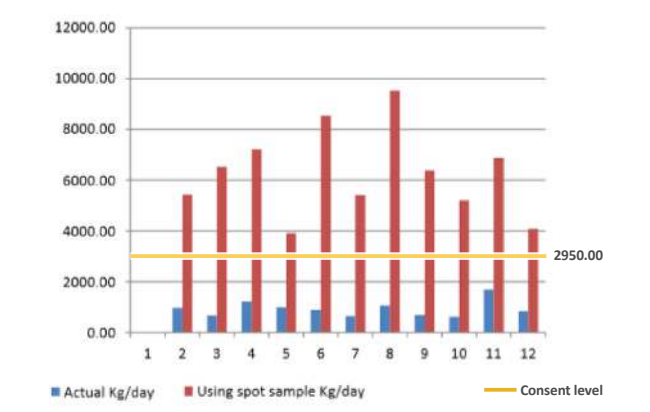
RESULTS

Very quickly, the area velocity flow meter showed that the flume was consistently being drowned during peak flows, making it over-read.



The graph shows a vast, consistent breach of consent when using data from the primary flow measurement, which is not the case when using data from the **MSFM**.

The daily volumes report showed very similar differences between the readings from the flume and the **MSFM**.



COD peaks at the start of the discharge flow stream but does not continue for the whole period of discharge to sewer.

Samples from the **auto sampler** were being taken at the start of each discharge to sewer, whereas the new COD analyser was taking samples every 5 minutes and showing vast differences in the COD loads, which were much more accurate and brought the site back within consent.

THE OUTCOME

The reports were presented to the **Trade Effluent Officer** of the regional waste water sewage undertaker, who was satisfied with Detectronic's results showing that the site was well within its consent agreement. The company now has on-going accurate data of their wastewater discharge. *All without the expense* of further costly waste water treatment.

To learn more about the **Detectronic**, get in touch:

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