Xcelbio Reduces COD by 25% at the UK ADDO group factory producing Pork Pies and Sausage rolls

Working with our JV application partner, ECOTON Ltd we present the actual case study after 4 months assessment written by Ecoton Ltd

PORK FARMS, POOLE-EFFLUENT TREATMENT CASE

Objective:

To explore whether changing the dosing bio-stimulant from the previous supplied product to Xcelbio would result in further reductions of COD and TSS values. It was hoped that this would have the effect of reductions of Pork Farms Trade Effluent charges.

Flow Volumes

The flow rate volume is 250M^3 per day and production is 24/7 the dosing of Xcelbio is as far upstream as possible at about 200ml per day and a further dosing immediately before the disolved air flotation unit (DAF), again at around 200 ml per day.
The indication is that there is about 40 minutes retention in the pipe network and around 30 minutes in the DAF.

Background:

The previous bionutrient had been dosed into the effluent stream since June 2010, with good results. The effluent figures indicate that there have been reductions in consent level issues since the bio-nutrient dosing commenced. The dosing unit was installed at the inflow point of the DAF unit. The effluent is passed through the DAF after flocking agents are added. Depending on time/flow considerations, the system is designed to pass the flow through the DAF plant more than once. In January 2013 following the surveys outlined below a further dosing application was established in the wash-house stream.

Method:

A study of the network of pipes which deliver the effluent from the various departments of the factory was undertaken by the factory Environmental Team. An access point into a suitable stream was identified. A reasonable flow was observed and a retention time between the dosing point and the effluent plant of between 20-40 minutes was expected. Test samples were collected prior to the additional installation. The additional product dosing unit was installed into a stainless steel bund in the utensils wash area on the 17th January 2013.

XCELBIO DOSING STARTED- 29TH JANUARY 2016.

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Results:

	PORK FARMS COMPANY ASSESSMENT RESULTS	COD mg/l	
1.	AVERAGE COD Dec 2012	2741	includes '3 'spikes'
2.	AVERAGE COD JAN 2ND- JAN16TH 2013	3039	includes '2 'spikes'
3.	AVERAGE COD JAN 17TH-FEB 5TH 2013	1682	includes '2 'spikes'
	REDUCTION BEFORE TO AFTER (2 TO 3)	44.65%	
4.	AVERAGE FOR CALENDAR YEAR 2015	1712	
5.	AVE FROM JAN 29TH 2016- 4TH APRIL 2016	1218	

Summary:

Although the daily dosing rate of Xcelbio remained unchanged,
compared to the previous product dosing rate;
There has been a significant reduction in COD values of 25%
when this is compared to the previous product.

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