Kempster & co Ltd
Waste Water &Safety Specialists

SCC. B.A.T. (best available technique) review July 2014

Background

South Caernarfon Creameries is a farmer owned co-operative so all of the member farmers who supply their milk also own a share in the company. It produces a range of award winning cheeses. It is a forward thinking company upgrading infrastructure as it moves forward. It was one of the first companies to get the IPPC licence and has Green Dragon accreditation. There are plans for a phased move into a purpose built cheese producing facility over the next couple of years. The effluent is treated on site and discharged into the Afon Erch.

Effluent treatment

Effluent treatment is by means of balancing and pre-treatment, a DAF, followed by BAFF, lamella filtering, Clarifier, filter beds and discharge.

The effluent plant is adequately treating the effluent from the factory, using a mix of old and new equipment, easily meeting the current consent. The effluent typically enter the plant with 6000-9000mg/l COD, which after treatment reduces to 52-148 mg/l. The plant is well managed with competent conscientious staff.

The effluent plant receives wastewater from milk reception, cheese production, butter/cream and the Prepack sections of the factory. It enters the plant for treatment via two main drains and is pumped from the receiving sump pumping stations to the main holding tank . Discharged from the effluent plant to the river is from three flows a combined- one from the RO plant, one from the BAFF and one from the Trickling Filters of the plant. The Reverse Osmosis (RO) plant is the last stage in the cheese making process. Part of the RO permeate requires treatment, whist the other has a COD of <100mg/l and is of sufficient quality to mix with the treated effluent and be discharged to watercourse.

The current layout of the plant is not straight forward with previously existing redundant equipment being brought back into service. It would be a consideration to look at the efficiency and operation of the current system. There is currently a high cost in both chemicals and power requirements.

The final effluent discharge is via a calibrated flume to the discharge point.

Full final effluent monitoring is in place with telemetry alarms should the effluent go out of consent on turbidity. Consent limits are visible on the computer system installation.

Final effluent turbidity, and pump station/storage tank high levels are alarmed. The alarms activate the computer system, this notifies the plant operator and engineers on their mobile phone.

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The waste sludge is removed by PAR contractors from Anglesey, who are a licenced waste carrier and disposed of by ground injection. The waste operator has been audited by South Caernarfon Creamery

Conclusion

The treatment facility onsite does satisfy best available techniques and the current treatment is more than adequately treating the daily flow and strength of the factory effluent, it is done at cost. These costs could be possibly be reduced by changing operation methods.

Testing and monitoring is done on site. Record keeping and reporting is well organised and thorough. Monitoring and alarms are in place and fit for purpose. These are fully automatic and by telemetry notify the relevant person by ringing their mobile phone until a response is received.

In the event of an emergency fail safes are in place, for electrical and mechanical failures.

There are written procedures for all the plant operations in place.

The plant is staffed by competent conscientious staff who takes pride in their work.

Moving forward with the new cheese facility on site it is not envisaged that there will be any significant increase in milk to site for the next two years, therefore there is sufficient capacity with in the treatment plant to cope with this.

One thing that is of concern that being the available storage on site should problems in the treatment occur.

Julie Kempster

28/7/2014