

**BOC Gases,
Longlands Lane,
Margam,
Port Talbot,
West Glamorgan,
SA13 2NS, UK.**

Environment Agency Wales, Maes
Newydd, Llandarcy, Neath Port
Talbot. SA10 6JQ.

Tel: +44(0)1639 873 246
Mobile: +44(0)7557009689
Email: Robert.warren@boc.com

20th March 2015

BOC Margam Permit No: BV9713IU

Dear Mr Lewis.

Following on from the annual review at BOC Margam on 24th February and discussions held with you at that time I would like to propose the following alterations to our permit.

- A reduction in the air emission testing frequency from biannual to annually.

This is based on single hydrogen plant operation, historic data and operational controls already in place. Previous submissions to date show that reported emissions are well below the allowable limits of 250mgm⁻³ NOx and 50mgm⁻³ CO. This demonstrates consistent and reliable operation of the plant within prescribed parameters.

- Spot pH monitoring checks on the demin plant effluent tank to cease.

Historic data shows there have been no non-conformance issues on discharge to sewer.

There is 100% redundancy in demineralised water plant following the decommissioning of the KTI hydrogen plant. This allows adequate time for maintenance of either unit whilst maintaining hydrogen production.

Both demineralisation units are fitted with a pH analysis system that will not allow the effluent to be pumped out into the common effluent tank unless the pH is between 6-10.

Both sets of effluent pumps are interlocked to trip or not to run on an out of specification pH reading, these probes are checked, cleaned and calibrated monthly by GE Water Technologies with an additional in house 3 monthly calibration.

It is possible to trend the effluent pump running against pH on a scada system.

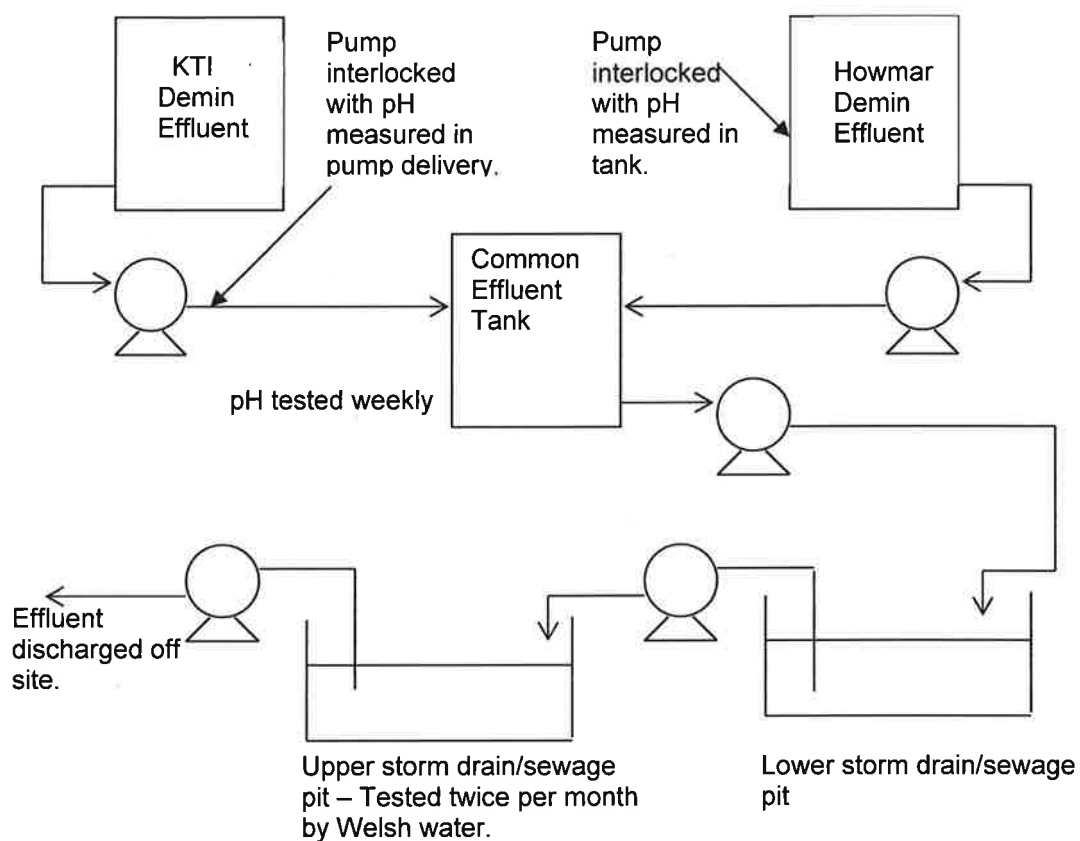
For your convenience I have enclosed a copy of a previously sent document explaining the effluent process.

If you require further information please do not hesitate to contact me.

Yours faithfully,

Robert Warren
SHEQ Manager
Margam

BOC MARGAM H₂ PLANT EFFLUENT SCHEMATIC.



The Howmar effluent tank pH is constantly measured and its pump will only discharge to the common effluent tank when the pH is within limits of 6 – 10.

The KTI effluent pH is measured in the pump delivery line and any out of limit measurement will trip the pump.

Welsh water conduct random sampling checks of the top sewage pit on average twice per month. No samples have breached the permitted pH limits.

