Natural Resources Wales
Environment Agency,
River's House,
St Mellons Business Park,
St Mellons,
Cardiff.
CF3 0EY

FAO: Liz Parr,
13th April 2017

Dear Liz,

The Environmental Permitting (England and Wales) Regulations 2010

In pursuance of Section 4.1.4 of our Permit No. NP3433BC, i.e. *"The Operator shall review fugitive emissions, having regard to the application of Best Available Techniques, on an annual basis, or such other period as shall be agreed in writing by the Agency, and a summary report on this review shall be sent to the Agency detailing such releases and the measures to reduce them within 3 months of the end of such period."*

"Fugitive emission" means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2.1.3, 2.2.2.4, 2.2.2.5, 2.2.2.8 or 2.2.2.9 of this Permit.

Attached is our annual review of fugitive emissions for 2016.

Please do not hesitate to contact me if you require any further information.

Yours Sincerely,

Kevin Richards
EHS & Facilities Manager
01685 846327
kevin.richards@convatec.com

The Environmental Permitting (England and Wales) Regulations 2010

UNIT 1 2016 FUGITIVE EMISSIONS REVIEW

FOR CONVATEC LIMITED

PPC Permit number NP3433BC
Variation Notice number PP3433LP,
Variation Notice number EA/EPR/NP3433BC/V003, &
Variation Notice number EPR/NP3433BC/V004

Issue 11

April 2017

EMISSION SOURCES

1.0 SUMMARY

It is difficult to identify fugitive sources that are captured by Section 4.1.4, i.e. those which fall outside the requirements of the Permit and Variations; however, a summary of emissions has been included below.

2.0 EMISSIONS TO AIR (2.2.1.3)

There are no VOC concentration limits set within the EPR Permit for emissions to air, however, it does establish a limit that all emissions must be less than 5% of the total solvent input. Currently, the process mass balance calculates this figure to be 1.2%, which complies with the Permit. The mass balance includes all process emissions, i.e.

- A1 – Bioscrubber stack
- A2 – Reactor Room Extract
- Storage Tank Vents
- Reactor Vents

Note: There are additional emissions points (see Variation EPR/NP3433BC/V004) related to the Unit 1 Capacity Increase facility, in particular:-

- A13 – New Steam Boiler
- A9 – Hydrocel Room Extract
- A10 – Hydrocel Room LEV
- Additional Storage Tank and Reactor Vents

We are nearing completion of an expansion project, which will increase our Silver production capacity by moving from the original suite in Unit 1 into a dedicated suite within the Annex. This will mean that two additional emission points will become active during 2017. i.e.-

- A7 – Silver Hydrocel Room Extract
- A8 – Silver Hydrocel LEV Extract

2.1 Tank venting

All fugitive emissions from the bulk IDA storage tanks and the process effluent tanks are directed to the bio-scrubber unit.

2.2 Nitrogen Inertion of storage tanks.

Nitrogen inertion of five storage tanks containing alcohol has been installed. This reduces vented emissions going to the scrubber and any possibility of producing explosive atmospheres within the vessels in normal operation.

Two additional tanks, one for IDA and one for IDA/Water waste, were installed during 2016. They will also have nitrogen inertion and become operational through 2017.

3.0 EMISSIONS TO SEWER (2.2.2.8)

Trade effluent consent limits have been set by Welsh Water and duplicated within the Permit. Through 2006 and 2007 we experienced difficulties in meeting the trade effluent consent limit for pH, COD and TSS, even following the relaxation of the limits by Welsh Water in 2006. Through 2008 to 2016 all trickling filter blowdown has continued to be collected and tankered off-site by Egan Waste. The re-introduction of in-situ drying in 2012 and the start up of the new production suite have not reduced the loadings on the bio-filtration such that its performance would have improved, however, this has been subject of review during 2015 and continues into 2017. Until such time where we replace the abatement system with an RTO, we will continue to tanker from site all trickling filter blowdown waste.

4.0 AQUEOUS PROCESS WASTE

All process waste (solution of IDA and water) is collected in dedicated vented tanks and tankered off-site for re-distillation and reuse on site. The waste stream is handled by Tradebe of Rhye (previously SRM) on the South East coast. 4892 Tonnes of IDA/water were tankered off-site in 2016, of which, 2818 Tonnes were recovered IDA.

Through this continued operation of a 'Toll Recovery' scheme with Tradebe, 90% of this waste stream was recycled as virgin material.

5.0 ODOUR RELEASE

There have been repeated odour complaints since 2011 resulting from the operation of the bioscrubber plant. In-situ dryers installed at the end of 2010 had clearly reduced the loading on the bioscrubber sufficiently to improve its digestive performance. However, early in 2011 processing difficulties resulted in a return to cabinet drying only and an increase in odour complaints received.

The site returned to in-situ drying in June 2012 and RPS carried out odour monitoring, a Hedonic assessment and emissions modelling for the scrubber stack as requested by the NRW. An automatic odour neutralising system has been installed into the bioscrubber stack, as supplied by Air Spectrum, and additional oxygenation of the buffer tank and trickling filter has been provided. Bioscrubber key parameter monitoring has continued through 2016 and a site Odour Management Plan has been maintained as required by the NRW.

A review of the abatement system has been undertaken to assess the overall performance of the bioscrubber in light of the present and future requirements of the site, taking into account the IED, BAT and associated Bref's for the process. The outcome of the study is the proposal

to replace the existing abatement system with a Regenerative Thermal Oxidiser. We are currently working with TSL through our Contract Project Team who are contracted to analyse and identify the future BAT for abatement and subsequent invitation to tender for the installation.

No odour complaints have been received since the 29th July, 2014.

6.0 DUST MONITORING

Situated in Unit 1 is a Dust extraction system to extract dust from the SMCA (Sodium Monochloroacetate) dispensary and related areas. This dust extraction unit is fitted with HEPA filters and two dust collection drums inside the main building. These drums are visually inspected on a regular basis and are emptied on a six monthly basis. All maintenance work on this unit is carried out by an outside contractor.

After filtration has occurred the residual clean air is vented outside at the front of Unit1. Although no specific monitoring has been carried out at this vent point we are confident that no particulate of dust is emitted from this point as no evidence has been observed to suggest otherwise. The vent point and the ground and walls around are always very clean and no dust has been observed deposited in that vicinity.

The emission point is inspected weekly as part of the weekly infra-structure checklist.

7.0 ACCIDENTAL SUBSTANCE RELEASE

A comprehensive onsite analysis has been carried out for the potential of access points to the river system of an accidentally released substance, there are areas of the site that are open to the river system but these areas are tightly controlled by control measures such as:-

- There are 27 employees on site trained as Spill team members, covering all departments and shifts worked.
- A dedicated underground intercept tank.
- A series of bladder valves, powered by a solar battery system, have been installed to protect the river system from pollution in the event of a major spillage in the yard/road areas.
- Fully maintained spill kits positioned near point of entry
- Substances in those areas stored inside bunded containers
- Appropriate signage positioned to allow persons to contact spill team

These control measures are considered adequate to allow us to contain a spill in Unit 1 and allow us to prevent entry to the river system.

In order to prevent release of dust from dropped or damaged powder substance raw materials, the company has implemented several procedures relating to handling and storage of raw materials. Raw materials are not man handled outside the building, only in the warehouse and the clean rooms. Materials are transported to the warehouse in bulk on pallets that are shrink wrapped together to prevent a spillage. In the unlikely event that a spillage of powdered substance did occur outside the main building it would be dealt with by the spill team as would a liquid substance spill.