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## **1 About the installation**

### **1.1 Non technical description**

Crystal Pharma Ltd is proposing to replace the current air extraction system in the plant with another that is more efficient and fitted with a filtration system capable of handling any potential hazardous emissions which may result from plant activities.

### **1.2 Proposed variations**

The operations which are normally carried out in the production plant do not generate hazardous emissions and therefore routine operations will not change, however the filtration system would cater for any incidents which would result in hazardous fumes being released to the atmosphere. In this regard the outlet of the ventilation system should now be considered as an emission point.

With regards to the extraction system in the production plant, our plan is to use the following filters: 2 x G4 filters (quebraven galvanized) mean efficiency 90% each.

ref: [http://www.venfilter.es/index.php?fuseaction=showprod&id\\_producto=17](http://www.venfilter.es/index.php?fuseaction=showprod&id_producto=17)

2/3 F7 filters with VOC adsorption with a mean efficiency of 85% each for 0.4 µm particles. Note that the particle size of solid product in the plant is typically in the 100-200 µm range.

ref: [http://www.venfilter.es/index.php?fuseaction=showprod&id\\_producto=56](http://www.venfilter.es/index.php?fuseaction=showprod&id_producto=56)

## **2 Your proposed techniques**

### **2.1 Environmental Management System**

Since the operations which are going to be carried out in the plant will remain the same, this point does not apply.

### **2.2 Proposed Activities**

2.2.1 The proposed change will include the ventilation system as an emission point however the filters that are to be installed at the outlet would in practice prevent any fumes from the plant escaping to the atmosphere.

2.2.2 Since the operations in the plant are not going to change this point does not apply.

2.2.3 No relevant BAT were found to have been published by the European Commission.

2.2.4 The filtration system proposed to be installed is the industry standard and considering that the plant requires ventilation it is the most practical solution. With regards to the deviation from the condition 1.4.1 (Reference 3-connection of extractor system to the HVAC system) of IP 0005/07/B, since the new extraction system to be installed is going to be considered as an additional HVAC system the end result will be equivalent to connecting the outlets to the existing HVAC system. Having a separate fan allows the system to operate independently of the cleaning room.

## **2.3 Maintenance**

Filters will be routinely inspected. Primary filters will be changed every three months and secondary filters will be changed every 6 months.

## **2.4 Energy**

The current dual fan system is rated at 0.5 Kw while the new single fan system is rated at 2.2 Kw. This increase in consumption is required due to the extra resistance to airflow offered by the filters which are to be installed.

## **2.5 Cessation**

The only potentially contaminated part of the system is the filters and these are changed and disposed of as contaminated waste on a regular basis.

# **3 Your proposed emissions**

## **3.1 Waste**

3.1.1 With regards to the disposal of contaminated filters we currently have a permit to transfer EWC 07 05 03\* which expires on 26th March 2013. Once this permit expires we will apply for a permit for EWC 15 02 02\* waste transfer as this better describes our typical contaminated litter. We have been in contact with Daniela Grech from WasteServ and she has confirmed that EWC 15 02 02\* is one of the accepted waste streams at the thermal treatment facility.

3.1.2 Used filters are disposed immediately along with other contaminated waste generated by the plant and the small size of the filters coupled with the low frequency of replacement means that storage is not an issue.

3.1.3 As there is currently no means of regenerating or recycling the filters it is proposed that they should be incinerated along with other contaminated waste generated by the plant.

## **3.2 Emissions to air**

3.2.1 As to rainwater collection and usage, we are studying various alternatives however it does not appear that such a system would be feasible due to the fact that the relatively small size of our staff (10 employees) results in very little water consumption for second class purposes.

3.2.2 The proposed filtration system will be installed in order to prevent the risk of potential hazardous emissions which is currently not catered for by the existing system.

The substances which are to be treated are mostly solvents, including THF, Isopropanol, Ethyl Acetate, Acetonitrile, Methanol and other different organic and inorganic compounds such as Triethylamine, Acetyl Chloride, Sodium Hydroxide and Sulfuric Acid which are commonly used in our facility. Note that operations involving solid product are currently being carried out either in the clean area or in the filtration rooms located at the centre of the plant, both of which are connected to the HVAC system which already has the appropriate filters installed. This means that the filters installed within the plant extraction system would not routinely be dealing with product in the atmosphere, such contact would be the result of an incident inconsistent with normal daily operation of the plant.

With regards to the efficiency see P 1.2

### **3.3 Noise**

3.3.1 The current fans installed have a nominal noise level of 66 dB A. These are to be replaced with a single fan with a nominal noise level of 74 dB A. According to the last measured data, noise levels in the area where the fan is to be installed (MP2) range from 66 to 75 dB A. In this regard there should be not significant change to noise levels coming from the facility.

### **3.4 Monitoring**

The system will be monitored using the same methodology and frequency of the HVAC emission point previously declared for this facility. The results will be included in the annual environmental report.

## **4 Technically competent person**

See current IPPC permit

## **5 Expenditure plan**

Initial installation will be approximately 10000 € and monitoring will be approximately 500 € per year.