9th IWA Odour & VOC/Air Emission Conference
26-27 October 2021 Bilbao, Spain

ABSTRACT

ADAPTATION TO THE REQUIREMENTS OF THE BEST AVAILABLE TECHNIQUES (BAT) IN WASTE TREATMENT IN A WASTE TREATMENT COMPLEX

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Waste treatment plants, like other types of industrial plants, present relevant potential odour impacts. These impacts entail that the competent administration needs to establish certain requirements, usually conditioned by the existence of previous complaints or justified nuisance to neighbours.

In accordance with the Spanish legislative framework, besides certain regional legislative initiatives (such as in Andalucia or in the Canary Islands) or particular local regulation, the odour impact requirements apply to installations subjected to Law 16/2002 for Integrated Pollution Prevention and Control (IPPC). These requirements consist on diagnostic studies and applying measures to minimise odour emissions for activities included in Annex I, group 5 (waste management). Furthermore, the competent regional environmental administration might request performing olfactometric studies (normally UNE-EN 13725) and take steps to minimize odour emissions, based on the potential pollution of the activity.

On the other hand, new emission levels associated to best available technologies (NEA-MTD in Spanish), have been established since the European Commission published their Decision establishing the conclusions of Best Available Techniques (BAT) in Waste Treatment. Further requirements are also included, such as implementing odour management plans and performing periodic olfactometric studies, in accordance with the European standard EN 13725.

Based on the aforementioned regulation premises, a complete study of the situation of a waste treatment complex was performed. The complex consists of a waste biomethanization plant and a sludge drying plant, where a diagnose was performed prior to proposing improvements which could allow a better adaptation to new legal requirements.

Firstly, a complete characterisation of all odour relevant sources was carried out. The used techniques (olfactometry based on the EN13725 standard and the characterization of VOC emissions by TD-GC/ToFMS), allowed us to define a starting point for the proposal of specific improvement measurements for odour abatement. These measurements focus on actions to improve specific process limitations and redesign of odour abatement systems, applying the requirements of maximum permitted odour concentration for the BATs used in biological treatment of waste. The project is currently in a second phase of implementation of the proposed measurements

Indicate preference of kind of presentation

- ☒ Oral Communication
- ☐ Poster

Indicate topic of your work for the conference:

- ☒ Policy and associated regulations for odour and air quality.
- ☐ Odour/VOC measurement, monitoring&sensor technologies.
- ☐ Odour/VOC perception, impact, formation and dispersion.
- ☐ GHG emissions particulate matter and industrial emissions.
- ☐ Source characterization and odour/VOC mapping.
- ☒ Odour/VOC abatement, mitigation and neutralization.
- ☒ Odour/VOC from waste water, sewer systems and livestock.
- ☒ Air emissions and sustainable solutions for waste handling
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