



Emissions and Odour Control

1st December 2016
The Studio, Leeds

Consultancy and events in
environmental science and
engineering

Event Outline

Nuisance emissions can have a substantial impact upon the quality of peoples' life especially when it is associated with waste handling and treatment plants, wastewater and sludge treatment plants and the application of materials to land. In particular, odour is the main source of complaints to the Environmental Regulator as well as being the key cause of dispute between site owners/operators and their neighbours. In the UK, nuisance odours from industrial, trade and business premises are regulated by local councils under the Environment Act 1990 and controlled under H4 guidance.

Operational and planning permits have changed with the level of regulation increasing over time. They are currently regulated by H4 guidance, however dependent upon the age of the permit it may require; the use of due diligence, prevention of odour impact at the site boundary or in the case of permits issued under IPPC, the use of Best Available Technologies (BAT). Failure to comply with the terms of a permit can result in abatement notices being applied, essentially preventing the importation of sludge or other materials into site, or in extreme cases the suspension of all activities on site.

Odour complaints are steadily increasing, for example over 50% of the category 1 or 2 pollution events associated with anaerobic digestion facilities are as a result of odour. One key reason for this increase is the fact that new housing estates are ever encroaching upon areas that have historically been used for waste and wastewater treatment to such an extent that many sites are now overlooked by houses. With the diminishment of 'cordon sanitaire' the control of odour emission from sites becomes increasingly important. Odour is measured in two forms: concentration and hedonic tone. Concentration is determined using olfactometry and reported in measurable units. Hedonic tone is more subjective measure used to describe what the odour is equivalent to. The hedonic tone essentially drives the limit at which particular odours become a nuisance.

With increasing quantities of waste and municipal materials being treated, transported (due to an increase in satellite sites and transfer sites) and utilised on land has increased the potential for odour emissions from both from point and diffuse sources.

Technologies and techniques to measure, monitor and evaluate the impact of odours emitted from new processes and assist with compliance with odour related permits include but are not limited to predictive computer modelling, odour emission modelling and point source controls. These techniques are constantly evolving and this one-day conference will seek to examine the most recent developments in the field.

Anticipated audience

- Site and compliance managers
- Permitting officers
- Regulators
- Odour professionals

Why attend?

- Learn about advancements in odour measuring techniques
- Gain an insight into odour regulation, monitoring and modelling
- Learn about improvements in odour suppression/control



Programme

Appropriate measures and best available techniques that need to be applied in site to control odorous emissions in order to reduce the impact of odorous emissions release.

Sam Hantoosh, Head Office Technical Advisor (Odour), Environment Agency

- Inventory of odorous materials Control
- Housekeeping measures – FIFO & cleaning
- Containment – buildings under negative pressure and how this could be achieved to reduce the impact of fugitive emissions release from site activities
- Process control – optimum conditions to control odour
- The design of abatement system(s) to treat odorous compounds

Odour – from source to Regulation

Andrew Lyon, Environment and Business Advisor, Site Based Regulation, Environment & Business Directorate

- Why is odour a concern?
- How is odour generated and how does it behave in the environment?
- How do we detect and identify odour?
- Regulation of odour for sites permitted by the Environment Agency

Bioaerosols in the context of waste management and IVC (in-vessel composting) facilities

Anushka Devaser, Senior Process Engineer, Amec Foster Wheeler

- Bioaerosol requirements
- Bioaerosols, an occupational health hazard?
- Specific risk assessments and surveying work to help understand and mitigate the problem

Characterising odours and implementation an odour management plan on a merchant anaerobic digestion plant

Daniel Galloway, Senior Process Chemist, Leeming Biogas

- Development of the odour management plan to meet H4 EA guidelines. Development of the plan included; liaison with sensitive receptors, installation of a weather station and a post box, improving the frequency of sniff checks and the method of reporting.
- The results of odour modelling survey to characterise specific components of the odours generated onsite and their affect beyond the site boundary.
- Modifications to the plant since operation began to reduce the amount of odour emissions generated from the site.

Change in Culture – Practical Implementation of the Sewerage Nuisance (Code of Practice) (Scotland) Order 2006 at Seafeld Wastewater Treatment Works – Sharing Experience

Naeem M Hafeez, Process Engineer, Veolia and Craig Carr, PFI Project Co-ordinator, Scottish Water

- Background of Seafeld WwTW
 - Overview of odour assessments conducted in order to improve odour emissions from site
 - Odour management techniques implemented and its outcomes
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Innovations in Odour Management for the Wastewater Treatment Industry - Case Studies for Pro-Active and Real-Time Management

Chaim Kolominskas, Business Development Manager, Pacific Environment and Nick Jones, Managing Director, Odournet UK

- Odour risk forecasting
- Real-time and pro-active odour management
- Automated analysis and reporting of odour performance

The Trials, operation and analysis of Low Range Hydrogen Sulphide Monitors

Rodrigo Baur, Odour/Ventilation Engineer, CH2M and Dejan Vernon, Senior Research Scientist, Thames Water

- Low range H₂S monitoring trials
- Operability, accuracy and key points of the H₂S monitors trialled
- Odour identification through monitoring and analysis of multiple sources of data

Advanced Biofilter Case study at Galindo WwTW including assessment of TOTEX

Silvia Nadal, Product Manager Air Quality Department, LABAQUA and Lynne Bouchy, Business Development Manager, Suez Advanced Solutions UK Ltd

- Odour analyse
- Calculation of the odour impact
- Selection of the main streams to be treated
- Technical and economical comparison of the odor treatment to apply
- Supply and installation of an Advanced Biofilter to treat the emissions of the sludge line emissions

Developing odour mitigation strategies to reduce customer impact and to meet planning conditions through process investigation, site specific odour characterisation and dispersion modelling

Paul Kynaston, Process Engineer, MWH and Antony Saunders, Engineering and Capital Delivery, United Utilities

- Process auditing and odour emissions analysis of wastewater biosolids (raw and limed liquid sludges and limed dewatered cake)
- The use of dispersion modelling to evaluate off-site odour impact and to assist in solution development and identify project risks, including a comparison of results from the use of NWP and "conventional" meteorological data sets
- The provision and subsequent performance testing of odour containment and control measures to satisfy Local Authority planning conditions

The challenges of meeting a numerical odour consent at a Sludge Treatment Plant

Antony Saunders, United Utilities

- One of United Utilities' sludge digestion plants has been decommissioned and replaced with temporary sludge dewatering and cake export facility. The cake export will be used to maximise the performance of an advanced treatment thermal hydrolysis plant. The permanent solution for the site will be delivered late 2017. These changes have generated a different odour profile of the works.
- The sludge treatment plant operates under PPC regulation which incorporates the Environment Agency's Horizontal Guidance Document H4 and therefore imposes a numerical odour value of 1.5 odour units per cubic metre at the site boundary. An odour impact assessment with extensive odour characterisation was undertaken to understand the odour impact of the temporary works.
- The odour impact assessment has driven the need for additional odour mitigation in order to achieve the numerical odour value at the site boundary and to reduce the off-site odour impact at residential and commercial receptors.

Timings

Registration 08.45

Start 09.30

Finish by 16.30

Venue

The Studio

Riverside West, Whitehall Road Leeds LS1 4AW

<http://www.studiovenues.co.uk>



Booking

To register online please visit www.aquaenviro.co.uk or email Clare for a booking form e. clarehunter@aquaenviro.co.uk

Fees

Full Delegate £320 + £64 VAT = £384

Students, Academics and Charities £100 + £20 VAT = £120