

Beddington Energy Recovery Facility

Emissions monitoring and the role of the Environment Agency

On 7th November 2018, Members of the South London Waste Partnership Joint Committee attended a briefing session at the Beddington Energy Recovery Facility with Louise McGoochan, Environment Agency Regulatory Officer.

The session was designed to provide Members with an opportunity to learn more about how emissions from Beddington ERF are controlled, monitored and regulated and how the Environment Agency ensures that facilities like the Beddington ERF operate in accordance with their Environmental Permits.

This Briefing Note provides a record of the key topics discussed, questions asked and answers provided.

Environmental Permits

- Louise McGoochan, the Regulatory Officer from the Environment Agency (EA), explained that she is responsible for regulating the Beddington ERF as part of a wider team of specialists.
- Louise outlined the regulatory process, including permitting arrangements. She explained that ERFs are regulated under the Environmental Permitting (England and Wales) Regulations 2016.
- An ERF such as Beddington needs an Environmental Permit in order to be able to operate. Permits ensure that the facility will not cause significant pollution or harm to human health. The key way this is achieved is by ensuring that the facility operates within its emissions limits.
- The list of conditions in the permit, as well as how the permit acts to implement the requirement of the environmental permitting regulations, was outlined for Members.
- It was noted that the Environment Agency is responsible for regulating emissions to land and water on site - in addition to the air, which is the primary focus at the Beddington ERF.
- The process followed by the Environment Agency when issuing a permit for a facility of this type was outlined for Members - including that the EA has the power to refuse, suspend and revoke permits in the event of problems.
- It was noted that the permit issued by the EA also addresses the efficient use of materials, including water and energy - as well as any noise or odour emanating from the site. The EA has a 24 hour hotline, on which residents can register complaints regarding these issues.
- Louise explained that residents are also able to log complaints via the Viridor control room in addition to the EA. When complaints are made to Viridor in relation to noise

or odour an investigation is launched and a report produced. This report is passed to the EA for verification.

Commissioning

- Louise explained that during the commissioning process, Viridor need to demonstrate that the conditions of the Environmental Permit can be met on an ongoing basis.
- The Environment Agency attends site during this period to monitor the testing of the facility and quality assurance tests of the emissions monitoring equipment.

Emissions monitoring

- Louise explained that there are two types of emissions monitoring: **continuous and periodic**.
- **Continuous Emissions Monitoring** (CEMs) is where specialist equipment takes samples of the gasses every 10 seconds from the flue stacks of the facility.
- Emissions from the Beddington ERF that will be monitored in this way include: Oxides of Nitrogen, Sulphur Dioxide, Carbon Monoxide, TOCs, Hydrogen Chloride, Dust/Particulates and Ammonia.
- The Environmental permit sets limits (based on half hourly and daily averages) for each type of emission.
- Members were shown an example of an Environment Agency CEMs report.
- The permit requires the operator (Viridor) to submit CEMs reports on a quarterly basis to the Environment Agency, no later than one month after the end of the reporting period.
- **Question:** How quickly does the EA find out if the emissions limits have been breached?
- **Answer:** If a daily or half hourly average emissions limit is breached, then Viridor is required under the permit to notify the Environment Agency within 24 hours. If an operator fails to report within that time frame, then that is a breach of the permit.
- **Question:** It is vital that Environment Agency is seen as an independent, trusted voice in relation to emissions monitoring. Residents shouldn't have to take Viridor's word for it. What does the EA do to make sure the data being reported by Viridor is accurate?
- **Answer:** The EA undertakes a multi stage quality assurance process for emissions monitoring equipment. Firstly, in order to meet the requirements of the Industrial Emissions Directive, CEMs must meet certain performance requirements evaluated under the Environment Agency's Monitoring Certification Scheme (MCERTS). This is known as 'QAL1'. The second level of quality assurance, known as 'QAL2', calibrates the instruments: An independent test house undertakes this calibration every five years. In addition, each year an Annual Surveillance Test is undertaken to ensure that the calibration function and variability remain as previously determined. Finally 'QAL3' requires the operator to regularly measure the drift and precision of the CEM using a specified gas of known composition.
- In addition to CEMS, **Periodic Monitoring** of emissions is also carried out by an independent test house. Specialist equipment is brought to the site to measure emissions such as cadmium and thallium. The results are submitted to the Environment Agency.

- Periodic monitoring is conducted every three months for the 1st year of operation, and then bi-annually.

Waste acceptance

- As well as emissions monitoring, the Environment Agency undertakes waste acceptance audits to monitor the types of material entering the facility. This process aims to assess how Viridor respond to incorrect material entering the facility.
- Viridor themselves take steps to prevent incorrect material - including issuing information leaflets and visiting waste transfer stations to check the arrangements in place for segregating material. Viridor also undertake random inspections of loads entering the facility - including opening up bags to check what is inside.

Ash monitoring

- The Environmental Permit requires ash from the facility to be monitored.
- There are two types of ash produced by the Beddington ERF:
 - ACPR - a mixture of finer particles from the boiler plus lime and activated carbon
 - IBA - a mixture of heavy inert fractions and metal items from the grate
- This ash is tested for organic content to ensure waste is being burnt properly and the correct material is being treated.

Community Engagement

- It was noted that all the information submitted to the Environment Agency by the operator (including CEMs) is available upon request.
- **Question:** It is important that local people are able to access the CEMs information easily and in an accessible way. What will be done to ensure this happens?
- **Answer:** In addition to providing the EA with CEMs data on a quarterly basis, as required by the permit, Viridor will also make the data available online every two weeks. The data will be presented in the same format as it is provided to the EA, to ensure local residents have confidence in what they are seeing.
- **Question:** The reports submitted to the EA are not that easy to understand. How will we help lay people make sense of what they're looking at?
- **Answer:** The reports available online will be accompanied by a commentary and supporting information to ensure the data is accessible and easily understandable.
- **Question:** in addition to making CEMs data available and running the 24 hour hotline, what other ways does the EA work with local communities, in particular if any concerns are raised about the operation of the facility?
- **Answer:** Louise explained that she attends the quarterly Beddington Community Liaison Group meetings, where members of the local community can raise any concerns. The EA can also be invited to attend other community and council committee meetings.
- It was agreed that the information provided by Louise needs to be incorporated into the Beddington ERF Virtual Visitor Centre and on the SLWP website so that local residents are aware of the role that the EA plays in ensuring the Beddington ERF operates safely and within the limits set in its environmental permit.

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