Calling incineration watchdogs: answers to your burning questions

EEB briefing on the revised EU standards on waste incineration

The revised European environmental standards on waste incineration operations were published in December 2019 in the EU's Official Journal.

The publication triggers a four-year deadline: operators across Europe should comply with the revised requirements **by 03 December 2023 at the latest.**
Installations first permitted after the publication of the standards (after 03 December 2019) should comply **immediately.**

1. What exactly are these standards?

These standards stem from the review of the Best Available Techniques Reference document (BREF) on Waste incineration (WI). The EU BREFs are industry-specific documents which define the most effective techniques that the European industry can employ to minimise the impact of their activities: these techniques are referred to as 'Best Available Techniques' or BAT.

The so-called 'BAT conclusions', included in the BREFs, are used as a reference to set permit conditions for industrial installations, including the emission limit values (ELVs) these installations must respect to comply with the EU Industrial Emissions Directive (IED). The IED is one of the most important EU laws that aim to prevent and control the environmental impact of industry.

The drafting of BREFs is coordinated by the European Commission in consultation with representatives from member states, industry and environmental protection groups, coordinated by the EEB.

2. What are the main improvements compared to the original 2006 standards? And what are the main shortcomings?

The revised BAT conclusions include some **significant improvements** in comparison to the original 2006 standards. Most notably, progress has been made regarding the **monitoring of mercury and dioxin emissions to air**, regarding measures for the **management of abnormal operating conditions** (often associated with very high emissions), **water pollution** and the **monitoring of persistent organic pollutants, so-called POPs**, in the output streams after hazardous waste is burnt, to ensure a **high destruction efficiency of such substances.**

On the other hand, the revised WI BAT conclusions **fall short of capturing the capabilities of the sector in terms of air emissions abatement:** the proposed BAT-AELs (the upper ends of the ranges more

specifically)[1] have been largely remained unchanged compared to the 2006 standards (with the exception of heavy metals, apart from mercury). **The BAT conclusions are failing to recognise state-of-the-art performance, also regarding techniques that have been in place for some time. The lack of ambition is further reflected when looking at the levels proposed for 'new' plants (almost identical to the 'existing' ones)[2].** Disappointing is also the fact that, in contradiction to the data collection outcome (that underpinned the standards review), the revised standards include higher emission levels for NOx and mercury emissions compared to the 2006 standards: for emissions of NOx, upper levels as high as 180 mg/Nm^3 (150 mg/ Nm^3 if the more effective SCR technique is applicable) are suggested 'as associated with use of BAT' for existing plants, when the data collection showed that even plants equipped with the (generally less effective) SNCR technique can achieve levels < 100 mg/ Nm^3 (daily averages).

Another problematic point is that all proposed emission levels are expressed as daily averages only, when (as also recognised both in the original 2006 WI BREF and the IED) it is very important that levels are set on the basis of half-hourly averages as well to ensure that the operator will take all measures necessary when high emission peaks occur.

Furthermore, there is a loophole that could allow certain plant operators to pollute more if they add biomass – like wood chippings or vegetable waste – to the materials they already burn, as doing so could place them out of the scope of the standards. Competent authorities must ensure that whenever waste is burnt these dedicated standards apply to curb harmful impacts on human health and the environment.

Ultimately, the real impact that these BAT conclusions can deliver, greatly depends on how the Member States authorities and permit writers will implement them.

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[1] BAT-AELs, the emission levels associated with the application of the Best Available Techniques, are expressed as ranges rather than as single values. We focus on the upper ends of the ranges as most EU member states, when implementing the EU BAT standards, set the pollutant emission limit values based on them rather than the lower ends or an in-the-middle value. The upper end shall not be exceeded, unless the operator has been granted a derogation as described in Article 15.4 of the IED.

[2] 'New plant': *'a plant first permitted following the publication of these BAT conclusions or a complete replacement of a plant following the publication of these BAT conclusions'* (as per the definition included in the BAT conclusions).
Differentiation in the emission levels proposed in the BREFs between 'new' and 'existing' plants is very common as 'new' plants are not bound to the same technical applicability restrictions.
Regarding implementation, authorities and NGOs should further be aware of the risk that this definition bears: recently built plants, or not-yet-built plants that however received an operation permit before the publication date of the BAT conclusions, could be permitted in according to the standards for 'existing' plants which are in some cases laxer. It should be reminded that all evidence, incl. the environmental performance data that informed the updated standards, was provided by installations running under economically and technically viable conditions long before 2014 (data collection reference year). It therefore makes sense to use an earlier 'cut off' date to distinguish 'new' from 'existing' installations for implementation purposes – such as the reference year of the data collection that informed the WI BAT conclusions.

3. How could I ensure that decision-makers in my country will make the most out of these standards?

The **public concerned has the right to be informed and consulted** during the permitting process of industrial installations and can formulate recommendations for the competent authorities.

NGOs operating at national / local level have therefore the right to closely follow the upcoming / on-going transposition and permitting processes, and bring the information outlined in this paper to the attention of their competent authorities that are responsible for the implementation of the revised WI BAT conclusions.

The time to act is now: due to considerations of investment certainty the revision of permits will start very early (despite the four-year deadline), and first review applications are expected **by December 2020.** For countries that implement the BAT conclusions through sector-level general binding rules **the national transposition process may have already started.**

Do you want to know more about your rights?

- *check out IED article 55 and Annex IV on 'public participation in decision-making'*
- *Listen to the EEB META podcast: https://meta.eeb.org/2019/10/16/know-your-environmental-rights-meta-podcast/*

4. What are the key issues?

1) Monitoring of mercury emissions to air:

- ***What's the issue?***
  Despite measures to control or minimize the input of mercury in waste incineration plants, significant amounts do still occasionally slip through e.g. in cases of illegal disposal of mercury-containing waste that the operator cannot track. To be able to promptly detect changes in the mercury content of the waste treated, and address high concentrations of mercury in the flue gas (so-called mercury emission peaks), incineration plants should continuously measure mercury emissions, and counter-measures should be quickly initiated in case of increasing concentrations.

- ***Is the issue tackled by the revised standards?***
  The WI BAT conclusions include continuous monitoring requirements for mercury, which is a clear improvement comparing to the original 2006 standards.

  However, regarding plants incinerating wastes *'with a proven low and stable mercury content (e.g. mono-streams of waste of a controlled composition), the continuous monitoring of emissions may be replaced by long-term sampling or periodic measurements with a minimum frequency of once every six months'.*

  This flexibility may be proved problematic as unexpected or illegal mercury input can occur at any plant, regardless of the type of waste being burnt: a case study conducted in the sewage sludge incineration plant, Frankfurt Sindlingen (Germany), demonstrates that even in plants with mono-streams of the same kind of waste can experience peaks of mercury emissions. The Sindlingen plant even exceeded the 25 µg/m^3 level while burning sewage sludge[3]. Discontinuous mercury monitoring is a random measurement that is obviously totally ineffective in detecting mercury peaks.

  Regarding the measures to tackle mercury emission peaks, while the revised standards include various techniques for the abatement of mercury emissions (explicitly mentioning the challenge of emission peaks – see BAT no. 31 referring to wet scrubber, dry sorbent or activated carbon injection, boiler bromide addition and adsorption techniques), they still offer operators the flexibility to only choose a single technique from the provided list. This approach fails to ensure that the most effective method is used to address the issue.

- ***Possible solution / recommendation for the implementation phase:***
  - The authorities may only authorize derogations from the continuous monitoring of mercury emissions in installations incinerating waste with indeed a proven low and stable mercury

[3] Information provided by Ms Susanne Schmidt, Stadtentwaesserung Frankfurt on 10.10.2013;
SEF 2013 Description of the sewage sludge incineration plant in Frankfurt Sindlingen: http://www.stadtentwaesserung-frankfurt.de/index.php/anlagen/abwasserreinigung/seva-sindlingen.html?limitstart=0

content e.g. in installations operating in industrial parks receiving wastes from the same, well-known sources.

- Regarding the measures to tackle mercury emission peaks, it should be noted that the techniques most suitable to prevent or minimise them are the following: fixed- or moving-bed adsorption (BAT no. 31, technique e) or injection of highly reactive activated carbon, in combination with continuous mercury raw gas measurement (BAT no. 31, technique c).

2) Monitoring of dioxins and furans emissions to air:

- ***<u>What's the issue?</u>***

  Dioxins and furans (PCDD/F) are a group of compounds, some of which are extremely toxic and are considered to be carcinogens. Their production and release occurs in all thermal processes under certain process conditions. Despite the harmfulness of these pollutants, current monitoring requirements are deemed inadequate. Only 2 measurements (minimum) per year are requested by the IED, which under certain conditions, may be reduced to a single measurement per year.

- ***<u>Is the issue tackled by the revised standards?</u>***

  The revised WI BAT conclusions include monthly monitoring requirements via long-term sampling for polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/F). This is clearly an improvement compared to the 2006 standards (and the IED framework).

  However, *'the monitoring does not apply if the emission levels are proven to be sufficiently stable';* in such cases a monitoring frequency of once every six months (via short-term sampling) is considered enough. That would be fine if the standards clearly stated what is meant by *'sufficiently stable emission levels'*. But no clarification is provided for permit writers.

- ***<u>Possible solution / recommendation for the implementation phase:</u>***

  To assess whether the PCDD/F emission levels are indeed sufficiently stable, the competent authority should request monthly monitoring (via long-term sampling) for one year. The procedure may be repeated every 5 years.

  Stable emission levels cannot be proved via periodic measurements of once every six months (via a short-term sampling period of e.g. 6-8 hours as per the IED requirements). Therefore, a monthly monitoring frequency (via long-term sampling) has to be established in all cases. Only if these measurements show stable emissions, the authority may authorize a 'lighter' monitoring regime.

Judgement by the Land and Environmental Court[1] and by the Swedish Supreme Court[1]: 'Long term sampling is 'best possible technique' and is economically viable'

In a judgement in January 2016 regarding environmental permitting for the SYSAV WI plant in Malmö, the Land and Environmental Court of Appeal decided that the use of long-term sampling of PCDD/F emissions to air:

- is the 'best possible technique'[1], and
- is economically viable*.

The operator appealed also against the judgement by the Land and Environmental Court of Appeal - to the Swedish Supreme Court. In a judgement in November 2017, the Supreme Court decided that the decision by the Land and Environmental Court of Appeal shall continue to apply. The Supreme Court also gave the company ten months to buy and install the monitoring equipment.

* **It was calculated that the costs would just be 10 eurocent/tonne:** this represents a very low cost compared to the incinerator's revenue and the price paid for the incineration of one tonne of municipal waste. The price differs between installations, but in Sweden plants are usually paid between 40 and 60 €/tonne to incinerate waste. In addition to this, the incinerator has revenues from selling heat and electricity.

3) Dioxin emissions to air during the start-up phase of operation:

- ***What's the issue?***

  Dioxin emission peaks have been observed while plants are starting-up, even before the incineration of waste has begun.

  As noted in the revised WI BREF Final Draft (published December 2018), '*during a cold start-up, the furnace and boiler surfaces that are in the temperature range that can promote PCDD/F formation through de novo synthesis are much bigger than when the incineration plant is working in stable conditions,* ***possibly resulting in PCDD/F emission loads equivalent to several months of normal operation being associated to a single cold start****. Also, due to the possible accumulation of PCDD/F in the flue-gas cleaning devices occurring during shutdown, some specific studies have highlighted PCDD/F emissions substantially higher than in stable conditions during prolonged periods of time (weeks) after a cold start'*.

  Unaware of the issue, or due to the lack of regulatory requirements, many plants are currently operating during start-up with a bypass for part of the flue gas cleaning system or even for the entire system (!) to avoid technical problems, such as bonding of used sorbents at the fabric filter at low temperatures.

- ***Is the issue tackled by the revised standards?***
  The revised BAT conclusions include monitoring requirements during start-up and shutdown (while no waste is being incinerated), explicitly referring to PCDD/F emissions – this is a positive first step. Most countries were not familiarised with this issue; these monitoring requirements will enable the compilation of an EU-wide database so that the magnitude of the issue is investigated and well-understood.
  However, when it comes to the operation of the flue gas cleaning system during these phases of operation (and prohibition of bypassing it), there is no clear requirement, but only a mention as an example[4]. This is regrettable as operators or permit writers could easily neglect it in the implementation stage.

- ***Possible solution / recommendation for the implementation phase:***
  In order to avoid increased emissions of PCDD/F, the flue gas cleaning system should be in full operation, already before start-up, and bypasses must be closed.
  There are techniques, such as the pre-heating of the fabric filters to avoid bonding of the used sorbents at low temperatures[5], that ensure an undisturbed start-up operation without the use of a bypass.

4) Monitoring and management of abnormal operating conditions:

- ***What's the issue?***
  Emissions occurring during so-called 'Other Than Normal Operating Conditions' (OTNOC), such as leaks, malfunctions and momentary stoppages, can be significantly higher than emissions occurring during 'normal operating conditions'. The operator should take steps to prevent or minimise OTNOC occurrences, by properly designing, operating and maintaining their system.

- ***Is the issue tackled by the revised standards?***
  It is very positive that dedicated BAT conclusions to monitor emissions during OTNOC (BAT no.5) and to implement an OTNOC management plan (BAT no.18) are included in the revised standards.
  However, the current wording of the requirements leaves room for operators and authorities to neglect key measures that could reduce the frequency of OTNOC occurrences. One important example, already mentioned above, is the use of supplementary burners to heat up the flue-gas and obviate the need to bypass the bag filter during start-up and shutdown (such measures are only mentioned as "e.g." in a parenthesis).

[4] BAT no. 18 excerpt: *'BAT is (…) appropriate design of critical equipment (e.g. compartmentalisation of the bag filter, techniques to heat up the flue-gas and obviate the need to bypass the bag filter during start-up and shutdown, etc.)'*
[5] These techniques are widely applied in plants in Germany

- ***Possible solution / recommendation for the implementation phase:***
  The competent authorities shall aim for an ambitious implementation of BAT conclusions no.5 and no.18 – among other measures, the use of supplementary burners and the full operation of the flue gas cleaning system (without bypass) during the whole operation cycle of the incineration activity shall become mandatory requirements for all plants across Europe.

  The IED provides that the BAT concept also includes proper design and maintenance aspects relating to the techniques used and the way in which the installation is operated. In general, incidents (such as malfunction or equipment breakdowns) should be prevented and measures need to be taken to limit environmental consequences and to prevent further possible incidents (Article 7 of the IED). Due to the nature of the activities, the permit shall also set out the maximum permissible period of any 'technically unavoidable' stoppages, disturbances or failures of the purification or monitoring devices (Art 45.1 f of the IED). Furthermore, whenever a breakdown occurs, the operator is obliged to reduce or close down operations 'as soon as practicable until normal operations can be restored' (Article 47). Finally, '*emissions should not exceed the emission levels associated with the best available techniques under 'normal operating conditions'* (recital 15 of the IED). It is clear that only 'technically unavoidable' OTNOC situations may, on a case by case basis, allow possible emission exceedances without legal implications for the operator.

  Regarding the implementation of aforementioned BAT conclusions no.5 and no.18, as well as the implementation of BAT-AELs and associated compliance of pollutant ELVs, our recommendation is that no incident should be considered as OTNOC per se, but depending on the circumstances:

  We need to differentiate between cases where an incident occurs that it is technically unavoidable, and cases where it occurs because, for example, of insufficient system maintenance or because the operator was negligent in taking preventive measures.

  An incident e.g. linked with high dust emissions in a plant with damaged bag filters that should have been replaced x years ago, it should not be considered as 'abnormal operation'; it is a 'normal' and 'technically avoidable' situation that occurred because the operator failed to appropriately maintain its equipment.

  Regarding start-up and shut-down: start-ups are planned, so the operator should be able to foresee and address related pollution issues. Concerning shut-downs, it depends on the causes that triggered them. An unplanned SD caused by malfunction(s) of a poorly maintained system should not be considered as an OTNOC occurrence neither any planned shutdown for other maintenance reasons, which is to be considered as a 'normal' aspect of the waste incineration activity.

The right to know:
Furthermore, for transparency reasons it is essential that the procedures applied to ensure environmental safety in the event of an interruption to normal operation should be recorded. This information should be made available to the competent authority and published to ensure that the operator is effectively managing each type of OTNOC and there is no concern for the neighbouring communities.

5) Water pollution:

- ***What's the issue?***
  While the majority of attention is given to the environmental impact of air pollution from waste incineration plants, wastewater is also an issue for many installations.
  The cleaning of waste gases and the treatment of slags and bottom ashes leads to the production of toxic residues and, where wet processes are used for pollution abatement, to pollutants emissions to water.
  The most significant water pollutants are metals, dioxins, organic compounds and suspended solids. Heavy metals lead (Pb) and nickel (Ni) are recognized as 'Priority Substances' under the EU Water Framework Directive, which dictates action at source for the reduction of their emissions; cadmium (Cd) and mercury (Hg) are further recognised as 'Priority Hazardous Substances', for which the aim is to be eliminated and any pollution through discharge, emission or loss must cease or be phased-out.

- ***Is the issue tackled by the revised standards?***
  Yes, the WI BAT conclusions include many helpful provisions incl. emission levels for the main pollutants. Notable ones:
  - The inclusion of technique BAT no. 33 (b), concerning the injection of wastewater from the (wet) flue gas cleaning system into the hotter parts of the system, so that the wastewater is evaporated instead of discharged to a water body. This technique is already well-established in municipal waste incineration plants in Germany.
  - The inclusion of monitoring requirements and BAT-AELs for both direct and indirect emission discharges[6] to a receiving water body; common wastewater treatment plants may not be fitted to treat toxic heavy metals or other persistent pollutants.

- ***Possible solution / recommendation for the implementation phase:***
  - The promotion of technique BAT no. 33 (b) against wastewater treatment techniques where feasible.

[6] indirect discharge: discharge not directly to the environment, but to a sewer or to an off-site wastewater treatment plant

- When wastewater treatment is taking place, abatement techniques for metals should be primarily optimized for the removal of mercury and cadmium: chemical precipitation, flocculation, sedimentation, combined with specific precipitation of mercury using sulphurous precipitants in a separate step, or alternatively using selective ion exchange or membrane filtration or application of activated carbon.
- Emissions of heavy metals, especially emissions of mercury, cadmium, lead and nickel, should be prevented at source – the authorities should properly implement the BAT-AELs set for indirect emissions.

6) *Monitoring of persistent organic pollutants, so-called POPs (in the output streams, after hazardous waste is burnt):*

- ***What's the issue?***

  The aim of this monitoring requirement is to ensure that POPs are effectively destroyed during the combustion process and thus not released to the environment through the output streams of the installation. POPs are chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk of causing adverse effects to human health and the environment.

- ***Is the issue tackled by the revised standards?***

  Partly.

  First of all, there is a problem with the fact that the relevant BAT conclusion (BAT no. 8) refers to 'hazardous waste'. In general, the POP concentration limit for whether a specific waste is covered by the EU POP Regulation is lower than the concentration limit for whether it is classified as 'hazardous waste'. This is confirmed by the recently published Commission notice on technical guidance on the classification of waste (2018/C 124/01)[7]: *'Waste which falls under the obligations of Article 7 of the POP Regulation because it contains POPs in concentrations which exceed the low POP content limit value is not necessarily a hazardous waste. (...). Note that all obligations for producers or holders of waste stemming from POP Regulation have to be fulfilled independently whether the classification of waste in line with the List of Waste leads to the waste to be considered as hazardous or not'.* **Because of this, limiting the POPs monitoring requirement to hazardous waste – following another classification system – leads to some POP-containing waste streams being excluded from the requirement.**

[7] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018XC0409(01)&from=EN

Letter sent to the European Commission regarding this issue of policy incoherence prior to the adoption of the revised standards:
https://eeb.org/library/monitoring-requirements-in-pop-regulation-and-waste-incineration/

Another issue is that the formulation of the applicability section of BAT no. 8 (the two bullet points), may lead in limitation of the applicability scope to only few installations. The applicability wording seems to demand both conditions to be fulfilled – therefore BAT no.8 would only apply to plants 'incinerating hazardous waste with high POP content' that - at the same time – 'do not meet the UNEP specifications'. If this is the case, plants incinerating high content POP-waste but meet the UNEP process description specifications are exempted. This becomes a problem if one looks into these specifications: Chapter IV.G.2 point (g) of the UNEP technical guidelines UNEP/CHW.13/6/Add.1/Rev.1. **They aren't detailed enough – many plants could qualify as a result, without a guarantee that they can provide for a high level of POP destruction efficiency.**

- ***Possible solution / recommendation for the implementation phase:***
  The application of BAT no. 8 shouldn't depend on the classification of the waste – but rather on the POP levels prior to incineration and the specifications of the treatment process. Furthermore, the specifications of the treatment process shall be looked at on a case-by-case basis to ensure that can deliver POP destruction, as meeting the aforementioned UNEP specifications do not guarantee this.

7) NOx emissions to air:

- ***What's the issue?***
  Emissions of NOx contribute to the acidification and eutrophication of waters and soils, and can lead to the formation of particulate matter and ground-level ozone. The adverse health and environmental impact of this kind of pollution is well documented.

- ***Is the issue tackled by the revised standards?***
  Insufficiently.

  The revised WI BAT conclusions fail to boost the deployment of proven techniques that can further reduce these emissions. Several Member States already apply emission limits that are stricter than the BAT-AELs included in the revised standards (the upper ends of the BAT-AELs ranges).

  The 'new' BAT-AELs for NOx emissions would allow operators maximum flexibility and would not require the optimisation of their NOx abatement systems. Even future plants, that are yet to be

built, would be allowed to pollute at levels significantly above what is technically possible and proven economically viable for the sector.

Failure to ensure Europe-wide levels for harmful pollutants are set based on frontrunners performance is unfair to European citizens living in countries that have weaker limits. It would also represent an absurd setback for those countries that have acted to protect human health and the environment by requiring a higher level of protection (in this case the Netherlands, Austria, Sweden; and France in areas covered by an "atmosphere protection plan").

- ***Possible solution / recommendation for the implementation phase:***
  Competent authorities have some flexibility when setting permit requirements, including when setting pollutant ELVs: as discussed, the 'Best Available Techniques Associated Emissions Levels' (BAT-AELs) included in the standards, are presented in ranges of achievable emission levels (e.g. 50 – 150 mg/Nm^3 for NOx emissions, as daily average). The permit writer will set an ELV within this range and in many cases based on the upper end of the range. The upper end shall not be exceeded, unless the operator has been granted a derogation as described in Article 15.4 of the IED.

  Our recommendation is that for NOx emissions to air, a maximum level of 100mg/Nm³ (daily average) should apply for both new and existing installations.

  Much lower levels than 100mg/Nm³ are achieved with the more effective SCR technique, as is the standard in Austria. However, a level of 100 mg/Nm^3 can also be achieved using the generally less effective Selective Non-Catalytic reduction (SNCR) technology[8].

  In general, it should be kept in mind that the BAT-AEL ranges aim to accommodate many different types of plants and circumstances, considering various potential applicability restrictions that may not pose a problem in every case. Any applicability concerns brought forward by the operator need to be critically assessed.

[8] SNCR optimisation may be necessary

8) *Averaging periods:*

- ***What's the issue?***
  It is important that pollutant ELVs are set on the basis of short-term averages, as a way to ensure that the operator will continuously monitor the emissions and will take all measures necessary when high emission peaks occur – so that they won't exceed the ELVs. This is recognised by the IED (through the so-called 'safety net' Annex VI half-hourly average ELVs) and the original 2006 WI BREF which included half-hourly average BAT-AELs.

- ***Is the issue tackled by the revised standards?***
  No, the issue is not recognised in the revised standards, where BAT-AELs for emissions to air are expressed as daily averages only. The only exception is for mercury emissions, but these (half-hourly average) BAT-AELs are still labelled as 'indicative'.

  Competent authorities attempting to set / update the short-term (half-hourly) average ELVs of installations, will not have a clear guidance (half-hourly average BAT-AELs) to adhere to, other than the outdated 'safety net' ELVs in IED Annex VI. It is crucial that such requirements are maintained and strengthened – especially in cases of installations that treat highly heterogeneous wastes; and particularly for pollutants such as dust whose emission peaks can have a harmful impact on nearby communities.

- ***Possible solution / recommendation for the implementation phase:***
  Competent authorities have some flexibility when setting permit requirements, including when setting pollutant ELVs.

  According to IED article 15(3)(b), the authority may set '*different emission limit values than those referred to under point (a) in terms of values, periods of time and reference conditions';* however, in such a case, *'the authority shall, at least annually, assess the results of emission monitoring in order to ensure that emissions under normal operating conditions have not exceeded the emission levels associated with the best available techniques'.*

  Our recommendation is therefore to use this flexibility and the recent findings of the WI BREF review to update the short-term ELVs of installations – useful data that will help this exercise can be found in Annex 8.7 of the final draft of revised WI BREF (published December 2018): detailed graphs of half-hourly and monthly average emission levels achieved by the waste incineration plants reporting continuously monitored emissions in the 2016 data collection that underpinned the review, are reported therein.

9) waste co-incineration loophole:

A loophole that has survived into the revised WI BAT conclusions could allow plant operators to pollute more if they add biomass – like wood chippings or vegetable waste – to the materials they already burn.

As per the vaguely-formulated scope of the revised standards, certain waste co-incineration plants burning only 100% non-biomass waste, will need to follow tighter rules and cut their emissions, but if they mix their wastes with biomass they could be exempted from the WI BAT Conclusions.

The EEB and NGO Zero Waste Europe had called for the word 'exclusively' to be added to the following sentence, which would have removed the current exemption and close the loophole.

Proposed amendment of scope section 5.2:

5.2 Disposal or recovery of waste in waste co-incineration plants:
(a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour;
(b) for hazardous waste with a capacity exceeding 10 tonnes per day;
whose main purpose is not the production of material products and where at least one of the following conditions is fulfilled:

- ~~*only waste, other than waste defined in Article 3(31)(b) of Directive 2010/75/EU, is combusted;*~~
  • wastes are combusted, except if those wastes are exclusively composed of biomass as defined in Article 3(31)(b) of Directive 2010/75/EU
- *more than 40 % of the resulting heat release comes from hazardous waste;*
- *mixed municipal waste is combusted.*

The proposed amendment aimed to ensure: a) that only plants combusting exclusively biomass waste are excluded from the WI BAT conclusions, and b) that this applies to both plants co-combusting biomass waste with other (non-biomass) wastes and to plants co-combusting fuels together with biomass waste.

Letter sent to the European Commission prior to the adoption of the standards:
https://eeb.org/publications/59/industry-health/98550/letter-to-european-commission-on-bat-for-waste-incineration-2019.pdf

The competent authorities shall be made aware of the issue and ensure that whenever waste is being burnt the WI BAT Conclusions apply. This will ensure that dedicated standards developed for waste incineration will be followed to prevent/reduce harmful impacts for human health and the environment.

Follow-up:

Do you have more burning questions? Drop us an email:
roberta.arbinolo@eeb.org (communications); aliki.kriekouki@eeb.org (content)

Hooked and you want to read more? There you go:
https://eeb.org/business-as-usual-for-waste-incineration-as-updated-eu-protections-match-or-weaken-existing-guidelines/

https://meta.eeb.org/2018/04/24/green-groups-demand-apology-from-waste-industry-bully/

https://meta.eeb.org/2018/05/11/5-things-weve-learnt-about-the-eus-new-rules-for-waste-incineration/

https://eeb.org/loophole-could-encourage-poison-mix-incineration/

See also here the META story (and EEB report) concerning the implementation of the EU Waste Treatment BREF (this one regulates operations linked to the mechanical, biological and physico-chemical treatment of waste): https://meta.eeb.org/2019/07/25/how-to-be-a-waste-watchdog/