Kick-off meeting (KoM) of the Technical Working Group (TWG) for the review of the BAT reference document for Waste Incineration (WI BREF)

TWG Conclusions

Scope of activities and sectors - Scope 1.1 I

TWG conclusions

- Define the scope of the WI BREF primarily based on the capacity thresholds set in IED Annex I, item 5.2.
- Do not include under the scope of the WI BREF those plants which only incinerate gaseous effluents, functioning as abatement devices.
- TWG members to share through BATIS the list of the plants incinerating only gaseous waste in the EU-28. Depending on the number of plants ~~above the capacity threshold~~, the EIPPCB will propose to the WI TWG the best way to address this issue taking into account the environmental impacts throughout the EU-28.

BP 2.1.1

Scope of activities and sectors - Scope 1.1 II

TWG conclusions

- TWG members to share through BATIS the list of the pyrolysis, gasification or plasma operating plants in the EU-28, if the substances resulting from the treatment are subsequently incinerated. Depending on the number of plants, the EIPPCB will propose to the WI TWG the possible inclusion of these plants under the scope of the WI BREF.

This conclusion is not supported by: BG, DE, FI, ES, UK, EEB, ESWET, Eurits, EuLA, HWE, CEWEP, Orgalime and FEAD.

- Exclude from the scope of the WI BREF the plants covered under IED Article 42(2), but include those plants covered by IED Article 42(2)(a)(i), as long as they are not covered by another BREF (e.g. LCP BREF).

Scope of activities and sectors – Scope 1.1 III

TWG conclusions

- Do not cover waste pre-treatment before incineration if it is dealt in the WT BREF. A cross-reference will be made to the WT BREF. Consider other relevant pre-treatment techniques that are specific to the WI sector.
- Control of the incoming waste is in the scope of the WI BREF.
- Include under the scope of the WI BREF the treatment of slags and ashes (incinerator bottom ash).
- Do not include under the scope of the WI BREF the treatment of fly ash and FGT residues. A cross-reference will be made to the WT BREF. Consider only other techniques where they are specific and relevant to the WI sector.

BP 2.1.3

Co-incineration of waste

TWG conclusions

- Within the WI BREF, not to make judgements on whether a particular plant or type of plant should be considered an incineration or a co-incineration plant.
- To exclude from the scope of the WI BREF those co-incineration plants whose main purpose is the generation of material products. These plants should be covered in other BREFs where relevant (e.g. CLM, CER).
- To include within the scope of the WI BREF only waste co-incineration plants (other than those whose main purpose is the generation of material products) where >40% of the heat release comes from hazardous waste or which incinerate or co-incinerate mainly ~~untreated~~ municipal and/or commercial waste, and which are not covered by the LCP BREF.

ES does not support this last conclusion.

KEI – General issues

TWG conclusions

- Do not consider treatment options other than waste incineration in the WI BREF.
- The current version of the WI BREF is a good starting point so the WI BREF review has to be focused on the general update of the information in the current BREF.
- ~~Discuss and agree at the KOM on the list of key environmental issues that the revision of the WI BREF will focus on.~~

KEI – Water, energy and resource efficiency

TWG conclusions

- The TWG considers that, while water consumption should be taken into account as a cross-media effect of some techniques, it is not a key environmental issue for the WI sector.
- To cover only those energy efficiency measures specific to waste incineration; for general energy efficiency measures cross-reference can be made to the ENE BREF in the WI BREF.
- Update the information regarding the consumption of energy – the derivation of BAT conclusions and BAT-AEPLs on energy efficiency should be considered alongside the consideration of energy recovery.
- To include energy recovery as a key environmental issue for the WI BREF.

BP 2.2.3.1

KEI in the context of this WI BREF review – Pollutants for emissions to air (1/5)

Interim TWG Conclusions pending further discussions of the TWG

- The pollutants listed in IED Chapter IV/Annex VI part 3 are key environmental pollutants for emissions to air.
- In order to focus the review of the WI BREF, to distinguish environmental issues according to the following 3 categories or groups:

1. Key environmental issues in the context of this WI BREF review:
   - NO_x and NH_3

BP 2.2.3.1

KEI in the context of this WI BREF review – Pollutants for emissions to air (2/5)

Interim TWG Conclusions pending further discussions of the TWG

2. Potential key environmental issues in the context of this WI BREF review, if ~~unless~~ demonstrated ~~otherwise~~ by the data collection:
   - TOC, PCBs, PCDD/F, PAHs including Benzo(a)pyrene
   - Hg
   - Dust and metals (in particular As, Cd, Tl and Sb)
   - N_2O primarily, but not limited to the NO_X abatement system
   - PM_{10}

BP 2.2.3.1

KEI in the context of this WI BREF review – Pollutants for emissions to air (3/5)

Interim TWG Conclusions pending further discussions of the TWG

3. Issues not initially considered to be a priority in the context of this WI BREF review:
   - CO
   - SO_2
   - HCl, HF
   - CO_2, CH_4
   - $PM_{2.5}$

- Where necessary for the TWG to confirm this initial consideration, to collect also information on pollutants in group 3 in order to decide where those pollutants should be finally categorised.

BP 2.2.3.1

KEI in the context of this WI BREF review – Pollutants for emissions to air (4/5)

Interim TWG Conclusions pending further discussions of the TWG

- Collect data through questionnaires on pollutants finally categorised in group 1 and group 2.
- The TWG will focus its work on deriving BAT conclusions including BAT-AELs on the confirmed KEI on the basis of the data collected through questionnaires.
- The TWG does not anticipate to set BAT-AELs, on those pollutants that are finally categorised in Group 3.

BP 2.2.3.1

KEI in the context of this WI BREF review – Pollutants for emissions to air (5/5)

Interim TWG Conclusions pending further discussions of the TWG

- *The TWG interim conclusions reflected in slides 8, 9, 10 and 11 are not supported by: AT, BE, BU, DE, DK, FI and SE.*
- *The second bullet point on slide 11 is not supported by NL and EEB.*
- *IT has concerns that the process described in the second bullet point of slide 10 lacks clarity.*
- *NL supports moving SO_2, HCl and HF from group 3 to group 2 and PCBs and PM_{10} from group 2 to group 3 (slides 9 and 10) .*

BP 2.2.3.2

KEI in the contest of this BREF review – Pollutants for emissions to water

TWG conclusions

- Emissions to water (other than cooling water) do not arise in many incineration plants and are therefore generally not a key environmental issue in the WI sector.
- Collect data only on waste water arising from the cleaning of waste gases, syngas and the treatment of slags and bottom ashes, and on the techniques used to treat it, for the following parameters:
  - TSS
  - Metals
  - PCDD/F
  - TOC.

This conclusion is not supported by: AT, BE, BG, DE, DK, EEB and Orgalime.

KEI – Key pollutants for emissions to water

TWG conclusions (continued)

- DK and HWE will provide information on dioxin-like PCBs.
- ~~To gather data on the emissions of dioxin-like PCBs and PAHs in order to evaluate if the setting of additional BAT-AELs could be appropriate.~~

BP 2.2.4

KEI – General issues for residues

TWG conclusions

- To collect information on the techniques used to treat slag and bottom ashes including techniques to enhance in particular the recovery of metals and phosphorus from sewage sludge incineration.
- To include a cross-reference to the WT BREF regarding the general treatment of fly-ashes and flue-gas treatment residues. To collect information on those techniques, which are specific and relevant for the WI sector.
- To collect data on the physical / chemical ~~composition and~~ characteristics of residues ~~as described in BP Section 2.2.5.3~~, including:
  - on the destruction efficiency and the burnout quality in case of incineration of hazardous waste, independent of the installations where it takes place;
  - for slags and ashes, when applied as a waste recovery operation.

BP 2.2.5.1

KEI – Expression of air emission BAT-AEPLs

TWG conclusions

- To express ~~short-term~~ BAT-AELs in concentrations ~~and~~ as a daily average or as an average over the sampling period depending on the availability of continuous monitoring for a given pollutant.
- Subject to the data collection, where practicable and justified, to also express BAT-AELs in concentrations as half-hourly averages for those pollutants monitored continuously.
- To gather information on ~~emissions expressed as an~~ annual average emissions in order to update Chapter 3 of the WI BREF, but not to express additional long-term average BAT-AELs (with the possible exception of NO_X and Hg, subject to data collection).

BP 2.2.5.1

KEI – Expression of water emission BAT-AEPLs

TWG conclusion

- To use the same basis as that set out in Part 6 of Annex VI of the IED and set short term BAT-AELs as an average of a flow-proportional sample over a period of 24 hours.

BP 2.2.5.3

KEI – Expression of residues BAT-AEPLs (1/2)

TWG conclusions

- To collect data on the TOC content of slags and bottom ashes as this is an important parameter in the operation of the incineration plant. Data will also be collected on the sampling and monitoring methods applied and their frequency; and whether any pre-treatment techniques are applied.
- To collect data on the tests carried out to establish the physical and chemical characteristics (as well as the quantity) and the polluting potential of the slags and bottom ashes prior to their disposal or recycling. This will include data on the sampling and monitoring methods applied and their frequency.

KEI – Expression of residues BAT-AEPLs (2/2)

TWG conclusions

- Subject to the data collection, to consider setting BAT-AEPLs for the TOC content in slag and bottom ashes and for the proportion of materials (e.g. metals) ~~and minerals~~ that are recovered (e.g. % of residues not requiring disposal, % of phosphorus recovered from sewage sludge incineration).
- Not to set BAT-AEPLs for the composition of the residues after treatment as the level of treatment of residues required will be dictated by the end-user specifications of the recovered materials.
- To establish a TWG sub-group on residues.
- AT, DE, EURITS and ERFO will share their information on the recovery of materials from slag and bottom ashes. FEAD will provide information concerning residues.

BP 2.2.5.4

KEI – Expression of energy efficiency and recovery BAT-AEPLs (1/3)

TWG conclusions

- To establish a clear system boundary, including e.g. definitions of terms and calculation methods used, necessary to address energy issues before developing the questionnaire for the collection of data.
- To collect data on both the design energy recovery of the plant and on its actual performance ~~over a full year~~ to take into account seasonal and climatic factors; including contextual information on energy demand (e.g. presence of a district heating/cooling network).
- To collect data on the energy consumption of incineration plants (e.g. energy demand ~~parasitic electrical energy~~ and combustion of support fuels). ~~also over a full year.~~

BP 2.2.5.4

KEI – Expression of energy efficiency and recovery BAT-AEPLs (2/3)

TWG conclusions

- To set BAT-AEPLs for the design of new plants to be verified during the performance testing and to consider setting BAT-AEPLs based on actual performance for existing plants.
- To take into account the specific issues of hazardous waste incineration due to its primary function in relation to hazardous waste.
- To establish a TWG subgroup on energy issues.
- To get inspiration on the current work of the LCP BREF on similar issues.

BP 2.2.5.4

KEI – Expression of energy efficiency and recovery BAT-AEPLs (3/3)

TWG conclusions

- ~~To decide whether there should be one BAT-AEPL for energy recovery minus consumption, or whether separate consumption and recovery BAT-AEPLs should be set. To express BAT-AEPLs either as % recovery or as MWh/tonne of waste incinerated, based on a standard NCV (net calorific value), as an annual average.~~

- ~~To set BAT-AEPLs based on actual performance, but to consider also setting a BAT-AEPL based on design values for new plant.~~

BP 2.2.6

KEI – Monitoring

TWG conclusions

- To collect information on the monitoring methods used in the WI sector and on the frequency of monitoring, taking into account especially the different types of waste treated.
- To collect such monitoring data from plants performing continuous/discontinuous monitoring and PCDD/F ~~continuous~~ long term sampling.
- To collect data on the use of continuous monitoring of mercury emissions.
- To collect contextual information on monitoring information (e.g. other than normal operating conditions data included or not; samples filtered or not; uncertainty removed or not; length of sampling for spot samples; and monitoring standard used).

KEI – Odour and noise

TWG conclusions

- Not to actively seek information on odour and noise issues but to update the WI BREF if relevant information is provided.
- ~~Update the information on the techniques applied in order to reduce noise emissions taking into account the possibility to cross-reference other BREFs (e.g. LCP, CWW).~~
- ~~According to the data and information gathered, evaluate the need to update the information on the techniques used to prevent and reduce odour emissions in the WI sector but not setting BAT-AEPLs.~~

BP 2.1.2

Interaction with IED Chapter IV (1/2)

TWG conclusions

- Not to exclude from the data collection those plants that operate under an IED Article 51 derogation, but to collect data on the derogations granted so this can be taken into account in the data analysis.
- Information on if a plant is an existing waste incineration plant or a new one, according with the IED Annex VI definition, can be collected through the questionnaire.
- Reference conditions for the reporting of the data will be those for waste incineration plants, as described in Section 1, Part 3 of Annex VI to the IED.

BP 2.1.2

Interaction with IED Chapter IV (2/2)

TWG conclusions

- To establish a TWG sub-group on data collection and questionnaire development.
- With the view to facilitate the comparison of data, this sub-group will meet in advance of the data collection to discuss what is considered to be NOC and OTNOC.
- To this end, TWG members will submit and discuss a list of OTNOC, with a goal of drawing BAT conclusions useful for operators and permitting.
- Based on the information gathered, the TWG should identify OTNOC for which BAT-AEPLs do not apply and, if information / data allow, will propose measures to prevent or reduce pollution during those stages.
- Information to facilitate this discussion will be made available by ESWET/CEWEP.

BP 2.3.1

Data and information collection (1/3)

TWG conclusions

- TWG to collect data using a common questionnaire template.
- TWG to collect data in all sectors covered in the BREF scope as agreed in slides 2,3 & 5 and to include those key environmental issues agreed in slides 8,9,13,15 & 20 in the questionnaire.
- TWG to collect representative, reliable, comparable real-life data, at least at installation level, from a manageable number of installations, that as a minimum fulfil the following criteria:
  - are representative of the sector as a good environmental performer, including best performers; (e.g. meeting the environmental performance of the current WI BREF).
  - are representative of the sector in terms of waste incinerated, processes and techniques used, geographical location when climate conditions are relevant;
  - include preferably both recent and less recent installations and plants;
  - include preferably both small and large incineration capacity installations.

BP 2.3.1

Data and information collection (2/3)

TWG conclusions

- To set 2014 as the reference year for the data collection (additional years can be allowed if needed).
- The EIPPCB will provide a draft questionnaire template on BATIS that will be discussed and further developed by the TWG sub-group.
- The final draft questionnaire template should be tested by a small number of installations.
- TWG to propose a list of environmentally well-performing plants/installations (including best performers) that are willing to participate in the data collection. The EIPPCB will provide a list template for this purpose.

BP 2.3.1

Data and information collection (3/3)

TWG Conclusions

- Member State representatives to collect the filled-in questionnaires from operators and to check the quality of the data and information before posting them on BATIS;
- The quality check implies that the Member State representatives:
  - will ensure the completeness and consistency of data;
  - will check confidentiality claims: if some information is claimed to be confidential, the Member State will extract the confidential part of the questionnaire and send it to the EIPPCB by email;
  - will post all the non-confidential questionnaires onto BATIS.

BP 2.3.2

Techniques to consider in the determination of BAT (1/2)

TWG conclusions

- The EIPPCB will work proactively with the TWG members to identify and submit information on techniques (both in process and end-of-pipe) which meet the definition of candidate or emerging techniques given in the IED and the BREF Guidance (2012/119/EU), following the 10-heading structure of the BREF Guidance Section 2.3.7.
- A consequence of this is that techniques which do not meet the definition of candidate or emerging techniques given in the IED and the BREF Guidance will not be included in the descriptions of candidate BAT or emerging techniques.
- Based on the information and data collected, to update the 'techniques to consider' Chapter of the WI BREF, including amendments to existing techniques, addition of new techniques and the deletion of obsolete techniques.

BP 2.3.2

Techniques to consider in the determination of BAT (2/2)

TWG conclusions (continued)

- ~~To establish at the KOM what should fall within the scope of the EMS for incineration plants and what should be considered as stand-alone techniques. (e.g. BAT conclusion 2-6, 8-10, 13 & 56 from current BREF could be part of EMS)~~
- To take into consideration the initial positions and information from the TWG members on techniques together with the additional issues mentioned in Chapter 7 "Concluding Remarks" of the current WI BREF.
- A proposal for a template for collecting information on candidate BAT and on emerging techniques will be posted on BATIS.
- IT and EuLA to submit information on new techniques.

BP 2.3.3

Emerging techniques

TWG conclusion

- Judgements on emerging techniques should be made in parallel with updating the information on techniques to consider and BAT.

BP 2.3.4

Cross-media effects and economic viability

TWG conclusions

- ~~To collect information and data on cross-media effects and economics of the techniques.~~
- ~~Derive BAT-AEPLs (including BAT-AELs) in accordance with the BREF Guidance, Commission Implementing Decision of 10 February 2012, i.e. making judgements on the economic viability of the sector rather than cost-benefit analysis.~~

BP 2.4.1

BREF structure

TWG conclusions

- To keep the same structure as the current WI BREF, and review the appropriateness of the sub-headings.
- To include, subject to the conclusion on slide 3, distinct sections on pyrolysis/gasification and plasma processes within the sections on thermal treatment, energy recovery, flue-gas treatment and solid residues.

BP 2.4.2

BAT conclusions structure (1/2)

TWG conclusions

- To have a similar structure to the current WI BREF for the BAT conclusions, i.e. that where possible BAT conclusions for the whole of the WI sector be identified with additional conclusions (where appropriate) based on the nature of the waste processed.
- Based on the nature of the waste processed, further subdivision(s) could be made based on the data collected, if deemed necessary. ~~The number of sub-divisions of BAT conclusions by waste type should be minimised and that these sub-divisions should be based on the data collection.~~
- ~~Not to propose to make BAT conclusions on those matters which are within the realm of public policy making.~~

BP 2.4.2

BAT conclusions structure (2/2)

TWG conclusions

- ~~That BAT conclusions and BAT-AEPLs should reflect the data gathered on the key environmental issues and the level of technical assessment carried out.~~

WI BREF review

What's next?

Next steps – data collection

- The EIPPCB will draft the mandate for each of the 3 following subgroups: data collection and questionnaire development; energy; residues.
- TWG members may submit information on BATIS on Group 3 pollutants (see slide 10) to inform the decision on their final categorisation by (*end of March 2015*)
- The EIPPCB will provide a preliminary draft of questionnaire(s) incorporating the decisions from the KoM by (*May 2015*)
- Final draft questionnaires to be shared on BATIS, tested by volunteers where needed by (*Sept 2015*).
- Overall start of data collection could begin by (*Oct/Nov 2015*)

all dates in parenthesis are tentative

Forward planning for the WI BREF review after the KoM

BREF review milestones	*Tentative timing*
TWG members submit to the EIPPCB a list of well-performing installations/plants participating in the data collection	(May 2015)
Release of questionnaire for the data collection	(Nov 2015)
Collection of information and data	(Feb 2016)
First draft of the revised BREF	**(Dec 2016)**
Commenting period on the first draft	(Mar 2017)
Final TWG meeting	(Dec 2017)
Final draft delivered to the IED Article 13 forum meeting	(May 2018)

Thank you all for participating!

End of meeting