

Report on the meeting of the ad-hoc of technical expert group held during WGSR 42nd

Final version after discussion in the WGSR on sept 5

Questions asked by the chair of the WGSR:

- 1) Proposals for updating the annexes IV and V (informal document nr 3)
- 2) Proposals for BAT for new substances (PeCB, PCN, HCBD)
- 3) Discussion on the informal document nr 5 (waste treatment and POP emissions)

The document prepared by the ad-hoc group:

Document: *Technical working group WGSR42nd.doc* shows the technical agreed updated clean text of Annex IV and V of the POPs Protocol.

Outcome of the ad-hoc group:

- 1) Proposals for updating the annexes IV and V (informal document nr 3)

Annex IV:

- In Annex IV we have agreed on an update of the definition of Toxic Equivalence used for Dioxins, recognizing the definition may not have an influence on emission limit values (WHO definition 2005 is used);
- We have concluded that the thresholds for the capacity of waste incineration plants can be deleted (Article 7);
- In Article 7 of Annex IV (Limit values for major stationary sources) we have determined different technical options. It is up to the WGSR to decide on the options below:

Medical solid waste 0.5 ng TE/m ³	<i>Option 1: 0.1 ng TE/m³ (Technically feasible for EU, Canada, Norway, Switzerland)</i> <i>Option 2: 0.5 ng TE/m³ (Technically feasible for other parties)</i>
Hazardous waste 0.2 ng TE/m ³	<i>Option 1: 0.1 ng TE/m³ (Technically feasible for EU, Canada, Norway, Switzerland)</i> <i>Option 2: 0.2 ng TE/m³ (Technically feasible for other parties)</i>

- We have considered the following ELVs for Electric Arc Furnaces, Non-hazardous industrial waste, Sinterplants, Secondary production of copper and aluminium.

Based on BAT mentioned Annex V it is technically possible to reduce emissions to:

<i>Electric Arc Furnaces</i>	<i><0.1 – 0.5 ng TE / m³</i>
<i>Non-hazardous industrial waste</i>	<i>0.1 ng TE / m³</i>
<i>Sinterplants</i>	<i><0.1 – 0.5 ng TE / m³</i>
<i>Secondary production of copper and aluminium</i>	<i><0.1 – 0.5 ng TE / m³</i>

Outcome Annex V:

- Within the Informal document nr.3 a lot of references to the EU BREF documents have been made. The BAT associated emission values and measures are generally formulated and are agreed on by the expert group. Nevertheless, since the non-EU parties are not quite familiar with these documents, some items have been left in square brackets and have to be confirmed later.
- Since the references to the EU BREF are detailed, only the general technologies are used in updating in the Annex.
- Several source categories were discussed and the WGSR could decide on adding new categories to Annex VIII.
- In general Annex V text has been updated. Sources as well as achievable concentrations of BAT have been discussed. Since most of the information was only based on EU BREF documents, there is still a need for more information exchange and review.
- A ToDo list has been compiled for those technologies that should be elaborated in more detail. (e.g. new source categories like oil refineries, review of Annex V in relation to other relevant documents, co-incineration of waste...)

2) Proposals for BAT for new substances (PeCB, PCN, HCBd)

If these substances are added to Annex III, new source categories may be added to Annex VIII.

- Possible new source categories to be added to Annex VIII: for HCBd two new source categories have been identified: the production of chlorinated hydrocarbons and primary production of magnesium.
- BAT can be described in Annex V. For PeCB and PCN, techniques to abate their unintentional release are the same techniques as the ones used for reduction of PCDD/F. In most cases these techniques will already be installed. Therefore in general it is expected that no extra measures would be needed to abate the emissions of PCN or of PeCB.
- Based on the results of the TFPOP (summary reports of management options, see doc 2007/14) technologies that could be used for the new substances are given in Annex A of this report;

3) Discussion on the informal document nr 5 (waste treatment and POP emissions)

- The informal document on BAT to reduce the emissions of POPs from waste treatment of Electronic and Electrical Equipment (EEE), furniture and car interiors

was presented and discussed. BAT for reduction of emissions of POPs (c-PentaBDE, c-OctaBDE, SCCPs) were presented. One conclusion was that more information on the amounts of EEE waste and other waste is needed to decide on the effectiveness of installing BAT emission reductions techniques on waste treatment facilities.

Comments on the informal document nr 5 are welcome!

[Annex A]:

Based on the results of the TFPOP (summary reports of management options, see doc 2007/14) technologies that could be used (in Annex V) for the new substances

ANNEX V

BEST AVAILABLE TECHNIQUES TO CONTROL EMISSIONS OF PERSISTENT ORGANIC POLLUTANTS FROM MAJOR STATIONAER SOURCES

I. INTRODUCTION

6. The most important POPs emitted from stationary sources are:
- (a) Polychlorinated dibenzo-p-dioxins/furans (PCDD/F);
 - (b) Hexachlorobenzene (HCB);
 - (c) Polycyclic aromatic hydrocarbons (PAHs).

[Other POP's that may be (unintentionally) emitted are:]

(d) Polychlorinated naphthalenes (PCN)

(e) Pentachlorobenzene (PeCB)

(f) Hexachlorobutadiene (HCBD)

Relevant definitions are provided in annex III to the present Protocol.

- 9 bis. PCN and PeCB are emitted as an unintentional release in a number of stationary sources that are mentioned in paragraph 7, 8 and 9.

From a technical point of view the production of primary magnesium is an important source of HCBD. And therefore could be added to Annex VIII

VIII. CONTROL TECHNIQUES FOR THE REDUCTION OF HCBD EMISSIONS

A. Non ferrous metals production

##.Primary production of magnesium .

Table 10 summarizes BAT for removal of hydrocarbons in primary production of magnesium.

Table 10: BAT for removal of hydrocarbons in production of magnesium

Pollutant	Emissions associated with the use of BAT	Techniques that can be used to reach these levels	Comments
Dioxins and hydrocarbons from the chlorination and electrolysis in the Mg production	Total destruction efficiency > 99.9%	Multi-stage scrubbers connected with a wet EP and an afterburner and injection of activated carbon	Dioxin emissions are < 10 µg/t TEQ for the MgCl ₂ brine dehydration process instead of 53 µg/t TEQ for the process which needs a chlorination step. The MgCl ₂ brine dehydration process is therefore regarded as BAT for new plants.

Note. Collected emissions only.

Associated emissions are given as daily averages based on continuous monitoring during the operating period. In cases where continuous monitoring is not practicable the value will be the average over the sampling period.

For the abatement system used, the characteristics of the gas and dust will be taken into account in the design of the system and the correct operating temperature used.

B. Production of chlorinated hydrocarbons

##. BAT to reduce emissions of HCBd from production of chlorinated hydrocarbons is based on treatment of off-gas to reduce HCBd concentrations and on reduction of fugitive emissions.

Abatement techniques to reduce HCBd in off gas can be based on adsorption, e.g. use of activated carbon, or absorption, e.g. use of wet scrubbers or cryogenic condensation by cooling the off gas to very low temperatures.

IX CONTROL TECHNIQUES FOR THE REDUCTION OF EMISSIONS OF PCN AND PeCB

Control Techniques to abate the unintentional release of PCNs, PeCB are the same techniques as the ones used for reduction of PCDD/F. In most cases these techniques will already be installed. Therefore in general no extra measures are needed to abate the emissions of PCN or of PeCB.