TECHNICAL WORKING GROUP (TWG) 
ON THE REVIEW OF THE BEST AVAILABLE TECHNIQUES (BAT) 
FOR THE PULP AND PAPER INDUSTRY 

KICK-OFF MEETING 
13-15 November 2006 

MEETING REPORT 

1. FOREWORD 

The Technical Working Group (TWG) on the Review of the Best Available Techniques (BAT) for the Pulp and Paper industry held its first plenary meeting at the Institute for Prospective Technological Studies (IPTS) of the European Commission in Seville, Spain on 13-15 November 2006. Mr Serge Roudier, acting Head of the European IPPC Bureau was in the chair and Mr. Michael Parth led the technical discussion. 

The meeting was held within the framework of the implementation of Council Directive 96/61/EC of 24 September 1996 concerning Integrated Pollution Prevention and Control (the IPPC Directive), in order to initiate the exchange of information for the Review of Best Available Techniques for the Pulp and Paper industry, and, as a result of this exchange, to come up with a revised reference document.

The original BREF was started in 1997, finalised in 2000 and adopted by the European Commission in 2001. The Pulp and Paper (PP) BREF represents information and data to be taken into account according to Annex IV to the IPPC Directive and serves as information and guidance for regulators within the permission procedure for the Pulp and Paper industry and other interested parties.

The development of best available techniques described in the BREF is an ongoing process and the TWG and the Information Exchange Forum agreed that the BREF should be updated and reviewed. The new situation with the enlarged European Union (EU-25, and soon EU-27) and the participation of the new Member States in the BREF review work can also give more input for updated data and information for the review.

BREF reviews have been discussed at the previous IEF meetings in Brussels. At the 15th Information Exchange Forum meeting in December 2004, BREF reviews were discussed and a decision was made to start the review of the Pulp and Paper Industry BREF during 2006.
At the IEF meeting, it was also discussed and agreed that a ‘wish list’ should be established. The list should cover a collection of new and available information that the TWG would like to gather and to provide.

It was also decided that if the TWG members have, or will shortly have, new information which they consider to be relevant to the review of the Pulp and Paper BREF, they should send a short description of the information they (the TWG members) have or will be able to provide to the EIPPC Bureau.

There were 34 participants from the European Commission, Member States (including one non EU State), Industry and Industrial Associations at the first plenary meeting for the review of the PP BREF. The agenda for the meeting followed the outline of the background paper dated 17 October 2006 that had been prepared by Michael Parth from the European IPPC Bureau as an introduction to the meeting.

2. REPORT

This paper is not intended to be a detailed report of the meeting and the content of the presentations are not generally repeated; only the main discussion points and conclusions are addressed.

The kick-off meeting officially started the work on the review of the Pulp and Paper BREF document based on an information exchange of members of this technical working group and their background groups and/or mirror groups.

Scope of the work for the review of the Pulp and Paper BREF and the TWG:

The activity for the pulp and paper industry addressed in Annex I (Section 6.1) to the IPPC Directive is the following:

6.1. Industrial plants for the production of:
(a) pulp from timber or other fibrous materials
(b) paper and board with a production capacity exceeding 20 tonnes per day

A core objective of this meeting was to discuss and conclude the scope of the work on the review of the Pulp and Paper BREF. This was important because the work on the review is very different to the development of a BREF from scratch.

Another important objective was to discuss and decide on the information to be exchanged by the TWG. Conclusions of the subjects were decided upon and an agreement of the work content was reached.

Wish lists for the review of the Pulp and Paper BREF were provided by the TWG prior to the meeting. The EIPPCB received wishes from CEPI, Finland, Germany, Norway, Austria, the Netherlands, Spain, Portugal, Italy, Sweden, Denmark and the Czech Republic.
Conclusions of the meeting

Where appropriate, in order of the presentation at the meeting:

General issues

To facilitate the use of the document, a "road map" also taking into account experiences from the existing document will be added. The nowadays usual cross-references in BREF documents will also be added.

The general structure of the BREF will be kept. Adjustments will be made to the text on different paper qualities and the production of boards will be structured in a more easily understandable way. Furthermore, the meeting agreed on not to more deeply investigate the subject of speciality papers.

In order to evaluate changes and developments in the sector since the original BREF was written, general data as well as emission and consumption data on plant level need to be updated. The majority of parties present at the meeting volunteered to provide the EIPPCB with these data.

For air emissions, it was agreed to use both concentrations and loads, where loads should preferably be in weight/weight (e.g. g/t of net saleable product).

To avoid problems with the comparability of the submitted data, it was agreed that the necessary data format will be elaborated by a smaller group until 31 January 2007. This group will also come up with a proposal on how to deal with concentration values in emissions to water.

Additionally, some information about the differences in environmental performance in relation to size and age of a plant will be provided.

Energy production is an important issue for the PP industry. The relevant sections of the PP BREF have to be harmonised with the now existing BREFs on Waste Incineration and Large Combustion Plants (LCP) in particular, taking into account special issues for the energy production in the PP industry.

Technologies and processes

The emerging techniques from the original document will be evaluated and where necessary their status will be changed (list of emerging techniques to be updated). Some Member States will also provide data about the current emerging or new technologies. General technological trends will also be added to the document.

The information on bleaching processes in pulping, both ECF and TCF, will be updated taking into account new developments and techniques used.

The issues of soil contamination and plant decommissioning were discussed at the meeting. Both issues do not seam to be PP specific. Some information will be provided and some general information about decommissioning will be added as well as links to the relevant sections in the Emissions from Storage (ESB) BREF.
Air related issues

VOC emissions are so far not dealt with in-depth in the existing document. Their importance is not clear yet; there is only limited data available on this issue. Two possible sources of VOC emissions were identified and will be investigated:

- Coating in papermaking
- Weak odorous gases in pulping

The data on dust emissions will be amended by two studies from Member States and information about the typical particle size distribution. Specific information on fine dust (PM$_{10}$ and PM$_{2.5}$) is currently not available.

Generally, the issue of NO$_X$ emissions will be investigated. A study on the influence of the used wood on the NO$_X$ emissions from recovery boilers will be presented and implemented into the document. Different fuels like peat or the ones dealt with in the LCP BREF will also be investigated.

Water related issues

It was agreed to keep on using the parameter AOX as there is currently no alternative available to monitor halogenated substances in the waste water. Nevertheless, information about a full effluent assessment will be provided.

The existing information on water saving techniques and closed circuits will be updated. Special regard will be given to the consequences of closed circuits and the cross-media effects.

More information will also be provided for:
- Existing waste water techniques
- Ozonisation and biofiltration
- Recovery of coating colours
- Atrex technology
- Phosphorus emissions to water originating from eucalyptus wood

Energy and waste

During the meeting, there were some doubts on how to deal with energy efficiency issues since the Emission Trading Scheme Directive is in force now. A subgroup was set up to define the further proceedings in the PP BREF. A definition of input data requirements will be proposed by 31 January 2007. Nevertheless, information on energy efficiency will be provided by both Member states and industry.

The internal use of waste and residues is a big concern to the pulp and paper industry. It was agreed to include rejects from recovered paper processes and deinking sludges to the list of internally used residues. Some studies will be provided by members of the TWG.

For the external treatment of residues and waste, no BAT conclusions can be drawn as this is outside the scope of IPPC Directive.
The EIPPCB will also add a disclaimer on how to understand waste in the sense of the document and also some definitions of the used waste terminology.

**Chemicals**

A complete study on complexing agents (such as EDTA) will be provided. The meeting also decided not to investigate in detail the substitution of chemicals banned by other European legislation, like the Water Framework Directive. It was noted that the issue of chemicals substitution is also dealt with in the REACH legislation.

Two items from the submitted wish lists could not be discussed in detail because the owner of the wishes was not present at the meeting:

- Use of enzymatic technologies: some information will be provided by the TWG
- Substitution of cationic polymers

**The following information was provided during the meeting:**

Continuum- Rethinking BAT Emissions of the Pulp and Paper Industry in the European Union, Strategic Background Paper, BÖYRY, Finland

**Boundaries with other BREFs**

The TWG noted that may be some overlaps in the review of the Pulp and Paper BREF with other BREFs.

Some examples were mentioned at the meeting:

- Waste Incineration
- Large Combustion Plants
- Emissions from Storage
- General Principles of Monitoring

**Basic structure of the document**

The structure of the BREF revised document was discussed and decided. The EIPPCB proposed to keep the basic structure of specific chapters for:

- Sulphate pulping
- Sulphite pulping
- Mechanical and chemi-mechanical pulping
- Recovered paper processing
- Papermaking and related processes
The TWG discussed the basic structure of the document and the following conclusions were agreed:

- The structure of this revised document should use the BREF outline and guide
- New information may create new sections or alter original sections
  - e.g. a specific section for board production within the papermaking chapter

**Information structure of the document**

A BREF Outline and Guide (BOAG) document exists for the development of this review BREF, so the TWG has to follow this guide as much as possible for harmonisation with the whole series of BREFs. The BREF outline and guide document can be downloaded from the following link: [http://eippcb.jrc.es/pages/FAbout.htm](http://eippcb.jrc.es/pages/FAbout.htm)

The standard structure from the BREF outline and guide must be used for Chapter 4 (in the case of the PP BREF Sections X.3) ‘Techniques to consider in the determination of BAT’.

The TWG discussed this topic and the following conclusions were agreed:

- Follow the BREF Outline and Guide [http://eippcb.jrc.es/pages/FAbout.htm](http://eippcb.jrc.es/pages/FAbout.htm)
- Use the standard structure for Chapter 4 ‘Techniques to consider in the determination of BAT for techniques which is as follows:

### 3. REVIEW PLANNING

A proposal for the specific planning of the review was created by the EIPPCB and agreed by the TWG.

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<tr>
<th>Date</th>
<th>Task</th>
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<tbody>
<tr>
<td>31.01.2007</td>
<td>Definition of emission data format and energy efficiency issues</td>
</tr>
<tr>
<td>30.04.07</td>
<td>Contribution from energy subgroup</td>
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<tr>
<td>01.07.07</td>
<td>Collection of information</td>
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<tr>
<td>11 or 12/07</td>
<td>Evaluation and meeting preparation</td>
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<tr>
<td>11 or 12/07</td>
<td>Interim meeting for discussion of the new information</td>
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<td>03/08</td>
<td>Draft of the revised BREF</td>
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<td>05/08</td>
<td>TWG comments on the draft</td>
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<tr>
<td>09/08</td>
<td>Final TWG meeting</td>
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<tr>
<td>11/08</td>
<td>Final draft</td>
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All TWG members were asked to provide the promised information and data at the latest by 1 July 2007, to enable the European IPPC Bureau to prepare the collection of provided information for the TWG meeting mentioned in the table above (TWG interim meeting).
It was emphasised that after the deadline of 1 July 2007, EIPPCB cannot guarantee the inclusion of information into the review document.

**Site visits**

The TWG members were invited to propose suitable pulp and paper plants for site visits in order to improve the general knowledge of the EIPPCB expert and to validate the provided information about techniques and practices. Earlier experiences have shown that site visits are very important to get a broad picture of issues to be dealt with. Some TWG members already indicated possible site visits which are to be discussed in detail later on.

Michael Parth, EIPPCB