Annex A - Comments on the draft PP BREF that are consensual within the forum

Overall Comment No.	Chapter / section No.				BATC #	Page # (pdf of July'13 Final Draft)	Comment description	Rationale	Proposal for modification
1					**-**	-	General comment: The structure of the document is useful to give guidance on BAT in the sector, all main processes are covered, available data is presented in the present consumption and emission chapters.		
2	3	1	12	1	**-**	208	Spelling of the name Kalle Pelin (not Kalle Pellin).	Spelling mistake	Spelling 'Kalle Pelin' in two positions on page 208.
3	4	2	2	5	**-**	412	Figure 4.32, 4.34, 4.35 and 4.37 (pages 412-415) presents various emissions to air from recovery boilers.	Issue related to BAT 37. Borregaard should not be included in these figures from the very beginning since Borregaard do not operate any recovery boilers.	Delete Borregaard from Figure 4.32, 4.34, 4.35 and 4.37.
4	4	3	21		**-**	471	Description: The chemicals used in the cooking plant appear in the flue-gas in the form of light MgO ash and the sulphur as SO2. These two chemicals form fresh cooking liquor when brought together in a counterflow multistage scrubber.	Editorial. The explanation in the second paragraph is technically incomplete. There is one step missing, as the MgO is first reacted to MgOH in a scrubber, then the MgOH slurry reacts with SO2 to form fresh cooking liquor in another scrubber.	Replace the quoted section with: *"The chemicals used in the cooking plant appear in the flue-gas in the form of light MgO ash and the sulphur as SO2. The MgO is recovered in a wet scrubber to a slurry of MgOH, which reacts with the SO2 to form fresh cooking liquor in another scrubber."*
5	4	3	21		**-**	472	Achieved environmental benefits: "The chemical recovery (in the case of the magnesium sulphite process) reduces simultaneously the dust emissions nearly completely and the initially very SO2-rich exhaust gas is cleaned to levels of around 20–100 mg SO2/Nm3 during 'normal operating conditions'." This incorrect value range is also referred in paragraph “Operational Data” at the end of page 473.	Issue related to BAT 37. It is not correct that the level that can be achieved with this technique is 20-100 mg SO2/Nm3. Even with a 6-stage venturi plant a value below 100 mg SO2/Nm3 is even with modern equipment almost unachievable (although there are some examples in the chapter which are no typical sulfite processes).	The range referred to as typical level to be achieved with the described technique should be corrected to 100-300 mg SO2/Nm3, both on page 472 and 473, which will then also be consistent with the BAT-AEL level in BAT 37, Table 8.15.
6	5	2	2	7	**-**	521	In the header of table 5.17 concerning heat is said "Indicative energy consumption level for gross process heat in kWhth/t". Footnote 3 runs "Figures do not consider the use of recovered secondary energy, such as recovered steam from TMP refiners." Further down on the same page is said as a comment: "(4) Values for specific energy consumption (SEC) relate to net process heat demand, i.e. the heat input is reduced by the recovered and reused heat (mainly relevant for TMP and CTMP refiners." The footnote and the comment seems to be contradictory to the heading where it is said that the figures relates to "gross" process heat.	It is clearly expressed in footnote 3 and comment 4 that recovered energy is not included in the levels for heat consumption. This is logical. The recovered heat origins from use of electricity at the plant. If this recovered heat is included in the level of heat consumption the same energy would be counted twice. In data the figures origin from are, as we can understand, not recovered energy included. The levels are also to the greater part the same as in BREF 2001 where it is obvious that recovered energy is not included, i.e. the levels refer to "net" consumption.	The header should be changed to: *"Indicative energy consumption level for net process heat in kWhth/t"*
7	5	2	2	7	**-**	521	Table 5.17 "Wood-containing SC paper", process heat: "1000-2000" kWh/t. Corresponding values in Draft 2, May 2012, Table 8.23, was "300-1700" kWh/t.	As an argument for the raising of levels has been said that the levels in the present BREF refers to "gross heat", while in the old BREF the levels referred to "net heat". As can be read in our comment nr 2 this is with our judgement not correct. Therefore, this is not a reason to raise the levels. The data in BATIS and data presented in the BREF seems to be in line with the earlier lower values. No new data has been presented. Furthermore, the levels are exactly the same as set in BREF 2001 (p. ix).	The levels should be changed back to what was earlier set. In Table 5.17 the heat value for "Wood-containing SC paper" should be "300-1700" kWhth/t.
8	5	2	2	7	**-**	521	Table 5.17 "Wood-containing newsprint (50% mechanical pulp)", process heat: "1000-2000" kWh/t. Corresponding values in Draft 2, May 2012, Table 8.23, are "400-900" kWh/t.	As an argument for the raising of levels has been said that the levels in the present BREF refers to "gross heat" to compare with the old BREF where the levels refer to "net heat". As can be read in our comment nr 2 this is in our opinion not correct. Therefore, this is no reason to raise the levels. The data in BATIS and data presented in the BREF seems to be in line with the earlier lower values. No new data has been presented. Furthermore, the levels are already somewhat higher than what was set in BREF 2001, 0-800 kWh/t (p. ix).	The levels should be changed back to what was earlier set. In Table 5.17 the heat value for "Wood-containing newsprint (>50%) mechanical pulp" should be "400-900 kWhth/t".
9	7	2	1		**-**	683	Table 7.4 with consumption and emission levels for typical tissue mill. Water vapour emission (evaporated water) has been evaluated to 1 m3/t of paper.	Unfortunately such low consumption value is not typical, and the values need to be rectified in order to consider the variety of processes and process conditions that could occur in tissue production. Experience at one plant on evaporated water for conventional tissue paper is between 1.5 and 3 m3/t, whereas for TAD paper machine could reach also 8 m3/t. The difference is relevant especially for tissue mills with low or very low water consumption (below 10 m3/t). The technical explanation is simple. The drying section of the paper machine normally evaporates around 1 m3/t, but due to the very little weight of the tissue paper, any other source of evaporated water (vacuum pumps, building extractions, dust removal fans, wet-end water mist extraction, waste water treatments and so on), removes relevant amount of water if compares with the scarce production of a tissue machine. What is presented in the BREF-PP document on page 683 could be a problem for tissue mills since many national authorities in the past asked for an explanation of this phenomena (with reference to the BREF-PP document), having in mind that part of the waste water stream was hide or not well measured. The value could also be also a problem for the calculation of the specific COD load. Water vapour 1-8 m3/t (Footnote: The upper end of the range refers to tissue mills using through-air drying (TAD)).	Modify the value for water vapour in Table 7.4 from 1 m3/t to "1-3 m3/t (up to 8 m3/t for TAD machine)". Add at the end of the footnote NB the following text: "Data for water vapour flow provided by Assocarta".

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10	8				-	781	Definitions and acronyms. Biofuels is defined as: Renewable fuels originating from plants, including those obtained as byproducts of the pulping process (non-condensable gases, methanol, turpentine).	Avoid using terms defined in other pieces of EU legislation. No need for separate definition as the term is only used twice in footnotes.	Delete the definition of Biofuels in BAT conclusions and modify footnotes (1) and (2) in Table 8.8 as follows: *"(1) When using liquid fuels originating from vegetable matter (e.g. turpentine, methanol, tall-oil), including those obtained as by-products of the pulping process, emission levels up to 350 mg/Nm3 may occur (corresponding to 0.35 kg NO2/Adt), based on a gas flow of 1000 Nm3/ADt. (2) When using gaseous fuels originating from vegetable matter (e.g. non-condensable gases), including those obtained as by-products of the pulping process, emission levels up to 450 mg/Nm3 may occur (corresponding to 0.45 kg NO2/Adt), based on a gas flow of 1000 Nm3/ADt."*
11	8				-	782	In the section "Definitions and acronyms" a definition of "Residual weak gases" has been introduced. The definition is to be read together with the BAT-AEL for "total reduced sulphur (TRS) in residual weak gases" that is set in BAT 20, chapter 8.2.2.1, page 797.	The consequence of the present definition is that weak gases, that indeed are collected, but treated in a cleaning device with a low degree of purification (e.g. a scrubber with approximately 50% degree of purification) will not be included in the BAT-AEL, and not in any other BAT-AEL either. As a matter of fact it would be enough to just collect weak gases and emit them without any cleaning device at all, to get this emission out of appliance to any BAT-AEL. The wording "or by passed" is not appropriate since "by-passing" ought to be classified as OTNOC.	Correct the definition of residual weak gases to read: *"Weak gases that are emitted in ways other than through a recovery boiler, a lime kiln or a TRS-burner".*
12	8				-	782	The definitions of total-N and total-P have been changed since the TWG meeting. Finland would propose the following wording for clarification	The proposed definitions can be misunderstood since the expression "the sum of" is used in the definitions. It would be much clearer to just say what total N and P includes. In the EIPPCB assessment of the TWG comments in June the proposed formulation has been justified with consistency with the current draft of the monitoring REF. Since this document is still under revision, there is no reason not to have a clearer definition. Total N (Tot-N) given as N includes organic N, ammonium (NH4-N), nitrate (NO3- nitrogen) and nitrite (NO2) –nitrogen. Total phosphorus (Tot-P) given as P includes dissolved phosphorus plus any insoluble phosphorus carried over into the effluent in the form of precipitates or within microbes.	Modify the definition of Total nitrogen (Tot-N) as follows: "*Total nitrogen (Tot-N) given as N includes organic nitrogen, free ammonia and ammonium (NH4+-N), nitrites (NO2--N) and nitrates (NO3--N)* ". Modify the definition of Total phosphorus (Tot-P) as follows: *"Total phosphorus (Tot-P) given as P includes dissolved phosphorus plus any insoluble phosphorus carried over into the effluent in the form of precipitates or within microbes".*
13					-	847	In the section "Chemical formulae commonly used in this document" the substance Na2S2O3 is listed twice, with different names.	Formula correction.	Change the chemical formula of sodium dithionite to Na2S2O4.
14					-	861	Chemical pulp definition, sulphite pulp (number 2.3) Sulphite: pulp produced by cooking wood chips in a pressure vessel in the presence of bisulphite liquor. End-uses range from newsprint, printing and writing papers, tissue and sanitary papers. Sulphite can be either bleached or unbleached. CEPI Harmonised Code is 922 200 000.	Correction. The CEPI pulp and paper grade definitions is not in line with the more detailed description in the BREF-PP document Section 4.1.1 and also partly wrong (as newsprint is not a typical application for sulphite pulp).	"Sulphite: pulp produced by cooking wood chips in a pressure vessel in the presence of bisulphite liquor. End uses range from printing and writing papers, tissue, sanitary papers, textiles and various chemicals (cellulose derivatives)."