

Annex B - Comments on the draft TAN BREF representing the view of certain members of the forum

Comment No.	Comments from (Forum Member)	Chapter No. / section No. (if available)						Chapter title	Page # (pdf version)	BAT #	Comment description	Rationale	Proposed amendment
1	Germany							General		General comment: We appreciate the efforts made at the final TWG meeting to develop BAT conclusions. In some aspects significant improvements have been achieved. However, we still believe that relevant parts of our comments delivered have been rejected without a satisfying rationale. This includes e.g. our request to reintroduce a section on Substitution of Chemicals in Chapter 5 (which currently is only referred to in Section 5.4.4 'Other reduction of emissions to water') or the need to provide an additional draft which includes a request of the EIPPCB to gather emission data by use of a further questionnaire. (see rationale)	We addressed the substitution of chemicals during the final TWG meeting as discussion item. However, no consensus could be reached within the TWG as the BREF did not contain sufficient evidence (mainly because the item was not given enough relevance). Furthermore we commented several times on chapter 4 that site specific data is missing and that the information given in chapter 4 is sometimes unsatisfactory to derive BAT conclusions of good quality, i.e. sufficiently qualified and complete. We think that mainly this lack of site-specific data including contextual information together with shortcomings in the descriptions of techniques to consider in the determination of BAT affects in some aspects the quality of the BREF and the BAT conclusions in a negative way.		
2	Denmark							General		We welcome EIPPCB focus in addressing BAT conclusions that only specify specific technologies be used without a conversion into an achievable emission limit value. The attempt to elaborate these BAT conclusions with specific emission limit values are fully recognized, as it is not possible under IED to require that a particular technology be used; only that specific emission limit values to be complied. If a BAT conclusion only holds a list of possible techniques to be applied then the BREFs will actually define which processes that the industry need to use. This is of course not the intent of the documents.		A suggestion to make it more apparent that the techniques listed are not prescriptive could be to add "for instance" at each BAT conclusion holding such a list. Thus the text will read: "...., BAT is for instance to use one or a combination of the following techniques:"	
3	Austria	4	9						187	The sentence " <i>In many cases the environmental performance which is achieved is designed to meet permit conditions which have been specified in order to achieve compliance with environmental quality standards, and may go beyond what is BAT</i> " implies that the data given in table 4.14 and 4.15 are beyond BAT. This is not the case as those data were used to derive BAT-AELs, which are derived from operational data of BAT. Therefore this sentence shall be deleted as we have already commented for several times.	Enhance clarity, unambiguousness and usability of the BREF	The sentence " <i>In many cases the environmental performance which is achieved is designed to meet permit conditions which have been specified in order to achieve compliance with environmental quality standards, and may go beyond what is BAT.</i> " shall be deleted.	
4	Germany	4	9						187	The following sentence is not correct and leaves room for misinterpretation: "In many cases the environmental performance which is achieved is designed to meet permit conditions which have been specified in order to achieve compliance with environmental quality standards, and may go beyond what is BAT." It could imply that the data given in table 4.14 and 4.15 are beyond BAT. This is not the case as those data were used to derive BAT-AELs. Therefore we would suggest deleting the sentence.	Clarification. Presentation of precise and correct information. See comment description	Please delete the following sentence: "In many cases the environmental performance which is achieved is designed to meet permit conditions which have been specified in order to achieve compliance with environmental quality standards, and may go beyond what is BAT."	
5	UK	4	12						207	Figure 4.5 Energy use in tanning The value of this figure is questioned as it shows considerable variability, and as detailed in Michele Canova's e-mail of 18 April 2012, much of this variability may be due to the inconsistent basis of the data (rather than only variable energy usage to achieve the same quantity and type of processing).	The United Kingdom does not agree the figure should be retained just because there is a BAT conclusion on the issue, particularly as the data in the Figure does not support the BAT conclusion.	It may therefore be appropriate to remove the figure from the BREF document.	
6	Denmark	5							218	The para about techniques listed being non-prescriptive at the bottom of page 218 should be moved up before the section defining the scope.	It is not possible under IED to require that a particular technology be used; only that specific emission limit values to be complied. A list of possible techniques to be applied can be misinterpreted as a definition on which processes that the industry need to use. This is not the intent of the documents. Therefore it is important for this paragraph to be highly visible.	Move the para about techniques listed being non-prescriptive above the Scope heading (under the heading <i>BAT conclusions</i>): " <i>The techniques listed and described in these BAT conclusions are neither prescriptive nor exhaustive. Other techniques may be used that ensure at least an equivalent level of environmental protection.</i> "	
7	Bulgaria	5							219		It is necessary the definition to be consistent with the character and ability to respond to normal investment process.	We propose at the end of definition of a new plant to be added "or a plant <i>which construction has begun</i> before the publication of these BAT conclusions".	
8	Austria	5	1						222	2	We appreciate the introduction of the section on Good Housekeeping (5.1.2) into the BAT Conclusions Chapter. However, we think that some points of good water management practice are still underexposed in the BREF, since tanneries can have a significant impact on the water environment. There exist some more techniques of good housekeeping referring to water management that are missing in BAT#2 and should be added.	this important information on good housekeeping for waste water management has also been agreed in COMMISSION IMPLEMENTING DECISION of 28 February 2012 establishing the best available techniques (BAT) conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for iron and steel production, 1.1.6. Water and waste water management	Add following technique to the principles of good housekeeping, especially referring to good water management practice, as point ix (after: viii. review of options for the reuse of process/washing water): "prevent, collect and separate waste water types, maximising internal recycling and using an adequate treatment for each final flow;" Therefore point ix (review of waste disposal options) becomes point x.
9	Austria	5	2						223	3	Section 5.2 gives the provisions for monitoring of emission and/or other relevant process parameters on a regular basis (parameter, frequency, applicability). There is no information on analytical methods to be used, which, in our opinion, will result in lack of comparability of monitoring results.	Important information on analytical methods and standards to be included. The way to provide this information has been agreed, for example, in the COMMISSION IMPLEMENTING DECISION of 28 February 2012 establishing the best available techniques (BAT) conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for iron and steel production, 1.1.7 Monitoring. Clarity and consistency of BAT Conclusions.	Please, add information on monitoring standards to be used. Add the following sentence under the table: "Monitoring should be done according to the relevant EN or ISO standards. If EN or ISO standards are not available, national or other international standards should be used that ensure the provision of data of an equivalent scientific quality."

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10	Germany	5	2					223	3	In our opinion all BAT AELs included in chapter 5 shall be given including the monitoring standards to be used. We would suggest to add a clarification either under BAT #3 or at the beginning of the BAT conclusions at an appropriate place.	Clarification. In order to present unambiguous BATs, BAT conclusions on emissions and especially those with BAT-AELs need a statement concerning the methods of analysis used. A reference to standard methods or equivalent national standards are a prerequisite for clear BAT statements.	Please add the following sentence: "BAT-AELs given in these BAT conclusions refer to the monitoring of emissions carried out in accordance with EN or ISO standards or other national/international standards that ensure the provision of data of an equivalent scientific quality."	
11	Denmark	5	2					223	3	At the time of the final meeting the faith of the monitoring BREF were not known. Even the author of the monitoring BREF were unable to shed some light on what to expect at the time of the final meeting. Now the BREF on Monitoring is transformed to a JRC-reference guideline, which have no legal status in the member countries. Therefore, Denmark wish to stress that BAT conclusion on Monitoring should be elaborated in each BREF document.	Denmark wish to stress that since the BREF on Monitoring is transformed to a JRC-reference guideline, which has no legal status in the member countries, then BAT conclusion on Monitoring should be elaborated in each BREF document.	Denmark suggest the following text added under Definitions: Monitoring of emissions: BAT-AELs given in these BAT conclusions refer to the monitoring of emissions carried out in accordance with EN or, if CEN standards are not available, ISO, national or other international standards which ensure the provision of data of an equivalent scientific quality.	
12	Bulgaria	5	2					223	3			The applicability of the BAT conclusion 3.b should refer only to the main materials, auxiliary substances and mixtures which are crucial for the production process and such with hazardous characteristics.	
13	UK	5	2					223	3	indirect discharge The description of the monitoring point in BAT Conclusion 3.(c) for chromium has been changed to require monitoring after chromium precipitation for "indirect discharges", and for "direct discharges" the monitoring point is after all other effluent treatment. - Major comment	BAT-AELs should not be set for indirect discharges. Additionally, the different monitoring points specified will result in incomparable results as further removal of chromium will occur during biological treatment which one monitoring regime includes and the other excludes. The United Kingdom does not accept the conclusions of the final meeting on either of these points.	Removal of references to indirect discharges	
14	UK	5	2					223	3	Monitoring of chemical oxygen demand (COD), biochemical oxygen demand (BOD) and ammoniacal nitrogen after on-site or off-site effluent treatment for direct discharges to receiving water, by using flow-proportional 24-hour composite samples. The use of 24 hour composite samples has been inserted as a requirement at several points in the table of BAT Conclusion 3. In general for waste water streams from Annex 1 activities the UK would support this, however the use of 24 hour composite samples for the waste water from a batch operated process which lasts more than 24 hours is not appropriate. - Major comment	Unless the tannery is in continuous production there will be a variation in the effluent over a production cycle. The effluent streams from the early stages of production will predominate in the first 24 hours, and those from finishing during the last 24 hours. Depending on production patterns a sample from a single day may be unrepresentative. The United Kingdom does not accept the conclusions of the final meeting on either of these points.	It would therefore be appropriate to amend the wording (and include this wording for other sampling requirements in BAT 27) to read 'by using flow proportional 24-hour composite samples for continuously operated processes, or flow proportional composite samples collected over the duration of a batch'.	
15	Bulgaria	5	2					223	3	BAT conclusion 3.c requires monitoring of the total chromium concentration on a weekly or montly base.		It is necessary to be specified where the monitoring frequency is based on weekly and where on monthly basis.	
16	Germany	5	2					223	3	The proposed frequency of measurements in BAT #3c and #3d may possibly be sufficient for those installations that run the processes in an optimized manner having implemented BATs in all processes. In general we would suggest a frequency of measurement of 1 or 2 times a week for BAT #3d and of 2 times a week for BAT #3c.	To avoid peak emissions and guarantee continuously high performing treatment plants a sufficient number of measurements is necessary. Without measurements, operators are not aware when the operating conditions move away from the designed conditions. Knowledge by measurement results allow the operator for reacting quickly and avoid period of times of higher pollution.	see comment	
17	Germany	5	2					224	3	The monitoring frequency specified by "on a regular basis" is ambiguous and may lead to completely different monitoring practice in Europe. Regular measurement could mean once a week, once a month, once a year. The term is used for BAT #3e, #3i, #3k, #3l	Avoidance of completely different monitoring practice in Europe	Please specify the monitoring frequency	
18	Germany	5	2					224	3	The monitoring frequency specified by "periodically" without mentioning the frequency and type of measurement is unspecific. Term is used for BAT # 3h.	clarification	Please specify the monitoring frequency (e.g. "Three spot samples of at least 30 minutes each during normal operating conditions including the time of the highest expected emissions. A measurement frequency of once a year up to once every 3 years is given as an indication.")	
19	Bulgaria	5	2					224	3	BAT conclusion 3.i requires monitoring of the technological parameters of the treatment facility.	Such a requirement could be part of the EMS but not a BAT conclusion.	BAT 3.i should be dropped because it is not directly related to emissions but it is requirement for monitoring of the technological parameters of the treatment facility.	
20	Germany	5	2					224	3	We do not understand the meaning of BAT#3 j. What is the purpose of capture efficiency related to the removal of particulate matter (BAT#20) or other emissions? As the BAT-AELs of BAT#20 include suficient monitoring provisions for air emissions we don't see the additional benefit of BAT #3 j.	see comment description	Please delete BAT#3j	
21	Bulgaria	5	3					225		The BAT consumption levels are expressed as a ratio to different units - the values for water and energy consumption are expressed as ratio to tonne of raw hide - in one case even to one piece of raw hide. BAT-AEL for the emissions to water are attributed to 1 liter (given as monthly averages), while those to the atmosphere - to 1 square meter leather (finished product).	Our proposal aims to facilitate the assessment of implementation of BAT for individual instalations.	We propose all the specific BAT consumption and emision levels to be recalculated to refer to the same indicator – a tone of raw hide.	

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22	Bulgaria	5	3					226			Our proposal aims to facilitate the assessment of implementation of BAT for individual instalations.	The specific BAT consumption levels of water for the processing of sheepskins to be recalculated to refer to a tone of raw hide.	
23	UK	5	3					225	4	selected text "Applicability is also limited to both new and existing processing vessels that allow the use of, or can be modified to use, short floats". The UK is concerned that the rewording of the applicability of BAT conclusions 4(a), 5(a) and 6(a) has removed the requirement for new plants or processing vessels to be designed for use with short floats.	The principle is the same as the two comments above. New equipment can be designed to use short floats. The re-worded text is better, in that an anomaly has been removed. It does not however make it clear that the introduction of this technique should always be considered when new processing vessels are to be installed.	Applicability is also limited to: new tanneries, those installing new processing vessels, and tanneries in which the existing vessels allow the use of, or can be modified to use, short floats	
24	UK	5	4					227	5	selected text "Applicability is also limited to both new and existing processing vessels that allow the use of, or can be modified to use, short floats". The UK is concerned that the rewording of the applicability of BAT conclusions 4(a), 5(a) and 6(a) has removed the requirement for new plants or processing vessels to be designed for use with short floats.	The principle is the same as the comment above. New equipment can be designed to use short floats. The re-worded text is better, in that an anomaly has been removed. It does not however make it clear that the introduction of this technique should always be considered when new processing vessels are to be installed.	Applicability is also limited to: new tanneries, those installing new processing vessels, and tanneries in which the existing vessels allow the use of, or can be modified to use, short floats	
25	UK	5	4					229	6	selected text "Applicability is also limited to both new and existing processing vessels that allow the use of, or can be modified to use, short floats". The UK is concerned that the rewording of the applicability of BAT conclusions 4(a), 5(a) and 6(a) has removed the requirement for new plants or processing vessels to be designed for use with short floats.	The principle is the same as the two comments above. New equipment can be designed to use short floats. The re-worded text is better, in that an anomaly has been removed. It does not however make it clear that the introduction of this technique should always be considered when new processing vessels are to be installed.	Applicability is also limited to: new tanneries, those installing new processing vessels, and tanneries in which the existing vessels allow the use of, or can be modified to use, short floats	
26	UK	5	4					230	7	selected text "Applicability is also limited to both new and existing processing vessels that allow the use of, or can be modified to use, short floats". The UK is concerned that the rewording of the applicability of BAT conclusions 4(a), 5(a) and 6(a) has removed the requirement for new plants or processing vessels to be designed for use with short floats.	The principle is the same as the three comments above. New equipment can be designed to use short floats. The re-worded text is better, in that an anomaly has been removed. It does not however make it clear that the introduction of this technique should always be considered when new processing vessels are to be installed.	Applicability is also limited to: new tanneries, those installing new processing vessels, and tanneries in which the existing vessels allow the use of, or can be modified to use, short floats	
27	UK	5	4					231	5, 6, 7	It is noted that Tables 5.3 and 5.4 have been deleted and the data were to be relocated to chapters 3 and 4. In the final draft the information has not been placed in chapter 4. Supporting information which was in chapter 4 has also been removed. The UK does not agree with these changes as the performance levels shown in these tables provided a basis for equivalent parameters to be set in permits, as provided by Article 14(2). It is not possible to describe the efficacy of the primary measures listed in BAT conclusion 5 in quantitative terms without such a performance standard. It may be particularly necessary to set equivalent parameters for the primary measures for the tanning of hides and skins since the waste water treatment processes utilised in the industry are so varied. Omission of this information from the BAT conclusions compromises the expression of emission levels associated with BAT for primary measures at the point at which emissions leave the installation. - Major comment	It is not possible to describe the efficacy of the primary measures listed in BAT conclusion 5 in quantitative terms without such a performance standard. It may be particularly necessary to set equivalent parameters for the primary measures for the tanning of hides and skins since the waste water treatment processes utilised in the industry are so varied. The United Kingdom disagrees with the decision of the final meeting to remove Tables 5.3 and 5.4 expressed as performance standards.	Restore table 5.3	
28	UK	5	4					231	5, 6, 7	It is noted that Tables 5.3 and 5.4 have been deleted and the data were to be relocated to chapters 3 and 4 (conclusions slide 34). In the final draft the information has not been placed in chapter 4. Supporting information which was in chapter 4 has also been removed. The UK does not agree with these changes as the performance levels shown in these tables provided a basis for equivalent parameters to be set in permits, as provided by Article 14(2). It is not possible to describe the efficacy of the primary measures listed in BAT conclusion 5 in quantitative terms without such a performance standard. It may be particularly necessary to set equivalent parameters for the primary measures for the tanning of hides and skins since the waste water treatment processes utilised in the industry are so varied. Omission of this information from the BAT conclusions compromises the expression of emission levels associated with BAT for primary measures at the point at which emissions leave the installation. - Major comment	It is not possible to describe the efficacy of the primary measures listed in BAT conclusion 5 in quantitative terms without such a performance standard. It may be particularly necessary to set equivalent parameters for the primary measures for the tanning of hides and skins since the waste water treatment processes utilised in the industry are so varied. The United Kingdom disagrees with the decision of the final meeting to remove Tables 5.3 and 5.4 expressed as performance standards.	Restore table 5.4	
29	Germany	5	4					232	8	As in our understanding the aim of this BAT is to prevent emissions from pesticides of high concern and which are subject to different legislation, therefore we would suggest to put the description in a more general way. Concerning the BAT conclusion it was agreed at the final TWG meeting that the description will be formulated for the final revision on the basis of the content of the directives on the matter. In our opinion the present text doesnt reflect all relevant EU legislation on the matter.	The European Commission strives to minimize substances of very high concern posing long term risk to human health and the environment following a systematic and continuous approach of identifying and substituting these substances. This process takes place under different legislative frameworks (inter alia: water legislation and chemicals legislation). The lists of substances of very high concern with minimization objectives are continuously revised due to progressing scientific knowledge. Therefore it is necessary to refer to this process in general and to the criteria, which define substances of very high concern.	Please replace the selected text by the following text: "The technique consists in specifying supply contracts for materials free from pesticides which are of high concern. Pesticides used should neither be classified as carcinogen, mutagen or reprotoxic according to the European regulation on classification and labeling (EC/1272/2008) nor should they fulfill the criteria of substances of very high concern determined in Annex XIII EC/1907/2006 (REACH). Relevant pesticides are listed in:".....	
30	Germany	5	4					232	8	We would suggest to clarify that pesticides of high concern are addressed in BAT 8.	Clarification	Please replace "specific pesticides" in BAT 8 by "pesticides of high concern"	

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31	Denmark	5	5					233	10	The wording can cause confusion, and leave the reader to believe that the industrial site must have a biological treatment plant.	The text: "The combination of techniques can be implemented in 2 or 3 stages." This could be misinterpreted by the permit writer that the industry should have a biological wastewater treatment plant.	Suggestion to change the wording under description: "The techniques can be combined in 2 or 3 steps on-site or off-site the tannery."	
32	Denmark	5	5					233	10	At the final meeting a new concept for establishing BAT AELs for wastewater were outlined, segregating the flows in direct to recipients, as direct, and flows to other destinations were named indirect flows. Denmark wishes to stress that the technical performance of a treatment plant is not dependent on the destination of the effluent. Denmark believes that the discussions on this issue, also taking place in the negotiations of other BREFs, is time consuming and delays the process considerable, due to the attempts to fit the indirect flows to specific conditions at each member state. Focus should be on the performance of specific techniques. Dealing with the economic should reveal if the attempt to set stricter values are extra burdensome for the industry.	Denmark will put emphasis on an differentiation between BAT AELs on wastewater following the techniques used, and the origine process of the influent, and hopes for the willingness to achieve a solution on this challenge during the coming negotiations on other BREFs with both EIPPCB, Member States, Industry and NGOs, so that the intent in IED (preamp 4), that legislation relating to industrial installations should be simplified and clarified and that unnecessary administrative should be reduced, is met to a greater extend.	BAT AELs should be defined for both physico-chemical treatment and for biological treatment. And it should be clear what wastestreams to apply them for. It should also be clear when wastestreams can be mixed to avoid mixing that are merely dilution of the pollutant. Please see comment no. 11, 12, 13 and 14	
33	Denmark	5	5					233	10	The wording 'direct' and 'indirect' is not defined anywhere in the text, thus the meaning of BAT 10 and BAT 12 can cause confusion.	Denmark suggest to avoid the words and instead focus on the two rationales: 1. All wastewater discharges from tanneries should be subject to pretreatment before mixing with other effluents due to the content of chromium and sulfide and should following be able to hold BAT AELs in BAT 12. 2. all wastewaters discharged to natural recieving waterbodies should be able to hold BAT AELs in BAT 10.	Add the following text to description in BAT 10: "The techniques should not necessarily be applied at the industrial site if it can be proved that appropriate measures are applied (by other parties) before discharge to recieving water bodies."	
34	UK	5	5			d		234	10	Biological nitrogen elimination With regard the DE example plant that oxidises sulphides to sulphates under anoxic conditions during denitrification to prevent H2S emissions, H2S will preferentially oxidise to H2SO4 during the nitrification stage (before the ammoniacal nitrogen is oxidised to nitrates), and this is enhanced by a slightly alkaline environment. However, how oxidising sulphides to sulphates can be achieved under reducing conditions (during denitrification) without the use of a sulphide scavenger is unclear. The prevention of H2S emissions from a batch process will be particularly important when the aeration system is restarted for the nitrification stage as any H2S in the sludge blanket could be blown off. Additionally, although nitrification and denitrification can be undertaken in the same vessel by altering the oxygen levels in the vessel and the nitrifying and denitrifying organisms can survive the alternating conditions, as the process is batchwise, considerable care is required to retain the sludge blanket in the vessel during decanting of the liquors. - Major comment	The UK has concerns that data from a very limited number of plants for which the details of the processes undertaken are not specified, and therefore could not be replicated by other tanneries, has been cited as BAT. The process, if kept secret, is not therefore 'available'.	Remove Biological Nitrogen Elimination as a BAT until information is provided which makes the technique available.	
35	Denmark	5	5					234	10	Guidelines on how to determine the BAT AELs for mixed flows by a weighing principle between flows, also described in IED for air emissions, were discussed during the final TWG and the subsequent discussion. The discussion and the reluctance by EIPPCB have left some confusion.	There is no clarification on how to determine BAT AELS for mixed flows, much needed by the permit writer.	Denmark wishes to have a clarification on how weighing between flows should be carried out, if not by the principle described in IED, and therefore suggest this to be discussed by the forum. That this issue will be clarified should somehow be reflected in the text of the BREF TAN. As a consequence we propose the following clarification in table 5.3 for Chromium: "The BAT-AELs for chromium for the total effluent shall be calculated using the mixing ratio (calculated back to wastewater from tanning, including samming and from post-tanning operations (neutralizing, retanning,dyeing, fatliquoring) each including rinsing). The calculation shall apply to the whole effluent of a tannery when effluents from tanneries carrying out chromium tanning and/or re-tanning are mixed with chromium-free effluents".	
36	Denmark	5	5					234	3, 10, 12	BAT conclusions with associated emission levels should be defined as an average of emissions over a given period of time under specified reference conditions. The reference conditions and the averaging period including the number of measurements considered should be unambiguously defined. Furthermore, the used methods of analysis for the determination should be included. The text in the draft BAT conclusions with regard to monitoring is not always sufficiently specified in this respect.	BAT-AELs of BAT 10 and BAT 11 in table 5.3 are expressed as monthly average without additional explanations concerning the frequency of measurement and the methods of analysis used. How many measurements is addequate to derive at the "monthly average" is not specified. Neither is the methods of analysis to use specified when determining the compliance with BAT-AELs. This may lead to non-comparable practices and consequently reported values in Europe.	Denmark suggest to add the frequencies of measurement and methods of analysis or a definition of monthly average and used analysis methods.	

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37	Germany	5	5		234	10, 12	<p>We recommend to add the point of reference of the BAT-AELs concerning BAT 10 and to include a sentence concerning the back calculation of the chromium levels in order to make sure that comparable BAT standards are presented for the different dischargers and that the compliance of the BAT-AELs are also/mainly achieved by mixing polluted waste water streams with unpolluted streams.</p>	<p>Clarification. Back-calculation according to the corresponding mixing ratio is important for waste water treatment plants treating mostly waste water from tanneries under the scope of the IED, as these plants may also receive waste water streams that do not contain any chromium, e.g. from tanneries carrying out vegetable tanning. Not considering this aspect means that the efforts for protection of the environment of a tannery that achieves the chromium BAT-AEL at the final effluent by mixing Cr-containing streams with chromium-free streams would be considered equivalent to a tannery that remove chromium, e.g. by precipitation. In this case, tanneries that have to deal with mainly chromium-containing waste water streams would be discriminated against on account of those companies that mix their chromium-containing waste water streams with water streams not polluted with chromium (they practically achieve the BAT AELs by dilution with unpolluted streams). Example: Joint wwt of effluents from 100 tanneries carrying out chromium tanning only:</p> <ul style="list-style-type: none"> • concentration in raw effluent of every single tannery: 100 mg Cr /l, • total influent to wwtp from the sum of the tanneries considered: 100 mg Cr/l • concentration after treatment: 1 mg Cr/l (reduction of 99%) <p>Joint wwt of effluents from 1 Tannery A carrying out chromium tanning and 99 Tanneries carrying out chromium free tanning</p> <ul style="list-style-type: none"> • 100 m³ from tannery A with concentration of raw effluent of 100 mg Cr /l • 9900 m³ from tanneries carrying out chromium free tanning 0 mg Cr / l • Concentration of total influent: 1 mg Cr / l <p>That means that in special cases the BAT AEL could be achieved by mixing with chromium-free effluents only.</p>	<p>Add the following sentence as a footnote into table 5.3, row "Total chromium (as Cr)" : "BAT-AELs for chromium for the total effluent shall be calculated back according to the mixing ratio. The calculation shall apply when effluents from tanneries carrying out chromium tanning and /or re-tanning are mixed with chromium-free effluents"</p>
38	Denmark	5	5		234	10, 12	<p>BAT conclusion mentions a specific technique to be used and not a BAT AEL. Further it only mentions chromium precipitation and substitution of chromium is an important alternative</p>	<p>It is not possible under IED to require that a particular technology be used; only that specific emission limit values to be complied.</p> <p>Preferably the conclusion should focus on that when wastewaters have high content of Chromium they should be subject to pretreatment before mixing with other effluents rather than prescribing of a specific technique. Further, it is important to mention substitution as an appropriate and valid measure to lower the emissions of chromium.</p> <p>If a BAT conclusion only define a specific technique to be applied then the BREFs will actually define which processes that the industry need to use. This is of course not the intend of the documents. An allowed BAT AEL for chromium is the target.</p>	<p>Change the text in the BAT conclusion to: "All wastewater discharges from tanneries should be subject to pretreatment before mixing with other effluents due to the content of chromium."</p> <p>Under applicability add text: "Not applicable for tanneries where chromium have been substituted, and are no longer in use."</p> <p>(Could be incorporated in BAT 12)</p>
39	Denmark	5	5		234	10, 12	<p>The wording 'direct' and 'indirect' is not defined anywhere in the text, thus the meaning of BAT 10 and BAT 12 are causing confusion.</p>	<p>Denmark suggest to avoid the words and instead focus on the two rationales:</p> <ol style="list-style-type: none"> 1. All wastewater discharges from tanneries should be subject to pretreatment before mixing with other effluents due to the content of chromium and sulfide and should following be able to hold BAT AELs in BAT 12. 2. all wastewaters discharged to receiving water bodies should be able to hold BAT AELs in BAT 10. <p>In BAT 12 a specific technique is mentioned. It is not apparent that this is only meant as an example of techniques to achieve the BAT AELs. If a BAT conclusion only define a specific technique to be applied then the BREFs will actually define which processes that the industry need to use. This is of course not the intend of the documents.</p> <p>It should be possible to include substitution of chromium as an appropriate measure. To achieve the allowed BAT AEL for chromium is the target.</p>	<p>Change the text of BAT 12: Wastewater discharges from tanneries should be subject to pretreatment before mixing with other effluents due to the content of chromium and sulfide.</p> <p>Under description add text: "Chromium can be reduced by for instance chromium precipitation (see BAT 9, technique b) or by substitution".</p>
40	UK	5	5		235	10, 12	<p>indirect discharges The references in BAT conclusion 12 and Table 5.4 to limits for indirect discharges is inappropriate and should be deleted. The setting of BAT-AELs for indirect discharges is inappropriate and should be deleted.- Major comment</p>	<p>With regard setting BAT-AELs for indirect discharges, the second paragraph of Article 15(1) needs to be read as allowing the competent authority to set ELVs that need not be the same as those required by the first paragraph of Article 15(1). It would therefore be inappropriate for the BREF to specify BAT-AELs for indirect discharges as the ELVs need to be site specific to 'take account of the water treatment plant'. The BREF must reflect the Directive's provisions, although of course it cannot interpret them. The United Kingdom considers that the TWG was wrong to consider that all UWWTP are incapable of removing either chromium or sulphides. As written the conclusion is prescriptive and seeks to constrain the permitting authority.</p>	<p>Delete BAT Conclusion 12 and Table 5.4. Each reference to the setting of BAT-AELs for indirect discharges should be removed from the text.</p>

Annex B - Comments on the draft TAN BREF representing the view of certain members of the forum

Comment No.	Comments from (Forum Member)	Chapter No. / section No. (if available)						Chapter title	Page # (pdf version)	BAT #	Comment description	Rationale	Proposed amendment
41	UK	5	5					235	10	It is noted that Table 5.6, which contained performance levels for waste water treatment, has been removed and replaced by Table 5.5 with emission concentrations. An emission level expressed as a concentration in an unspecified quantity of water does not provide a quantitative expression of BAT as it is neither related to the processing of a given quantity of hides or skins, nor standardised to a particular water use rate, and therefore may not be associated with the application of BAT. - Major comment	A performance level expressed in percentage removal may be more appropriately described as an equivalent parameter. It is more flexible than a standard expressed in final concentration and can be applied to all the varieties of waste water treatment processes, particularly when supported by BAT-AELs set as specific mass emission rates. BAT conclusion 3 specifies that BAT is to minimise water consumption. It is therefore inappropriate to provide a disincentive to do so by specifying emission limits in concentrations without any correction for the water use rate. The United Kingdom does not accept the conclusion of the final meeting to remove performance standards and to substitute emission concentrations, particularly when those concentrations are expressed without a reference to a water use rate in the process. The United Kingdom is concerned that this decision will set an inappropriate precedent for future BAT discussions.	Delete the new table and restore the original table containing performance levels for waste water treatment.	
42	UK	5	5					235	11	g (as Cr 3+)per tonne of raw material, The UK disagrees with the deletion of the BAT-AEL in kg/tonne raw hide for chromium removal and replacement with a BAT-AEL in mg/l. The UK is clear that BAT-AELs can, and should where appropriate, be specified as a specific mass emissions rate under Article 3(13) (for example, kg Cr/tonne raw hide), and is concerned that EPPICB and some MSs appear not to recognise this or the value of setting specific mass emissions rate BAT-AELs. The UK does not agree with either the proposed use of BAT-AELs as concentrations, or any proposal which could confuse this further by 'back calculating'. BAT conclusion 3 specifies that BAT is to minimise water consumption. The BAT-AELs in mg/l proposed in Table 5.6 may therefore conflict with this requirement and provide a disincentive to minimise water consumption by specifying emission limits in concentrations without any allowance for a lower water use rate. - Major comment	Chromium precipitation is identified as BAT in the treatment of effluent from tanneries which use chromium compounds in tanning. It is therefore important that the efficacy of the precipitation process is measured properly. A BAT-AEL in kg/tonne raw hide for chromium removal is a standard applicable across the industry, irrespective of the waste water treatment process. The concentration BAT-AEL which has been inserted does not address these issues. An emission level expressed as a concentration in an unspecified amount of water cannot provide a quantitative expression of BAT. An emission level which is neither related to the processing of a given quantity of hides or skins, nor standardised to a particular water use rate cannot be said to be associated with the application of BAT. The United Kingdom does not accept the conclusion of the final meeting to remove performance standards and to substitute emission concentrations, particularly when those concentrations are expressed without a reference to a water use rate in the process. The United Kingdom is concerned that this decision will set an inappropriate precedent for future BAT discussions.	Restore the BAT AEL specified as a mass emissions rate. The re-instatement of the BAT-AEL expressed in terms of a mass related to the quantity of hides or skins processed addresses the problems identified by Brigitte Zietlow in her e-mail of 19 April 2012 concerning 'back calculation according to the mixing ratio'.	
43	UK	5	5					235	11	on-site or off-site BAT conclusion 11 should be amended	The words are superfluous. The UK does not believe that adding words that are accepted by the EIPPCB as redundant are useful in stressing the concept.	Delete the words 'on-site or off-site'	
44	Italy	5	5					235	12	BAT 12 - Applicability Following the discussions undertaken in the Art. 13 Forum meeting, it should be noted that an amendment to the Commission proposal regarding the introduction of the "Applicability" paragraph to BATC 12 is needed, taking into account issues related to the technical management of the plant.	The technical considerations in the "Description" paragraph of the BAT 11 should be reflected also in the BAT 12, concerning the efficiency of both chromium precipitation and sulphide oxidation. As a matter of fact, based on specific chemical-physical conditions, the chromium precipitation and sulphide oxidation better occur in the case of segregated exhausted tanneries streams, because in such streams the concentrations of chromium and/or sulphide is higher.	Applicability to BAT 12: Chromium precipitation is <i>better</i> applicable to on-site and/or off-site treatment of <i>segregated chromium-bearing streams</i> of waste water effluents of tanneries carrying out chromium tanning and/or retanning. Sulphide oxidation is generally applicable. Sulphide oxidation is <i>generally better</i> applicable to on-site and/or off-site treatment of segregated unhairing streams of waste water effluents of tanneries.	
45	Italy	5	5					235	12	BAT 12 - Description Erroneous cross-reference to BAT 9, instead of BAT 10 and unnecessary reference to the chromium precipitation.	Coherently with the descriptions indicated in the BAT 10, technique b (and not in BAT 9) we would suggest to modify the reference accordingly in the paragraph on "Description". We would also recommend to check the other cross-references in the entire document, according to the recent update.	The following modification is suggested: "For chromium precipitation, see BAT 9 10, technique b.	
46	Bulgaria	5	5					236	10, 12	BAT-AEL for the emissions to water are attributed to 1 liter (given as monthly averages).	Our proposal aims to facilitate the assessment of implementation of BAT for individual installations.	All the specific BAT-AELs to be recalculated to refer to the same indicator – a tone of raw hide.	
47	Germany	5	5					236	3, 10, 11, 12	We would recommend to clarify the BAT AELs of BAT #11 and #12 by including information on type and frequency of measurement in table 5.4.	Clarification: BAT-AELs expressed as monthly average without additional explanations concerning frequency of measurement may lead to non-comparable practices and reported values in Europe. This is especially important as BAT-AELs in BAT 11 are not clearly related to BAT 3 on monitoring. We would suggest a frequency of measurement of 1 or 2 times a week.	Add the following clarification as a footnote to table 5.4 related to the BAT-AELs: "The monthly average values are based on a defined number of representative 24 hours composite samples (or shorter sampling periods) taken with a flow-proportionate automatic sampler. The minimum frequency for the measurements of the relevant parameters is once a week"	
48	Denmark	5	5					236	10, 12	The differentiation of the water flows are not adequately described, which encourages the mixing flows for the purpose of dilution.	The BAT AELs for direct and indirect flows were presented on the final TWG meeting, and EIPPCB proposal for BAT AELs were adopted. Denmark were contacted by industry following the final TWG meeting regarding the BAT AEL for sulphide for indirect flow. When consulting the data submitted for EIPPCB for the content of sulphide, then three out of the five measurements from example plants are above 1 and below 2. When further consulting the data it can be seen that the three measurements above 1 are from effluents with separate treatment of sulphide, where as the two plants with effluents below 1 mg/l have mixing of the effluent. In order not to encourage industry to mix flows before measuring or to favour industry with higher water consumption (e.g. tanneries with all processes compared to tanneries producing wet-blue/wet-white) we suggest to have this better described.	Suggestion to add a footnote to the value <1 in table 5.3 and 5.4: "For effluents from separate treatment of sulphide, deriving directly from soaking, liming and deliming, without mixing with other flows, the BAT associated level is up to 2 mg/l."	

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Comment No.	Comments from (Forum Member)	Chapter No. / section No. (if available)						Chapter title	Page # (pdf version)	BAT #	Comment description	Rationale	Proposed amendment
		5	6										
49	Bulgaria	5	6						239	19	The solvent use levels and BAT-AELs for VOC emissions to the atmosphere are attributed to 1 square meter leather (finished product).	Our proposal aims to facilitate the assessment of implementation of BAT for individual instalations.	All the specific BAT consumption levels and AELs to be recalculated to refer to the same indicator – a tone of raw hide.
50	Denmark	5	6						239	19	The upper BAT AELs for "footwear, garment and leathers" and for "Coated leathers" are high.		Could the deriving of these upper levels please be elaborated. How are they derived from the submitted emission data.
51	Bulgaria	5	6						239	20	The specific BAT-AELs for particular matter are expressed as a ratio to 1 normal m3 of exhausted air	Our proposal aims to facilitate the assessment of implementation of BAT for individual installations.	The specific BAT-AELs of particular matter to be recalculated to refer to the same indicator – a tone of raw hide.
52	Denmark	5					List of reference		242		References in BAT conclusions to previous chapters have been deleted. Example: In BAT 10 table row b the description of the techniques is "sulphide oxidation and/or precipitation, .." One of the techniques poses serious difficulties that a permit writer should have into consideration. This is described only in chapter 4.9.2:"Sulphide oxidation results in the formation of sulphate. The release of sulphate into the sewers may need to be limited because of the damage sulphates can cause to concrete sewers. ... Under anaerobic conditions, sulphates may revert to sulphides." Given the extent of the BREF this information can be difficult to find, the permit writer is forced to go through and search the whole document.	Many of the newly defined BAT conclusions are imprecise for permit writers and thus cannot be directly implementet as reference for setting the permit conditions.	We acknowledge that BAT conclusions cannot have references, since the BAT conclusion shall be the reference for setting the permit conditions. Denmark propose to add a list of references from the BAT conclusions to the previous, relevant chapters.