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A Driver for Environmental Performance in Industry”
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Influence on smaller installations

illustrated by the Tanneries BREF and the
addressing of horizontal issues across
industry sectors in the Storage BREF

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1 Smaller installations; the Tanneries BREF

1.1 Contents of the Tanneries BREF

The BREF on Tanneries is at the moment in process; the first draft was sent out to TWG members last year, and about 600 comments came back. At this moment the second - and probably last - draft is in process; this means adding new information and amending the text due to the comments, where necessary or sensible.

The first draft was quite thin and contains rather general, mostly descriptive, information. Specific information or data are missing. The data in this BREF concerning emission and consumption levels are averages, not from one specific reference tannery, but averages representing several tanneries. The only categorisations made are whether the tanneries process cattle hides - sheep skins - or goat skins, and whether they perform chrome-tanning or vegetable tanning. There is no relation with production capacity. The average data represent small and big tanneries and thereby represent the whole tanning industry and not only the tanneries, which big enough to fall under the IPPC Directive. The best available techniques, to be defined in chapter 5, will mainly be based on expert opinion, rather than on data, due to the fact that data are only averages and that the data about costs are missing almost completely.

Despite the fact that detailed information is missing, the information that can be found in this BREF is a good description of the whole tanning process from the beginning through to the end together with a description of the main chemicals used and their impact on the environment.

The BAT to be defined will not only be process techniques but also possible substitutes for the main chemicals used that have an important impact on the environment. Also waste- and wastewater management will get a place in this document.

1.2 Why is detailed information missing?

There must be a reason why detailed information from those tanneries that meet the threshold is not made available for inclusion in this BREF. And perhaps there are more reasons but only two will be mentioned.

1.2.1 *The threshold in the IPPC Directive*

The threshold mentioned in Annex I of the IPPC Directive, concerning the tanning installations is not clear:

"6.3. Plants for the tanning of hides and skins where the treatment capacity exceeds 12 tonnes of finished products per day."

And the following comparison will explain which strange effect this threshold has in practice.

- Tannery A produces shoe upper leather out of raw cattle hides in a chrome tanning process. Typically 200 kg leather is produced out of 1 tonne raw salted hides.
- Tannery B produces shoe soles out of raw cattle hides in a vegetable tanning process. Typically 650 kg leather is produced out of 1 tonne raw salted hides.
- Tannery C produces wet-blue out of raw cattle hides. Typically 850 kg wet-blue is produced out of 1 tonne raw salted hides.

To meet the threshold of 12 tonnes finished products per day, tannery A needs to process 60 tonnes raw hides, where tannery B needs to process 18.5 tonnes of raw hides and tannery C only 14 tonnes. The figures are calculated from [FAO, 1992] and [ICT, 1969].

This is because for tannery A "finished products" means cattle hide turned into leather with a product water content of about 8% and usually coated, where for tannery B "finished products" consists of leather, which is made very heavy and contains about 40% vegetable tannins. Tannery C's "finished products" is soaking wet, chrome tanned leather, which is going to be dyed, dried and probably coated elsewhere.

It might be clear out of these examples, that the tanning industry is very unsure about when a tannery falls under the IPPC Directive or not. So for the TWG members, responsible for submitting the data to be put into the BREF, it is almost impossible to give data concerning only those tanneries that fall under the IPPC Directive.

1.2.2 Competitiveness

Another reason for the lack of detailed information is the fear of industry that once the information is published, it will affect their competitiveness. The tanning industry is a industry with a long history and although the EU still is the world's largest supplier of leather on the international marketplace, the total number of tanneries continues to decline [EU,1997]. Competition with countries inside, but also outside the EU is large. And for this reason companies are not very keen on submitting information that might be turned to advantage for competitors.

1.3 This BREF and smaller installations

Due in part to the above mentioned reasons, this BREF is not as detailed as intended. On the other hand, it addresses the whole industry and not only the biggest companies. And therefore the information in this BREF is suitable to use for every type of tannery. This outcome might turn to be a big advantage of this BREF,

not only for the permit writer, but also for the industry and even for the environment.

Because instead of writing a BREF that only addresses the companies meeting the threshold, this BREF can be a very useful instrument for the permit writer for every type of tannery; big or small - falling under the IPPC Directive or not.

Industry could also benefit in that every tannery should be able to find useful information in this BREF. Industry, by means of their TWG members, is heavily involved in this whole process and they have submitted, and still are submitting, an important part of the information. Implementing BAT, whether required by regulation or even voluntarily, does not always mean higher cost. There can be some savings when for example chemicals are saved or less waste has to be disposed of.

When this BREF is used for writing permits for all tanneries, because the information in it is suitable to do so, it can also be an advantage concerning the environment. Even so it might be that because detailed information is missing, the BAT related emission level values are probably not as ambitious as possible. But than a major proportion of the whole industry is probably able to apply the defined BAT's in this BREF.

1.4 The message

The message is that this BREF on tanneries can be a useful instrument considering the tanning industry as a whole. But not without the warning that this of course means not copying the BAT conclusions into a permit without any sense or any consideration of the local situation and specific conditions in the individual case.

2 The addressing of horizontal issues across industry sectors; the Storage BREF

2.1 Horizontal BREF

Where the vertical BREF addresses one specific industry sector and stems from the descriptions of activities in annex 1 to the IPPC Directive, a horizontal BREF addresses a specific issue that concerns many different industries. At this moment all the foreseen horizontal BREF's are in progress and are concerning the following issues:

- Industrial cooling systems
- Monitoring systems
- Common waste water and waste gas treatment/management systems in the chemical sector

- Emissions from storage of bulk or dangerous materials
- Economic and cross media issues

Except for the common waste water/ waste gas BREF, which only address chemical industry, all other BREF's concern all relevant industries of annex I of the Directive. The fact that those BREF's are all horizontal ones, does not mean that they will be processed in the same way. There are differences in processing the several vertical BREF's, but the differences in processing the horizontal ones might be even bigger. There are topic-related problems and problems related to the horizontal aspect. This will be explained on the bases of the Storage BREF and where possible compare this with other horizontal BREF's.

The work on the Storage BREF is just started. The Kick Off Meeting was held in December last year. Although the TWG has discussed in this Kick Off Meeting what topics will be addressed, there is always the possibility that during elaborating this BREF, ideas will have to be changed for what reason ever. Some problems specific for horizontal BREF's have already arisen.

2.1.1 Horizontal - related problems

Addressing all industries falling under the IPPC Directive means addressing at least 27 different kinds of industries, where a vertical BREF is planned to be written for, or is already written. This means in practice that every Member State will have to look for one or two TWG members that are experts on Storage, but related to 27 different kinds of industries. But especially industry has difficulties in finding the proper representatives for the Storage TWG and not because there are no experts on storage, but experts representing the several industries that are involved, that's the problem. One umbrella organisation for all the different industries that it concerns does simply not exist. UNICE (Union of Industrial and Employers' Confederation of Europe) is represented in the Storage TWG, but also UNICE is not the umbrella organisation over every industry.

At this moment new representatives of industries that might be affected by this Storage BREF are being added to the TWG.

Another problem specific for the horizontal BREF's is what level of detail can be achieved. Let's again consider the Storage BREF. Imagine how many different substances there are stored in 27 different industries and in how many different ways you can store all these. You don't have to be an expert on storage to see that this BREF cannot consider every single substance, not even when you would focus only on the dangerous substances. Because than you will run in to the question what will have to be considered dangerous? Milk for example is a harmless not toxic substance until it floats in big amounts into a little river; the high oxygen demand will have a disastrous effect.

In the Storage BREF this problem will probably be tackled by creating categories of substances that require in general the same storage equipment.

2.1.2 Topic - related problems

Take for example the BREF on Cooling Systems, which deals with all kinds of cooling systems used in all kinds of industries. A cooling system is not a part of an installation that you can see apart from the production process; it is completely integrated. So when you want to change the cooling system for environmental reasons, this will have almost always a direct impact on the production process. This means that it is very difficult to define BAT for a cooling system in a horizontal BREF, because it is impossible to consider every specific production process.

The BREF on Storage will probably not be faced with this problem, because storage is not integrated into the production process to the same extent as cooling systems. Storage can much easier be seen as an activity apart from the production process and sometimes this is also made visible on a plant site when special tank-parks are created.

2.2 How to use the Storage BREF

To avoid duplication of work, for the sake of consistency and to make the use of the several BREF's as easy as possible, the staff of the European IPPC Bureau and the Storage TWG made an agreement. The goal of the TWG on Storage is to define BAT concerning general principles for storing and handling categories of substances. Those BAT-conclusions will be taken over by the experts of the IPPC Bureau in the vertical BREF's and where necessary, for example because specific substances or specific storage facilities have to be considered for a specific type of industry, detailed information is added.

This is the ideal situation. But there are already vertical BREF's finished or will be finished before this Storage BREF is; in those cases this structure is missing. So for the time being, the user of the BREF - most times the permit writer - has to check both the documents, the industry specific - vertical - one and the Storage BREF to be sure of having all the information about BAT on Storage. For the time being means until the next review, with a frequency of five years. This means that with the review of the already finished BREF's, the agreement of how to cope with the topic 'storage' also will have to be kept.

Writing BREF's is a rather young process and agreements like the above mentioned one, about how the several BREF's can be used with regard to each other, will help to develop clear borders and simplify the use of the range of BREF's that will be written. Eventually we hope to develop the series of all BREF's to be available electronically, for example on CD rom to make it easier to get the required information from the vast amount in the whole series of BREF's.

3 Bibliography

FAO, Food and Agricultural Organisation, (1992): "Global Compendium on conversion factors for raw hides and skins and leather.

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EU, European Commission (1997): Panorama of EU Industry



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Tanneries BREF

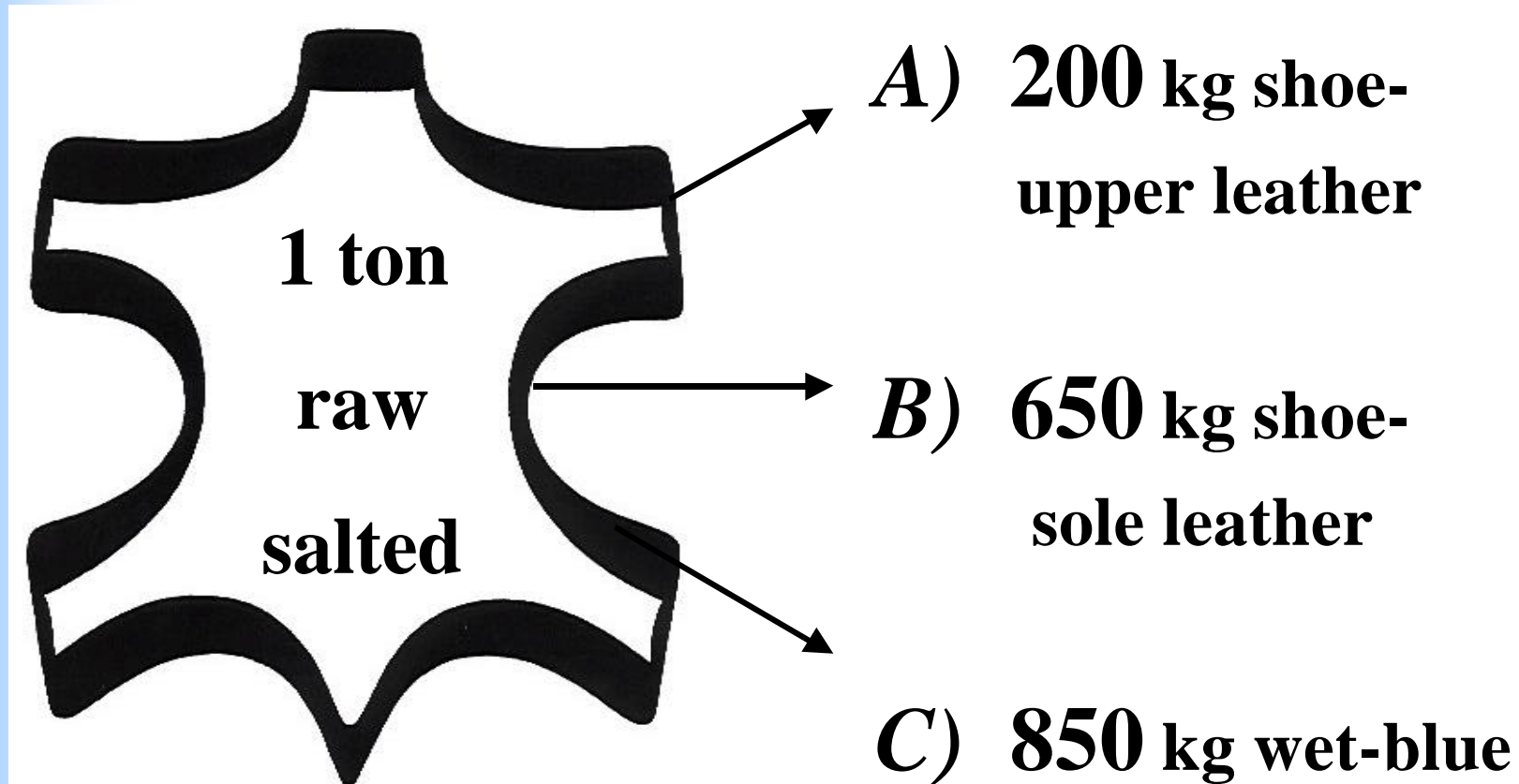
“Influence on smaller installations”

Tanneries BREF

1) the threshold:

“6.3. Plants for the tanning of hides and skins where the treatment capacity exceeds 12 tonnes of finished products per day”.

Tanneries BREF



Tanneries BREF

A) 60 tonnes

B) 18.5 tonnes

C) 14 tonnes



Tanneries BREF

2) competitiveness

Tanneries BREF

addresses whole industry

- + permit writer
- + industry
- + environment

Tanneries BREF

WARNING:

do not cut and paste BAT conclusions into the permit.

- **local circumstances**
- **individual case**
- **cost**

Storage BREF

“Horizontal issues across industry sectors”

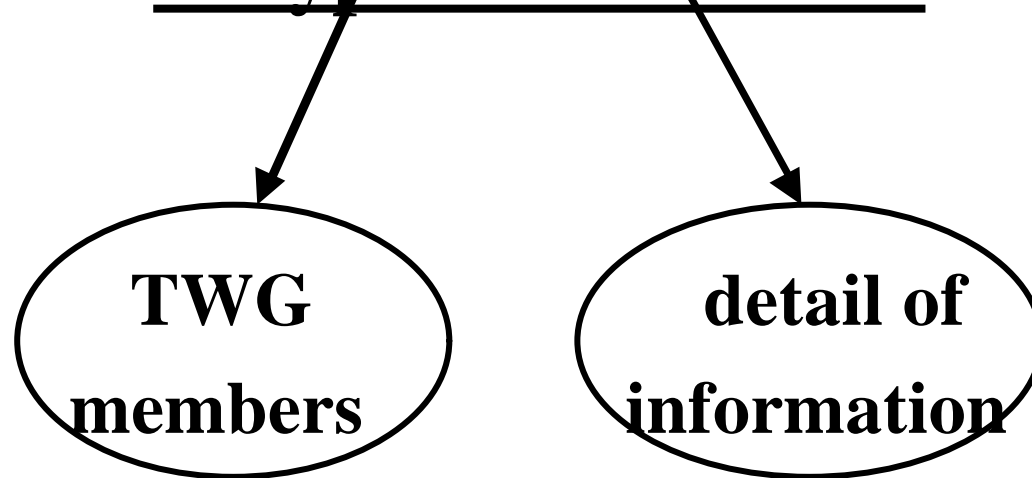
Storage BREF

- **Industrial cooling systems**
- **Monitoring systems**
- **Common wastewater and waste gas treatment/management systems**
- ★ **Emissions from storage of bulk or dangerous materials**
- **Economic and cross media issues**

Storage BREF

Horizontal - related problems

27 types of industries



Storage BREF

Topic - related problems

**integrated cooling systems
versus
tank - parks**

Storage BREF

