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## **Practical use of BREF in permitting**

Danish pilot project on the implementation  
of the IPPC project in Bulgaria.

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## **1 Project presentation**

Upon agreement between the environmental ministers of Bulgaria and Denmark a project on approximation of the EU IPPC Directive in Bulgarian legislation was formed.

In the practical implementation we have used the experience from Denmark, where integrated permitting has been used since 1974, from Ireland, where the BAT concept is very well developed, and from Estonia where the implementation of the IPPC Directive is a little bit ahead of the process in Bulgaria.

In the following we will focus on the part of the project which is the practical implementation involving production of guidelines to industry and authority, and training of the authority personnel.

## **2 Elaboration of guidelines**

Two guidelines were produced:

One Application Guideline for the industry and their consultants, giving detailed information on what to include in an application and how to organise the information. Empty tables are enclosed.

One Permitting Guideline for the authority, giving detailed information on how to evaluate the application, and how to structure the permit.

The basic ideas are as follows:

- Integrated approach
- One application is send to one authority
- One permit is written covering all media
- The application forms a part of the permit
- Application and permit have the same numbering system
- The guidelines are supplemented by two real permits as examples

## **3 Testing the guidelines**

Two companies, a coal fired district heating and power plant and a tannery, were asked to produce an application based on the guidelines and the relevant Draft BREF document in the case of the Tannery.

For the time being no EU reference document for BAT for large combustion plants has been elaborated.

Emission limits for new power plants can be found in EU's LCP directive (88/609/EEC). This directive stays according to the IPPC directive valid until December 31, 2003. The LCP directive does not contain emission limits for existing power plants, but it could be expected that existing plants will have to fulfil the requirements of the directive within a 8 year period following the IPPC directive's article 5.

BAT for large combustion plants is described in „Revision of the EC Emission Limit Values for New Large Combustion Plants (>50 MWt), January 1996, Commission of the European Communities.“

A literature searching has not made more recent or more authoritative documents appear.

During the company's elaboration of the application the BREF document was used for benchmarking the company, as inspiration for future planning, and as a frame of reference towards the authority.

The authority used the BREF to get a general knowledge about tanning technology, and as a frame of reference for the assessment of the application.

## **4 Structure of the IPPC permit**

The permit was structured in four major parts each aiming at a special target group:

- A. General information
- B. Summary (popular target group)
- C. Evaluation (technical target group)
- D. Terms for the production (technical and legal target group)

### **4.1 General Information**

The general part tells you what it is all about, how the case has been handled including involvement of the public, and how a possible complaint can be brought forward.

### **4.2 Summary**

The summary is written to the general public.

It contains a short description of the activity applied for, permits and licenses in force, a short overview of the main environmental pollution, and comments from other stakeholders, such as the municipality, labour inspection, NGO's, public hearings etc.

### 4.3 Evaluation and Terms

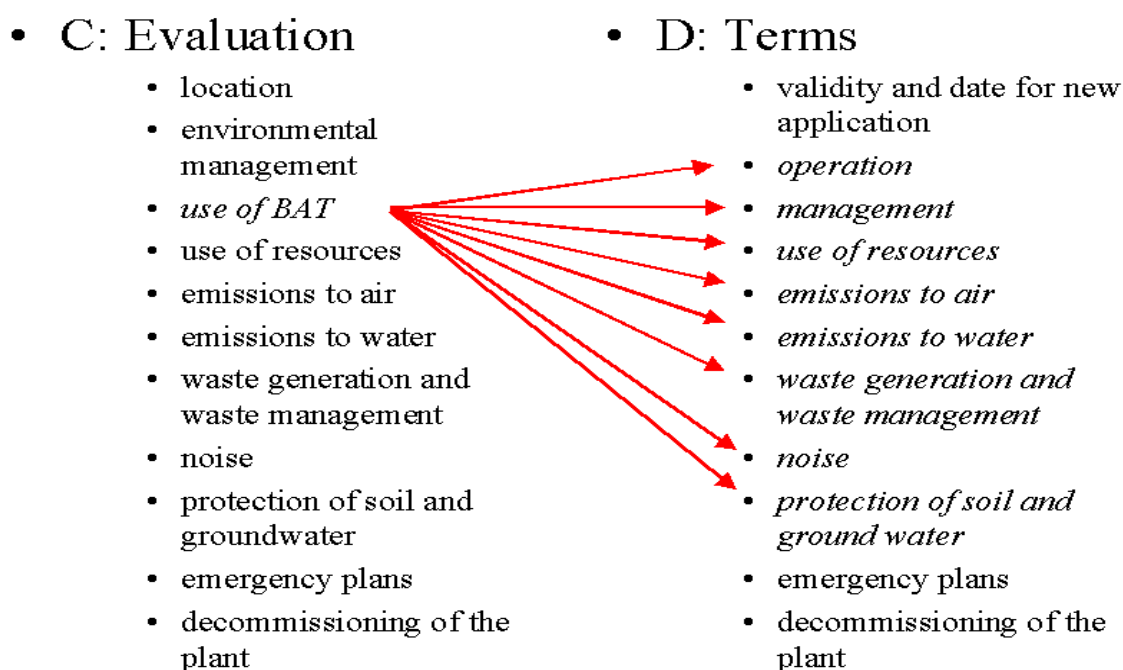
In the evaluation part of the permit, there must be arguments for all the terms.

Here we have decided to give the evaluation of the implementation of BAT a special chapter to emphasise the importance of this assessment.

On the other hand we do not have special terms on BAT, but found it more manageable to let the implementation of BAT find expression in the terms covering emission limits, operation, management and the use of resources.

Questions regarding environmental- and general management of the company we have given a separate chapter, although this is also a part of the BAT concept.

Figure 1: Evaluation and Terms



## 5 How to use BREF in the Permit

When evaluating the BAT for the applicant, it is important that the applicant and the authority makes reference to the actual BAT Reference Documents used, and argue for the choice of document.

In the comparison of the applied production to the BAT notes we are first looking at the possible substitution of dangerous substances, and then on the technological processes.

It shall be described which dangerous substances are used in the production, and what should be done in terms of substitution to reach BAT.

It shall be described which processes are used in the production, and what should be done to reach BAT. A subdivision of this paragraph into single processes can be useful for clarification.

All new productions shall apply BAT according to the definition in the IPPC Directive.

For existing companies it should be described:

- whether the process uses BAT and if not - why not
- which terms in the permit that will ensure that an action plan towards BAT will be mandatory for the enterprise
- the time limits and why it is necessary to give the enterprise time to apply BAT

## **5.1 Examples on Terms on BAT**

### **5.1.1 Substitution**

The company is not allowed to use:

- surfactants based on alkylphenols or including any other endocrine disrupting substances;
- chloroorganic compounds, solvents in the leather production, volatile organic substances, complex forming substances, formaldehyde;
- syntans of high toxicity and with high monomer content;
- dyestuffs that content heavy metals or which are in the list of azo-substances that can release carcinogenic amines after reduction;
- chrome tanning salts containing Cr(VI)
- aziridines, isocyanates

The company should report its findings about the possibility to change sulphide with enzymes in the annual report.

### **5.1.2 Process**

In the old shop they can continue to use ammonia deliming systems but in case of replacement of the equipment, the company should install equipment relevant for CO<sub>2</sub> deliming.

When having excess capacity in the new shop, production should be moved there from the old shop.

## **6 Conclusion of the project**

When the authority had finished writing a draft of the permit it was negotiated with the company.

Finally the companies were giving comments on the guidelines, and the guidelines were rewritten according to the experience gained during the project.

## **7 How did Bulgaria benefit from the project**

Staff from the ministry of environment and water, and staff from the regional inspection of environment and water were trained in IPPC permitting based on Bulgarian realities.

A list of IPPC companies in Bulgaria was elaborated.

A cost analysis for BAT implementation in two industrial sectors (tannery and district heating) were made.

Field testing of IPPC application form and permit template, including guidelines for their use.

Two IPPC permits for existing plants were elaborated.

An action plan for transposition and implementation of IPPC in Bulgaria was made.

## **8 How will IPPC be implemented in the Bulgarian legislation**

A new Environmental Protection Act is to be adopted by the Parliament within the next year introducing an integrated permitting regime covering all environmental media and in the mean time amending the present Clean Air, Waste Management and Water Acts by repealing the corresponding single media permitting provisions.

The Directive will be fully transposed with a New regulation on integrated pollution prevention and control under this new act. The present emission limit values based on the above sectoral acts will stay in force as a minimum requirements when issuing an IPPC permit

## **9 Final remarks**

After this project, Denmark has implemented the IPPC Directive, and the experiences gained in Bulgaria has been used in training Danish officials in permitting. And Bulgaria is planning IPPC permitting of the country's 5 largest industrial enterprises based on the developed concept in the near future.

We have been happy to shear our experiences with you, and we do hope you can benefit from it.