



**Improving existing institutional frameworks,  
legislation and policy related to Emission Limit  
Values (ELV) for industrial effluents, industrial  
permitting and monitoring systems according to the  
IPPC principles and CP concepts**

## **IPPC Seminar**

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# **Integrated Pollution Prevention and Control**

- **IPPC – permitting procedure**
- **Recommendations for implementation**

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## **Integrated Permitting Process**

### **Recommendations**

**One of the main advantage of the European approach is the integrated process, to include almost every issues into the permitting procedure.**

**A precise definition of the term "installation" should be implemented with the following details:**




**⇒ difference between main plant, auxiliary facilities**

**⇒ common installation**



## Permitting Procedure – Necessary Permit

### Recommendations

-  Any new installation should have a permit
-  existing installations should also be checked whether an updating of the permit or special new obligations are necessary to make sure that BAT standards will be implemented
-  Smaller, minor changes should be announced to the Authority



## Permitting Procedure – Necessary Permit

### Recommendations



for complex permitting procedures the process should be divided in sections and partial permits are granted



If the operator plans to close the installation permanently, this should be announced to the authority. The competent authority has to check whether the operator manage all activities to avoid any **pollution risk** (Assessment report of the state of soil and groundwater)



## Permitting Procedure – Scope

### Scope

The concept can be used for large installations listed in chapter III, IV, V and VI and Annex I of the IE Directive and for smaller industrial activity, too.

### Recommendations

- ➔ The scope for the implementation of an integrated permitting process should be chosen generously and cover not only large industrial plants, but also small and medium-sized installations.
- ➔ Research, development and testing facilities for new products or procedures should be exempt from permit requirement.



## **Permitting Procedure: Consultancies before application**

### **Recommendations**

The applicant should be advised by the competent authority in an early phase before the application form is fixed. During this phase the following environmental topics and other relevant issues are to be clarified:

- The scope of the installation
  - ⇒ demarcation of the plant
  - ⇒ relevant activity, which constitute a technical unit
  - ⇒ auxiliary facilities - in a technical connection with the main activities and that can have an impact on emissions and pollution



## Permitting Procedure: Consultancies before application

### Recommendations

- Other facilities at the site
  - ⇒ of the same operator
  - ⇒ of other operators
- Environmental Impact Assessment
  - ⇒ Classification of the plant to the EIA projects
  - ⇒ Check to determine if a EIA is necessary (screening)
  - ⇒ if yes: identification of the necessary requirements for the EIA and other necessary documents (scoping)





## Permitting Procedure: Consultancies before application

### Recommendations

- Transboundary impacts
  - ⇒ participation of the affected neighbouring state and its people
- Scope of the Seveso II Directive
  - ⇒ establishment with basic obligations/lower tiers – safety Check
  - ⇒ establishment extended obligations/upper tiers - safety report
  - ⇒ evaluation of the safety report by approved verifiers



## **Permitting Procedure: Consultancies before application**

### **Recommendations**

- Air quality situation at the site
  - ⇒ Determination of the preload air pollutants, noise, odours
  - ⇒ which emissions have to be determined?
- Identity of affected nature conservation areas
  - ⇒ determine the relevant areas .



## Permitting Procedure: Consultancies before application

### Recommendations

- Nature and timetable of the permitting procedure
  - ⇒ Type of license (new, change, partly permit)
  - ⇒ Necessary permitting procedures from other authorities for the installation and coordination of the activities
  - ⇒ Estimated date for issuing the integrated permits
  - ⇒ Responsible persons on both sides for managing the permitting procedure (authorities and applicant)



## Permitting Procedure: Consultancies before application

### Recommendations

- Determination which authorities have to be involved
  - ⇒ The applicant should be informed of his opportunity to contact other concerned authorities and to conduct preliminary discussions.
- Notes on BAT
  - ⇒ Applicable BREF
  - ⇒ Applicable other relevant legislations such as TA Luft 2002



## Permitting Procedure: Consultancies before application

### Recommendations

- Required application documents (appropriate checklists are helpful)
- Requirements for safety and health at work
- Requirements if plant is closed permanently
- Other concerns, such as agriculture and forestry, traffic, railroad law, monument conservation.



## Permitting Procedure: Seveso II Directive

### Recommendations

- The safety report is of special importance for the documentation of plant safety.
- For facilities subject to the Seveso II Directive, a security concept should be created by an expert.
- Several possible types of accidents should be analyzed and countermeasures have to be described



## Permitting Procedure: Noise and vibration

### Recommendations

- Plants should be built according to the state of the art concerning noise reduction so that no unreasonable noise is caused so that e.g. residential areas are protected
- The German Technical Guideline (TA Lärm) from Aug 26, 1998th can be helpful to evaluate the situation.
- The assessment should also include low-frequency noise and vibrations



## Permitting Procedure: Air Quality Situation

### Recommendations

- for air quality issues it is recommended to use the procedure of the German TA Air when creating an air quality calculation.
- To minimize work for the applicants, especially for operators of smaller facilities, we recommend a stepped approach
  - low irrelevant mass flow
  - irrelevant small additional charge
- determination of the total charge by identifying the additional inputs.





## **Permitting Procedure: Odour assessment**

**Chemical plants, petroleum refineries, food factories, waste treatment and other installations often cause very strong odour emissions. These are to be limited by the requirements of best available techniques.**

### **Recommendations**

- **For smelly installations requirements should be imposed at the source of the odour.**
- **Odour emissions should be emitted through a sufficiently high chimney**
- **For the assessment of odour emissions the German “Smell directive” could be used**



## Permitting Procedure: Sewage water requirements

### Recommendations

- Installations for dealing with water-endangering substances are to be built according to the rules of technology and require a special authorization
- The "two barrier principle" should be considered.
- In the event of a fire an approach from the view of water management is needed, which indicates which quantities of fire water are to be expected the kind of water pollution and the required size of the reception rooms to hold it.



## Permitting Procedure: Use of surface water and groundwater

Usually surface water or groundwater are used to discharge waste water (including cooling water and rainwater). The integrated permit includes the approval to use this water

### Recommendations

- By establishing obligations, measures can be imposed on the discharger (eg of water saving measures or requirements for wastewater-use materials).
- Requirements for the technical design, operation, and monitoring of the wastewater installations should be regulated by obligations



## Permitting Procedure: Environmental Impact Assessment (EIA)

### Recommendations

- It is recommended to always carry out environmental impact assessment with the participation of the public.
- The test should be a dependent part of the approval process, which serves the decision on the admissibility of projects.
- If a decision on the admissibility of a project under several aspects is taken, the results are combined into an overall assessment of all environmental impacts
- The applicant should generally receive an extensive consultation in the form of a scoping date.
- The scoping should start before the official permitting procedure



**Permitting Procedure: Relevant issues –  
Environmental Impact Assessment (EIA)**

## Recommendations

- If the project may have transboundary effects, the state concerned has to be involved in the environmental impact assessment procedure.
- If smaller industrial projects or minor changes to existing large industrial facilities are implemented, a comprehensive EIA is not always necessary. As part of a screening it should be decided by a rough estimation before the application, whether significant effects are to be expected by the project. The result of the individual assessment is to be documented and then made public.



## **Permitting Procedure: Check of Completeness**

**Upon receipt of the application, the Authority checks if all the necessary documents are complete. This should be done within four weeks and on the basis of the checklist agreed on in the preliminary talks**

### **Recommendation**

**It is recommended that the maximum period of the Check of completeness should be fixed by law**



**Permitting Procedure:**  
Participation of specialized authorities and consultants

## Recommendations

- **The authorities and experts should be involved in a “star shape”**
- **They should be set a time limit for returning their statement (usually one month)**
- **A consequent time management is recommended**



## Permitting Procedure: Involving public opinion

### Recommendations

- The public should be given a specific period (e.g.1 month) to complain against the project
- The competent authority should consider and ensure that no trade secrets are disclosed





## Permitting Procedure: Final Checking for Decision

### Recommendations

- The integrated permit should contain requirements (i.e. emission limit values) to ensure that all appropriate preventive activities will be implemented to protect the environment in general
- BAT Guidelines in defining binding requirements should be used to determine emission limit values. This allows following issues:
  - Greater predictability of legal requirements,
  - Equal treatment plant operators as well neighbours
  - standardisation of the permitting procedure and thus acceleration of the process because the licensing authority does not even have to develop assessment standards.



## Permitting Procedure: Final Checking for Decision

### Recommendations

The assessment framework should focused on the following issues:

- Air Pollution
- Water
- Soil
- waste prevention, recycling, disposal
- Plant safety, accident prevention
- Economical and efficient use of energy
- Safety at Work / Explosion protection.



## Permitting Procedure: Permit conditions/Obligations

### **Permit conditions/Obligations**

Each permit includes requirements such as emission limit values in order to ensure the approval conditions.

### **Recommendation**

- it is necessary that the definition of all permit obligations are sufficiently defined.



## Permitting Procedure- Permit conditions/Obligations

### Permit conditions/Obligations

#### Emission Limit Values Air

⇒ It should be fixed just emission limit values for those pollutants which have relevant effect

#### Emission Limit Values Water

⇒ Concerning water pollutant emission limit values can fixed as concentrations (usually mg/ l).

### Recommendations

- **The associated sewage flow should be limited (usually m<sup>3</sup>/ h and / or m<sup>3</sup> / d)**
- **In addition, the limitation of the permitted pollutant load may be necessary, e. g. based on the approved production.**
- **To establish a clear framework for the verification the requirements, in each case is the location of sampling, the type of sampling and sample preparation has to define clear in the permit**



## Permitting Procedure- Permit conditions/Obligations

### **Waste Management Issues**

Waste which cannot be avoided or recovered has to dispose without any environment effect .

### **Recommendations**

- The operator has to avoid waste, or, if this is not technically and economically possible to eliminate it, so that any impact on the environment is reduced.
- The waste is classified by the operator., Particularly hazardous wastes are designated.
- The applicant must provide information to the competent authority whether he remove or dispose the waste



## Permitting Procedure: Permit conditions/Obligations

### Integrated permit

#### Recommendations

A permit should contain the following issues (Recommendation of the licensing structure):

#### **I. Approval of the address:**

Content of the permit

Description of the

- System components
- auxiliary facilities
- Performance / capacity of the plant or plant parts limit - amount of substance
- Operating times
- Approved documents.



## Permitting Procedure: Permit conditions/Obligations

### Recommendations

#### II. Obligations (emission limit values, additional terms and conditions)

- Emission limit values, **BAT requirements**
- determining the allowable emissions of air pollutants. Here the limits in concentration and cargo (mass flow) of all relevant air pollutants are set out.



## Permitting Procedure: Permit conditions/Obligations

### Recommendations

## II. Obligations (emission limit values, additional terms and conditions)

- determining the allowable emissions in an aquatic environment or the public sewer system.
  - maximum amounts of sewage water,
  - maximum water temperature, pH and further
  - sewage treatment plant

For each substance, the terms of the respective measurement and assessment of conditions is required.





## Permitting Procedure: Permit conditions/Obligations

### Recommendations

- Obligations concerning waste
  - Determining the nature and quantity of waste to the permitted disposal routes and supporting documents, minimization and prevention guidelines
- define the permissible noise emissions and emissions
- determining the allowable emissions of odour
- obligations concerning the storage and handling of dangerous and / or water polluting substances



## Permitting Procedure: Permit conditions/Obligations

### Recommendations

- Obligation of technical and organizational protection measures (e.g. retention facilities, fire water retention, flood control, fire protection)
- Requirements of the Seveso II Directive



## Permitting Procedure: Permit conditions/Obligations

### Recommendations: Monitoring Issues

The integrated permit should include following obligations concerning "monitoring":

- In terms of individual issues (air, water, soil, noise, vibrations) in the permit requirements for technical surveillance measures, should involve including the measurement methodology, the frequency of measurements, and the collection, processing and transmission of monitoring data to be incorporated.
- The competent authority may require after certain periods of time or for a special occasion that the operator carries out additional measurements



## Permitting Procedure: Permit conditions/Obligations

### Recommendations: Monitoring Issues

- The competent authority may require after certain periods of time or for a special occasion that the operator carries out additional measurement
- The storage, recycling or disposal of waste should be documented. The documents are handed over to the Authority on request.
- The operator should give the competent authority at regular intervals (as specified by the integrated permit) the monitoring reports of emissions. If relevant, the operator has to report immediately any accidents.
- The operator must provide any additional information that are necessary to enable the Authority to assess the possibility of a major accident.



***Thank you very much for  
your attention!***