The European Commission’s science and knowledge service

Joint Research Centre
Defining BAT under the Industrial Emissions Directive – History and Procedures

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Workshop to Promote the Ratification of Technical Protocols of the UNECE Air Convention
with Focus on Countries in the EECCA Region – 14 to 16 May 2019, Berlin, Germany
Outline

1 – The European IPPC Bureau
2 – The Industrial Emissions Directive
3 – The 'Sevilla Process'
The European Integrated Pollution Prevention and Control (IPPC) Bureau – EIPPCB

• Created in 1997
• Part of the European Commission's Joint Research Centre (JRC) (Circular Economy and Industrial Leadership Unit of the JRC's Directorate B – Growth and Innovation)
• Main output: BAT reference documents, the BREFs, and their key parts, the BAT conclusions
• 20 staff, of which 16 scientific and 4 support staff
Outline

1 – The European IPPC Bureau
2 – The Industrial Emissions Directive
3 – The 'Sevilla Process'
Industrial Emissions Directive 2010/75/EU (IED)

- Key instrument for minimising emissions and consumption of industrial activities in Europe
- General framework:
  - prevent and, if not feasible, reduce pollution
  - high level of protection for the environment as a whole
  - permit based on Best Available Techniques (BAT)
Industrial scope of the IED

Wide range of industrial activities listed in Annex I:

- **Energy industries**
- **Production and processing of metals**
- **Mineral industries**
  - Cement, Lime, Glass, Ceramics
- **Production of chemicals**
- **Waste management industries**
  - Several recovery or disposal operations; incineration
- **Other activities**
  - Pulp and paper; textile processing; tanning of hides and skins; intensive rearing of poultry or pigs; slaughterhouses and animal by-products; food, drink and milk; surface treatment using organic solvents
Environmental scope of the IED

- Emissions to air
- Emissions to water
- Waste prevention and recovery
- Energy & water use
- Prevention and control of accidents
- Heat
- Noise
- Odour
- Vibration
IED Article 3(10):

**Best**
Most effective in achieving a high general level of protection of the environment as a whole

**Available**
Developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions

**Techniques**
Both the technology used and the way the installation is designed, built, maintained, operated and decommissioned
Role of BAT conclusions in permitting

• IED Article 14(3): BAT conclusions are the reference for setting permit conditions of IED installations.

• IED Article 15(3): Permits to contain emission limit values (ELVs) to ensure that, under normal operating conditions, emissions do not exceed BAT-associated emission levels (BAT-AELs).

• IED Article 15(4): Derogation from BAT-AELs is only allowed in specific and justified cases.
IED Article 21(3):

• Within **four years** of publication of BAT conclusions relating to the main activity of an installation:
  
  (a) **reconsideration** and, if necessary, **update of all permit conditions**
  
  (b) **installation complies** with those permit conditions

• **Reconsideration shall take into account all the new or updated BAT conclusions**
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History of the 'Sevilla Process'

- Information exchange started in 1997 under the predecessor legislation, the IPPC Directive
- Several guidance documents for the information exchange were developed and updated under the IPPC Directive
- Information exchange was codified into law with Commission Implementing Decision 2012/119/EU
- Information exchange is coordinated by the EIPPCB based in Seville, hence called 'Sevilla Process'
- Continuous further evolution of the process (e.g. use of webinars, data assessment workshops)
The 'Sevilla Process'

Industry

Environmental NGOs

Bulk of info. needed (incl. questionnaires)

EU Member States + EEA countries

European Commission/EIPPCB

Comments

TWG kick-off meeting

Draft 1 (D1)

Draft 2 (D2)*

Final TWG meeting

Final draft

* D2 optional
Total duration:
- 24 – 29 months (without D2)
- 29 – 39 months (with D2)
Evidence-based and participatory decision making (1/3)

1. Installations in the EU (and outside)
2. Select 'well-performing plants'
3. Design questionnaire
4. Collect plant-specific data
5. Process and analyse data/info
6. Experts meeting(s)
7. BREFs and BAT conclusions
Evidence-based and participatory decision making (2/3)

• Approximately 80 to 230 experts involved
• Kick-off meeting to decide on the scope, key environmental issues and the process (3 to 4 days)
• Process to draft questionnaire for collecting plant-specific information
• Commenting on draft BREFs: 500 to 8500 comments that are assessed individually
• Up to two data assessment workshops
• TWG subgroups on complex issues
• Final meetings (3 to 7 days) with up to 140 participants
• Transparency: BATIS and EIPPCB website
Evidence-based and participatory decision making (3/3)

TSS emissions to water from the chemical sector

- Effluent values not shown in the graph:
  - < LOD: #69 (Bio)
  - < 5 mg/l: #36 (Bio)

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>Bio</td>
<td>Biological treatment</td>
</tr>
<tr>
<td>Filt</td>
<td>Filtration (includes Membrane bioreactor)</td>
</tr>
<tr>
<td>Flot</td>
<td>Flotation</td>
</tr>
<tr>
<td>NI</td>
<td>No information provided</td>
</tr>
<tr>
<td>PC</td>
<td>Physico-chemical treatment only</td>
</tr>
<tr>
<td>Sed</td>
<td>Sedimentation</td>
</tr>
<tr>
<td>SF</td>
<td>Sand filtration</td>
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<tr>
<td>Ultraf</td>
<td>Ultrafiltration</td>
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</tbody>
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BAT-AEL: 5 – 35 mg/l (yearly average)
14 BREFs reviewed and published, including BAT conclusions:

1. Iron and Steel Production (IS);
2. Manufacture of Glass (GLS);
3. Tanning of Hides and Skins (TAN);
4. Production of Cement, Lime and Magnesium Oxide (CLM);
5. Production of Chlor-Alkali (CAK);
6. Production of Pulp, Paper and Board (PP);
7. Refining of Mineral Oil and Gas (REF);
8. Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector (CWW);
BREF review progress under the IED (2/4)

...  
9. Wood-Based Panels Production (WBP);  
10. Non-ferrous Metals Industries (NFM);  
11. Intensive Rearing of Poultry or Pigs (IRPP);  
12. Large Combustion Plants (LCP);  
13. Production of Large Volume Organic Chemicals (LVOC);  

1 Reference report published:  
   • Monitoring of Emissions to Air and Water from IED Installations (ROM).
8 BREFs being worked upon:

1. Food, Drink and Milk Industries (FDM);
2. Waste Incineration (WI);
3. Surface Treatment using Organic Solvents/Wood Preservation with Chemicals (STS);
4. Ferrous Metals Processing Industry (FMP);
5. Common Waste Gas Treatment in the Chemical Sector (WGC);
6. Textiles Industry (TXT);
7. Slaughterhouses and Animal By-products Industries (SA);
8. Smitheries and Foundries Industry (SF).
BREF review progress under the IED (4/4)

Work on 3 more BREFs to start in 2019 to 2020:

1. Ceramics Manufacturing Industry (CER);
2. Surface Treatment of Metals and Plastics (STM);
3. Production of Large Volume Inorganic Chemicals (LVIC).
Ongoing challenges

• Management of input
• Time-consuming process
• Transparency
• Where and how to focus?
• Involvement of equipment suppliers
• Achieving consensus in marathon-like meetings
• High staff turnover and need for qualified staff
Key messages on the 'Sevilla Process'

• Highly participatory, transparent and fact-based process
• Process evolved and matured over 20 years
• Consensus that the process is fit for purpose
• Good results depend on good data
Further information


• BREFs, draft BREFs, BAT conclusions and TWG kick-off meeting reports: [http://eippcb.jrc.ec.europa.eu/reference/](http://eippcb.jrc.ec.europa.eu/reference/)

• Documents of the IED Article 13 Forum (e.g. work programme on the exchange of information), of the IED Article 75 Committee, of the Industrial Emissions Expert Group as well as other IED-related studies: [https://circabc.europa.eu/w/browse/1d945fd8-0d7e-4418-bac4-1c2f4a91af3e](https://circabc.europa.eu/w/browse/1d945fd8-0d7e-4418-bac4-1c2f4a91af3e)

Any questions?
You can contact us at jrc-b5-eippcb@ec.europa.eu