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Implementation of the EU Industrial Emissions Directive in the Czech Republic

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Introduction

CENIA, Czech Environmental Information Agency

- established on the 1st of April 2005 by the transformation of former Czech Environmental Institute
- service Organisation for the Ministry of the Environment
- collecting and interpreting of environmental data and their assessment
- Structure of the organisation
  - Director's Office
  - Department of Technical Protection of the Environment
  - Department of Information Services
  - Department of Internal Services

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Implementation of the IPPC Directive

- Council Directive 96/61/EC of September 24th 1996
- before entering the EU on 1st of May 2004
- Twinning projects (Great Britain, the Netherlands)
- Act No. 76/2002 Coll. on integrated pollution prevention and control, on the integrated pollution register and on amendment of some laws (the Act on integrated prevention)
  - from the 1st of March 2002
  - came into effect on the 1st of January 2003

Implementation of the IPPC Directive

- Decree No. 554/2002 Coll. laying down the form of an application for granting an integrated permit, the extent and manner of its completion
  - from the 16th of December 2002
  - came into effect on the 1st of January 2003

- Act No. 76/2002 Coll.
  - installations brought to operation by the 30th of October 2000 (at latest) must have an integrated permit by the 30th of October 2007 to able to operate the installation after this date
  - for new installation an integrated permit must be granted before the construction permit

Implementation of the IPPC Directive

- Act No. 76/2002 Coll. – key principles
  - application for granting an integrated permit submitted to the Regional Authority (14 regions)
  - application for granting an integrated permit send to the Relevant Administrative Authorities and Participants in the Procedure
  - brief summary of the application for granting an integrated permit published in the IPPC information system (http://www.mzp.cz/ippc)
  - Authorised Person (CENIA) could be asked by Regional Authority for an expert statement on application for granting an integrated permit (focused especially on best available techniques (BAT) assessment)
  - expert statement on application for granting an integrated permit published in the IPPC information system (http://www.mzp.cz/ippc)

Implementation of the IPPC Directive

- Act No. 76/2002 Coll. – key principles
  - oral discussion could be organized by the Regional Authority
  - Decision on the Application is granted within 45 (90) days
  - inspection of the installation (together with public health authorities and CENIA) – Czech Environmental Inspectorate (10 regional inspectorates)
  - Technical Working Group – Regional Authority and Integrated Prevention – methodical management of the IPPC (IED) process by the Ministry of the Environment
  - national system for exchange of information on Best Available Techniques (BAT)

Implementation of the IPPC Directive

- System for exchange of information on Best Available Techniques (BAT)
  - established on national level
  - Ministry of the Environment, Ministry of Industry and Trade, Ministry of Agriculture, Czech Environmental Inspectorate, Regional Authorities, CENIA, industrial associations, chamber of commerce, operators of IPPC installations
  - national Technical Working Groups (similar to TWGs in the Seville process at EIPPCB – review of the BREFs) – translation of existing and revised BREFs (publicly available on http://www.mpo.cz/ippc), preparation of the national position to the review of BREFs
  - once a year – stakeholder conference on BATs

Integrated approach

- one permit instead of several single permits
  - pollution sources – air emissions
  - pollution sources – water emissions
  - pollution sources – noise immissions
  - waste management
  - energy efficiency
  - accident management
  - monitoring

- more pollution sources/installations in one locality
  - operated by one or different operators

Implementation of the Industrial Emissions Directive

- the EP and Council Directive 2010/75/EU of November 24th 2010

- Act No. 69/2013 Coll. amending Act No. 76/2002 Coll. on integrated pollution prevention and control, on the integrated pollution register and on amendment of some laws (the Act on integrated prevention)
  - from the 19th of February 2013

  - new industrial activities (added to Annex I) must have an integrated permit by the 7th of July 2015 to able to operate the installation after this date
  - for new installation an integrated permit must be granted before the construction permit

Implementation of the Industrial Emissions Directive

- Decree No. 288/2013 Coll. complementing Act on integrated prevention
  - from the 6th of September 2013
  - the form of an application for granting an integrated permit, the extent and manner of its completion
  - baseline report
  - expert statement for granting a derogation
  - the form of a report on fulfilling the permit conditions

Implementation of the Industrial Emissions Directive

- Amended Act No. 76/2002 Coll. – key principles
  - BAT Conclusions
  - BAT-AELs – emission levels associated with BAT
  - baseline report
  - soil and groundwater monitoring
  - environmental inspections
  - emerging techniques

- more than 1 700 IPPC/IED installations
  - category 6.6 (more than 400)
  - category 5 (more than 300)
  - category 2 (more than 250)

CENIA in the IPPC process

- expert support of the execution of public administration
  - expert statements on the IPPC process in the Czech Republic for the Ministry of the Environment and Regional Authorities

- Authorised Person activities
  - expert statements on application for granting an integrated permit (focused especially on best available techniques (BAT) assessment) for Regional Authorities

- cooperation on integrated inspections of IPPC (IED) installations

Other activities

- cooperation on the information exchange system on BAT (national and international level)
- management of the cross-sectional Technical Working Groups – Economic and cross media effects, Monitoring of emissions from IED-installations, Emissions from storage, Common waste water and waste gas treatment/Management systems in the chemical sector, Waste Treatment, Waste Incineration, Industrial cooling systems
- participation in Technical Working Group – Regional Authority and Integrated Prevention – methodical management of the IPPC (IED) process by the Ministry of the Environment

BAT (Best Available Techniques)

- the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole

- **techniques** includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned

- **available** techniques means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator

- **best** means most effective in achieving a high general level of protection of the environment as a whole

Authorised Person – BAT

- Expert statement focused on BAT
  - assessment of the BAT comparison in the application for granting an integrated permit (regional/local aspects and economic effects)
  - general BAT assessment of the installation
  - BAT determination

- General BAT assessment of the installation
  - result of an complex assessment of specific sectoral and local/regional effects to determine an optimal operation of the installation
  - criteria for determining best available techniques (Annex III of IED) needs to be taken into account

- BAT determination (possible optimum how to operate the installation)
  - way to find a compromise among the applied technique, state of environment in the area of the installation, economic effects, public health protection, national and international agreements, …

Source of information for BAT assessment in the IPPC process

- Information about the technologies/techniques from the application for granting an integrated permit
- Best Available Techniques Reference Documents (BREFs)
  - European Integrated Pollution Prevention and Control Bureau (Seville)
  - European TWGs (originals – in English)
  - National TWGs (Czech translations)
- Technical norms
- Experience and knowledge – technologies/techniques applied in the Czech Republic

Criteria for determining best available techniques

- the use of low-waste technology
- the use of less hazardous substances
- the furthering of recovery and recycling of substances generated and used in the process and of waste, where appropriate
- comparable processes, facilities or methods of operation which have been tried with success on an industrial scale
- technological advances and changes in scientific knowledge and understanding
- the nature, effects and volume of the emissions concerned
- the commissioning dates for new or existing installations
- the length of time needed to introduce the best available technique
- the consumption and nature of raw materials (including water) used in the process and energy efficiency
- the need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it
- the need to prevent accidents and to minimise the consequences for the environment
- information published by public international organisations

BAT Conclusions
Emission levels associated with BAT

- BAT Conclusions
  - document containing the parts of a BAT reference document laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures

- Emission levels associated with the best available techniques
  - the range of emission levels obtained under normal operating conditions using a best available technique or a combination of best available techniques, as described in BAT conclusions, expressed as an average over a given period of time, under specified reference conditions

Revised BREFs – BAT Conclusions

- BAT reference document (BREF)
  - a document, resulting from the exchange of information organised pursuant to Article 13, drawn up for defined activities and describing, in particular, applied techniques, present emissions and consumption levels, techniques considered for the determination of best available techniques as well as BAT conclusions and any emerging techniques, giving special consideration to the criteria listed in Annex III

- BAT Conclusions
  - one chapter of revised BREF
  - published in Official Journal of the European Union as Commission Implementing Decision
  - all relevant permits must be reviewed and permit conditions must be in compliance with BAT Conclusions within 4 years

Implementation of BATs and Emission Limit Values (ELVs)

- BREF (Reference Documents on Best Available Techniques)
  - prepared according to IPPC Directive – BATs are recommended, not legally binding
  - national emission limit values (national decree) used to set permit conditions (for polluting substances in Annex II of IED)

- Review of BREFs
  - prepared according to IED – BAT-AELs are legally binding
  - national emission limit values (national decree) used only as a background to set permit conditions in case of a derogation

Revised BREFs – BAT Conclusions

- Revised BREFs, including chapter BAT Conclusions
  - Best Available Techniques (BAT) Reference Document for Iron and Steel Production – March 2012
  - Best Available Techniques (BAT) Reference Document for the Manufacture of Glass – March 2012
  - Best Available Techniques (BAT) Reference Document for the Tanning of Hides and Skins – February 2013
  - Best Available Techniques (BAT) Reference Document for the Production of Cement, Lime and Magnesium Oxide – April 2013
  - Best Available Techniques (BAT) Reference Document for the Production of Chlor-alkali – December 2013
  - Best Available Techniques (BAT) Reference Document for the Production of Pulp, Paper and Board – September 2014
  - Best Available Techniques (BAT) Reference Document for the Refining of Mineral Oil and Gas – October 2014

Revised BREFs – BAT Conclusions

- Revised BREFs, including chapter BAT Conclusions
  - Best Available Techniques (BAT) Reference Document for the Production of Wood-based Panels – November 2015
  - Best Available Techniques (BAT) Reference Document for Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector – June 2016
  - Best Available Techniques (BAT) Reference Document for the Non-Ferrous Metals Industries – June 2016
  - Best Available Techniques (BAT) Reference Document for the Intensive Rearing of Poultry or Pigs – February 2017
  - Best Available Techniques (BAT) Reference Document for Large Combustion Plants – August 2017
  - Best Available Techniques (BAT) Reference Document for the Production of Large Volume Organic Chemicals – December 2017
  - Best Available Techniques (BAT) Reference Document for Waste Treatment – August 2018

BAT Conclusions
BREF for Iron and Steel Production

- General BAT Conclusions
  - Environmental management systems
  - Energy management
  - Material management
  - Management of process residues such as by-products and waste
  - Diffuse dust emissions from materials storage, handling and transport of raw materials and (intermediate) products
  - Water and waste water management
  - Monitoring
  - Decommissioning
  - Noise

BAT Conclusions
BREF for Iron and Steel Production

- Specific BAT Conclusions
  - Air Emissions
  - Water and waste water
  - Production residues
  - Resource management
  - Energy
  - Noise

BAT conclusions – practical aspects

- the techniques listed and described are neither prescriptive nor exhaustive
- other techniques may be used that ensure at least an equivalent level of environmental protection

- the environmental performance levels associated with BAT are expressed as ranges, rather than as single values
- a range may reflect the differences within a given type of installation (e.g. differences in the grade/purity and quality of the final product, differences in design, construction, size and capacity of the installation) that result in variations in the environmental performances achieved when applying BAT

BAT conclusions – practical aspects

- BAT-AELs for air emissions are expressed as either
  - mass of emitted substances per volume of waste gas under standard conditions (273,15 K, 101,3 kPa), after deduction of water vapour content, expressed in the units g/Nm^3, mg/Nm^3, µg/Nm^3 or ng/Nm^3
  - mass of emitted substances per unit of mass of products generated or processed (consumption or emission factors), expressed in the units kg/t, g/t, mg/t or µg/t

- BAT-AELs for emissions to water are expressed as
  - mass of emitted substances per volume of waste water, expressed in the units g/l, mg/l or µg/l

Environmental inspections

- Czech Environmental Inspectorate
  - 10 regional inspectorates

- environmental inspection plan
  - at national level
  - new plan every year
  - list of installations covered by the plan
  - includes also procedures for non-routine environmental inspections (serious environmental complaints, serious environmental accidents, incidents and occurrences of non-compliance)

Environmental inspections

- environmental inspection programmes
  - at regional level
  - new programme every year
  - routine environmental inspections, including the frequency of site visits for different types of installations

- environmental inspections
  - period between two site visits is every year for installations posing the highest risks and not more than 3 years for installations posing the lowest risks
  - risk assessment is based on a systematic appraisal of the environmental risks of the installations concerned

Environmental inspections

- systematic appraisal of environmental risks is based on:
  - potential and actual impacts of the installations concerned on human health and the environment taking into account the levels and types of emissions, the sensitivity of the local environment and the risk of accidents
  - record of compliance with permit conditions
  - participation of the operator in the Union eco-management and audit scheme (EMAS)
  - IMPEL (network for coordination of environmental inspections on EU level) recommendations are used

Environmental inspections

- environmental inspection report
  - describes relevant findings regarding compliance of the installation with the permit conditions and conclusions on whether any further action is necessary
  - notified to the operator concerned within 2 months of the site visit taking place
  - made publicly available – IPPC information system (http://www.mzp.cz/ippc) – within 4 months of the site visit taking place

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