

Für Mensch & Umwelt

Umwelt   
Bundesamt

**Twinningproject: Support to the Israeli Ministry for Environmental Protection in improving and modernizing environmental regulatory and management tool for the Israeli industry – Regulatory tolls for SMEs, Resource Efficiency, Eco-Management and Audit Scheme**

**Mission to Tel Aviv November/December 2016**

**Transposition of BAT into German national law and the role of the  
Federal Environment Agency in the review of the TA AIR**

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Section III 2.1 / Cross-sectoral aspects of industry

Federal Environment Agency

DESSAU-ROßLAU

## Overview

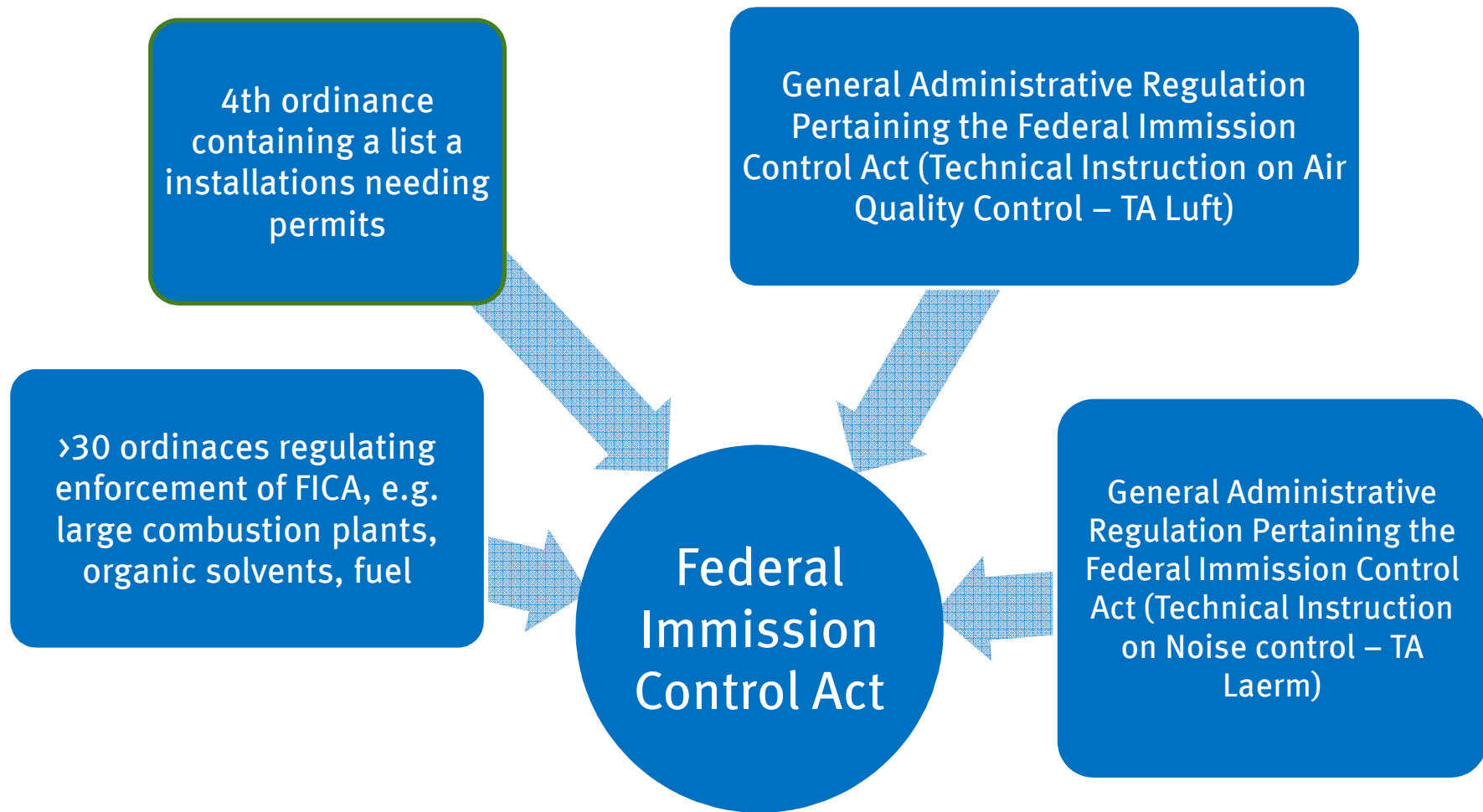
### A. BREF AND BAT

1. BREF AND BAT CONCLUSIONS AS A RESULTAT OF THE INFORMATION EXCHANGE PROCESS. HOW DO THEY GET TRANSPOSED INTO GERMAN REGULATION?
2. CURRENT STATUS OF THE TRANSPOSITION
3. PROBLEMS WITH THE TRANSPOSITION OF BAT CONCLUSIONS

### B. TA AIR

1. REVIEW OF THE TA AIR

## General composition of the Federal Immission Control Act



## A. 1 How do BAT conclusions get transposed into German regulation/law

### Transposition depends on the **scope** of the **BAT** conclusion:

- **General BAT conclusions** without AEL: i.e. environment management systems, energy management, material management, monitoring, decommissioning, noise, production residues and waste, energy → case-by-case decision by competent authorities; (general consideration during the TA AIR review)
- **BAT for Waste water**
  - BL AK (working group) amending the waste water ordinance and annexes
- **BAT for Air emission**
  - until the end of **2013 TALA** (TA Luft committee)
  - since 2014 transposition by **single general administrative regulations** for each BREF (and revision of ordinances); occasionally inclusion of these general administrative regulations into the TA Luft

## A. 1 How do BAT conclusions get transposed into German regulation/law

### **TALA committee:**

- TA Luft (no. 5.1.1) of 2002 sets the framework for a procedure to transpose BAT AEL into national law
- **Role of UBA:** preparation of a draft of the synopsis (for each BREF)
- an expert group of representatives of the federal states (4), industry (2), science (2) and environmental NGOs (2) discuss a synopsis comparing the current values of the TA Luft and the BAT AEL of a BREF
- Result of TALA: recommendations for changes in national regulation which then have to be handled by the Ministry of the Environment and an working group of the Federal States (Final: concluded recommendations by the conference of Environment Ministers (**executive recommendations**))
- Industry and NGOs only participating in the TALA step

## A. 1 How do BAT conclusions get transposed into German regulation/law

### Transposition of BAT Conclusion from 2014 onwards :

- **Role of UBA:** preparation of a draft of the synopsis (for each BREF)
- transposition by **single general administrative regulations (Mini-TA AIR)** for each BREF drafted by the Ministry of the Environment together with UBA
- According § 48 FICA official hearing of the parties concerned
- Result: upon approval of the federal council of Germany a **single general administrative regulations** for each BREF comparable to the TA Luft with recommendations for changes; as legally binding as the TA AIR
- Industry and NGOs only participating in the official hearing

## A. 1 How do BAT conclusions get transposed into German regulation/law

### **Advantages and disadvantages of the transposition procedures:**

#### **TALA:**

- Stakeholders were hardly trying to modify the BAT AEL ranges, on the other hand obvious mistakes in BREFs were eliminated due to intensive discussions in the TALA (Derogations by TALA, i.e. in the „Lime“ BREF in BAT No. 48 higher CO values have been set for selected furnace types.)
- The resulting concluded recommendations (Vollzugsempfehlungen) were less legally binding as the TA AIR and still depending on the Federal States

#### **Single general administrative regulations :**

- Stronger position of the Ministry of the Environment and UBA
- More likely that mistakes remain undiscovered until the hearing
- Assumption that the process can be accelerated compared to TALA
- As legally binding as the TA Luft

## A. 2 Current status of the transposition of BAT conclusions

**29 BREFs developed under IPPC/IED have been passed through the TALA process. Needs for amendments in the TA Air were found for 11:**

- Ceramic Manufacturing Industry CER (IPPC)
- Surface treatment using organic solvents STS (IPPC)
- Large volume inorganic chemicals LVIC-AAF (IPPC)
- Production of speciality inorganic chemicals SIC (IPPC)
- Manufacture of organic fine chemicals OFC (IPPC)
- Smitheries and foundries Industry SF (IPPC)
- Waste treatments Industries WT (IPPC)
- Tanning of hides and skins TAN (IPPC)
- Manufacture of glass GLS (IED)
- Iron and steel Production IS (IED)
- Production of Cement, lime and magnesium oxide CLM (IED)

**The following BREFs reviewed under IED were or will be transposed by single general administrative regulations:**

- Production of Chlor-alkali CAK (IED)
- Pulp and paper industry PP (IED)
- Common waste water and waste gas treatment (Chemical sector) CWW (IED)
- Refining of mineral oil and gas Ref (IED)
- Non-ferrous metals industries NFM (IED)



### *A. 3 Problems with the transposition of BATAELs into national German regulation/law*

#### **a) BAT without AEL**

- Art. 14 (3): BAT conclusions shall be the reference for setting the permit conditions; not as clear as Art. 15
- **General BAT conclusions** without AEL: i.e. environment management systems, energy management, material management, monitoring, decommissioning, noise, production residues and waste, energy → case-by-case decision by competent authorities; and general consideration during the TA AIR review
- **Specific BAT conclusions** without AEL: → consideration in **single general administrative regulations** and in part 5.4 of the TA AIR during the review

#### **b) BREF/BAT** concept is abatement-technique orientated ← → TA AIR is not (only State of the art)

#### **c) New- and existing plants** → TA AIR has no special regulations for new plants; only permanent or temporally restrictions for existing plants

- Example: sinter in iron and steel production; filter and ESP

## Example for BAT Conclusions for Sinter plants



Example for BAT conclusions:

Reduction of dust emissions from sinter strands

**20. BAT for primary emissions from sinter plants is to reduce dust emissions from the sinter strand waste gas by means of a bag filter.**

**BAT for primary emissions for existing plants is to reduce dust emissions from the sinter strand waste gas by using advanced electrostatic precipitators when bag filters are not applicable.**

**The BAT-associated emission level for dust is <1 – 15 mg/Nm<sup>3</sup> for the bag filter and <20 – 40 mg/Nm<sup>3</sup> for the advanced electrostatic precipitator (which should be designed and operated to achieve these values), both determined as a daily mean value.**

#### **Bag Filter**

**Description:** Bag filters used in sinter plants are usually applied downstream of an existing electrostatic precipitator or cyclone but can also be operated as a standalone device.

**Applicability:** For existing plants requirements such as space for a downstream installation to the electrostatic precipitator can be relevant. Special regard should be given to the age and the performance of the existing electrostatic precipitator.

## A. 3 *Published recommendation for Sinter plants*

### A) **VOLLZUGSEMPFEHLUNGEN FÜR ANLAGEN DER NUMMER 3.1 DES ANHANGS DER 4. BIMSCHV: EISENERZ-SINTERANLAGEN**

Der Stand der Technik hat sich hinsichtlich der Anforderungen der Nummer 5.2.1 für die staubförmigen Emissionen im Abgas des Sinterbandes aus Anlagen der Nr. 3.1 sowie der Anforderungen der Altanlagenregelung der Nr. 5.4.3.1.1 betreffend der staubförmigen Emissionen bei vorhandener Entstaubung des Sinterbandes mit elektrischen Abscheidern fortentwickelt.

Bis zur **Änderung der TA Luft empfiehlt die LAI** als Vollzugshilfe zu diesen Anforderungen der TA Luft folgende besonderen Regelungen zur Emissionsbegrenzung als neuen Stand der Technik:

„Gesamtstaub, einschließlich Feinstaub

**Die im Abgas des Sinterbandes enthaltenen staubförmigen Emissionen dürfen die Massenkonzentration 10 mg/m<sup>3</sup> nicht überschreiten.**

#### **ALTANLAGEN**

Altanlagen, die mit elektrischen Abscheidern ausgerüstet sind, sollen die Anforderungen spätestens in acht Jahren (ab dem 08.03.2020) einhalten;

Ab dem 08.03.2016 (4-Jahresfrist) dürfen bei Anlagen, die mit elektrischen Abscheidern ausgerüstet sind, die staubförmigen Emissionen im Abgas des Sinterbandes die Massenkonzentration 40 mg/m<sup>3</sup> nicht überschreiten.“

#### **Begründung:**

In Deutschland ist inzwischen die Mehrzahl der Eisenerz-Sinteranlagen mit Gewebefiltern ausgestattet, die eine Einhaltung des genannten Emissionswertes ermöglichen; auch verbliebene Anlagen mit Elektrofiltern sind z.T. vergleichsweise modern, so dass sie zwar nicht den Emissionswert von 10 mg/m<sup>3</sup>, jedoch den genannten Emissionswert von 40 mg/m<sup>3</sup> einhalten können. Da der in der BVT-Schlussfolgerung als Anwendungshemmnis genannte „Platzbedarf“ kein dauerhafter Hinderungsgrund für eine Umstellung auf Gewebefilter ist, kann die unbefristete Altanlagenregelung vor dem Hintergrund der BVT-Schlussfolgerung keinen Bestand haben.

Durch Verweis auf Alter und Leistung des bestehenden Elektrofilters ermöglicht die BVT-Schlussfolgerung jedoch eine befristete Altanlagenregelung, die den verbleibenden Anlagen eine angemessene Frist zur Planung und Umsetzung der nötigen Investitionen gewährt.

### *A. 3 Problems with the transposition of BATAELs into national German regulation/law*

#### **d) BAT AEL ranges → emissions limit values (ELV)?**

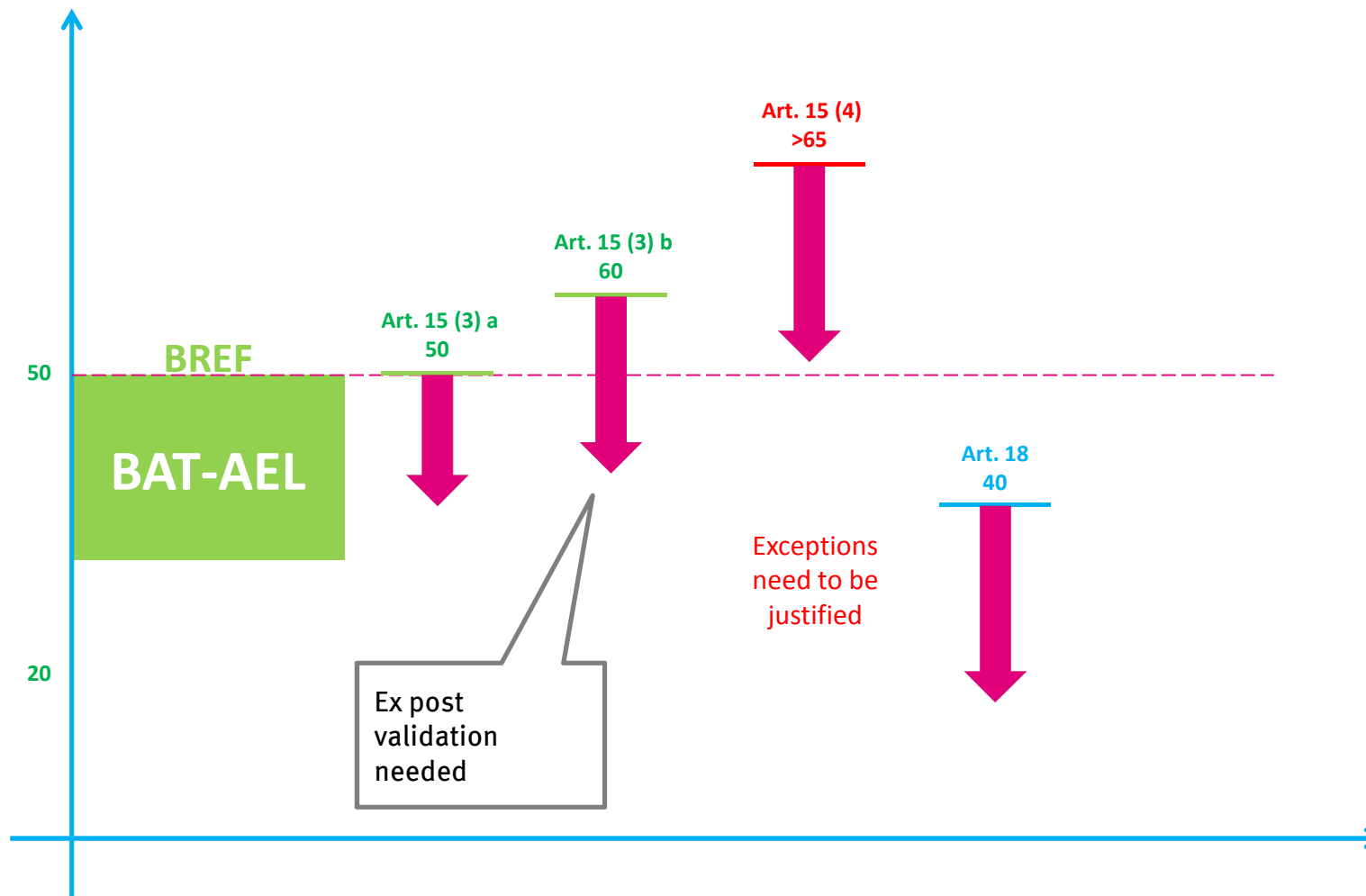
**Under IPPC:** BAT AEL were considered as a reference. The transposition of BAT AEL under IPPC was not compulsory. (citation: BAT AEL...have to be taken into account)

- Not all BAT AEL were transposed.

**Under IED: permitting procedure according to Art. 15 (3) , 15 (4) and Art. 18**

- See next slide (if derogations are used, usually only in case-by-case decisions and not as a GBR)

## Transposition according to Art. 15 (3) , 15 (4) and Art. 18



### A. 3 *Problems with the transposition of BATAELs into national German regulation/law*

#### d) **BAT AEL ranges → emissions limit values (ELV)?**

Usually TA Air is more stringent → principle to **prevent deterioration** → maintained regulation

- BAT AEL more stringent? → TALA chose the upper end of the range; in exceptional cases with sufficient evidence the lower end of the range has been used.
- Problem: Long term average as BAT AEL → concept of TA AIR: daily averages(!)  
Example: SIC BREF: BAT No. 7: HCN 1 mg/m<sup>3</sup> im Jahresmittel zu begrenzen. Der TA Luft Wert gemäß Nr. 5.2.4 Kl. II liegt bei 3 mg/m<sup>3</sup>. Die Vollzugsempfehlungen enthalten einen Tagesmittelwert von 2 mg/m<sup>3</sup>.
- Begründung: der Jahresmittelwert von 1 mg/Nm<sup>3</sup> wird u.E. durch den Tagesmittelwert von 2 mg/m<sup>3</sup> eingehalten; die Einhaltung des JMW sollte anhand realer Anlagendaten überprüft werden.
- Anderes Beispiel: BVT 36 in PP-BVT-MB: Ammoniak Schlupf nach SNCR 5 mg/m<sup>3</sup> als JMW. Lösung 10 mg/m<sup>3</sup> als TMW.
- Falls ausnahmsweise JMW in die TA Luft aufgenommen werden sollen, müssen diese immer mit kontinuierlichen Messungen gekoppelt sein.

## A. 3 *Problems with the transposition of BATAELs into national German regulation/law*

### e) **Footnotes**

Footnotes are often used to dissolve difficult situations in the TWG meeting. Depending on the way the footnote is phrased this can cause problems (non executable).

Example Cement, lime and Magnesia BREF:

1. Energieconsumption (\*)

(\*) Energy consumption depends on the type of product, the product quality, the process conditions and the raw materials

2. BAT AEL applying ESP is  $< 20 \text{ mg/m}^3$  (\*)

(\*) In exceptional cases where the resistivity of dust is high, the BAT-AEL could be higher, up to  $30 \text{ mg/Nm}^3$ , as the daily average value.

3. BAT-associated emission levels for CO from the flue-gas of kiln firing processes BAT-AEL (\*)  $< 500 \text{ mg/Nm}^3$

(\*) Emissions can be higher depending on raw materials used and/or type of lime (hard lime) produced, e.g. hydraulic lime.



## Synopsen zur Umsetzung von BVT Schlussfolgerungen in zukünftigen Allgemeinen Verwaltungsvorschriften

### f) Sum parameters

Some of the sum parameters in BREFs are not used in German legislation (i.e. waste water ordinance or TA AIR).

#### 1. Examples PP BREF:

Total reduced sulphur (TRS im). TRS comprises Mercaptane und Dimethylsulfid etc. TA AIR regulate H<sub>2</sub>S only. Same for BOD<sub>5</sub>, BOD<sub>7</sub>, TOC, DOC, AOX, TSS, Total N in water

#### 2. Example Cement and Glass BREF:

Different classes for sum parameters for Heavy metals (BAT 21 Glass, BAT 28 Cement) → modification of classes for sum parameters in the TA

AIR

## Synopsen zur Umsetzung von BVT Schlussfolgerungen in zukünftigen Allgemeinen Verwaltungsvorschriften

### **g) Reference oxygen content (should prevent off-gas-dilution)**

- BREFs sometimes contain reference oxygen contents where we have none in the TA AIR.

Example: CLM BREF:

BREF 11% oxygen value → none in the TA AIR, to be modified

- Ref. Oxygen contents should be orientated on real process values.  
Examples: Problems in the PP and WBP BREFs.

### **h) Monitoring (Parameter und frequency)**

- TA AIR: single measurements every 3 years; some BREF sets annually (or shorter) measurements for distinct parameters
- Will be considered generally in the TA AIR review and in the means time in the single general administrative regulations

## 4. Examples for prospective changes of the TA Luft (18)

### No. 5.4 Special provisions for certain types of installations

- Transposition of BAT conclusions into national regulations:
  - ✓ **General no setback**
  - ✓ Usually the upper end of the BAT-AEL range is used for the recommendations or administrative regulations
  - ✓ Deviations from the upper BAT-AEL value only in well-justified cases

## B. 1 Review of the TA AIR

**Decision of the Minister of Environment from March 2014 to review the TA AIR **within the current election period****

- **Review** of the TA AIR within the given structure and systematic
- Same **principles** as during the review of 2002:  
**Proportionality, transparency, participation and reasonability**

## B. 1 What is the Technical Instruction on Air Quality Control (TA Luft)?

### FIRST GENERAL ADMINISTRATIVE REGULATION PERTAINING THE FEDERAL IMMISSION CONTROL ACT (TECHNICAL INSTRUCTIONS ON AIR QUALITY CONTROL – *TA LUFT*) OF 24 JULY 2002

- **installations among the 4th ordinance** → more than 50.000 installations with severe influence on the environment (letter G in 4th Ordinance)
- **I.a. the TA Air consists of**
  - **part 4: prevention against harmful effects** (Immissions -air quality) and **part 5: precaution against harmful effects** (Emissions)
  - with a general part with common emission values (No. 5.2) and sector-related sections with sector-specific values (No. 5.4)
- **The TA Air is legally binding for competent authorities**
- **Similar plants are treated equality** → **TA Air provides General Binding Rules**
- **TA Air provides legal certainty and planning reliability** for industry
  
- **Advantage** → more flexible compared to ordinances
- flexible instruments, i.e. **specific regulations for existing plants, dynamic state of the art requirements, minimization principle and target values**

## B. 2 Why do we consider a review of the TA AIR necessary?

### Last review of the TA Air 2002

- **Transposition of IED** → revised 4th ordinance with modified structure and new installations (i.e. wood pellet plants, shredder plants)
- **Further developed of state of the art**
- **Transposition of BAT conclusions**
- **Transposition of other recommendations developed since 2002** (UA Luft/Technik u. AISV)
- temporally restricted requirements for existing installations are expired
- **Harmonisation with other laws, i.e. §34 Federal Law on Nature protection** (deposition of N, NH<sub>3</sub>)
- Needed updates, corrections, additions, amendments

### TA Luft History:

First TA Luft 1964  
(Trade Regulations)

Under FICA  
(BImSchG) 1974

Review 1986

Review 2002  
(IPPC, Air quality,  
PM)

**Currently: Review  
2017(?)**

## B.3 What will be checked? (Examples)

**In general the whole TA Air will be checked, in particular ...**

- ...developed state of the art?
- ...new conclusions on carcinogenic substances (quartz PM 4 und formaldehyde)
- ... Annex 6: most VDI Monitoring guidelines have been reviewed
- ...Check of all temporally restricted requirements for existing installations (appr. 35)
- ...consideration of new types of installations
- ...consideration of the new systematic of the **CLP Regulation** (for "Classification, Labelling and Packaging (EC) No 1272/2008 (modified classification criteria)
- ...Inclusion of a odour exposure guideline (GIRL) is intended

## B. 4 Role of UBA (and Ministry, „Länder“ and other parties)?

- **Official start March 2014**
- **UBA together with Ministry of Environment main contributor,** supported by the "Länder" (Federal States)
- New working group Ministry/Länder/UBA AG „TA Luft“
- Targeted and investigation and search for data and talks with industry
- Inclusion of the recommendations for 11 BREFs (29 BREFs were checked by TALA) and new general administrative regulations
- Research projects for 16 types of installations and for carcinogenic substances
- Early discussion of drafts **with industry parties**
- **Target:** New TA AIR 2017



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