Implementation of IED

Overview on environmental management and permitting procedures for VOC installations in Germany

Vierte Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes (Verordnung über genehmigungsbedürftige Anlagen - 4. BImSchV)

4. BImSchV

Ausfertigungsdatum: 02.05.2013

Vollzitat:

"Verordnung über genehmigungsbedürftige Anlagen in der Fassung der Bekanntmachung vom 31. Mai 2017 (BGBl. I S. 1440)"

Stand: Neugefasst durch Bek. v. 31.5.2017 I 1440

https://www.gesetze-im-internet.de/bimschv_4_2013/4._BImSchV.pdf

Structure

1. Overview on installations requiring an environmental permit
2. German environmental integrated permitting system
3. Duties of the operator according to German Federal Pollution Control Act
4. Managing the compliance to environmental conditions by the operator

1. Overview on German types of permits

Environmental permit required: in list of 4th BImSchV

IED installations

Special conditions for implementation of BAT C in

- TA Luft
- Administrative regulations
- Ordinances

G/V installations

- TA Luft
- Ordinances

No environmental permit required – not in list of 4th BImSchV

Only construction license necessary

- Federal Ordinances e.g. 1st, 2nd, 31th BImSchV
- Local Ordinances like for combustion on solids in polluted areas

- TA Luft prevention requirements only as source of knowledge

2. German environmental integrated permitting system

4th BImSchV

Installations require a permit that

are specially designed in a high degree because of their nature or way of operating

- to cause harmful effects on the environment

or

- to endanger, to disadvantage or bother significantly in an other way

Installations requiring a permit are listed in **Annex of 4th BImSchV**

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Ausfertigungsdatum: 02.05.2013

Vollzitat:

"Verordnung über genehmigungsbedürftige Anlagen vom 2. Mai 2013 (BGBl. I S. 973, 3756), die durch Artikel 3 der Verordnung vom 28. April 2015 (BGBl. I S. 670) geändert worden ist"

Stand: Geändert durch Art. 3 V v. 28.4.2015 I 670

Why an integrated permit?

- Setting environmental standards to same type of installations
- Integrated approach = concerning not only one media to prevent emissions into air, water or soil – if not possible then minimization to achieve a high level of protection for the environment as a whole
- Permit sets clear condition of operation of an installation! -> operator must take measures to guarantee an environmental impact as low as possible

Goal =

High protection of the environment as a whole when operating an installation

Scope and components of an installation

- Parts of the installation and processing steps necessary for operation, and
- auxiliary facilities associated with parts of installations and process stages in terms of location and operation which may be relevant to

  a) the occurrence of harmful environmental impacts

  b) precaution against harmful environmental impacts or

  c) the occurrence of other risks, significant drawbacks or significant disturbances

Fourth Ordinance for the Implementation of the Federal Immission Control Act (Ordinance on Installations Requiring a Permit – 4. BImSchV)

4th BImSchV

G = Procedure with public participation; E = IED requirements; V= simplified permitting procedure without public participation

No	Type of installation	Type of permitting procedure	Installation according Art. 10 IED
a	b	c	d
5.1	Installations for surface treatment, including installations, if colours or coats contain only high-boiling oils as organic solvents (with a vapour pressure of less than 0.01 kPa at a temperature of 293.15 Kelvin) and these solvents have no higher vapour pressure at the respective conditions of application		
5.1.1	Installations for the surface treatment of materials, objects or products, including related drying units, if organic solvents are used, in particular for dressing, printing, coating, degreasing, waterproofing, laminating, sizing, painting, cleaning or impregnating with an consumption of organic solvents of		
5.1.1.1	150 kilograms or more per hour or 200 tons or more per year,	**G**	**E**
5.1.1.2	25 kilograms and less than 150 kilograms per hour or 15 tons and less than 200 tons per year, excluding printing of	**V**	

What is included in an Integrated German Permit?

Integrated German Permit includes:
Requirements according Federal Immission Control Act like:

- Air Pollution Control
- Noise protection
- Waste

Requirements from other regulations
e.g.:

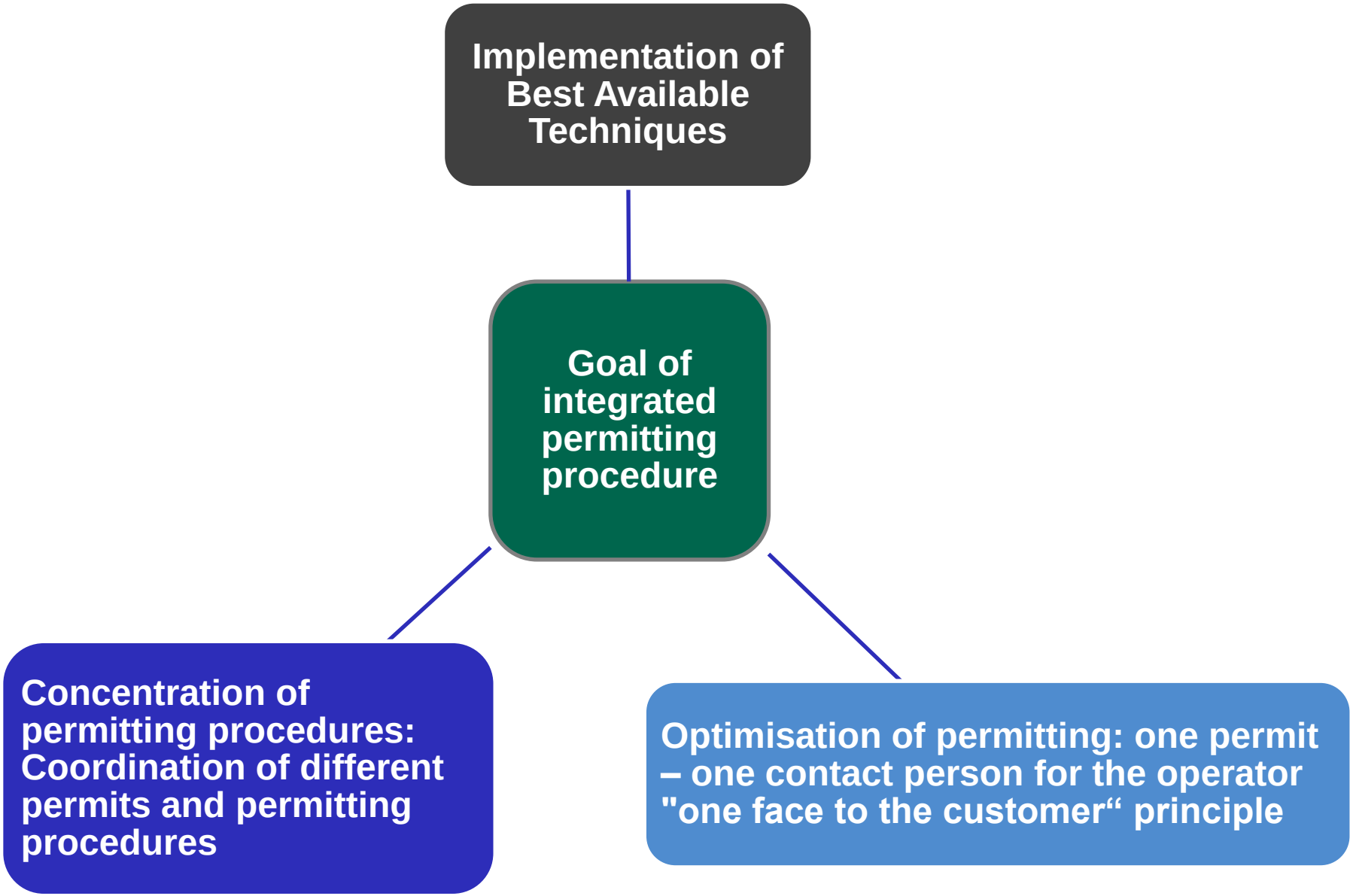
- Occupational health
- Safety and fire protection
- ELVs for waste water, discharged to sewer
- Land use planning

Other permits
e.g.

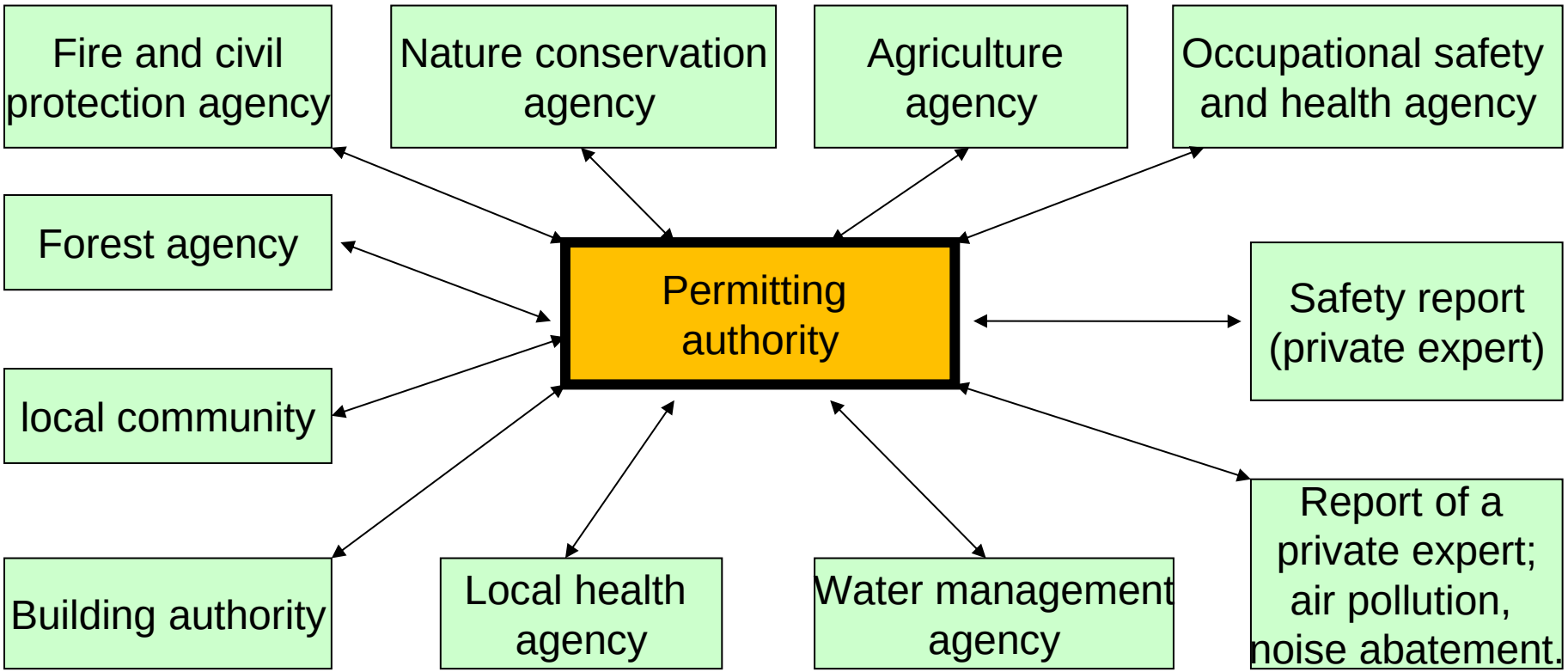
- Building licence
- Discharges of waste water to public sewers before treatment in a public treatment plant
- Permissions according to Ordinance on Industrial Safety and Health 12. BImSchV ("Seveso"

Not included in the permit:

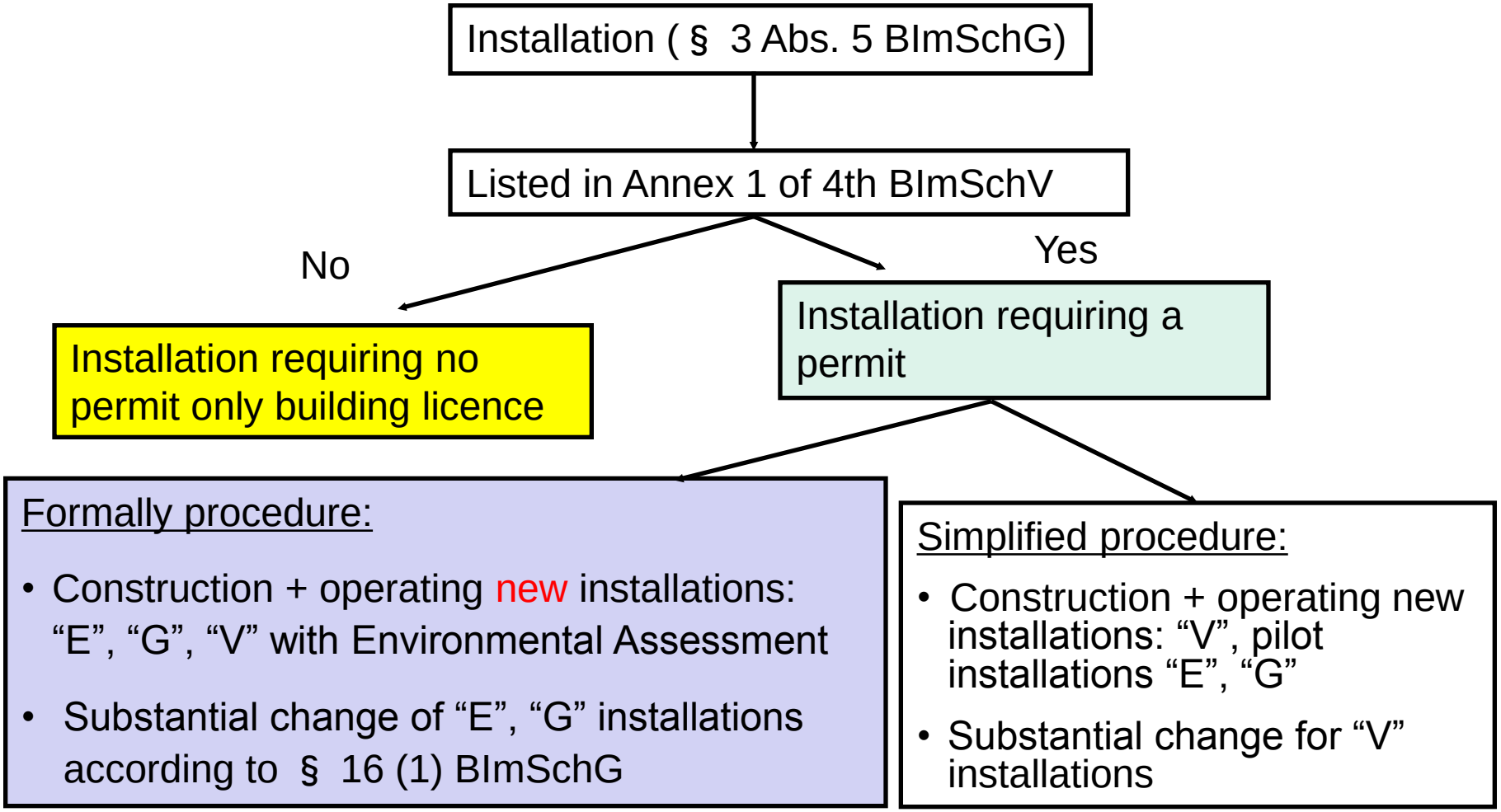
Permit according to Water Management Act
regarding discharge of waste water or cooling water into surface waters or groundwater


Implementation of Best Available Techniques
Goal of integrated permitting procedure
Concentration of permitting procedures: Coordination of different permits and permitting procedures
Optimisation of permitting: one permit – one contact person for the operator "one face to the customer“ principle

Principle of Integrated Permitting: Participation of authorities and agencies in permitting procedure - BImSchG



- The permitting authority sends the application documents to specialised agencies and the authorities which are responsible to public issues – **star shape procedure**
- The permit, issued by the permitting authority should contain all obligations proposed by the agencies/institutes involved


Installation (§ 3 Abs. 5 BImSchG)
Listed in Annex 1 of 4th BImSchV
No
Yes
Installation requiring no permit only building licence
Installation requiring a permit
Formally procedure:
• Construction + operating new installations: "E", "G", "V" with Environmental Assessment
• Substantial change of "E", "G" installations according to § 16 (1) BImSchG
Simplified procedure:
• Construction + operating new installations: "V", pilot installations "E", "G"
• Substantial change for "V" installations

Involved authorities:

Participation of all authorities that are responsible for the carrying out of public-legal regulations that are relevant for construction or operation of the installation:

- Authorities whose decision is displaced by **concentration effect of the environmental permit** like building authorities
- Authorities that **make own decisions** according to the undertaking like water authorities, authorities for the nature, authorities for traffic, municipalities
- Authorities that **acts as public agencies** because of their field of functions like industry control office, health authorities, authorities for the nature

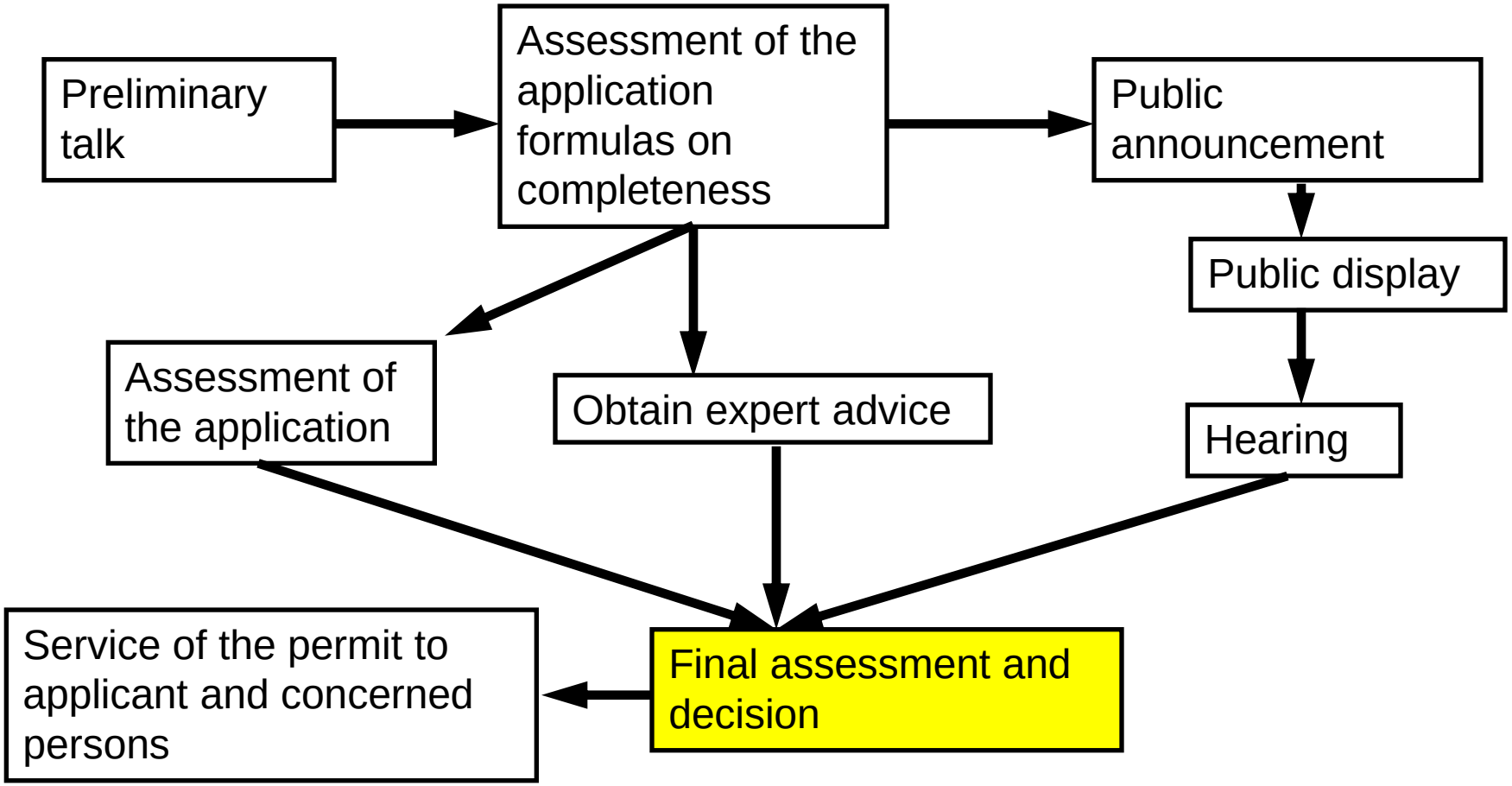
Application for permit includes a description of

9th BImSchV

- the installation and its activities, kind + extend of activity
- raw and auxiliary materials, other substances and the energy used in or generated by the installation
- sources of emissions from the installation
- conditions of the site of the installation
- nature and quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment
- the proposed technology and other techniques for preventing or, where this not possible, reducing emissions from the installation
- where necessary, measures for the prevention and recovery of waste generated by the installation
- further measures planned to comply with the general principles of the basic obligations of the operator
- measures planned to monitor emissions into the environment

(Simplified) Procedure of an integrated permitting process

9th BImSchV

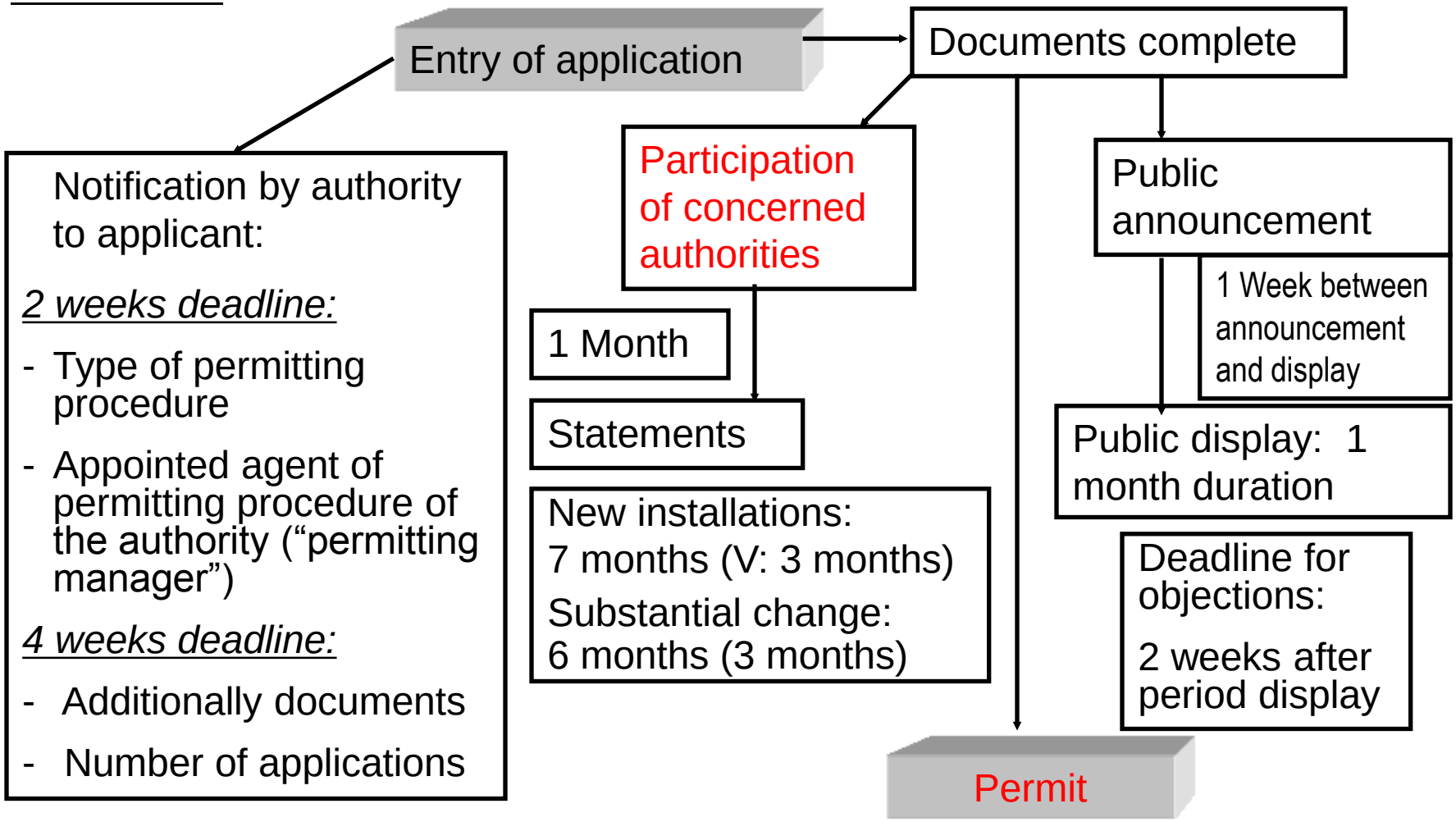


Preliminary talk: **Consultation** of the **applicant by the permitting authority** e.g.

9th BImSchV

- Clarification of the permitting obligation and of the permitting procedures (permit for new installations or substantial changes; formally or simplified procedure)
- Application of a partial license, early start
- Participation and selection of experts
- Questions according to public participation
- Clarification of the obligation of an Environmental Impact Assessment
- Time flow
- Scope and number of application forms
- Determination of the authorities to be involved

Dead-lines:


Entry of application
Documents complete
Notification by authority to applicant:
2 weeks deadline:
- Type of permitting procedure
- Appointed agent of permitting procedure of the authority ("permitting manager")
4 weeks deadline:
- Additionally documents
- Number of applications
Participation of concerned authorities
1 Month
Statements
New installations:
7 months (V: 3 months)
Substantial change:
6 months (3 months)
Public announcement
1 Week between announcement and display
Public display: 1 month duration
Deadline for objections:
2 weeks after period display
Permit

Simplified procedure:

9th BImSchV

- For “V” installations of Annex 1 of 4th BImSchV
- No public announcement
- No public display of application
- No objects against the undertaking are possible
- No public hearing
- Time period of procedure: 3 months

Substantial Change according to § 16 (2) BImSchG

- No public announcement of the undertaking
- No public display of the application and application materials

If there are no significant nuisances or significant disadvantages for the environment to be expected, e.g.:

- No harmful effect are to be expected by the planned measures of the operator
- The disadvantages are low compared to the advantages

‘**substantial change**’ means a change in the nature or functioning, or an extension, of an installation or combustion plant, waste incineration plant or waste co-incineration plant which may lead to adverse effects which may be of relevance with regard to the examination pursuant to the basic obligations

Application for permit by the operator

Legally basic information is regulated in 9th BImSchV

Neunte Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes (Verordnung über das Genehmigungsverfahren - 9. BImSchV
in der Fassung der Bekanntmachung vom 29. Mai 1992 zuletzt geändert durch Art. 5 VO vom 28.04.2015

In Germany different application forms and system available – large differences!

E.g. in Bavaria: only checklist

In Lower Saxonia: Electronic permitting system

Application

9th BImSchV

Most crucial topic for an integrated permit:

Detailed application forms

Additional in-depth description of the installation and the procedures

including descriptions, flow charts, full-scale drawings and technical data,

Data on emissions, immissions and measures for emission control

Source	Kind of source	Type of construction of source	Geographical site		geodetical	Height over floor	Area of outlet	In case of line or area sources		
No referring to flow chart					Height [m]	[m]	[m²]	length [m]	Width [m]	Winkle to north
1	2	3	4	5	6	7	8	9	10	11

Structure of the checklist for application documents

1.	General information
2.	Location and vicinity of the installation
3.	Description of equipment and procedure
4.	Air pollution control
5.	Noise and vibration protection, light effects, electromagnetic fields
6.	Installation safety
7.	Waste (including plant - specific waste water)
8.	Energy efficiency, use of heat dissipation
9.	Initial state of the plant property, Cessation of operation
10.	Building documents
11.	Workers safety
12.	Water pollution
13.	Nature protection
14.	Environmental impact analysis

Structure of the checklist for application documents (extract)

1.	General information
1.1	Name, address of the operator, if different: from the applicant too Contact person with phone, e-mail, fax
1.2	Location, address of the installation (owner of the premises)
1.3	Scope of application
1.3.1	Information about the nature and extent of the applied installation with brief description
1.3.2	Substantial change procedure: - Naming of the concrete scope of the change, - Description of the current situation, - Request of non-participation of public with reasons
1.3.3	Partial permit; reasons for this request
1.3.4	Permit of Early Start(§ 8a BImSchG) reasons for this request related to § 8a Abs. 1 Nr. 3 BImSchG
1.4	Short description of the planned installation
1.5	Environmental—Audit
1.6	Verifiable invest cost and building costs
1.7	Time of the planned start of building and operating
1.8	List of documents accompanying the application, if necessary, included with special marking of the documents, containing business or trade secrets

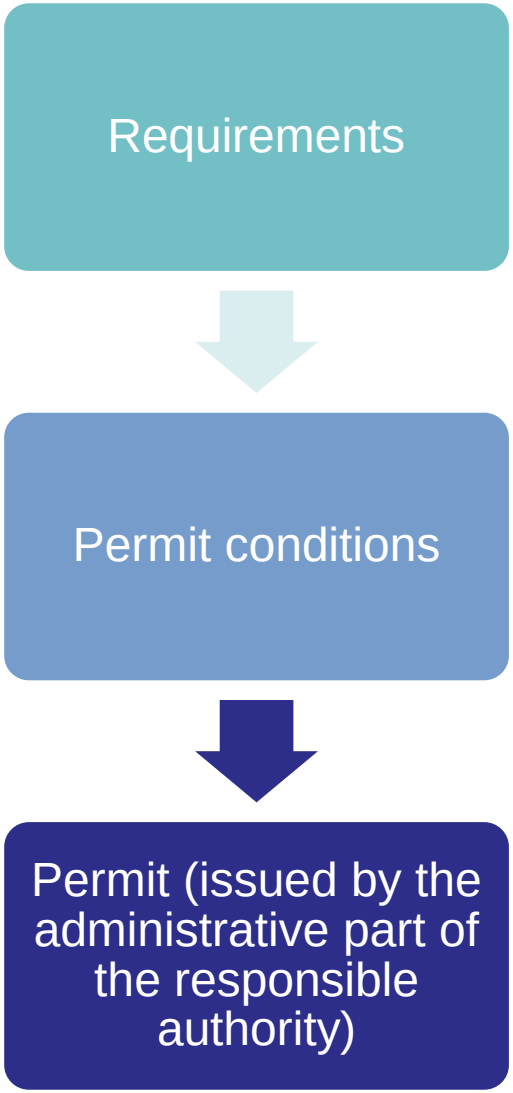
Structure of the checklist for application documents (extract)

4.	Air pollution control
4.1	Planned measures to avoid emissions
4.2	Information relating to emissions of air pollutants from each emission source (stack, diffuse sources, odor; if available measurement reports): • Location, dimensions, diameter • Classification of air pollutants according to regulation/law, pollutant concentration (mg / m³), pollutant mass flow (kg / h), emission duration and time course • Information on the spatial and temporal distribution of emissions
4.3	Proposed measures to reduce emissions of air pollutants, especially a description of emission control equipment (eg dust, scrubber) including overview of the technical characteristics (eg separation efficiency).
4.4	Information on gas collection and exhaust discharge, including emission outlet conditions (especially stack height, stack diameter, gas temperature and velocity at the chimney outlet, exhaust rates (m³ n / h) at standard conditions
4.5	Planned measures to monitor emissions: Esp. data for the measurement and recording of emissions and to monitor the effectiveness of emission control devices
4.6	Consideration of the immissions of the plant as far as necessary
4.7	Information on emission trading, as far as necessary

Structure of the checklist for application documents (extract)

7.	Waste (including plant-specific waste water)
7.1	Planned measures to avoid waste including discourse, why a further avoidance is not possible or is unreasonable
7.2	Kind, amount, composition and point of origin with waste code related to Directive 2000/532/EG
7.3	Planned measures to recycle waste including discourse, why a further avoidance is not possible or is unreasonable
7.4	Planned measures for waste disposal including disposal routes

How to set ELVs and writing permit conditions



In Germany:

- Integrated permits have generally the same structure
- Conditions result from legally requirements like TA Luft, specific ordinances like 13., 17. 31. BImSchV
- Masters of conditions available (e.g. resulting from requirements of TA Luft, TA Lärm etc.)
- Not only ELV are laid down in permit but conditions and measures to ensure the compliance of the ELV as well as the controlling of the requirements like registration of measured emissions

Structure of a permit

1. General
2. Construction Law
3. Fire
4. Occupational Safety and Health
5. Air pollution control
6. Noise protection
7. Wastewater
8. Waste protection
9. Nature protection
10. Protection of soil and groundwater
11. Definite cessation
12. Legal reasons for the permit and the conditions

Requirements set out

- Conditions guaranteeing that the installation complies with the legal requirements
  - Including emission limit values for polluting substances likely to be emitted from the installation concerned in significant quantities, having regard to their nature and their potential to transfer pollution from one medium to another (water, air and land)
- Requirements ensuring protection of the soil and ground water
- Measures concerning the waste management
- Other technical measures based on the best available techniques

- Monitoring requirements, specifying measurement methodology and frequency evaluation procedure
- Obligation to supply the competent authority yearly with data required for checking compliance with the permit
- Measures relating to conditions other than normal operating conditions (start-up, leaks, malfunctions, momentary stoppages and definitive cessation of operations)
- Information and reporting duties
- Requirements concerning the environmental management system

3. Duties of the operator according to German Federal Pollution Control Act

Article 5
Obligations of Operators of Installations Subject to Licensing

(1) Installations subject to licensing shall be constructed and operated in such a way that, in order to ensure a high level of environmental protection altogether,

1. harmful effects on the environment or any other hazards, significant disadvantages and significant nuisances to the general public and the neighbourhood are avoided;

2. precautions are taken to prevent any harmful effects on the environment or any other hazards, significant disadvantages or significant nuisances, in particular by such measures as are appropriate according to the best available techniques;

3. wastes are avoided, unavoidable wastes are recovered, and non-recoverable wastes are disposed of without impairing the public welfare; wastes shall be deemed to be unavoidable if avoidance is not technically feasible or not reasonable; avoidance shall be deemed to be inadmissible if it leads to more adverse effects on the environment than would be the case with the option of recovery; recovery and disposal of wastes shall be based on the provisions of the Closed Substance Cycle and Waste Management Act and on any other provisions applicable to wastes;

4. economical and efficient energy use is ensured.

4. Managing the compliance to environmental conditions by the operator

Management for the Environment for the installation to ensure the compliance with the requirements of § 6 para 1 No 1:

(1) A permit shall be granted if

1. it is ensured that the obligations arising from Article 5 and from any ordinance issued under Article 7 will be complied with

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