The following English text of the Thirteenth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on Large Combustion Plants and Gas Turbine Plants – 13. BImSchV) is a legally non-binding version. Legally binding is only the latest German version resulting from the Federal Law Gazette (Bundesgesetzblatt).

Thirteenth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on Large Combustion Plants and Gas Turbine Plants – 13. BImSchV)*)

of 20 July 2004 (Federal Law Gazette I p. 1717) corrected on 27 January 2009 (Federal Law Gazette I p. 129)

The Federal Government decrees pursuant to

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*) This ordinance serves as transposition of Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants (OJ EC L 309 p. 1).

- Article 7 paragraph 1 no. 1 to 4 as well as paragraph 2, 3 and 5 of the Federal Immission Control Act in the version of the announcement of 26 September 2002 (Federal Law Gazette I p. 3830) after having heard the parties concerned,

- Article 7 paragraph 4 and 5 as well as Article 48a paragraph 1 and 3 of the Federal Immission Control Act

ensuring the rights of the parliament according to Article 48b of the Federal Immission Control Act the following ordinance:

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1 Part I General provisions

1.1 Article 1

1.1.1 Scope

(1) This ordinance shall apply to the construction, design and operation of combustion plants including gas turbine plants as well as gas turbine plants for mechanical drives with a rated thermal input of 50 Megawatt or more for the use of solid, liquid or gaseous fuels.

(2) This ordinance shall not apply to

1. combustion plants in which waste gases are directly used in manufacturing processes (e. g. blast furnaces),

2. combustion plants in which waste gases are directly used for heating, drying or any other treatment of objects or materials (e.g. reheating furnaces or heat treating furnaces),

3. post-combustion facilities designed to purify waste gases by combustion as far as they are not operated as independent combustion plants,

4. combustion plants in which catalysts for catalytic cracking are purified by heat treatment,

5. combustion plants in which hydrogen sulphide is converted into sulphur (Claus plants),

6. combustion plants in the chemical industry which are designed for direct heating of goods in reactors,

7. coke battery furnaces,

8. cowpers,

9. gas turbine plants used on offshore platforms,

10. internal combustion engine plants and

11. plants as far as they are subject to the Seventeenth Ordinance for the Implementation of the Federal Immission Control Act in that version which is currently applicable.

(3) This ordinance contains requirements to be fulfilled as a precaution against harmful effects on the environment according to Article 5 paragraph 1 no. 2 of the Federal Immission Control Act.

1.2 Article 2

1.2.1 Definition of terms

For the purpose of this ordinance mean

1. waste gas

   the carrier gas together with the solid, liquid or gaseous emissions; the waste gas volume flow is referred to the waste gas volume at standard conditions (temperature 273,15 K; pressure 101,3 kP) after subtraction of the humidity content of steam; it shall be indicated in cubic metre per hour (m^3/h);

2. abatement equipment

   equipment connected to the combustion plant on the outlet side for reduction of air pollutants including equipments for selective non catalytic reduction;

3. existing plant

   a plant

   a) which according to Article 67 paragraph 2 or Article 67a paragraph 1 of the Federal Immission Control Act or before coming into force of the Federal Immission Control Act according to Article 16 paragraph 4 of the Industrial code was to be notified,

   b) for which the first license for construction and operation according to Article 4 or Article 16 of the Federal Immission Control Act was given before 27 November 2002 and which was put into operation before 27 November 2003 or

   c) which was subject of a full request for a license for construction and operation according to Article 4 or Article 16 of the Federal Immission Control Act up to the date of 26 November 2002 and which was put into operation before 27 November 2003;

4. biomass fuels

   a) products consisting of any whole or part of a vegetable matter from agriculture or forestry as far as they can be used as a fuel for the purpose of recovering its energy content and

   b) the following wastes as far as they are used as fuel:

      aa) vegetable waste from agriculture and forestry,

      bb) vegetable waste from the food processing industry as far as the heat generated is recovered,

      cc) fibrous vegetable waste and black liquor from virgin pulp production and from production of paper from pulp as far as they are co-incinerated at the place of production and the heat generated is recovered,

      dd) cork waste,

      ee) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating; included in particular are such wood wastes originating from construction and demolition waste;

5. fuels

   all solid, liquid or gaseous combustible substances including their non-combustible components with the exception of combustible materials as far as they are subject to the Seventeenth Ordinance for the Implementation of the Federal Immission Control Act in that version which is currently applicable;

6. diesel fuel

   diesel fuel according to DIN EN 590 (edition February 2000);

7. emissions

   air pollutants discharging from a plant; they shall be indicated as mass concentrations in terms of milligrams per cubic metre waste gas (mg/m^3) or nanograms per cubic metre waste gas (ng/m^3), referred to the waste gas volume at standard conditions (temperature 273,15 K; pressure 101,3 kP) after subtraction of the humidity content of steam; emissions of dust can also be indicated as soot level;

8. emission limit value

   the permissible mass concentration of an air pollutant contained in the waste gas from a plant which may be discharged into the air; it shall be indicated in terms of milligrams per cubic metre waste gas (mg/m^3) or nanograms per cubic metre waste gas (ng/m^3) and referred to an oxygen content by volume in the waste gas of 3 per cent in the case of combustion plants for liquid and gaseous fuels, 6 per cent in the case of solid fuels and 15 per cent in the case of gas turbines plants. The mass concentration measured in the waste gas shall be converted in line with the following equation:

$$E_B = \frac{21 - O_B}{21 - O_M} \times E_M$$

The following definitions apply:

E_B mass concentration related to reference oxygen content

E_M mass concentration measured

O_B reference oxygen content

O_M oxygen content measured

If abatement equipment is used to reduce emissions conversion may occur with regard to the substances for which the abatement equipment is operated only for those periods during which the oxygen content measured exceeds the reference oxygen content;

emission limit values for dust can also be indicated as permissible soot level;

9. natural gas

   naturally occurring methane with not more than 20 per cent by volume of inerts and other constituents which meets the requirements of DVGW working document G 260 of January 2000 for gases of the 2. gas family;

10. combustion plant

    any plant in which fuel is oxidised in order to use the heat thus generated;

11. rated thermal input

    the heat content of the fuels, related to the net calorific value, fed per unit time to a combustion plant in continuous operation; it shall be indicated in Megawatt(MW);

12. gas turbine plant

    any plant with a rotating machine which converts thermal energy into mechanical work, consisting mainly of a compressor, a thermal device in which fuel is oxidised in order to heat the working fluid, and a turbine;

13. common plant

    a common plant in the sense of Article 1 paragraph 3 of the Fourth Ordinance for the Implementation of the Federal Immission Control Act in which particularly some plants are constructed in such a way or an existing plant is extended by one or more new plants in such a way that, taking spatial and operational coherences into account, their waste gases can be discharged through a common stack;

14. light fuel oil

    light fuel oil according to DIN 51603 Part 1 (edition March 1998);

15. multi-fuel firing unit

    individual combustion unit which may be fired alternately by two or more types of fuels;

16. mixed fuel firing unit

    individual combustion unit which may be fired simultaneously by two or more types of fuels;

17. rate of desulphurisation

    the ratio of the quantity of sulphur which is not emitted into the air at the combustion plant site to the quantity of sulphur contained in the fuel which is introduced into the combustion plant; it is indicated in percentage.

2 Part II Requirements relating to construction and operation

2.1 Article 3

2.1.1 Emission limit values for combustion plants for solid fuels

(1) The combustion plants shall be constructed and operated in such a manner that the requirements of this paragraph and the paragraphs 2 to 15 are met. The operator has to ensure that

1. no daily mean value exceeds the following emission limit values:

   a) total dust 20 mg/m^3

   b) mercury and its compounds, to be indicated as Hg, 0.03 mg/m^3

c) carbon monoxide with a rated thermal input of

50 MW to 100 MW 150 mg/m^3

more than 100 MW 200 mg/m^3

d) nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide,

for the use of untreated wood and a rated thermal input of

50 MW to 300 MW 250 mg/m^3

more than 300 MW 200 mg/m^3

for the use of other biomass fuels and a rated thermal input of

50 MW to 100 MW, except for the use in fluidised bed combustions, 350 mg/m^3

more than 100 MW to 300 MW 300 mg/m^3

more than 300 MW 200 mg/m^3

in fluidised bed combustions and a rated thermal input of

50 MW to 100 MW, except for the use of untreated wood, 300 mg/m^3

more than 100 MW 200 mg/m^3

for the use of other fuels or other combustion units and

a rated thermal input of 50 MW to 100 MW 400 mg/m^3

more than 100 MW 200 mg/m^3

e) sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, for the use of

biomass fuels 200 mg/m^3

other fuels and a rated thermal input of

50 MW to 100 MW in

fluidised bed combustions 350 mg/m^3

other combustion units 850 mg/m^3

more than100 MW 200 mg/m^3

in fluidised bed combustions with a rated thermal input of 50 MW to 100 MW additionally to the limitation of the mass concentration a rate of desulphurisation of at least 75 per cent must be achieved;

in combustion plants with a rated thermal input of 100 MW or more and for the use of other fuels than biomass fuels additionally to the limitation of the mass concentration a rate of desulphurisation of at least 85 per cent must be achieved;

2. no half-hourly mean value exceeds twice the emission limit values established in number 1;

3. no mean value, determined during the respective sampling period, exceeds the following emission limit values:

a) cadmium and its compounds, to be indicated as cadmium,

thallium and its compounds, to be indicated as thallium,

totally 0.05 mg/m^3

b) antimony and its compounds, to be indicated as antimony,

arsenic and its compounds, to be indicated as arsenic,

lead and its compounds, to be indicated as lead,

chromium and its compounds, to be indicated as chromium,

cobalt and its compounds, to be indicated as cobalt,

copper and its compounds, to be indicated as copper,

manganese and its compounds, to be indicated as manganese,

nickel and its compounds, to be indicated as nickel,

vanadium and its compounds, to be indicated as vanadium,

tin and its compounds, to be indicated as tin,

totally 0.5 mg/m^3

c) arsenic and its compounds (except for arsine),

to be indicated as arsenic,

benzo(a)pyren,

cadmium and its compounds, to be indicated as cadmium,

water-soluble compounds of cobalt, to be indicated as cobalt,

chromium(VI) compounds (except for barium chromate and lead chromate), to be indicated as chromium,

or

arsenic and its compounds, to be indicated as arsenic,

benzo(a)pyren,

cadmium and its compounds, to be indicated as cadmium,

cobalt and its compounds, to be indicated as cobalt,

chromium and its compounds, to be indicated as chromium,

totally 0.05 mg/m^3

and

d) dioxins and furans according to Annex I 0.1 ng/m3 and

4. no annual mean value exceeds the following emission limit values:

nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, with a rated thermal input of

50 MW to 100 MW	250mg/ m^3
more than100 MW	100 mg/m3.

(1a) para (1) sentence 2 no. 4 does not apply if bio fuels according to Article 2 no. 4 are used exclusively.

(2) The emission limit values according to paragraph 1 sentence 2 no. 3 letter a to c shall not apply for the use of coal, untreated wood as well as wood waste according to Article 2 no. 4 letter b ligature ee. The emission limit value according to paragraph 1 sentence 2 no. 1 letter b shall not apply to combustion plants for the use of untreated wood.

(3) Notwithstanding the emission limit values for carbon monoxide, established in paragraph 1 sentence 2 no. 1 and 2, an emission limit value for carbon monoxide of 250 mg/m^3 for the daily mean value and of 500 mg/m^3 for the half-hourly mean value shall apply for plants using biomass fuels except untreated wood.

(4) Notwithstanding the emission limit value for mercury and its compounds, established in paragraph 1 sentence 2 no. 2, no half-hourly mean value shall exceed the emission limit value of 0.05 mg/m^3.

(5) Notwithstanding paragraph 1 sentence 2 no. 1 and 2 for the emissions of sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, for plants with a rated thermal input of

a) 50 MW to 100 MW alternatively a rate of desulphurisation of at least 92 per cent must be achieved,

b) more than 100 MW to 300 MW an emission limit value of 300 mg/m^3 for the daily mean value and of 600 mg/m^3 for the half-hourly mean value shall apply and additionally a rate of desulphurisation of at least 92 per cent as daily mean value shall be achieved,

c) more than 300 MW an emission limit value of 400 mg/m^3 for the daily mean value and of 800 mg/m^3 for the half-hourly mean value shall apply and additionally a rate of desulphurisation of at least 95 per cent as daily mean value must be achieved

as far as the emission limit values established in paragraph 1 cannot be met with a proportional effort due to the sulphur content of the fuels utilized.

(6) Additionally to paragraph 1 sentence 2 no. 1 and 2 for combustion plants using biomass fuels, except black liquor from the sulphite process of the pulp industry, for organic substances, to be indicated as total carbon, an emission limit value of 10 mg/m^3 for the daily mean value and of 20 mg/m^3 for the half-hourly mean value shall apply.

(7) The emission limit values must also be met during cleaning of the heating surface.

(8) Notwithstanding the emission limit values for total dust, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of

a) 50 MW to 100 MW until 31 December 2012 an emission limit value of 30 mg/m^3 for the daily mean value and of 60 mg/m^3 for the half-hourly mean value,

b) more than 100 MW an emission limit value of 20 mg/m^3 for the daily mean value and of 60 mg/m^3 for the half-hourly mean value shall apply.

(9) Notwithstanding the emission limit values for carbon monoxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of more than 100 MW an emission limit value of 250 mg/m^3 for the daily mean value and of 500 mg/m^3 for the half-hourly mean value shall apply.

(10) Notwithstanding the emission limit values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of

a) 50 MW to 100 MW an emission limit value of 500 mg/m^3 for the daily mean value and of 1000 mg/m^3 for the half-hourly mean value,

b) more than 100 MW to 300 MW an emission limit value of 400 mg/m^3 for the daily mean value and of 800 mg/m^3 for the half-hourly mean value shall apply.

(11) Notwithstanding the emission limit values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of more than 300 MW for the use of coal for which due to safety reasons an additional burner with liquid fuels is needed an emission limit value of 200 mg/m^3 for the daily mean value and of 400 mg/m^3 for the half-hourly mean value shall apply.

(12) Notwithstanding the emission limit values for sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants, except fluidised bed combustions, with a rated thermal input of 50 MW to 300 MW for the use of

a) hard coal an emission limit value of 1200 mg/m^3 for the daily mean value and of 2400 mg/m^3 for the half-hourly mean value and

b) lignite an emission limit value of 1000 mg/m^3 for the daily mean value and of 2000 mg/m^3 for the half-hourly mean value shall apply.

For a rated thermal input of more than 100 MW to 300 MW additionally to the limitation of the mass concentration a rate of desulphurisation of at least 60 per cent must be achieved.

(13) Notwithstanding the emission limit values for sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with fluidised bed combustions with a rated thermal input of more than 100 MW to 300 MW an emission limit value of 350 mg/m^3 for the daily mean value and of 700 mg/m^3 for the half-hourly mean value as well as a rate of desulphurisation of at least 75 per cent shall apply.

(14) Notwithstanding the emission limit values for sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, established in paragraph 1 sentence 2 no. 1 and 2 in conjunction with paragraph 5 letter b, for existing plants using black liquor from the sulphite process of the pulp industry with a rated thermal input of more than 100 MW to 300 MW an emission limit value of 400 mg/m^3 for the daily mean value and of 800 mg/m^3 for the half-hourly mean value shall apply during standard operation.

(15) Notwithstanding the emission limit values for sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of more than 300 MW an emission limit value of 300 mg/m^3 for the daily mean value and of 600 mg/m^3 for the half-hourly mean value shall apply.

2.2 Article 4

2.2.1 Emission limit values for combustion plants for liquid fuels

(1) The combustion plants shall be constructed and operated in such a manner that the requirements of this paragraph and the paragraphs 2 to 10 are met. The operator has to ensure that

1. no daily mean value exceeds the following emission limit values:

   a) total dust 20 mg/m^3

   b) carbon monoxide 80 mg/m^3

   c) nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, with a rated thermal input of

      aa) 50 MW to 100 MW and for the use of

      – light fuel oil in boilers with a safety device setting value (e.g. safety temperature limiter, safety pressure valve) against exceedance of

      – a temperature smaller than 383,15°K or excess pressure smaller than 0,05 MPa 180 mg/m^3

      – a temperature of 383,15°K to 483,15°K or excess pressure of 0,05 MPa to 1,8 MPa 200 mg/m^3

      – a temperature more than 483,15°K or excess pressure more than 1,8 MPa 250 mg/m^3

with respect to the reference value for organically bound nitrogen of 140 mg/kg according to Annex B of DIN EN 267 (edition November 1999). The organically bound content of nitrogen shall be determined according to DIN 51444 (edition 2003). The measured mass concentrations of nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, shall be converted to the reference value of organically bound nitrogen, as well as to the reference conditions of 10 g/kg air humidity and 20 C combustion air temperature;

– for other liquid fuels 350 mg/m^3

bb) more than 100 MW to 300 MW 200 mg/m^3

cc) more than 300 MW 150 mg/m^3

d) sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, with a rated thermal input of

50 MW to 100 MW 850 mg/m^3

more than100 MW to 300 MW 400 - 200 mg/m^3 (linear decrease)

more than 300 MW 200 mg/m^3

in combustion plants with a rated thermal input of more than 100 MW additionally to the limitation of the mass concentration a rate of desulphurisation of at least 85 per cent must be achieved;

2. no half-hourly mean value exceeds twice the emission limit values established in number 1;

3. no mean value, determined during the respective sampling period, exceeds the following emission limit values:

a) cadmium and its compounds, to be indicated as cadmium,

thallium and its compounds, to be indicated as cadmium,

totally 0.05 mg/m^3

b) antimony and its compounds, to be indicated as antimony,

arsenic and its compounds, to be indicated as arsenic,

lead and its compounds, to be indicated as lead,

chromium and its compounds, to be indicated as chromium,

cobalt and its compounds, to be indicated as cobalt,

copper and its compounds, to be indicated as copper,

manganese and its compounds, to be indicated as manganese,

nickel and its compounds, to be indicated as nickel,

vanadium and its compounds, to be indicated as vanadium,

tin and its compounds, to be indicated as tin,

totally 0.5 mg/m^3

c) arsenic and its compounds (except for arsine), to be indicated as arsenic,

benzo(a)pyren,

cadmium and its compounds, to be indicated as cadmium,

water-soluble compounds of cobalt, to be indicated as cobalt,

chromium(VI) compounds (except for barium chromate and

lead chromate), to be indicated as chromium,

or

arsenic and its compounds, to be indicated as arsenic,

benzo(a)pyren,

cadmium and its compounds, to be indicated as cadmium,

cobalt and its compounds, to be indicated as cobalt,

chromium and its compounds, to be indicated as chromium,

totally 0.05 mg/m^3,

d) dioxins and furans according to Annex I and 0.1 ng/m^3

4. no annual mean value exceeds the following emission limit values:

nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, with a rated thermal input of

50 MW to 100 MW	250mg/ m^3
more than100 MW	100 mg/m3.

(1a) Notwithstanding para (1) sentence 2 no. 4 the requirements shall not apply for plants used only for peak load covering of energy supply and no more than 300 hours per year. In terms of sentence 1, the plant operator has to submit to the competent authority respectively until 31 March of a year for the previous year an evidence of the compliance of the operation time. The evidences shall be kept on file by the operator for five years after the end of the evidence period.

(1b) Notwithstanding paragraph 1 sentence 2 no. 4 the requirements shall not apply for plants using residues from distillation or conversion for own consumption in refineries.

(2) Notwithstanding the emission limit values for total dust, established in paragraph 1 sentence 2 no. 1, for the use of light fuel oil or comparable liquid fuels soot level 1 shall apply.

(3) For the use of light fuel oil or comparable liquid fuels which fulfil the requirements with regard to sulphur content of the Third Ordinance for the Implementation of the Federal Immission Control Act in that version which is currently applicable, the rate of desulphurisation, established in paragraph 1 sentence 2 no.1 letter d, shall not apply.

(4) The emission limit values according to paragraph 1 sentence 2 no.3 shall not apply for the use of light fuel oil or comparable liquid fuels which fulfil the requirements of the Third Ordinance for the Implementation of the Federal Immission Control Act in that version which is currently applicable.

(5) Notwithstanding paragraph 1 sentence 2 no. 3 letter b for plants using distillation and conversion residues for own consumption in refineries the emission limit value shall apply without provision for vanadium; for vanadium and its compounds, to be indicated as vanadium, an emission limit value of 1.0 mg/m^3 shall apply.

(6) The emission limit values must also be met during cleaning of the heating surface.

(7) Notwithstanding the emission limit values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants using light fuel oil with a rated thermal input of 50 MW to 100 MW operating for up to

300 hours per year exclusively during periods of peak load for the energy supply an emission limit value of 300 mg/m^3 for the daily mean value and of 600 mg/m^3 for the half-hourly mean value shall apply. The operator of such a plant has to submit to the competent authority respectively until 31 March of a year for the previous year an evidence of the compliance of the operation time.

(8) Notwithstanding the emission limit values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of more than 50 MW to 300 MW for liquid fuels except light fuel oil an emission limit value of 400 mg/m^3 for the daily mean value and of 800 mg/m^3 for the half-hourly mean value shall apply.

(9) Notwithstanding the emission limit values for sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, established in paragraph 1 sentence 2 no. 1 and , for existing plants using other liquid fuels than light fuel oil or comparable liquid fuels with a rated thermal input of more than 100 MW to 300 MW an emission limit value of 850 mg/m^3 for the daily mean value and of 1700 mg/m^3 for the half-hourly mean value as well as a rate of desulphurisation of at least 60 per cent shall apply.

(10) Notwithstanding the emission limit values for sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of more than 300 MW an emission limit value of 300 mg/m^3 for the daily mean value and of 600 mg/m^3 for the half-hourly mean value shall apply.

2.3 Article 5

2.3.1 Emission limit values for combustion plants for gaseous fuels

(1) The combustion plants shall be constructed and operated in such a manner that the requirements of this paragraph and the paragraphs 2 to 5 are met. The operator has to ensure that

1. no daily mean value exceeds the following emission limit values:

   a) total dust for the use of

      blast furnace gas or coke oven gas 10 mg/m^3

      other gaseous fuels 5 mg/m^3

   b) carbon monoxide for the use of

      gases of public gas supply 50 mg/m^3

      blast furnace gas or coke oven gas 100 mg/m^3

      other gaseous fuels 80 mg/m^3

   c) nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, with a rated thermal input of

      aa) 50 MW to 300 MW and for the use of

      – gases of public supply in boilers with a safety device setting value (e.g. safety temperature limiter, safety pressure valve) against exceedance of

      – a temperature smaller than 383,15°K or excess pressure

smaller than 0,05 MPa	100 mg/m^3
– a temperature of 383,15°K to 483,15°K or excess pressure of 0,05 MPa to 1,8 MPa	110 mg/m^3
– a temperature more than 483,15°K or excess pressure more than 1,8 MPa	150 mg/m^3
– other gases	200 mg/m^3
bb) more than 300 MW	100 mg/m^3
d) sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, for the use of	
liquefied gas	5 mg/m^3
coke oven gas with low calorific value	350 mg/m^3
blast furnace gas with low calorific value	200 mg/m^3
other gaseous fuels	35 mg/m^3

2. no half-hourly mean value exceeds twice the emission limit values established in number 1.

(2) Notwithstanding paragraph 1 sentence 2 no. 1 and 2 for existing plants with a rated thermal input of more than 300 MW for the use of blast furnace gas or coke oven gas an emission limit value for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, of 135 mg/m^3 for the daily mean value and of 270 mg/m^3 for the half-hourly mean value shall apply.

(3) Notwithstanding the emission limit values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for existing plants with a rated thermal input of 50 MW to 100 MW for the use of natural gas an emission limit value of 150 mg/m^3 for the daily mean value and of 300 mg/m^3 for the half-hourly mean value shall apply.

(4) Notwithstanding paragraph 1 sentence 2 no. 1 and 2 for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, for existing plants reforming natural gas or producing alkenes by cracking hydrocarbons with a rated thermal input of more than 100 MW to 300 MW an emission limit value of 200 mg/m^3 for the daily mean value and of 400 mg/m^3 for the half-hourly mean value and with a rated thermal input of more than 300 MW an emission limit value of 150 mg/m^3 for the daily mean value and of 300 mg/m^3 for the half-hourly mean value shall apply.

(5) Notwithstanding paragraph 1 sentence 2 no. 1 and 2 for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, for existing plants in refineries using other gases with a rated thermal input of 50 MW to 300 MW an emission limit value of 300 mg/m^3 for the daily mean value and of 600 mg/m^3 for the half-hourly mean value shall apply.

2.4 Article 6

2.4.1 Emission limit values for gas turbine plants

(1) Gas turbine plants shall be constructed and operated in such a manner that the requirements of this paragraph and the paragraphs 2 to 11 shall apply. The operator has to ensure that

1. no daily mean value exceeds the following emission limit values:

   a) nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, for the use of natural gas in

plants used in combined heat and power systems having an annual overall efficiency of at least 75 per cent — 75 mg/m^3

plants used in combined cycle plants having an electrical annual overall efficiency of at least 55 per cent — 75 mg/m^3

plants for mechanical drives — 75 mg/m^3

other plants — 50 mg/m^3

other gaseous fuels or light fuel oil or diesel fuel — 120 mg/m^3

b) carbon monoxide — 100 mg/m^3

2. no half-hourly mean value exceeds twice the emission limit values established in number 1
and

3. no annual mean value exceeds the following emission limit values: nitrogen dioxide and nitrogen monoxide, to be indicated as nitrogen dioxide, at a rated thermal input of more than 100 MW , for the use of gases from public gas supply

a) plants used in combined heat and power systems having an annual overall efficiency of at least 75 per cent — 50 mg/m3

b) plants used in combined cycle plants having an electrical annual overall efficiency of at least 55 per cent — 50 mg/m3

c) plants for mechanical drives — 50 mg/m3

d) other plants — 35 mg/m3.

(2) The emission limit values shall apply for operation from 70 per cent load at ISO-conditions (temperature 288,15°K, pressure 101,3 kPa, relative air humidity 60 per cent).

(3) Notwithstanding paragraph 1 sentence 2 no. 3 letter a for gas turbines using natural gas for the production of electrical energy and operating solo with an efficiency of more than 35 per cent at ISO conditions the emission limit value of 50 mg/m^3 shall be increased in line with the percentage improvement of efficiency. An emission limit value of 75 mg/m^3 shall not be exceeded.

(3a) Notwithstanding paragraph 1 sentence 2 no. 3 letter d for gas turbines using natural gas for the production of electrical energy and operating solo with an efficiency of more than 35 per cent at ISO conditions the emission limit value of 35 mg/m³ shall be increased in line with the percentage improvement of efficiency. An emission limit value of 50 mg/m^3 shall not be exceeded

(4) When liquid fuels are used the soot level shall not exceed the value 2 during continuous operation and the value 4 during start up.

(5) When liquid fuels are used in gas turbines only light fuel oil or diesel fuel according to the Third Ordinance for the Implementation of the Federal Immission Control Act in that version which is currently applicable may be used or equivalent measures to reduce emissions of sulphur oxides must be applied.

(6) When gaseous fuels are used for sulphur dioxide and sulphur trioxide the requirements according Article 5 paragraph 1 sentence 2 no. 1 letter d and no. 2 shall apply, provided the emission limit values are converted to a reference oxygen content of 15 per cent.

(7) For gas turbines for emergency use operating for up to 300 hours per year paragraphs 1 to 3 shall not apply. The operator of such a plant has to submit to the competent authority respectively until 31 March of a year

for the previous year an evidence of the compliance of the operation time.

(8) Notwithstanding the emission limit values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, established in paragraph 1 sentence 2 no. 1 and 2, for an individual gas turbine with a rated thermal input of less than 50 MW in plants used in combined heat and power systems having an annual overall efficiency of at least 75 per cent, in plants used in combined cycle plants having an electrical annual overall efficiency of at least 55 per cent or in plants for mechanical drives which is a component of a common plant with a rated thermal input of 50 MW or more, for the use of other gaseous or of liquid fuels an emission limit value of 150 mg/m^3 for the daily mean value and of 300 mg/m^3 for the half-hourly mean value shall apply.

(8a) Notwithstanding paragraph 1 sentence 2 no. 3, the established emission limit value does not apply to an individual gas turbine with a rated thermal input of less than 50 MW in plants used in combined heat and power systems having an annual overall efficiency of at least 75 per cent, in plants used in combined cycle plants having an electrical annual overall efficiency of at least 55 per cent or in plants for mechanical drives which is a component of a common plant with a rated thermal input of more than 100 MW.

(9) Notwithstanding paragraph 1 sentence 2 no. 1 letter a and no. 2 for existing plants using natural gas an emission limit value of 75 mg/m^3 for the daily mean value and of 150 mg/m^3 for the half-hourly mean value and using other gaseous fuels or light fuel oil or diesel fuel an emission limit value of 150 mg/m^3 for the daily mean value and of 300 mg/m^3 for the half-hourly mean value shall apply. For individual aggregates in existing plants with a mass flow of nitrogen oxides of up to 20 Mg/a, to be indicated as nitrogen dioxide, the requirements for the limitation of nitrogen oxide emissions shall not apply. The operator of such a plant has to submit to the competent authority respectively until 31 March of a year for the previous year an evidence of the compliance of the mass flow.

(10) For existing plants operating for up to 300 hours per year exclusively during periods of peak load for the energy supply paragraphs 1 to 3 shall not apply. The operator of such a gas turbine has to submit to the competent authority respectively until 31 March of a year for the previous year an evidence of the compliance of the operation time.

(11) For existing plants operating for up to 120 hours per year with light fuel oil or diesel fuel paragraphs 1 to 3 for light fuel oil or diesel fuel shall not apply. The operator of such a gas turbine has to submit to the competent authority respectively until 31 March of a year for the previous year an evidence of the compliance of the operation time.

2.5 Article 7

2.5.1 Combined heat and power generation

When a plant is constructed or substantially changed the operator has to implement requirements for combined heat and power generation unless this is technically impossible or disproportional. This has to be verified to the competent authority.

2.6 Article 8

2.6.1 Operation with several fuels

(1) The combustion plants and gas turbine plants shall during operation with several fuels be operated in such a manner that the requirements of this paragraph and the paragraphs 2 to 5 are met. The operator has to ensure that

1. no daily mean value exceeds the emission limit values established in paragraphs 2 to 5 and

2. no half-hourly mean value exceeds twice the emission limit value established in number 1.

(2) For mixed fuel firing units the emission limit values and the relevant reference oxygen content to be determined for the respective fuel and the relevant reference oxygen content shall be determined correspondingly to the ratio of the rated thermal input applied with each fuel to the total amount of rated thermal input applied. The emission limit values relevant to the combustion plant result by addition of the values determined according to sentence 1.

(3) For mixed fuel firing units in combustion plants using the distillation and conversion residues for own consumption in refineries

a) the emission limit value for the fuel with the highest emission limit value shall apply as far as the rated thermal input contributed by this fuel amounts at least 50 per cent of the total amount of rated thermal input fed,

b) for the rest paragraph 2 shall apply provided that as emission limit value for the fuel with the highest emission limit value twice of this value minus the emission limit value of the fuel with the lowest emission limit value is inserted.

Notwithstanding sentence 1 the competent authority may allow upon request for sulphur dioxide and sulphur trioxide, to be indicated as sulphur dioxide, within a refinery an emission limit value of 600 mg/m^3 for the daily mean value and of 1200 mg/m^3 for the half-hourly mean value as a weighted mean value over the waste gas mass flows of all process combustion plants irrespective of the fuel used.

(4) For multi-fuel firing units the requirements for the relevant fuel used shall apply.

(5) For gas turbine plants paragraph 2 and 4 shall apply accordingly.

2.7 Article 9

2.7.1 Substantial change and extension of plants

If a plant will be changed substantially the requirements of Articles 3 to 8 shall apply immediately for those components of the facility and processes which are intended to be changed as well as for those components of the facility and processes which would be affected by such a change. For the requirements the total capacity of the plant is relevant.

2.8 Article 10

2.8.1 Limitation of emissions during storage and transportation

(1) As regards the storage and transportation of substances measures shall be taken according to specific provision of the competent authority according to the requirements of the Technical Instructions on Air Quality Control.

(2) Dust emissions arising when filtering plants are emptied must be reduced by removing the dust in closed containers or by moistening it at the points of discharge.

(3) Enclosed transport equipment and enclosed intermediate storage must be used for particulate combustion residues.

2.9 Article 11

2.9.1 Conditions regarding the discharge of waste gases

Waste gases shall be discharged in controlled fashion in a way that an unhindered removal together with the free flow of air is possible. For the determination of the discharge height the requirements of the Technical Instructions on Air Quality Control in that version which is currently applicable must be applied. Specific provisions must be laid down in the license.

2.10 Article 12

2.10.1 Disturbances relating to the abatement equipments

(1) In case of a malfunction or breakdown of the abatement equipment the operator shall take measures needed for normal operation immediately. He has to reduce the operation of the plant or close down the plant if a return to normal operation cannot be ensured within 24 hours. In any case the competent authority must be informed immediately latest within 48 hours.

(2) The competent authority has to arrange suitable measures in the license relating to malfunction or breakdown of the abatement equipment. In case of breakdown of abatement equipment a plant may be operated at most 120 hours during a twelve month period without this abatement equipment.

3 Part III Measuring and monitoring

3.1 Article 13

3.1.1 Measurement sites

Measurement sites must be installed for measurements according to specific determination of the competent authority; they shall be sufficiently large, easily passable, designed and selected in a way to ensure representative and accurate measurements.

3.2 Article 14

3.2.1 Measuring methods and measuring equipment

(1) For measurements to determine emissions as well as to ascertain reference parameters or process operation parameters measuring methods and suitable measuring equipments representing the best techniques available in metrology must be used and applied according to specific provision of the competent authority. Sampling and analysis of all pollutants as well as reference measurement methods to calibrate automated measurement systems must be carried out in accordance with CEN standards. If CEN standards are not available ISO standards, national standards or other international standards shall apply which will ensure that data of an equivalent scientific quality are determined.

(2) The operator has to verify to the competent authority the correct installation of the measuring instruments for continuous monitoring before commissioning by a certification of an agency which has been announced by the competent authority for calibration.

(3) The operator shall provide for measuring instruments, used for continuous determination of emissions and process operation parameters, to be calibrated and tested once a year with regard for the functional capability (parallel measurements using the reference method) by an agency which has been announced by the competent authority for calibration. The calibration after construction or substantial change must be carried out when fault-free operation is reached, however at the earliest after three months of operation and not later than six months after commissioning and subsequently at least every three years. The reports on the outcome of the calibration and the testing of the functional capability must be submitted to the competent authority within twelve weeks after calibration and testing.

3.3 Article 15

3.3.1 Continuous measurements

(1) The operator has

1. the mass concentration of emissions of total dust, mercury, total carbon, carbon monoxide, nitrogen monoxide, nitrogen dioxide, sulphur dioxide, sulphur trioxide and soot level, as far as emission limit

values or a limitation of soot level are determined,

2. the volume content of oxygen in the waste gas and

3. the relevant process operation parameters needed for the assessment of normal operation, particularly capacity, waste gas temperature, waste gas volume flow, humidity content and pressure

continuously to determine, record, evaluate according to Article 16 paragraph 1 and submit in case of Article 16 paragraph 2 sentence 3. For this reason the operator has to equip the plants with suitable measuring and evaluating equipments before commissioning. The emission of total dust shall be determined without the contribution of sulphur trioxide to the value measured.

(2) Measuring equipments for the humidity content are not necessary as far as the waste gas is dried before the determination of the mass concentration of emissions. The competent authority shall waive the continuous measuring of humidity content and admit the use of the value determined with individual measurements, if due to the layout and the operating method of wet waste gas desulphurisation equipment as a result of saturation vapour pressure of the waste gas and the constant waste gas temperature the humidity content in the waste gas has a constant value at the measuring point. In this case the operator has to maintain evidences of the existence of the mentioned conditions during calibration and to submit to the competent authority on demand. The evidences must be kept on file by the operator for five years after calibration.

(3) The competent authority shall waive the continuous measuring of nitrogen dioxide and admit the determination of the proportion by calculation, if due to raw materials, layout, operating method or individual measurements the proportion of nitrogen dioxide to the nitrogen oxide emissions accounts for less than 5 per cent. In this case the operator has to maintain evidences of the proportion of nitrogen dioxide during calibration and to submit to the competent authority on demand. The evidences must be kept on file by the operator for five years after calibration.

(4) The mass concentration of sulphur trioxide can be determined during calibration and taken into account by calculation if the mass concentration of sulphur dioxide is measured continuously.

(5) Notwithstanding paragraph 1 measurements for the determination of emissions of total dust are not needed for combustion plants using exclusively natural gas. For operation with other gaseous fuels measurements are not needed, if the emission limit values are met by using adequate fuels. In this case the operator has to maintain evidences of the dust content of the used fuels for each calendar year and to submit to the competent authority on demand. The evidences must be kept on file by the operator for five years after the end of the evidence period according to sentence 3.

(6) Notwithstanding paragraph 1 measurements for the determination of emissions of sulphur oxides are not needed for combustion plants and gas turbine plants using exclusively light fuel oil, diesel fuel or natural gas. For operation with other liquid or gaseous fuels measurements for the determination of emissions of sulphur oxides are not needed, if the emission limit values are met by using adequate fuels. In this case the operator has to maintain evidences of the sulphur content and the net calorific value of the used fuels for each calendar year and to submit to the competent authority on demand. The evidences must be kept on file by the operator for five years after the end of the evidence period according to sentence 3.

(7) Notwithstanding paragraph 1 measurements for the determination of emissions of sulphur oxides are not needed for combustion plants using exclusively biomass fuels if the emission limit values are met by using adequate fuels. In this case the operator has to maintain evidences of the sulphur content and the net calorific value of the used fuels for each calendar year and to submit to the competent authority on demand. The evidences must be kept on file by the operator for five years after the end of the evidence period according to sentence 2.

(8) Notwithstanding paragraph 1 measurements for the determination of emissions of carbon monoxide, nitrogen monoxide and nitrogen dioxide are not needed for gas turbine plants with a rated thermal input of less than 100 MW using natural gas if it is ensured by applying other tests, particularly processing conditions, that the emission limit values are met. In this case the operator has to maintain evidences of the correlation between tests and emission limit values every three years and to submit to the competent authority on demand. The evidences must be kept on file by the operator for five years after the end of the evidence period according to sentence 2.

(9) The competent authority shall on demand waive the continuous measuring of mercury and its compounds, to be indicated as mercury, if it has been reliably proven by regular control that the emission limit values according to Article 3 for mercury and its compounds are only utilized for less than 50 per cent.

(10) For the determination of the rate of desulphurisation the operator has to determine regularly the sulphur content in the used fuel additionally to the measurement of the emissions of sulphur dioxide and sulphur trioxide in the waste gas. The kind of evidence of the attainment of the rate of desulphurisation as daily mean value is determined by the competent authority more closely.

(11) The evidences according to paragraphs 2, 3 and 5 to 8 are to provide by procedures correspondingly appropriate CEN standards or if CEN standards are not available by proved adequate procedures. The procedure must be notified to the competent authority and approved by it. The approval is regarded as given if the competent authority does not contradict within a period of four weeks.

3.4 Article 16

3.4.1 Evaluation and assessment of continuous measurements

(1) During operation of the plant measured values for each successive half hour are used to derive half-hourly mean values and to convert to the reference oxygen content. The daily mean value, related to the daily operating time, is to derive from the half-hourly mean values for each day. Special arrangements must be drawn up for start-up and shut-down processes during which it cannot be avoided that values exceed twice the established emission limitations.

(2) The operator has to draw up a measurement report of the continuous measurement results for each calendar year and to submit to the competent authority until 31 March of the following year. The operator has to keep on file the report according to sentence 1as well as the appertaining records of the measuring instruments for 5 years after the end of the reporting period according to sentence 1. As far as measurement results are submitted by suitable telemetric transmission to the competent authority the obligation to submit the measurement report to the competent authority according to sentence 1 does not apply.

(3) The emission limit values are met if no result of a daily mean value or a half-hour daily

mean value validated according to Annex II exceeds the respectively relevant emission limit value according to Articles 3 to 6 and 8 and no result is lower than the rate of desulphurisation according to Article 3 or Article 4.

3.5 Article 17

3.5.1 Individual measurements

(1) After construction or substantial change of a plant the operator has to provide for measurements carried out by an agency designated to do so according to Article 26 of the Federal Immission Control Act for determination whether the requirements according to Article 3 paragraph 1 no.3 and Article 4 paragraph 1 no.3 are fulfilled. Measurements must be carried out when fault-free operation is reached, however at the earliest after three months of operation and no later than six months after commissioning, and subsequently every three years at least at three days (recurrent measurements). The measurements shall be carried out while the plants are operating at the highest capacity which they are licensed for with the raw materials used during the measurements in permanent operation.

(2) Notwithstanding paragraph 1 sentence 1 measurements are not needed in the case of a substantial change if the operator verifies to the competent authority that the performed measures have no or obviously small effects on the combustion conditions and on the emissions.

(3) The sampling period for measurements to determine substances according to Article 3 paragraph 1 no. 3 letter a to c and Article 4 paragraph 1 no. 3 letter a to c is at least half an hour; it should not exceed two hours. The sampling period for measurements to determine substances according to Article 3 paragraph 1 no. 3 letter d and Article 4 paragraph 1 no. 3 letter d is at least six hours; it should not exceed eight hours.

(4) Notwithstanding paragraph 1 sentence 2 recurrent measurements for determination of emissions of substances according to Article 3 paragraph 1 no. 3 and Article 4 paragraph 1 no. 3 are not needed for combustion plants with solid and liquid fuels, if it has been reliably proven by regular control of the fuels, particularly if new fuels are used, and the operating method that the emissions are less than 50 per cent of the emission limit values. In this case the operator has to maintain corresponding evidences for each calendar year and to submit to the competent authority on demand. The evidences shall be kept on file by the operator for five years after the end of the evidence period according to sentence 2

3.6 Article 18

3.6.1 Reports and evaluation of individual measurements

(1) The operator has to compile a measurement report according to Article 17, regarding the results of the measurements according to sentence 2, and immediately to submit to the competent authority. The measurement report must contain details about measuring plans, the result of each individual measurement, the measuring method applied and the operational conditions which are relevant to evaluate the measuring results.

(2) The emission limit values are regarded as met if no result of an individual measurement exceeds a mean value according to paragraph 3 or paragraph 4.

3.7 Article 19

3.7.1 Annual reports on emissions

(1) The operator of a plant has to submit to the competent authority starting in 2004 and for each subsequent year respectively until 31 May of the following year for each individual plant an inventory of the annual emissions of sulphur oxides, nitrogen oxides and total dust as well as the total annual amount of energy

input. This one must be related to the net calorific value and broken down in terms of the fuel-categories biomass fuels, other solid fuels, liquid fuels, natural gas and other gaseous fuels.

(2) The operator has to submit additionally a summary of the results of these inventories for a reporting period of three years starting in 2004 to 2006 respectively until 31 May of the following year to the competent authority.

(3) The report according to paragraph 1 and an inventory of the summaries according to paragraph 2, showing the emissions of refineries separately, has to be submitted to the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety for transmission to the Commission of the European Communities.

3.8 Article 19 a

3.8.1 Determination of annual mean values, monitoring and reporting

(1) The annual mean values are calculated on the basis of the respective daily mean values according to the permit of the plant; the daily mean values of a calendar year are to be added and to be divided by the number of daily mean values. The operator has to maintain evidences for the annual mean values for each calendar year and to submit to the competent authority on demand. The evidences shall be kept on file by the operator for five years after the end of the evidence period.

(2) The emission limit values are met if no result of an annual mean value according to Articles 3 paragraph 1 sentence 2 no. 4, Article 4 paragraph 1 sentence 2 no. 4 and Article 6 paragraph 1 sentence 2 no. 3 is exceeded.

(3) Notwithstanding paragraphs 1 and 2, the calculation of annual mean values for nitrogen monoxide and nitrogen dioxide is not needed for gas turbines fuelled with natural gas and a thermal rated input of less than 100 MW, if it has been proven by other checks, particularly by verified process conditions, that the limit values are met. In this case the operator has to maintain corresponding evidences on correlation between the mentioned checks and the emission limit values every three years and to submit to the competent authority on demand. The evidences shall be kept on file by the operator for five years after the end of the evidence period according to sentence 2.

4 Part IV Requirements for existing plants

4.1 Article 20

4.1.1 Transitional regulation

(1) Subject to the regulation of sentence 2 for existing plants shall apply

a) the requirements of this ordinance from 1 November 2007,

b) the requirements according to Article 6 paragraph 9 from 1 October 2012,

c) the requirements according to Article 6 paragraph 1 sentence 2 no.1 letter a in conjunction with Article 6 paragraph 9 as well as the requirements according to Article 6 paragraph 1sentence 2 no. 1 letter b and no. 2 for gas turbines using natural gas for mechanical drives for the physical transport and the storage of natural gas from 1 October 2015.

The requirements of Part III of this ordinance shall apply from 27 November 2004.

(2) Subject to the regulation of sentence 4 for existing plants the requirements of the Ordinance on Large Combustion Plants of 22 June 1983 (Federal Law Gazette I p. 719), last amended by Section 6 of the Act of 3 May 2000 (Federal Law Gazette I p. 632), shall apply respectively until the date mentioned in paragraph 1 sentence 1. Notwithstanding

sentence 1 the requirements of the Directive 2001/80/EC of the European Parliament and the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants (OJ EC L 309, p. 1) shall apply as far as they exceed the requirements of the Ordinance mentioned in sentence 1 or of this Ordinance. The same shall apply if the competent authority has determined in an individual case requirements as a precaution against harmful effects of air pollutants on the environment. The requirements of Part IV of the Ordinance mentioned in sentence 1 shall apply until 26 November 2004.

(3) Paragraph 1 sentence 1 shall not apply if the operator of an existing plant undertakes in a written declaration, submitted by 31 December 2006 at the latest to the competent authority, to close down this plant until 31 December 2012 under waiver of the entitlement for the operation arising from the license. Until this date the requirements of the Ordinance on Large Combustion Plants shall apply. Notwithstanding sentence 2 the requirements of the Directive 2001/80/EC of the European Parliament and the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants (OJ EC L309, p. 1) shall apply as far as they exceed the requirements of the Ordinance mentioned in sentence 2 or of this Ordinance. The same shall apply if the competent authority has determined in an individual case requirements as a precaution against harmful effects of air pollutants on the environment. If the operator does not undertake a declaration the requirements related to unlimited operation shall apply.

(4) Notwithstanding paragraph 1 sentence 1 letter a shall apply a period until 31 December 2010 for an existing plant which has been retrofitted due to the Ordinance on Large Combustion Plants and which will be in operation longer than 31 December 2012. Paragraph 2 sentence 1 to 3 shall apply correspondingly.

4.2 Article 20 a

4.2.1 Transitional regulation for compliance with annual mean values

(1) The requirements to abide annual mean values of nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, as well as the requirements following Article 19 a apply for plants commissioned after 31 December 2012.

(2) After 31 December 2012, the requirement to abide annual mean values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, as well as the requirements following Article 19 a are applied for parts of a plant and process steps substantially changed as well as parts of a plant and process steps which are effected by these substantial changes.

(3) Notwithstanding paragraph 1 the requirements to abide annual mean values for nitrogen monoxide and nitrogen dioxide, to be indicated as nitrogen dioxide, as well as the requirements following Article 19 a do not apply for plants

1. for which a complete permit for construction and operation according Articles 4 and 16 of the Federal Immission Control Act and have been applied for before 31 December 2010 or for which the constructions have been started before 31 December 2011, and
2. which have started its operation before 31. December 2013.

5 Part V
Common provisions

5.1 Article 21

5.1.1 Permission of exceptions

(1) At the request of the operator the competent authority may allow exceptions from provisions of this Ordinance, as far as in consideration of the particular circumstances of the case concerned,

1. individual requirements of the Ordinance are not or only with a disproportional effort realizable,

2. for the rest measures to limit emissions are applied according to best available technique,

3. the stack height is designed according to the Technical Instructions on Air Quality Control in that version which is currently applicable also for the emission limit value, authorized exceptionally, unless the conditions of no. 1 apply in this respect also,

4. the exceptions do not contravene the requirements of Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants (OJ EC L 309, p.1).

(2) As far as in agreement with Directive 2001/80/EC exceptions are granted which cause an obligation for a report to the Commission of the European Community one copy of the exception permit according to paragraph 1 sentence 1 shall be submitted immediately to the Federal Ministry for Environment, Nature Conservation and Reactor Safety for transmission to the Commission of the European Community.

5.2 Article 22

5.2.1 More extensive requirements

(1) The rights of the competent authority to determine additional or more extensive requirements particularly to prevent harmful effects on the environment according to Article 5 paragraph 1 no. 1 of the Federal Immission Control Act remain unaffected.

(2) If requirements were determined already in an individual case as a precaution against harmful effects of air pollutants on the environment which exceed the requirements of this Ordinance, they will be relevant furthermore.

5.3 Article 23

5.3.1 Accessibility of standards and working documents

The DIN-Standards mentioned in Articles 2 and 4 as well as CEN-Standards mentioned in Article 15 can be received by BEUTH Verlag GmbH, Berlin. The DVGW-working document mentioned in Article 2 can be received by Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbH, Bonn. The standards mentioned as well as the working document mentioned are lodged in the archives of the German Patent and Trade Mark Office in München for safe custody.

5.4 Article 24

5.4.1 Administrative offences

(1) An administrative offence within the meaning of Article 62 paragraph 1 no. 2 of the Federal Immission Control Act shall be deemed to have been committed by anyone who, wilfully or negligently,

1. contrary to Article 3 paragraph 1 sentence 1, Article 4 paragraph 1 sentence 1, Article 5 paragraph 1 sentence 1, Article 6 paragraph 1 sentence 1 or Article 8 paragraph 1

sentence 1 fails to construct or operate a plant mentioned there correctly,

2. contrary to Article 12 paragraph 1 sentence 1 fails to take a measure or to take in time,

3. contrary to Article 12 paragraph 1 sentence 2 fails to reduce the operation of the plant or to reduce in time or to close down the operation of the plant or to close down in time,

4. contrary to Article 12 paragraph 1 sentence 3 fails to inform the competent authority or to do so correctly, completely or in time;

5. contrary to Article 12 paragraph 2 sentence 2 operates a plant,

6. contrary to Article 14 paragraph 2 sentence 1 fails to submit an evidence or to submit in time,

7. contrary to Article 14 paragraph 3 sentence 1 or 2 fails to test a measurement equipment or to test in time or to carry out the calibration or to carry out in time,

8. contrary to Article 14 paragraph 3 sentence 3, Article 16 paragraph 2 sentence 1, Article 18 paragraph 1 sentence 1 or Article 19 paragraph 1 or 2 fails to submit a report, an inventory or a summary or to do so correctly, completely or in time,

9. contrary to Article 15 paragraph 1 sentence 1 fails to evaluate the mass concentration of emissions, the volume content of oxygen or a process operation parameter mentioned there or to evaluate correctly or completely or to submit or to submit correctly or completely,

10. contrary to Article 15 paragraph 1 sentence 2 fails to equip a plant or to equip correctly or in time,

11. contrary to Article 15 paragraph 2 sentence 3 or 4, paragraph 3 sentence 2 or 3, paragraph 5 sentence 3 or 4, paragraph 6 sentence 3 or 4 or paragraph 7 sentence 2 or 3 or Article 17 paragraph 4 sentence 2 or 3 fails to carry out an evidence, to submit or to submit in time or to keep on file or to keep on file at least five years,

12. contrary to Article 16 paragraph 2 sentence 2 fails to keep on file a report or a note or to keep on file at least five years or

13. contrary to Article 17 paragraph 1 sentence 1 or 2 fails to carry out a measurement or to carry out in time.

(2) An administrative offence within the meaning of Article 62 paragraph 1 no. 7 of the Federal Immission Control Act shall be deemed to have been committed by anyone who, wilfully or negligently, contrary to Article 4 paragraph 1 a sentence 2 or 3 or Article 19 a paragraph 3 sentence 2 or 3 fails to carry out, to carry out in the right way or to carry out completely an evidence, to submit or to submit in time or to keep on file or to keep on file at least five years.

6 Part VI Final provisions

6.1 Article 25

6.1.1 Entry into force, rescission

This Ordinance shall enter into force on the first day after publication. At the same time the Ordinance on Large Combustion Plants of 22 June 1983 (Federal Law Gazette I p. 719), amended by Section 6 of the Act of 3 May 2000 (Federal Law Gazette I p. 632) shall be rescinded.

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8 Annex I

8.1.1

8.1.2 Equivalence factors

The concentrations of the following dioxins and furans determined in the waste gas shall be multiplied by the given equivalence factors and totalled in order to receive the totals required according to Article 3 paragraph 1 no. 3 letter d or Article 4 paragraph 1 no. 3 letter d:

Substance	Equivalence factor
2,3,7,8-Tetrachlordibenzodioxin (TCDD)	1
1,2,3,7,8-Pentachlordibenzodioxin (PeCDD)	0,5
1,2,3,4,7,8-Hexachlordibenzodioxin (HxCDD)	0,1
1,2,3,7,8,9-Hexachlordibenzodioxin (HxCDD)	0,1
1,2,3,6,7,8-Hexachlordibenzodioxin (HxCDD)	0,1
1,2,3,4,6,7,8-Heptachlordibenzodioxin (HpCDD)	0,01
Octachlordibenzodioxin (OCDD)	0,001
2,3,7,8-Tetrachlordibenzofuran (TCDF)	0,1
2,3,4,7,8-Pentachlordibenzofuran (PeCDF)	0,5
1,2,3,7,8-Pentachlordibenzofuran (PeCDF)	0,05
1,2,3,4,7,8-Hexachlordibenzofuran (HxCDF)	0,1
1,2,3,7,8,9-Hexachlordibenzofuran (HxCDF)	0,1
1,2,3,6,7,8-Hexachlordibenzofuran (HxCDF)	0,1
2,3,4,6,7,8-Hexachlordibenzofuran (HxCDF)	0,1

1,2,3,4,6,7,8-Heptachlordibenzofuran (HpCDF)	0,01
1,2,3,4,7,8,9-Heptachlordibenzofuran (HpCDF)	0,01
Octachlordibenzofuran (OCDF)	0,001

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10 Annex II

10.1.1 Requirements for the continuous measuring equipments and the validation of the measuring results

The value of the 95 per cent confidence interval of a single measuring result for the emission limitation determined for the daily mean value shall not exceed the following percentages of this emission limitation:

Carbon monoxide	10 per cent
Sulphur dioxide	20 per cent
Nitrogen oxides	20 per cent
Total dust	30 per cent
Total organic carbon	30 per cent
Mercury	40 per cent

The validated half-hourly mean values and daily mean values shall be determined from the measured half-hourly mean values after having subtracted the measurement uncertainty determined during calibration. Any day in which more than six half-hourly mean values are invalid due to malfunction or maintenance of the continuous measurement system shall be invalidated. If more than ten days over a year are invalidated for such situations the competent authority shall require the operator to take adequate measures to improve the reliability of the continuous monitoring system.