

**QUESTIONNAIRE ON STRATEGIES AND POLICIES
FOR THE 2004 COMPLIANCE REVIEW**

COUNTRY CONTACT

Q.0 Provide below the name, address, phone and fax number, and e-mail address of the contact person who could help the secretariat should it have specific questions concerning the answers provided by your country.

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**QUESTIONNAIRE ON STRATEGIES AND POLICIES
FOR AIR POLLUTION ABATEMENT:
(2004 COMPLIANCE REVIEW)**

Parties to the 1979 Convention on Long-range Transboundary Air Pollution

Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom, United States, European Community.

SECTION 1. THE 1985 SULPHUR PROTOCOL

Parties: Austria, Belarus, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Russian Federation, Slovakia, Sweden, Switzerland, Ukraine.

Note: When referring to European Union directives, please give the exact reference (title and symbol) of the directive and, if applicable, relevant amendments; explain how the directive satisfies the question and indicate whether the directive has been transposed into national law and has been implemented, with a reference to the respective legislation.

Q.1 As required by article 6 of the Protocol, provide information on your country's national strategies, policies and programmes that specifically address the reduction of sulphur emissions. You may wish to refer to your answer to question 18 in section 4 below.

Air pollution control activity in Germany is ruled by the 1974 Federal Immission Control Act (Bundes-Immissionsschutzgesetz - BImSchG). A basic feature of this act is the precautionary principle, which means in practical terms that all sources (new and existing) must prevent and control emissions according to the state of the art. Since the mid-1970s, a system of ordinances and technical instructions on emission prevention and control has come into effect and has reversed the trend of SO₂ emissions. Between 1980 and 1990 SO₂ emissions in the old federal Lander decreased by 70%. With German unification the BImSchG and its regulations became applicable in the new federal Länder. In unified Germany SO₂ emissions decreased from 7514 kt in 1980 to 2945 kt in 1993 the target year of the protocol, and have continued to decrease to 638 kt in 2000.

To achieve this, all large combustion plants were fitted with flue gas desulphurization technology. In addition, the sulphur content of fuels was reduced and use of low-sulphur fuels was required for installations where the use of flue gas treatment technology was not appropriate. For details see Q18 on legislation, Q20 on ELVs and Q23 on fuel standards.

For a documentation of laws and regulations see the attachment to this questionnaire.

SECTION 2. THE 1988 NITROGEN OXIDES PROTOCOL

Parties: Austria, Belarus, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Russian Federation, Slovakia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, United States, and European Community.

Note 1: When referring to European Union directives, please give the exact reference (title and symbol) of the directive and, if applicable, relevant amendments; explain how the directive satisfies the question and indicate whether the directive has been transposed into national law and implemented, with a reference to the respective legislation.

Note 2: When providing information on national emission standards or emission limit values for NO_x, please indicate: the numerical value; whether they have been transposed into national law and implemented, with a reference to the respective legislation. When providing a list of NO_x source categories, please clarify whether these are actually used as major source categories in your country.

Note 3: When providing information in tables, please use the format below, including reference to your country under "Party" to avoid errors.

Q.2 Provide information, as required by article 8, paragraph 1, on national strategies, policies and programmes developed in accordance with article 7 that specifically address the control and reduction of emissions of nitrogen oxides or their transboundary fluxes, including progress achieved under them and any changes made to them.

Air pollution control activity in Germany is ruled by the 1974 Act of Federal Immission Control (Bundes-Immissionsschutzgesetz - BImSchG). A basic feature of this act is the precautionary principle, which means in practical terms that all sources (new and existing) must prevent and control emissions according to the state of the art. Since the mid-1970s, a system of ordinances and technical instructions on emission prevention and control has come into effect. NO_x emission control requirements are laid down in various ordinances to the BImSchG, including the 1 BImSchV, the 13 BImSchV, the 17 BImSchV and the Technical Instructions on Air Quality Control (TA Luft).

The establishment and operation of installations particularly liable to cause harmful

effects on the environment are subject to licensing. These plants are listed in the 4th ordinance (4. BImSchV). Detailed provisions relating to the licensing procedure are laid down in the 9th ordinance (9. BImSchV).

NOx emissions in Germany had decreased from 3350 kt in 1987 to 2055 kt in 1994 the target year of the protocol, which is more than the required 30%, and have continued to decrease to 1584 kt in 2000.

For a documentation of laws and regulations see the attachment to this questionnaire.

Q.3 Provide information, as required by article 8, paragraph 1 (b), and article 2, paragraph 2 (a), on progress made in applying national emission standards to the new and substantially modified stationary sources. In your reply, list the source categories in your country that are considered to be major stationary source categories under the Protocol, taking into account its technical annex and article 1 (Definitions). For each source category, state the national emission standards applied or to be applied, the units and statistical treatment, and the pollution control measures applied. For standards to be applied, please indicate when they will come into effect. You are encouraged to use the table format suggested below.

Germany has national NOx emission standards and applies BAT for heat and power generation according to size of plant and type of fuel and for industrial processes as in the following table. For their legal implementation see the list of regulations attached to the questionnaire.

PARTY: Germany			
Major stationary source categories for NOx	National emission standards for NOx from new and substantially modified stationary sources	Units & statistical treatment ^{1/}	Pollution control measures and year applied or to be applied ^{2/}
Boilers	depending on type of plant and fuel	mg NO ₂ /m ³ , daily average, related oxygen content	-
1-50 MW	solid 250-500, liquid 180-350, gaseous 100-200	7-11%, 3%, 3%	primary measures
> 50-300 MW	solid 400, liquid 300, natural gas 200	5-7%, 3%, 3%	primary measures, SNCR, SCR
> 300 MW	solid 200, liquid 150, natural gas 100	5-7%, 3%, 3%	primary measures, SNCR, SCR
Gas turbines	75-150 (depending on fuel and size)	15%	primary measures, dry low NOx, water- /steam-injection
Stationary engines	-	-	-
compression ignition (diesel engines):	500-1000, (depending on fuel)	5%	water injection, SCR
spark ignition (Otto engines):	500-800, (depending on type)	5%	primary measures
Industrial processes (selection)	-	-	-
Nitric acid plants	450	-	SCR, SNCR
Fertilizers	500	-	-
Pulp mills >50-MW	300	3%	primary measures, optimised combustion techniques

Iron and steel	400-500	-	low NOx-burner
Cement	500	-	primary measures, staged combustion, SNCR, SCR
Glass	500	-	primary measures, 3R/re-burning, SNCR, SCR

1/ The statistical treatment can be a percentile (e.g. 95 percentile), a daily average, a monthly average, etc.

2/ Refer to the technical annex to the 1988 Nitrogen Oxides Protocol concerning control technologies for NOx emissions from stationary sources.

Q.4 Provide information, as required by article 8, paragraph 1 (b), and article 2, paragraph 2 (b), on the progress made in applying national emission standards to new mobile sources. In your reply, list the new mobile source categories in your country that are considered to be major source categories under the Protocol, taking into consideration its technical annex and article 1 (Definitions). For each category, state the standards applied or to be applied, the units and statistical treatment, and the pollution control measures applied. For standards to be applied, please indicate when they will come into effect. You are encouraged to use the table format suggested below.

Germany regulates emissions from mobile sources pursuant to EC Directives. The directives 97/68/EC, 98/69/EC, 99/96/EC have been transposed into national law and have been implemented.

PARTY: Germany				
New mobile source category/class for NOx	NOx emission standards (unit: g/km or g/kWh)		Pollution control measures applied ^{1/}	Comments e.g. reference to EC directive, applied test cycle
	Petrol	Diesel		

1/ Refer to Table 2 in the technical annex (amended 23 June 1995) to the 1998 Nitrogen Oxides Protocol concerning control technologies for NOx emissions from mobile sources.

Q.5 Provide information, as required by article 8, paragraph 1 (c), and article 2, paragraph 2 (c), on progress made in introducing pollution control measures for the existing sources in the major stationary source categories, including measures introduced or to be introduced, taking into account the technical annex to the Protocol. In your reply, list the source categories in your country that are considered to be major stationary source categories under the Protocol, taking into account its technical annex and article 1 (Definitions) and the measures applied to each source category. For planned measures, please indicate the year they will be introduced.

Germany applies emission limit values (ELV) as mentioned in the table under Q3 with a transition period also to existing sources. A transition period takes normally 5 years, beginning with the day the ELV has come into force.

PARTY:

Major existing stationary source categories for NOx	Pollution control measures applied ^{1/}	If national emission standards are applicable:	
		Limit values for NOx	Units & statistical treatment ^{2/}

1/ Refer to the technical annex (amended 23 June 1995) to the 1988 Nitrogen Oxides Protocol concerning technologies for NOx emissions from stationary sources.

2/ The statistical treatment can be a percentile (e.g. 95 percentile), a daily average, a monthly average, etc.

Q.6 Provide information, as required by article 8, paragraph 1 (d), on progress made in making unleaded petrol available. Has your country phased out the use of leaded petrol for on-road vehicles?

Yes, leaded petrol has been phased out.

If not, when do you expect to phase out leaded petrol?

If not, please also report on the availability of unleaded petrol, in particular along the main international transit routes, and the percentage of total sales in terms of mass or volume of leaded and unleaded petrol.

Q.7 Provide information, as required by article 8, paragraph 1 (e), on measures taken to facilitate the exchange of technology related to the reduction and control of emissions of nitrogen oxides.

Germany (the Federal Environmental Agency) operates the Internet system "Cleaner Production Germany" www.cleaner-production.de, which provides information on projects of clean production and pollution prevention and control. Germany takes part in the Transform-Programme, providing technical assistance to central and eastern Europe, and the Twinning Programme of the EU. Germany is active in the information exchange on Best Available Techniques (BAT) under the European IPPC Directive 96/61/EC. The German background documents have been made available to the public via Internet <http://www.umweltbundesamt.de/nfp-bat/mat.htm>.

SECTION 3. THE 1991 VOC PROTOCOL

Parties: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Liechtenstein, Luxembourg, Monaco, Netherlands, Norway, Slovakia, Spain, Sweden, Switzerland, United Kingdom.

Note 1: Question 9 applies only to Parties that have chosen article 2, paragraph 2 (a). **The Parties that have chosen 1988 as their base year are:** Austria, Belgium, Bulgaria, Estonia, Finland, France, Germany, Hungary, Netherlands, Spain, Sweden, and United Kingdom. **Parties that have chosen article 2, paragraph 2 (a), but another year as their base year are:** Czech Republic (1990), Denmark (1985), Italy (1990), Liechtenstein (1984), Luxembourg (1990), Monaco (1990), Slovakia (1990) and Switzerland (1984). It is probable that non-Parties (except those listed under 9bis and 9ter) will choose this option when they ratify the VOC Protocol. They may, therefore, wish to respond to question 9.

Note 2: When referring to European Union directives, please give the exact reference (title and symbol) of the directive and, if applicable, relevant amendments; explain how the directive satisfies the question and indicate whether the directive has been transposed into national law and has been implemented, with a reference to the respective legislation.

Note 3: When providing information on national emission standards or emission limit values, please indicate the numerical value; whether they have been transposed into national law and have been implemented, with a reference to the respective legislation. When providing a list of VOC source categories, please clarify whether these are actually used as major source categories in your country.

Note 4: When providing information in tables, please use the format below, including reference to your country under “Party” to avoid errors.

Q.9 Provide information, as required by article 8, paragraph 1, on national strategies, policies and programmes developed in accordance with article 7 that specifically address the control and reduction of VOC emissions or their transboundary fluxes, including progress achieved under them and any changes made to them. Article 2, paragraph 2 (a), requires effective measures to be taken to reduce the national annual VOC emissions by at least 30 per cent by the year 1999, using the 1988 level as a basis. If your country has specified another year upon signature or accession, use that year as a basis.

Air pollution control is ruled by the 1974 Federal Immission Control Act (Bundes-Immissionsschutzgesetz - BImSchG). A basic feature of this act is the precautionary principle, which means in practical terms that all sources (new and existing) must prevent and control emissions according to the state of the art. Since the mid-1970s, a system of ordinances and technical instructions on emission prevention and control

has come into effect. VOC emission control requirements are laid down in various ordinances, including the 2. BImSchV, the 17. BImSchV, the 31. BImSchV and the Technical Instructions on Air Quality Control (TA Luft).

The establishment and operation of installations particularly liable to cause harmful effects on the environment are subject to licensing. These plants are listed in the 4th Ordinance (4. BImSchV). Detailed provisions relating to the licensing procedure are laid down in the 9th ordinance (9. BImSchV).

NMVOC emissions in Germany have decreased from 3256 kt in 1988 to 1663 kt in 1999 the target year of the protocol, which is more than the required 30%, and have continued to decrease to 1605 kt in 2000.

For a documentation of laws and regulations see the attachment to this questionnaire.

Note 5: This option (question 9 bis) applies to **Norway**, which is a Party, and to **Canada**, which is a non-Party. Norway specified the 1989 level as its basis for its TOMA and Canada chose 1988.

Q.9(bis) Provide information, as required by article 8, paragraph 1, on national strategies, policies and programmes developed in accordance with article 7 that specifically address the control and reduction of VOC emissions or their transboundary fluxes, including progress achieved under them and any changes made to them. Article 2, paragraph 2 (b), requires measures to be taken to reduce annual VOC emissions in the TOMA (as described in annex I) by at least 30 per cent by the year 1999, using the 1988 level (or 1989 as the case may be) as a basis.

Note 6: This option (question 9 ter) applies to **Greece**, which is a non-Party.

Q.9(ter) Provide information, as required by article 8, paragraph 1, on national strategies, policies and programmes developed in accordance with article 7 that specifically address the control and reduction of VOC emissions or their transboundary fluxes, including progress achieved under them and any changes made to them. Article 2, paragraph 2 (c), requires effective measures to be taken to ensure that by 1999 the national annual VOC emissions do not exceed their 1988 level.

Q.10 Provide information, as required by article 8, paragraph 2 (b), and article 2, paragraph 3 (a) (i), on the application of appropriate national or international emission standards to control and reduce VOC emissions from new stationary sources. In your reply, list the source categories in your country that are considered to be major new stationary source categories under the Protocol, taking into account its annex II and article 1 (Definitions). For each source category, state the emission standards applied or to be applied, the units and statistical treatment, and the pollution control measures required for the new sources, taking into ac-

count annex II to the Protocol. For standards to be applied, please indicate when they will come into effect. You are encouraged to use the table format suggested below.

Germany has national emission standards for all stationary sources subject to permitting and for other relevant plants. The emissions standards are promulgated in the TA Luft, in the 17. BImSchV and in the 31. BImSchV. They differ with regard to risk classes of VOC emissions and, there are special emission limit values for specific source categories. The use of solvents in plants is regulated in accordance with the Solvents Directive (1999/13/EC). Alternatively to the emission limit values of a plant a reduction scheme can be used, allowing other means of emission reduction, equivalent to the emission limit values. For installations not subject to licensing (e.g. vehicle refinishing and coating of wood and other materials) a simplified reduction scheme (SRS) can be used, demonstrating that coatings not containing VOCs in excess of a defined maximum permissible value are used exclusively. Many of the ELVs in the table are linked to additional requirements on emission reduction.

PARTY: Germany			
Major new stationary source categories for VOCs	Emission standards for VOCs from new stationary sources	Units & statistical treatment^{1/}	Pollution control measures and year applied or to be applied^{2/}
General ELVs TA Luft			
class I, mass flow <0.1 kg/h	20	mg/m ³ , daily averages	
class II, mass flow <0.5 kg/h	100	mg/m ³ , daily averages	
VOCs mass flow <0.5kg/h	50	mgC/m ³ , daily averages	
Specific ELVs TA Luft			
Combustion plants for wood/straw	10/50	mgC/m ³ , daily averages	
Melting of aluminium	50	mgC/m ³ , daily averages	
Melting of non-ferrous metals	50	mgC/m ³ , daily averages	
Melting of non-ferrous metals	50	mgC/m ³ , daily averages	
Organic chemical industry, depending on process	0,2 to 25	mgC/m ³ , daily averages	
Manufacturing of man-made mineral fibre products	40	g/m ³ manufactured board	
Manufacturing of chipboards or hardboards	120	g/m ³ manufactured board	
Waste incineration	10/20	mg/m ³ daily average	
17. BImSchV		mg/m ³ half h average	

17. BImSchV		age/half h average	
Solvents 31. BImSchV			
General ELV VOCs particular harmful	1 or mass flow <2,5	mg/m ³ g/h	
Heatset web offset printing, SCT [t/a]>15	20	mg C/m ³	Thermal Post- Combustion (TPC)
Publication rotogra- vure SCT [t/a] > 15	50	mg C/m ³	Adsorption
Other rotary printing SCT [t/a] >15	50	mg C/m ³	TPC
Vehicle refinishing SCT [t/a] >0	50	mg C/m ³	SRC applicable
Coil coating SCT [t/a] >25	20	mg C/m ³	TPC
Other metal and plas- tic coating SCT [t/a] >5/>15	100/50	mg C/m ³	waste gas treatment, SRC applicable, water based coatings, solvent poor coatings
Coating of wooden surfaces SCT [t/a] >5/>15/>25	SRS/100/50	mg C/m ³	SRC applicable, water based coatings solvent poor coatings
Adhesive coating SCT[t/a] >5	50	mg C/m ³	waste gas treatment, SRC applicable, water based coatings, solvent poor coatings
Surface cleaning SCT [t/a] >1	75	mg C/m ³	closed installations, condensation/adsorption
Cars	35	g VOC/m ²	waste gas cleaning, water-based varnishing powder
Truck cabins	45	g VOC/m ²	waste gas cleaning, water-based varnishing
Vans and trucks	70	g VOC/m ²	waste gas cleaning, water-based varnishing
Buses	150	g VOC/m ²	waste gas cleaning, water-based varnishing
Track vehicles	110	g VOC/m ²	waste gas cleaning, water-based varnishing

1/ The statistical treatment can be a percentile (e.g. 95 percentile), a daily average, a monthly average, etc.

2/ Refer to annex II to the 1991 VOC Protocol concerning control measures for emissions of VOCs from stationary sources.

Q.11 Provide information, as required by article 8, paragraph 2 (b), and article 2, paragraph 3 (b) (i), on progress made in applying measures to control and reduce VOC emissions from the existing stationary sources. In your reply, list the source categories in your country that are considered to be major stationary source categories under the Protocol, taking into ac-

count its annex II and article 1 (Definitions). For each source category, state the techniques/technologies applied or to be applied, taking into account annex II to the Protocol. For the technologies to be applied, please state the year they will be applied.

Germany applies emission limit values as mentioned in table Q10 also to existing sources with a transition period. A transition period takes normally 5 years; beginning with the day the ELVs have come into force.

Q.12 Provide information, as required by article 8, paragraph 2 (b), and article 2, paragraph 3 (b) (ii), on progress made in introducing techniques to reduce VOC emissions from petrol distribution and motor vehicle refuelling operations and to reduce the volatility of petrol, taking into account annexes II and III to the Protocol.

For the storage and distribution of petrol Stage I and II controls are regulated in the 20. and 21. BImSchV and are in place. In addition, VOC control measures are required by the TA-Luft for the loading/unloading of liquid mineral oil products.

Q.13 Provide information, as required by article 8, paragraph 2 (b), and article 2, paragraph 3 (a) (iii), on the application of appropriate national or international emission standards for new mobile sources based on best available techniques. Your reply should list the mobile source categories and state the standards applied and the control techniques or programmes used for each category, taking into account annex III to the Protocol. You are encouraged to use the table format suggested below.

Germany regulates emissions from mobile sources pursuant to EC Directives. The directives 97/68/EC, 98/69/EC, 99/96/EC have been transposed into national law and implemented.

SECTION 4. THE 1994 SULPHUR PROTOCOL

Parties: Austria, Belgium, Canada, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, and European Community.

Note 1: When referring to European Union directives, please give the exact reference (title and symbol) of the directive and, if applicable, any relevant amendments; explain how the directive satisfies the question and indicate whether the directive has been transposed into national law and implemented, with a reference to the respective legislation.

Note 2: When providing information on national emission standards or emission limit values, please indicate the numerical value; whether they have been transposed into national law and implemented, with a reference to the respective legislation. When providing a list of source categories for sulphur, please clarify whether these are actually used as major source categories in your country.

Note 3: When providing information in tables, please use the format below, if possible, including reference to your country under "Party" to avoid errors.

Q.18 Report, as required by article 5, paragraph 1 (a), on national strategies, policies, programmes and measures, referred to in article 4, paragraph 1, that specifically address the control and reduction of sulphur emissions.

Air pollution control activity in Germany is ruled by the 1974 Federal Immission Control act (BImSchG). A basic feature of this act is the precautionary principle, which means in practical terms that all sources (new and existing) must prevent and control emissions according to the state of the art. Since the mid-1970s a system of ordinances and technical instructions determining the state of the art of emission prevention and reduction for all kinds of sources has come into effect. SO₂ emission control requirements are laid down in various ordinances, including the 1. BImSchV, the 13. BImSchV, the 17. BImSchV and the Technical Instructions on Air Quality Control (TA Luft).

The establishment and operation of installations particularly liable to cause harmful effects on the environment are subject to licensing. These plants are listed in the 4th ordinance (4. BImSchV). Detailed provisions relating to the licensing procedure are laid down in the 9th ordinance (9. BImSchV).

SO₂ emissions in Germany have decreased from 5322 kt in 1990 to 638 kt in 2000 the target year of the protocol with a required emission ceiling of 1300 kt.

For a documentation of laws and regulations see the attachment to this questionnaire.

Q.20 As required by article 5, paragraph 1, and article 2, paragraph 5 (a), report on progress made in your country in applying emission limit values at least as stringent as those specified in annex V to the Protocol to the major new stationary combustion sources, stating the source category, the technologies applied and whether similar or more stringent values than those in annex V were applied.

Germany has national SO₂ emission standards for heat and power generation according to the type of fuel and for industrial processes including all sectors listed in annex V to the Protocol and applies control technologies as follows in the table. For Boilers smaller than 100 MW and larger than 300 MW it is obvious that the German standards are more stringent as those specified in annex V of the Protocol. For Boilers in between 100 and 300 MW Germany applies in addition to the emission limit value a desulphurisation rate of at least 60%. This makes the German emission reduction requirement more stringent than the linear decrease of the ELV, respectively the increase of the desulphurisation rate in annex V.

PARTY: Germany					
Major new stationary combustion source category / fuel type for SO₂	Thermal input (MW_{th})	Limit values (mg SO₂ /Nm³)^{1/} or other emission limitations	Oxygen per-centage in flue gas & statistical treatment^{2/}	Desulphurization rate (%)	Pollution control measures applied^{3/}
Boilers, ELV according to type of fuel					
solid/liquid/nat.gas	50-100 MW	2000/1700/35	5-7/3/3%		sorbent additives, spray drying
solid/liquid/nat.gas	>100-300MW	2000/1700/35	5-7/3/3%	60	sorbent additives, spray drying, FGD
solid/liquid/nat.gas	> 300 MW	400	5-7/3%	85/85/65	FGD
FBC < 300 MW		400 or		75	
Industrial processes (selection) O₂ content sector specific					
Pulp Mills		400	-		4stage venturi,
Smelters		500	-		low S fuels
Refineries		as boilers	-		low S fuels, FGD, DeSOx additive
Iron and steel (sinter)		500	-		low S fuels, FGD
Cement		400	-		sorbent additives

1/ Refer to annex V to the 1994 Sulphur Protocol concerning emission and sulphur content limit values.

2/ The statistical treatment can be a percentile (e.g. 95 percentile), a daily average, a monthly average, etc.

3/ Refer to annex IV to the 1994 Sulphur Protocol concerning control technologies for sulphur emissions from stationary sources.

Q.21 As required by article 5, paragraph 1, and article 2, paragraph 5 (b), report on progress made in your country in applying emission limit values such as those specified in annex V to existing stationary combustion sources with a thermal input above 500 MW_{th}, stating the source category, the technologies applied and whether similar or more stringent values than those in annex V were applied. If other equivalent limitations or other appropriate provisions

were applied to achieve the sulphur emissions ceilings specified in annex II to the Protocol, please describe those.

Germany applies emission limit values as mentioned in the table under question 20 also to existing sources.

Q.22 As required by article 5, paragraph 1, and article 2, paragraph 5 (b), report on progress made in your country in applying emission limit values or emission limitations to the major existing stationary combustion sources whose thermal input is between 50 and 500 MW_{th}, stating the source category and the technologies applied, using annex V as guidance.

Germany applies emission limit values as mentioned in the table under question 20 also to existing sources.

Q.23 As required by article 5, paragraph 1, and article 2, paragraph 5 (c), report on progress made in applying national standards for the sulphur content of gas oil which are at least as stringent as those specified in annex V to the Protocol.

Directive 1999/32/EC (transposed into German law by the 3. BImSchV) meets the requirements of the Protocol by setting a limit of 0.2% on the sulphur content of fuel gas oils (0.1 % S by 01.01.2008), Directive 98/70/EC (transposed into German by the 10. BImSchV) law sets the allowable sulphur content in diesel at 350 (50 ppm by 01.01.2005) and in gasoline at 150 mg/kg (50 ppm by 01.01.2005). Due to national tax incentives very low sulphur gasoline and diesel is marketed in Germany only.

PARTY: Germany			
Sulphur content of gas oil (in % or ppm)			
Diesel for on-road vehicles	Diesel for off-road vehicles and engines	Gas oil for inland navigation	Gas oil for heating
350 ppm	350 ppm	0.2% S	0.2% S
50 ppm (01.01.2005)	50 ppm (01.01.2005)	0.1 % S (01.01.2008)	0.1 % S (01.01.2008)
Marketed are following fuel qualities			
10 ppm	10 ppm	0,136 Gew.-%	0,136 Gew.-%

SECTION 5. THE 1998 PROTOCOL ON PERSISTENT ORGANIC POLLUTANTS (POPs)

Parties: Austria, Bulgaria, Canada, Czech Republic, Denmark, Finland, France, Germany, Iceland, Luxembourg, Netherlands, Norway, Republic of Moldova, Slovakia, Sweden, Switzerland.

Note 1: When referring to European Union directives, please give the exact reference (title and symbol) of the directive and, if applicable, relevant amendments; explain how the directive satisfies the question and indicate whether the directive has been transposed into national law and implemented, with a reference to the respective legislation.

Note 2: When providing information on national emission standards, or emission limit values, please indicate the numerical value; whether they have been transposed into national law and implemented, with a reference to the respective legislation. When providing a list of POP source categories, please clarify whether these are actually used as major source categories in your country.

Note 3: When providing information in tables, please use the format below, including reference to your country under “Party”, to avoid errors.

Q. 28 Provide information, as required by article 9, on the national strategies, policies and programmes developed in accordance with article 7, paragraph 1, to implement the Protocol on POPs to control, reduce or eliminate discharges, emissions and losses of persistent organic pollutants. Please include information on measures such as those listed in article 7, paragraph 2. If applicable or relevant, include a description of measures taken for other POPs not yet listed in this Protocol.

National strategies, policies and programmes on POPs are developed to eliminate production and uses of intentionally produced POPs and to minimize emissions from unintentional sources. Control activities are governed under three regulations as follows: Prohibitions and use restrictions in the Ordinance on the Prohibition of Chemicals under the Chemicals Act (ChemVerbotsV, GefStoffV) and the Ordinance on Bans on the Placing on the Market and the Use of Plant Protecting Agents Containing Particular Active Substances (Pflanzenschutz-Anwendungsverordnung) under the Plant Protection Act. The relevant stationary sources of POP emissions are all subject to licensing. Requirements on POP emission prevention and control are based on best available technique (state of the art) and regulated in a system of ordinances and technical instructions under the Federal Immission Control Act (BImSchG).

Germany has transposed in 2002 all provisions of the UNECE POP protocol and of the Stockholm Convention on POPs into national law.

For a documentation of laws and regulations see the attachment to this questionnaire.

Note 4: When answering questions 29 to 33, please take into account article 3, paragraph 4, and article 4 (Exemptions). Whenever article 4 applies, explain the exemption and specify the paragraph of article 4 to which it refers.

Q.29 Provide information, as required by article 3, paragraph 1 (a), on measures taken to eliminate the production and use of substances listed in annex I.

Uses of most of the substances listed in annex I are prohibited pursuant to different ordinances. Aldrin, DDT, dieldrin, endrin, chlordane, hexachlorobenzene and heptachlor are subject to prohibitions pursuant to the Ordinance on the Placing on the Market and the Use of Plant Protecting Agents Containing Particular Active Substances (Pflanzenschutz- Anwendungsverordnung). None of these substances is a component or active ingredient of a registered pesticide in Germany, nor are chlordecone, mirex or toxaphene.

Production of DDT is prohibited in Germany pursuant to a "DDT-law".

Marketing of PCB and preparations of PCB is prohibited pursuant to the Chemicals Prohibition Ordinance (Chemikalien-Verbotsverordnung). While production and use of PCBs is prohibited according to the "Gefahrstoffverordnung".

Q.30 Provide information, as required by article 3, paragraph 1 (b) (i), on measures taken to ensure that the destruction or disposal of substances listed in annex I is undertaken in an environmentally sound manner, taking into consideration relevant subregional, regional and global regimes governing the management of hazardous waste, in particular the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

Apart from small scale uses (scientific research) there is no indication about any existing stockpiles of aldrin, chlordane, chlordecone, dieldrin, DDT, endrin, heptachlor, mirex, toxaphene and hexachlorobenzene in Germany. The destruction of POPs or their environmentally sound disposal are regulated by the Act on Closed Substance Cycle Management and Waste Disposal and the Federal Immission Control Act as well as by the respective sets of implementing regulations, notably the Technical Instructions on the Management of Hazardous Wastes.

Q.31 Provide information, as required by article 3, paragraph 1 (b) (ii), on measures taken to endeavour to ensure that the disposal of substances listed in annex I is carried out domestically.

The disposal of aldrin, dieldrin, DDT, endrin, chlordane, mirex, toxaphene, heptachlor and hexachlorobenzene is carried out domestically in accordance with the Act on Closed Substance Cycle Management and Waste Disposal and the Federal Immission Control Act as well as by the respective sets of implementing regulations, notably the Technical Instructions on the Management of Hazardous Wastes.

Q.32 Provide information, as required by article 3, paragraph 1 (b) (iii), on measures taken to ensure that the transboundary movement of substances listed in annex I is conducted in an environmentally sound manner, taking into consideration applicable subregional, regional and global regimes governing the transboundary movement of hazardous waste, in particular the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

The Basel Convention is implemented by the Waste Shipment Regulation 259/93/EEC and by the German Waste Movement Act, i.e. the export of waste for final disposal in non-EU and non- EFTA countries is banned, and export for recovery/recycling to non-OECD countries is banned.

Q.33 Provide information, as required by article 3, paragraph 1 (c), on measures taken to restrict the substances listed in annex II to the uses described.

The Ordinance on the Prohibition of Chemicals prohibits the manufacture and use of DDT and PCBs. HCH (Lindane) is banned for any use as active ingredient of plant protection products; for biocidal products (wood preservatives) there is still no regulation in place. A ongoing niche application still exists for public health purposes(head lice and scabies).

Q.34 Please report, as required by article 3, paragraph 3, on progress made to develop strategies for identifying articles still in use and wastes containing substances listed in annex I, II or III to the Protocol. Also provide information on measures taken or to be taken to ensure that such wastes and such articles, upon becoming wastes, are destroyed or disposed of in an environmentally sound manner.

Remaining PCBs in equipment (condensers, transformers and as hydraulic fluids), have to be disposed of by the year 2005 according to the Act on Closed Substance Cycle Waste Management and Waste Disposal. Machinery still containing PCBs are inventoried.

Waste wood is analysed for PCP prior to recycling (Ordinance on management of waste wood), Lindane is indirectly covered by the prescribed analytical measure. In case of relevant contamination the wood is disposed of as hazardous waste.

Q.35 Report, as required by article 3, paragraphs 5 (b)(i)-(iv), on progress made towards applying best available techniques (BAT), taking into consideration annex V, and limit values as stringent as those specified in annex IV to each new stationary source and to existing stationary sources. In your reply, list the source categories in your country that are considered to be major stationary source categories under the Protocol, taking into account article 1

(Definitions) and annexes V and VIII. For each source category, state the limit values applied or to be applied, the units and statistical treatment, and the pollution control measures applied. For limit values to be applied, please indicate when they will come into effect. You are encouraged to use the table format below to respond. A Party may, as an alternative, apply different emission reduction strategies that achieve equivalent overall emission reductions. Should this be the case, please describe the strategies and any progress made. When answering this question, you should also consider article 3, paragraph 6, of the Protocol.

The establishment and operation of installations particularly liable to cause harmful effects on the environment are subject to licensing under the Federal Immission Control Act (BImSchG). A key issue of this act is the precautionary principle, which in practical terms means that all sources (new and existing) must prevent and control emissions according to the best available technique. A number of technical ordinances to this act set out specific regulations on various emission sources. Emissions from major stationary sources of all categories listed in annex IV (municipal waste incinerators, hazardous waste incinerators and medical waste incinerators) are covered by the "17. BImSchV" (on municipal and hazardous waste incinerators). In addition there is an ordinance in place for crematoria (27.BImSchV). Major stationary need an authorisation (permit) according to the 4. BImSchV. while detailed provisions relating to the licensing procedure are laid down in the 9. BImSchV.

For residential combustion (1.BImSchV) no emission values are set out but certain requirements for solid fuels along with monitoring requirements and technical measures to optimize burning-out contribute to overall reduction of POPs from that multiple point sources.

PARTY: Germany			
Major stationary source categories for POPs	Limit values for POPs from new and existing stationary sources^{1/}	Units & statistical treatment^{2/}	Pollution control measures and year applied or to be applied^{3/}
Waste incinerators (municipal, hazardous, medical, sewage sludge) and co-incinerators	0.1 PCDD/F 0.05 PAH	ng TEQ/m ³ mg/m ³	High burning-out, Flue gas cleaning systems, Periodical measurement
Crematoria	0.1	ng TEQ/m ³	High burning-out quality, Flue gas cleaning systems, Periodical measurement

1/ Refer to limit values specified in annex IV to the 1998 POPs Protocol.

2/ The statistical treatment can be a percentile (e.g. 95 percentile), a daily average, a monthly average, etc.

3/ Refer to annex V to the 1998 POPs Protocol concerning best available techniques to control emissions of POPs from major stationary sources.

Q.36 Describe, as required by article 3, paragraph 5 (b) (v), the measures taken or to be taken to control emissions from mobile sources, taking into account annex VII to the Protocol concerning recommended control measures for reducing emissions of POPs from mobile sources.

Germany regulates emissions from mobile sources pursuant to EU Directives (97/68/EC, 98/69/EC, 99/96/EC). Achievable emission levels for various type of vehicles (passenger cars, heavy duty trucks etc.) as set out in annex VIII are deduced from the above mentioned EU directives.

In 1991 production of leaded gasoline discontinued in Germany, while marketing of ceased in 1995. To this end there is no further need to add chlorinated and brominated scavengers (19. BImSchV).

Q.37 Provide information, as required by article 3, paragraph 8, relating to the production and sales of substances listed in annexes I and II to the Protocol. You are encouraged to use the table format below.

Apart from one minor use of lindane (see Q 33) substances listed in annexes I and II are neither produced nor used in Germany.

Since there is no obligation in Germany to notify or authorize biocidal products it cannot definitively be excluded that Lindane is still be included in some wood preservatives on the market. Deliberately disclosed information by domestic producers and importers of wood protection products (not exhaustive for total market) revealed no Lindane being present in the products. Situation will clear up by 2006: from then only notified products are allowed to be further marketed. Lindane has only been notified for biocidal use category "veterinary products" under the EU directive 98/8/EC (marketing of biocidal products).

SECTION 6. THE 1998 PROTOCOL ON HEAVY METALS (HMs)

Parties: Canada, Czech Republic, Denmark, Finland, France, Germany, Luxembourg, Netherlands, Norway, Republic of Moldova, Romania, Slovakia, Sweden, Switzerland, United States, European Community.

Note 1: When referring to European Union directives, please give the exact reference (title and symbol) of the directive and, if applicable, relevant amendments; explain how the directive satisfies the question and indicate whether the directive has been transposed into national law and implemented, with a reference to the respective legislation.

Note 2: When providing information on emission limit values, please indicate the numerical value; whether they have been transposed into national law and implemented, with a reference to the respective legislation. When providing a list of heavy metal source categories, please clarify whether these are actually used as major source categories in your country.

Note 3: When providing information in tables, please use the format below, including reference to your country under “Party”, to avoid errors.

Q.41 Provide information, as required by article 7, on the national strategies, policies and programmes developed in accordance with article 5, paragraph 1, to implement the Protocol and control and reduce emissions of the heavy metals listed in annex I to the Protocol. You may wish to include information on measures such as those listed in article 5, paragraph 2. If applicable, please include information on measures taken for other heavy metals, not listed in annex I.

Air pollution control activity is ruled by the Federal Immission Control Act (BImSchG). A basic feature of this act is the precautionary principle, which means in practical terms that all sources must prevent and control emissions according to the state of the art. National strategies, policies and programmes developed for air pollution abatement cover the various stages of the generation of air pollution and a large spectrum of environmental policy instruments. Since the mid-1970s a system of ordinances and technical instructions determining the state of the art of emission prevention and control as emission limit values (ELVs) or technology requirements (BAT) has come into effect.

PM emission control requirements for stationary sources are laid down in various ordinances to this act, including the 1. BImSchV, 13. BImSchV and 17. BImSchV and, in particular in the Technical Instructions on Air Quality control (TA Luft). Besides Hg, Cd and Pb they cover also Tl, As, Co, Ni, Se, Te, Sb, Cr, Cu, Mn, Pt, Pd, Rh, V and Sn. In addition, carcinogenic, mutagenic and reproduction toxic sub-

stances in the waste (e.g. Arsenic) are to be minimized.

Major stationary sources need an authorisation (permit) according to the 4.

BImSchV, while detailed provisions relating to the licensing procedure are laid down in the 9. BImSchV.

Of equal importance as direct regulatory measures to control air emissions is an efficient use of energy. As regulated in the BImSchG stationary sources subject to licensing have to use energy in an efficient way.

The measures initiated to promote energy efficiency and sufficiency are listed in the Federal Government's National Climate Protection Programme of Oct. 2000

www.bmu.de/klimaschutz/fset800.php .

For a documentation of laws and regulations see the attachment to this questionnaire.

Q.42 Provide information, as required by article 3, paragraph 1, on measures taken to reduce emissions of the heavy metals listed in annex I from their level in the reference year set in accordance with that annex. Please indicate the reference year for each metal.

The measures referred to under Q41 and the phase-out of leaded gasoline have led to a decreasing trend of total annual HM emissions. From the reference year 1990 the emissions developed as follows:

	Cadmium t/a	Lead t/a	Mercury t/a
1990	2322	30	112
2000	<400	<11	<31

For reporting on new stationary sources, as required by article 3, paragraph 2 (a) and (b), the questionnaire does not provide an entry. Therefore we provide a table on German PM ELVs for new stationary sources attached to this questionnaire.

These ELVs will come into force for existing sources by 2007 at the latest.

Q.43 Report, as required by article 3, paragraph 2 (c), on progress made towards applying best available techniques to existing stationary sources. In your reply, list the source categories in your country that are considered to be major stationary source categories under the Protocol, taking into account its article 1 (Definitions) and annex II. For each source category state the control techniques applied using annex III to the Protocol as guidance. A Party may, as an alternative, have applied different emission reduction strategies that achieve equivalent overall emission reductions. Should this be the case, please describe the strategies and any progress made.

The Federal Immission Control Act (BImSchG) establishes the principle of applying best available techniques (state-of-the-art technology) to new and existing installations. Existing sources are granted a transition period for compliance. The emission reduction requirements are in principle ELVs, based on BAT. For the regulated

source categories, the emission limit values and the applied control technologies see table Q 44.

Q.44 Report, as required by article 3, paragraph 2 (d), on progress made towards applying the limit values specified in annex V to existing stationary sources. In your reply, list the source categories in your country that are considered to be major stationary source categories under the Protocol, taking into account its article 1 (Definitions) and annex II. For each source category, state the limit values applied or to be applied, the units and statistical treatment, and the pollution control measures applied. For limit values to be applied, please indicate when they will come into effect. You are encouraged to use the table format suggested below. A Party may, as an alternative, have applied different emission reduction strategies that achieve equivalent overall emission reductions. Should this be the case, please describe the strategies and any progress made.

Germany has national emission limit values on HM for all relevant stationary sources. They are promulgated in the TA Luft, the 13. BImSchV and the 17. BImSchV. Limit values for new plants see attachment

PARTY: Germany			
Major stationary source categories for HMs	Limit values for HMs from stationary sources^{1/}	Units & statistical treatment²	Pollution control measures and year applied or to be applied^{3/}
13. BImSchV: Power plants and industrial boilers >50 MW: solid fuels solid except coal or wood liquid fuels special fuel oils gaseous fuels	dust: 50 Σ As,Pb,Cd,Co,Cr,Ni in dust: 0.5; dust: 50 Σ As,Pb,Cd,Co,Cr,Ni in dust: 2 dust: 5	mg dust/m ³ , daily average 5/6/7 % O ₂ , depending on the type of plant 3 % O ₂ 3 % O ₂	ESP, FGD, FF fuel switch use of clean gas
TA Luft: General HM limit values for industrial installations including the sectors covered below	Σ Cd,Hg,Tl: 0,2 Σ As,Co,Ni,Se,Te:1 Σ Sb,Pb,Cr,CN,F,Cu,Mn,Pt,Pd,Rh,V,Sn: 5	mg dust/m ³ ; sector specific O ₂ -contents	
Boilers <50 MW: solid fuels liquid fuels gaseous fuels more ELVs for special fuels	50 50 5	7 % O ₂ 3 % O ₂ 3 % O ₂	
Primary iron and steel industry	50	no fixed O ₂ -content	ESP or FF
Secondary iron and steel industry	20	no fixed O ₂ -content	FF
Iron foundries	20-50	no fixed O ₂ -content	wet scrubber or FF
Lead industry	10	no fixed O ₂ -content	capture of fugitive emissions, FF
Other metal production:	20		

Cement industry	50	10 % O ₂	ESP or FF
Glass industry	50	11/13 % O ₂	ESP or FF
Chlor-alkali-industry	1,5	g Hg /t _{Cl}	
17. BimSchV Municipal, medical and hazardous waste incineration	10/30 Hg: 0,03/0,05 Σ Cd,Tl: 0,05 ΣSb,As,Pb,Cr,Co,Cu,Mn,Ni,V,Sn:0,5	mg dustM/m ³ daily /½-hour average 11 % O ₂	ESP; wet scrubber, FF, activated carbon filters

1/ Refer to limit values specified in annex V to the 1998 Protocol on Heavy Metals.

2/ The statistical treatment can be a percentile (e.g. 95 percentile), a daily average, a monthly average, etc.

3/ Refer to annex III to the 1998 Protocol on Heavy Metals concerning best available techniques to control emissions of HMs from major stationary sources.

Q.45 Provide information, as required by article 3, paragraph 3, on the application of product control measures in accordance with the conditions specified in annex VI. You may wish to refer to your answer to question 6 in section 2 concerning unleaded petrol.

Leaded petrol has been phased out. The EC Directive 98/101/EC (on batteries) has been incorporated into national law (German Battery Ordinance). Batteries containing more than 5 ppm Hg must no longer be marketed since September 2001, button cells may still contain up to 2 % Hg.

Q.46 If applicable and as suggested in article 3, paragraph 4, describe briefly additional product management measures currently being applied and future measures being considered, taking into account annex VII to the Protocol.

Bans and restrictions in the use of Heavy Metals in Products are laid down in the Chemicals Act and the Ordinances on the Prohibition of Chemicals and on Hazardous Substances to this act. Regulations cover the placement on the market and the use of certain hazardous substances, preparations, and products, they include **Cd** as a dyeing agent in plastics, in paints, as PVC stabiliser, as a metal surface treatment agent; **Pb** compounds in paints; **Hg-**, **As-**, and **tin-organic compounds** in anti-fouling paints and water treatment; **Hg** and **As** compounds for wood or textile impregnation; **As** in cleaning and pickling agents, paints, pesticides, glass production, textile industry, enamel production, metal surface treatment, production of pyrotechnical products, metal glues.

In order to recover **Hg** from fluorescent tubes, German industry has set up recycling facilities. The use of Hg in thermometers in households has nearly vanished without administrative action.

The German Battery Ordinance regulates in general the take back of all batteries, not only those containing hazardous pollutants. Furthermore, three eco-labels for low-pollutant batteries have been developed. The eco-label for rechargeable alkali manganese batteries is designed to enhance the share of these environmentally friendly batteries (rechargeable and low-pollutant).

The 1. BImSchV bans the use of wood fuel, containing heavy metals in small combustion installations.

Germany

Attachment to the Questionnaire on Strategies and Policies for the 2004 Compliance Review

HM Protocol

The questionnaire does not provide an entry for reporting on new stationary sources, as required by article 3, paragraph 2 (a) and (b).

PM emission control requirements for stationary sources are laid down in various ordinances (1. BimSchV, 13. BimSchV, 17. BImSchV) and in the Technical Instructions Air (TA Luft) with ELVs as in the table below. More stringent emission limit values for large combustion plants (13. BImSchV) will come into force within short time. Due to directive 2001/80/EC the amendment of this ordinance is in preparation and will generally prescribe more stringent emissions limit values on dust and heavy metals.

New facilities for the production of chlorine or alkali lye cannot make use of the amalgam process or the diaphragm process with asbestos any more. New plants shall use the Hg-free membrane process or the non-asbestos diaphragm process (TA Luft considered both processes as BAT).

Limit values for HMs and dust from new stationary sources

Major stationary source categories for HMs	Limit values for HMs from stationary sources ¹	Unit & Statistical treatment ²	Pollution control measures and year applied or to be applied ³
13. BimSchV Boilers ≥ 50 MW			
Solid fuels	20 0,03 Hg 0,05 Σ Cd,Tl 0,05 Σ As, Benzo(a)pyren,Cd,Co,Cr (cancerogenic compounds) 0,5 Σ Sb, As, Pb, Cr, Co,Cu, Mn,Ni, V,Zn	mg dust/m ³ , daily average 6% O ₂ mg/m ³	ESP, FGD, FF
Liquid fuels	20 0,05 Σ Cd,Tl 0,05 Σ As, Benzo(a)pyren,Cd,Co,Cr	mg dust/m ³ , daily average 3% O ₂ mg/m ³	ESP, FGD, FF

¹ Refer to limit values specified in annex V to the Protocol on Heavy Metals

² The statistical treatment can be a percentile (e.g. 95 percentile), a daily average, a monthly average, etc

³ Refer to annex III to the 1998 Protocol on Heavy Metals concerning best available techniques to control emissions of HMs from major stationary sources

	(cancerogenic compounds) 0,5 Σ Sb, As, Pb, Cr, Co,Cu, Mn,Ni, V,Zn		
Gaseous fuels blast or coke furnace gas	5 10	mg dust/m ³ , daily average 3% O ₂	
TA Luft			
Boilers 1-50 MW, Coal, coke, wood > 5 MW < 5 MW < 2.5 MW (exclusively wood)	20 50 100	mg dust/m ³ , daily average 7% O ₂ 11% O ₂	ESP,FGD,FF
Biomass without wood <1 MW \geq 1 MW	50 20	11% O ₂ 11% O ₂	
Boilers 20–50MW public gas supply, liquid gas other liquid fuel (e.g.heavy oil)	5 20 or 50 if additional limits for inor- ganic dust e.g. for V, Ni are achieved	3% O ₂	
General ELV for all industry sectors	20 0,05 Hg, Tl 0,5 Σ Pb, Co, Ni, Se, Te 1 Σ Sb, Cr, Cn, F, Cu, Mn, V, Sn 0,05 Σ As, Benzo(a)pyren,Cd,Co,Cr (cancerogenic compounds)	mg dust/m ³ , mg/m ³	
Chlor production, amalgam process for cell room waste air	1 Hg	g/tCl, annual average	
Cement Industry	0,05 Σ As, Benzo(a)pyren,Cd,Co,Cr (cancerogenic compounds)	10% O ₂ mg/m ³	
Glass Industry	3 Σ Pb,Co,Ni,Se,Te, if Pb or Se is used 0,8 Pb, if foreign fragments are used	mg/m ³	
Primary and Secondary Iron, Steel and Non Ferrous Metals Industry			
roasting, smelting, sintering of ores	1 Pb	mg/m ³	ESP
integrated steelworks	10	mg dust/m ³ , 3% O ₂	

steel electric furnace Non ferrous metals industry, except Al in lead works	5 5 1 Σ Pb,Co,Ni,Se,Te 2 Σ Sb,Cr,CN,F,Cu,Mn,V,Sn 2 Σ Pb,Co,Ni,Se,Te	mg/m ³	
17. BImSchV Waste incineration	10 30 0,03 Hg 0,05 Hg 0,05 Σ Cd, Tl 0,5 Σ Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn 0,05 Σ As, Cd, Co, Cr	11% O ₂ mg dust/m ³ , daily av. ½-hour av. mg/m ³ , daily average; ½-hour aver- age mg/m ³	ESP; wet scrubber, FF, activated car- bon filters

Attachment

to the UN ECE Questionnaire on Strategies and Policies for the 2004 Compliance Review

German regulations that have an impact on emission reduction

(Status: 18.03.2004)

	Regulation	Content of regulation
1	<p>Federal Immission Control Act</p> <p>Act on the Prevention of Harmful Effects on the Environment Caused by Air Pollution, Noise, Vibration and Similar Phenomena (Federal Immission Control Act - BImSchG) as promulgated on 26.09.2002 (BGBl. I, p. 3830), (with amendment of 21.8.2002) (BGBl. I, pp. 3322-3341) and last amended on 06.01.2004 (BGBl. I, p. 2)</p>	<p>The Federal Immission Control Act contains provisions applicable in all of Germany for major pollutant-emission source sectors (industrial, commercial, residential, transport), and thus forms a centrepiece of Germany's environmental legislation. It authorises the Federal Government to issue statutory ordinances and administrative regulations containing detailed provisions in respect of emission reduction.</p>

	Regulation	Content of regulation
1.1	<p>Small and medium-capacity firing installations</p> <p>First Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on small and medium-capacity firing installations – 1. BImSchV) as promulgated on 14.03.1997 (BGBl. I, p. 490) and last amended on 14.08.2003 (BGBl. I, p. 1614)</p>	Limits emissions of firing installations not subject to licensing with a heating capacity of less than 1 MW for solid fuels and of less than 20 MW for liquid or gaseous fuels through plant- and fuel-related requirements. For oil- and gas-fired installations, the Ordinance also limits energy losses via waste gas.
1.2	<p>Volatile halogenated organic compounds</p> <p>Second Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the limitation of emissions of highly volatile halogenated hydrocarbons – 2. BImSchV) of 10.12.1990 (BGBl. I, p. 2694) as last amended on 21.08.2001 (BGBl. I, pp. 2180)</p>	Limits emissions of volatile halogenated hydrocarbons and other volatile halogenated organic compounds due to the use of halogenated organic solvents in surface treatment plants, dry-cleaning and textile finishing plants or extraction plants.
1.3	<p>Sulphur content of liquid fuels</p> <p>Third Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the sulphur content of certain liquid fuels – 3. BImSchV) of 24.06.2002 (BGBl. I, p. 2243)</p>	Transposes Directive 1999/32/EC into German law by prohibiting light fuel oil and marine gas oil with a content of sulphur compounds of more than 0,20% by mass (from 1 January 2008: 0,10% by mass), heavy fuel oil with more than 1,00% by mass and diesel fuel with more than 350 mg/kg (from 1 January 2005: 50 mg/kg).
1.4	<p>Installations subject to licensing</p> <p>Fourth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on installations subject to licensing - 4. BImSchV) as promulgated on 14.03.1997 (BGBl. I, p. 504) and last amended on 06.01.2004 (BGBl. I, p. 2)</p>	Final list of installations subject to licensing under the BImSchG.
1.5	<p>Licensing procedure</p> <p>Ninth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the licensing procedure - 9. BImSchV) as promulgated on 29.05.1992 (BGBl. I, p. 1001) and last amended on 14.08.2003 (BGBl. I, p. 1614)</p>	Defines the details of the licensing procedure for installations

	Regulation	Content of regulation
1.6	<p>Quality of vehicle fuels</p> <p>Tenth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the quality of vehicle fuels and the marking of vehicle fuel qualities – 10. BImSchV) of 13.12.1993 (BGBl. I, p. 2036) as last amended on 22.12.1999 (BGBl. I, p. 2845)</p>	<p>Petrol fuel must comply at least with DIN EN 228 (from 01.01.2005: aromatics content not higher than 35,0 % by volume and sulphur content not higher than 50 mg/kg), diesel fuel must comply at least with DIN EN 590 (from 01.01.2005: sulphur content not higher than 50 mg/kg) and liquid gas fuel at least with DIN EN 589.</p>
1.7	<p>Large combustion plants</p> <p>Thirteenth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on large combustion plants - 13. BImSchV) of 22.06.1983 (BGBl. I, p. 719) as last amended on 03.05.2000 (BGBl. I, p. 632)</p>	<p>Lays down emission control requirements for large combustion plants and transposes Directive 88/609/EEC into national law. The Ordinance is currently being amended for transposition of Directive 2001/80/EC.</p>
1.8	<p>Co-incineration of waste</p> <p>Seventeenth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on incinerators for waste and similar combustible material – 17. BImSchV) as promulgated on 14.08.2003 (BGBl. I, p. 1633)</p>	<p>Lays down emission limit values for SO₂, NMVOCs and NO_x for waste incineration plants subject to licensing and transposes Council Directive 2000/76/EC on the incineration of waste into German law.</p>
1.9	<p>Chlorine and bromine compounds as fuel additives</p> <p>Nineteenth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on chlorine and bromine compounds as fuel additives – 19. BImSchV) of 17.01.1992 (BGBl. I, p. 75) as amended on 21.12.2000 (BGBl. I, p. 1956)</p>	<p>Prohibits the marketing of fuels which contain chlorinated or brominated additives.</p>
1.10	<p>Emissions of volatile organic compounds from loading and storage of petrol</p> <p>Twentieth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the limitation of emissions of volatile organic compounds resulting from the loading and storage of petrol - 20. BImSchV) of 27.05.1998 (BGBl. I, p. 1174) as last amended on 24.06.2002 (BGBl. I, p. 2247)</p>	<p>Transposes Directive 94/63/EC into German law with extended requirements. It limits NMVOC emissions resulting from the storage of petrol and its distribution from storage installations to service stations along roads, railways and waterways.</p>

	Regulation	Content of regulation
1.11	<p>Hydrocarbon emissions from refuelling of motor vehicles</p> <p>Twenty-first Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the limitation of hydrocarbon emissions resulting from the fuelling of motor vehicles - 21. BImSchV) of 7.10.1992 (BGBl. I, p. 1730) as last amended on 6.05.2002 (BGBl. I, p. 1566)</p>	Requires the use of a vapour-return system for fuelling of motor vehicles at service stations, which collects the fuel vapours emitted from the vehicle tank and feeds them into the service station's storage tank in closed circuit. A special control device continuously monitors the functionality of the vapour-return system.
1.12	<p>Titanium dioxide industry</p> <p>Twenty-fifth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the limitation of emissions of the titanium dioxide industry - 25. BImSchV) of 08.11.1996 (BGBl. I, p. 1722)</p>	Lays down an emission limit value for sulphur dioxide and sulphur trioxide, expressed as sulphur dioxide, for plants using the sulphate process
1.13	<p>Cremation plants</p> <p>Twenty-seventh Ordinance on the Implementation of the Federal Immission Control Act (Cremation Plants Ordinance - 27. BImSchV) of 19.03.1997 (BGBl. I, p. 545) as amended on 03.05.2000 (BGBl. I, p. 632)</p>	Lays down an emission limit value for organic substances, expressed as total carbon, for cremation plants.
1.14	<p>Biological treatment of waste</p> <p>Thirtieth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on plants for the biological treatment of waste - 30. BImSchV) of 20.02.2001 (BGBl. I, p. 305)</p>	Lays down an emission limit value for organic substances, expressed as total carbon, for biological waste treatment plants subject to licensing.
1.15	<p>Emissions of volatile organic compounds due to the use of organic solvents in certain installations</p> <p>Thirty-first Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain installations - 31. BImSchV) of 21.08.2001 (BGBl. I, p. 2180)</p>	Transposes Directive 1999/13/EC into German law with extended requirements. The Ordinance limits emissions of NMVOCs from various installations that use organic solvents on a relevant scale.

	Regulation	Content of regulation
1.16	<p>Technical Instructions on Air Quality Control</p> <p>First General Administrative Regulation Pertaining to the Federal Immission Control Act (1. BImSchVwV – Technical Instructions on Air Quality Control - TA Luft) of 24.07.2002 (GMBL., p. 511)</p>	The TA Luft sets immission and emission standards which must be observed by the competent authorities in the licensing process. It does not apply where it is inconsistent with higher-level legislation such as the statutory ordinances listed here.
2	<p>Lead in petrol</p> <p>Act on the Reduction of Air Pollution by Lead Compounds in Petrol for Motor Vehicle Engines (Lead-in-Petrol Act – BzBlG) of 05.08.1971 (BGBl. I, p. 1234) as last amended on 25.11.2003 (BGBl. I, p. 2304)</p>	Prohibits the marketing of petrol fuels whose content of lead compounds, calculated as lead, exceeds 0.15 grams per litre (measured at +15° C). From 1 February 1988, petrol fuels with a motor octane number lower than 85 and a research octane number lower than 95 may only be introduced on the market if their content of lead compounds, calculated as lead, does not exceed 0.013 grams per litre (measured at +15° C).
3	<p>Renewable energy sources</p> <p>Act on Granting Priority to Renewable Energy Sources (Renewable Energy Sources Act - EEG) of 29.03.2000 (BGBl. I, p. 305), as last amended on 22.12.2003 (BGBl. I, p. 3074)</p>	This Act promotes the use of renewable energy sources in order to reduce emissions from the use of fossil energy sources.
3.1	<p>Biomass</p> <p>Ordinance on Generation of Electricity from Biomass (Biomass Ordinance - BiomasseV) of 21.06.2001 (BGBl. I, p. 1234)</p>	This Ordinance promotes the generation of electricity from biomass in order to reduce emissions from the use of fossil energy sources..
4	<p>Heat-power cogeneration</p> <p>Act on Maintaining, Modernising and Expanding Heat-Power Cogeneration (Heat-Power Cogeneration Act -Kraft-Wärme-Kopplungsgesetz) of 19.03.2002 (BGBl. I, p. 1092) as amended on 25.11.2003 (BGBl. I, p. 2304)</p>	This Act protects existing CHP plants, promotes their modernisation and supports development of small CHP and fuel cell systems, thereby contributing to reducing emissions from the use of fossil energy sources
5	<p>Energy Saving Act</p> <p>Act on Energy Saving in Buildings (Energy Saving Act - EnEG) of 22.07.1976 (BGBl. I, p. 1873) as last amended on 10.11.2001 (BGBl. I, p. 2992)</p>	This Act lays down energy-efficiency requirements to reduce emissions caused by energy generation.

	Regulation	Content of regulation
5.1	Energy Saving Ordinance Ordinance on energy-efficient thermal insulation and energy-efficient plant technology in buildings (Energy Saving Ordinance - EnEV) of 16.11.2001 (BGBl. I, p. 3085) as amended on 25.11.2003 (BGBl. I, p. 2304)	This Ordinance lays down energy-efficiency requirements to reduce emissions caused by energy generation.
6	Chemicals Act Act on Protection against Hazardous Substances (Chemicals Act – ChemG) as promulgated on 20.06.2002 (BGBl. I, p. 2076) and last amended on 25.11.2003 (BGBl. I, p. 2304)	The purpose of this Act is to protect man and the environment from the harmful effects of hazardous substances and preparations, including biocides.
6.1	Bans on chemicals Ordinance on bans and restrictions on the marketing of hazardous substances, preparations and products pursuant to the Chemicals Act (Chemicals Prohibition Ordinance - ChemVerbotsV) as promulgated on 13.06.2003 (BGBl. I, p. 867) and last amended on 25.02.2004 (BGBl. I, p. 328)	Prohibits the marketing of substances and preparations, among them DDT, PCDD/Fs, PCBs, PCTs, PCP, SCCP
6.2	Use of plant protection products Ordinance on use bans for plant protection products (Pflanzenschutz-Anwendungsverordnung) of 10.11.1992 (BGBl. I, p. 1887) as last amended on 23.07.2003 (BGBl. I, p. 1533)	Lists plant protection products whose use is either banned completely (among them aldrin, chlordecan, dieldrin, endrin, DDT, heptachlor, HCB; HCB including lindane) or restricted.
7	Use of fertilisers Ordinance on principles of good professional practice in the use of fertilisers (Use of Fertilisers Ordinance - Düngerverordnung) of 26.01.1996 (BGBl. I, p.118), as last amended on 14.02.2003 (BGBl. I, p. 235)	The Use of Fertilisers Ordinance, issued on the basis of the Fertilisers Act, regulates the use of fertilisers on farmland. It defines, in particular, principles of good professional practice in the use of fertilisers and contributes to the reduction of NH ₃ and NO _x emissions.
8	Road Traffic Act As promulgated on 05.03.2002 (BGBl. I, p. 310; corr. p. 919) and last amended on 14.01.2004 (BGBl. I, p. 74)	This Act contains basic provisions on road traffic. It authorises the Federal Government to issue statutory ordinances in respect of, <i>inter alia</i> , the condition, equipment and testing of vehicles.

	Regulation	Content of regulation
8.1	<p>Regulations authorising the use of motor vehicles for road traffic</p> <p>(StVZO) as promulgated on 28.9.1988 (BGBl. I, p. 1793) and last amended on 07.02.2004 (BGBl. I, p. 248)</p>	<p>These Regulations under the Road Traffic Act define technical requirements for motor vehicles. They transpose existing EC directives on the reduction of NO_x and NMVOCs in motor-vehicle exhaust gas, such as Directives 91/441/EEC, 91/542/EEC, 94/12/EEC, 96/69/EC, 97/24/EC, 93/12/EEC and 98/70/EC, into German law</p>
9	<p>Act on Closed Substance Cycle Waste Management and Waste Disposal</p> <p>Act for Promoting Closed Substance Cycle Waste Management and Ensuring Environmentally Compatible Waste Disposal (Kreislaufwirtschafts- und Abfallgesetz - KrW-/AbfG) of 27.09.1994 (BGBl. I, p. 2705) as last amended on 25.01.2004 (BGBl. I, p. 82)</p>	<p>This Act transposes Directive 91/156/EEC into national law and forms the basis for waste management. The disposal and recovery procedures it prescribes contribute to the reduction of NMVOC and NH₃ emissions.</p>
9.1	<p>PCB/PCT waste</p> <p>Ordinance on the disposal of polychlorinated biphenyls, polychlorinated terphenyls and halogenated monomethyldiphenyl methanes (PCB/PCT Waste Ordinance - PCBAbfallV) of 26.06.2000 (BGBl. I, p. 932) as amended on 16.04.2002 (BGBl. I, p. 1360)</p>	<p>PCBs may only be disposed of using the procedures specified in the Ordinance.</p>
9.2	<p>Waste wood</p> <p>Ordinance on requirements for the recovery and disposal of waste wood (Waste Wood Ordinance – AltholzV) of 15.08.2002 (BGBl. I, p. 3302)</p>	<p>Contains provisions on non-harmful recycling of waste wood as well as limit values for the use of waste wood in the manufacture of wood materials.</p>
9.3	<p>Batteries</p> <p>Ordinance on the take-back and disposal of used batteries and accumulators (Battery Ordinance – BattV) as promulgated on 02.07.2001 (BGBl. I, p. 1486) and amended on 09.09.2001 (BGBl. I, p. 2331)</p>	<p>Introduces a take-back and recycling system for used batteries and provisions on zero-emission disposal of non-recyclable batteries</p>

	Regulation	Content of regulation
10	<p>Transboundary movements of waste</p> <p>Act on the Supervision and Control of Transboundary Movements of Waste (Act on Transboundary Movements of Waste – AbfVerbrG) of 30.09.1994 (BGBl. I, p. 2771) as last amended on 25.11.2003 (BGBl. I, p. 2304)</p>	<p>The provisions of this Act apply to movements of waste into, out of or through Germany (transboundary movements).</p>
11	<p>Mineral oil tax</p> <p>Mineral Oil Tax Act (MinöStG) of 21.12.1992 (BGBl. I, p. 2150) as last amended on 29.12.2003 (BGBl. I, p. 3076)</p>	<p>This Act contributes to the reduction of NO_x and NMVOC emissions by granting tax relief for low-emission fuels for internal combustion engines such as natural gas and liquid gas.</p>
12	<p>Motor vehicle tax</p> <p>Motor Vehicle Tax Act 2002 (KraftStG 2002) as promulgated on 26.09.2002 (BGBl. I, p. 3818)</p>	<p>This Act contributes to the reduction of NO_x and NMVOC emissions by providing for emissions-based taxation of passenger cars and lorries with a total permissible weight greater than 3.5 t. In addition, it grants tax exemptions for passenger cars meeting the EURO 4 exhaust standard, particularly fuel-efficient passenger cars (3-litre cars) and electric cars.</p>