STRATEGIES AND POLICIES OF PARTIES AND SIGNATORIES TO THE CONVENTION FOR THE ABATEMENT OF AIR POLLUTION

# 2010 QUESTIONNAIRE FOR PRIORITY COMPLIANCE REVIEW

PART 1

## Answers BELGIUM

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## I. 1985 SULPHUR PROTOCOL[1]

1. The question in this section refers to the following Parties: Austria, Belarus, Belgium, Bulgaria, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Liechtenstein, Lithuania, Luxembourg, the Netherlands, Norway, the Russian Federation, Slovakia, Sweden, Switzerland and Ukraine.

2. **Question 1**: With reference to article 6 of the Protocol, please provide details of your country's national programmes, policies and strategies that specifically address the reduction of sulphur emissions. If your country is a Party to the 1994 Sulphur Protocol[2] and/or the 1999 Gothenburg Protocol[3], you may cross-refer to question 13 and/or 39.

**Answer**

Belgium is a Party to the 1994 Sulphur Protocol and the 1999 Gothenburg Protocol.
See answer to Q.39.

[1] 1985 Helsinki Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent.
[2] 1994 Oslo Protocol on further Reduction of Sulphur Emissions.
[3] 1999 Gothenburg Protocol to abate Acidification, Eutrophication and Ground-level Ozone.

## II. NITROGEN OXIDES PROTOCOL[4]

3. The questions in this section are based on the reporting obligation of Parties in accordance with article 8 and enable Parties to provide information on the implementation of the obligations under articles 2, 4 and 7 of the Protocol.

4. They refer to the following Parties to the Protocol: Austria, Belarus, Belgium, Bulgaria, Canada, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Liechtenstein, Lithuania, Luxembourg, the Netherlands, Norway, the Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, the United Kingdom of Great Britain and Northern Ireland, the United States of America and the European Community.

5. **Question 2**: With reference to article 7, please provide up-to-date information on the national programmes, policies and strategies your country has developed to implement the obligations under the Protocol that serve as a means of controlling and reducing emissions of nitrogen oxides ($NO_x$) or their transboundary fluxes. If your country is a Party to the Gothenburg Protocol, you may cross-refer to question 39.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol.
See answer to Q.39.

6. **Question 3**: With reference to article 2, paragraph 2 (a), please specify the national $NO_x$ emission standards applied to major stationary sources and/or major source categories in your country, taking into consideration the technical annex to the Protocol. For the purpose of this question, “major stationary source” means any stationary source, the construction or substantial modification of which commenced after 14 February 1993 and which has a thermal input of at least 50 $MW_{th}$. Please complete the table below.

**Answer**

Emissions of major stationary sources are regulated by regional legislation: see answers given below by the different regions.
For the smaller domestic and residential boilers (< 400 kW) $NO_X$ standards have been regulated on a federal level by a Royal Decree. Since the contribution of this source category

[4] 1988 Sofia Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes.

is far less than 10 % of the total national $NO_X$ emission, this category is not a major source category as defined by the 1988 $NO_X$ protocol and so no further details are reported for it in the answer below.

***Flemish Region***

Emission standards referred to in table below for major stationary sources and major source categories in Flanders are imposed by the 'Order of the Flemish Government of 1 June 1995 concerning General and Sectoral provisions relating to Environmental Safety (VLAREM II)' and the modification of 23 April 2004.
The modification of 23 April 2004 of VLAREM II - implementing the LCP Directive 2001/80/EC and the objectives of the NEC Directive 2001/81/EC - introduced new emission limit values for large combustion plants, gasturbine installations, stationary engines, oil refineries and nitric acid production. The new emission limit values reported in table below for the large combustion installations authorised before 27/11/02 are applicable from 1 January 2008.
For limit values for stationary engines and sinter plants we refer to the answers to Q.44/45.
In implementing the Waste Combustion Directive 2000/76/EC into the Order of the Flemish Government of 1 June 1995, also the limit values for waste combustion have recently been modified (December 2003).
There is no cement production, no lime production and no pulp production in the Flemish region. Neither are there significant activities on extraction, processing and distribution of fossil fuels in the Flemish region. Glass production is not a major source category in the Flemish region.

| **Source category** | **National emission standards in mg/Nm³** | | | **Pollution control measures applied** |
|---|---|---|---|---|
| **1. Power plants and industrial combustion plants (boilers and heaters)** | for installations authorised | | | |
| | from 01/07/87 until 31/12/95 | from 01/01/96 until 26/11/02 | from 27/11/02 | |
| Solid fuels (6% $O_2$) | | | | |
| 50-100 MWt | 500 ([1]) | 400 ([1]) | 150 ([2]) | ([1]) PM (LNB,…) and/or SNCR/SCR |
| 100-300 MWt | 500 ([1]) | 200 ([2]) | 150 ([2]) | ([2]) PM (LNB,…) and SCR |
| 300-500 MWt | 350 ([1]) | 200 ([2]) | 150 ([2]) | |
| >500 MWt | 200 ([2]) | 200 ([2]) | 150 ([2]) | |
| Liquid fuels (3% $O_2$) | | | | |
| 50-300 MWt | 300 ([1]) | 300 ([1]) | 150 ([2]) | ([1]) PM (LNB, …) and/or SNCR/SCR |
| >300 MWt | 200 ([2]) | 200 ([2]) | 150 ([2]) | ([2]) PM (LNB,…) and SNCR/SCR |
| Gaseous fuels (3% $O_2$) | | | | |
| 50-300 MWt | 300 ([1]) | 150 / 200 ([2]) | 100 / 200 ([2]) | ([1]) LNB |

| | | | | |
|---|---|---|---|---|
| >300 MWt | 150 / 200 ([2]) | 100 / 200 ([2]) | 100 / 200 ([2]) | ([2]) LNB or SNCR or SCR |
| Bio-mass (11% $O_2$) | | | | |
| 50-300 MWt | 200 ([1]) | 200 ([1]) | 200 ([1]) | ([1]) PM (LNB,…) and SCR |
| >300 MWt | 130 ([1]) | 130 ([1]) | 130 ([1]) | |
| Statistical treatment<br>In case of discontinuous measurements (< 100 MWt): no measurement above emission standard<br>In case of continuous measurements (≥ 100 MWt): no daily average above emission standard and no hourly average above twice the emission standard | | | | |
| **2. Gasturbine installations** | for installations authorised | | | |
| | before 01/01/00 | from 01/01/00 until 26/11/02 | from 27/11/02 | |
| Liquid fuels (15% $O_2$) | | | | |
| 50-100 MWt | 200 | 150 | 120 | |
| >100 MWt | 200 | 120 | 120 | |
| Gaseous fuels (15% $O_2$) | | | | |
| 50-100 MWt | 100 / 200 | 100 | 50 / 75 | DLN |
| >100 MWt | 100 / 200 | 75 | 50 / 75 | DLN |
| Statistical treatment<br>In case of discontinuous measurements (< 100 MWt): no measurement above emission standard<br>In case of continuous measurements (≥ 100 MWt): no daily average above emission standard and no hourly average above twice the emission standard | | | | |

| **Source category** | **National emission standards in mg/Nm³** | **Statistical treatment** | **Pollution control measures applied** |
|---|---|---|---|
| **3. Oil refineries** | | | |
| Bubble ELV | | | |
| from 01/01/2005 | 300 | no yearly average > ELV;<br>no monthly average > 7/6 x ELV;<br>no daily average > 2 x ELV | further switch to gas and cogeneration, increase of LNB |
| from 01/01/2010 | 200 | no yearly average < ELV;<br>no monthly average < 7/4 x ELV;<br>no daily average < 3 x ELV | (+) SCR on cat cracker |

| | | | |
|---|---|---|---|
| **4. Non-combustion processes** | | <u>For all non-combustion processes</u>: | |
| Nitric acid production | | | |
| authorised before 01/01/04 | 450 | Discontinuous measurements (frequency < monthly): | SCR or SNCR |
| authorised from 01/01/04 | 350 | no measurement > ELV | SCR or SNCR |
| Other processes | 500 | Discontinuous measurements (frequency > monthly): no measurement > ELV or no daily average > ELV; < 5% exceeding of hourly values in function of the number of samples; no hourly average > 2 x ELV<br><br>Continuous measurements no daily average > ELV; 97% of (half) hourly averages not > 6/5 x ELV; no (half) hourly average > 2 x ELV | |
| **5. Waste incineration of municipal and industrial waste** | | | |
| Existing > 6 tonnes/h (authorised before 28/12/02) | 200 | no daily average > ELV; no half hourly average > 2 x ELV or 97% of half hourly averages not > ELV | DeNOx (SCR) |
| New > 6 tonnes/h (authorised from 28/12/02) | 150 | no daily average > ELV; no half hourly average > 400 or 97% of half hourly averages not > 200; no yearly average > 125 | DeNOx (SCR) |

***Walloon Region***

Les normes figurant ci-dessous sont appliquées aux grandes installations de combustion suivantes :
- centrales électriques;
- sucreries;
- sidérurgie;
- chimie de transformation
- pâte à papier

Les normes de LCP directive 2001/80/CE sont traduites en Arrêté du Gouvernement wallon du 13 novembre 2002 portant conditions sectorielles relatives aux centrales thermiques et

autres installations de combustion pour la production d'électricité dont la puissance installée est égale ou supérieure à 50 MWth. Les normes rapportées ci-dessous pour les installations mise en service avant 27/11/2003 sont les nouvelles normes applicables dés 1 janvier 2008. The Waste Directive 2000/76/EC on waste incineration imposing emission limit values for waste incineration and cement industry (co-incinerating waste) is implemented in Walloon legislation by the 'Order of the Walloon Government of 27 February 2003 on incineration and co-incineration of waste': see values also in table below.

| **Catégorie de source** | **Normes d'émission RW, mise en service avant 27/11/2003** | **Normes d'émission RW, mise en service après 27/11/2003** | **Unités et traitement statistique 1/** | **Mesures antipollution appliqués 2/** |
|---|---|---|---|---|
| **combustible solides** (6% $O_2$)**:** | | | | - remplacement par du gaz<br>- brûleurs hors service |
| < 100 MWt | 600 mg/Nm$^3$ | 400 mg/Nm$^3$ | Voir * pour les installations mise en service avant 27/11/2003<br>Voir ** pour les installations mise en service après 27/11/2003 | (- DéNox) |
| 100-300 MWt | 600 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |
| 300-500 MW | 600 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |
| > 500 MWt | 500 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |
| **combustible liquids** (3% $O_2$)**:** | | | | - OFA (Over Fire Air)<br>- fonctionnement à bas excès d'air<br>-réglage débit d'air et contrôle de la vitesse d'air<br>- remplacement par du gaz – régulation d'oxygène – URE<br>- cogénération<br>(- DéNox) |
| < 100 MWt | 450 mg/Nm$^3$ | 400 mg/Nm$^3$ | Voir * pour les installations mise en service avant 27/11/2003<br>Voir ** pour les installations mise en service après 27/11/2003 | |
| 100-300 MWt | 450 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |
| 300-500 MW | 450 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |
| > 500 MWt | 400 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |
| **combustible gazeux** (3% $O_2$)**:** **gaz naturel** | | | | - recyclage des fumées |
| < 300 MWt | 300 mg/Nm$^3$ | 150 mg/Nm$^3$ | Voir * pour les installations mise en service avant 27/11/2003<br>Voir ** pour les installations mise en service après 27/11/2003 | - mesures primaires<br>- turbines gaz/vapeur<br>- cogénération |
| 300-500 MW | 300 mg/Nm$^3$ | 100 mg/Nm$^3$ | | |
| > 500 MWt | 200 mg/Nm$^3$ | 100 mg/Nm$^3$ | | |
| **autres gaz** | | | | |
| < 500 MWt | 300 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |

| | | | | |
|---|---|---|---|---|
| >500 MW | 200 mg/Nm$^3$ | 200 mg/Nm$^3$ | | |
| **Turbines à gaz**:<br>**gaz naturel**<br>**autres gaz**<br>**liquides** | (15% $O_2$) | <br>50/75 mg/Nm³<br>120 mg/Nm³<br>120 mg/Nm$^3$ | Voir ** pour les installations mise en service après 27/11/2003 | |
| **production de pâte à papier**: chaudière de récupération et à écorce: | 250 mg/Nm$^3$ (à partir de 1992) | 250 mg/Nm$^3$ | moyenne journalière | |
| **incinérateurs de déchets ménagers** | 400 mg/Nm³ (mise en service < 28/12/02 ; < 6 tonnes/h<br>200 mg/Nm³ (mise en service < 28/12/02 ; > 6 tonnes/h)<br>200 mg/Nm³ (mise en service ≥ 28/12/02) | | moyenne journalière<br>moyenne journalière<br>moyenne journalière | DéNox |
| **co-incinérateur cimenteries** | 800 mg/Nm³ (mise en service < 28/12/02)<br>500 mg/Nm³ (mise en service ≥ 28/12/02) | | moyenne journalière<br>moyenne journalière | |

1/ Le traitement statistique peut être un centile (par exemple, centile 95), une moyenne journalière, une moyenne mensuelle, etc.

2/ Voir l'annexe technique du Protocole relatif aux oxydes d'azote quant aux meilleures techniques disponibles.

* traitement statistique pour les installations mise en service avant 27/11/2003 :
Dans les cas de mesures en continu (> 100 MWt):
- aucune valeur moyenne au cours d'un mois civil ne dépasse les valeurs limites d'émission, et
- 95% de toutes les valeurs moyennes relevées sur 48 heures ne dépassent pas 100% des valeurs limites d'émission
Dans les cas des mesures discontinus (< 100 MWt)
- les résultats de chacune des séries de mesures ne dépassent pas la valeur limite d'émission.

** traitement statistique pour les installations mise en service après 27/11/2003 :
- aucune valeur moyenne journalière n'est supérieure aux valeurs limites d'émission, et
- 95% de toutes les valeurs moyennes horaires validées au cours de l'année ne dépassent pas 200% des valeurs limites d'émission.

***Brussels-Capital Region***

For the moment there are no LCP or other major stationary sources in the Brussels-Capital Region. The LCP directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants (including gas turbine installations) was translated into the "Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à la limitation des émissions de certains polluants dans l'atmosphère en provenance des grandes installations de combustion " of 21 November 2002 (M.B. 21/12/2002). See further details under Q. 44.
The Waste Directive 2000/76/EC on waste incineration imposing emission limit values for waste incineration and cement industry (co-incinerating waste) is implemented in Brussels legislation by the "Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à l'incinération des déchets" of 21 November 2002 (M.B. 20/02/2003): for ELV's, see table above for Walloon Region.

In the Brussels-Capital Region, the companies are in first instance regulated for their activities by the legislation on Environmental Permit (license).

The Environmental Permit (license)
20,000 businesses representing all the sectors are spread in the Brussels-Capital Region (161 km²). Their sizes are quite different: from small craftsmen's workshops to the headquarters of multinational companies. In Brussels, the number of major industrial facilities is very small and the small businesses are clearly dominant (80% have fewer than ten employees).
There is no real "major polluting activity" in the Brussels-Capital Region but a multitude of minor sources, often spread all over the city, and sometimes located in the centre of a residential district.
In addition, small businesses have limited human and financial resources for improving their facilities or manufacturing processes on their own initiative, and these are often sources of pollution.
The "Environment Permit" (license) regulation took effect in 1993 and the "Inspection" service was created simultaneously.
To practise their activities, the companies needs to have several authorizations and administrative declarations including the Environmental Permit.
The Environmental Permit is essentially an administrative authorization, which contains the technical dispositions to be followed. The use of the Environmental Permit is included in a global policy to prevent harmful effects, improve the environmental performances of the companies settled in the city and integrate the economical activities in the Brussels-Capital Region. The Environmental Permit gives to the companies guidelines for their development in order to respect the environment and the quality of life of the people.
The Environmental Permit is based on legislation, which defines the classified installations.

Below the list of the texts still in use:

a. The “Ordonnance du Gouvernement de la Région de Bruxelles-Capitale fixant la liste des installations de classe IA visée à l'article 4 de l'ordonnance du 5 juin 1997 relative aux permis d'environnement » of 22 April 1999 : it draws up the installation of class IA (MB of the 05/08/99).
b. The « Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant la liste des installations de classe IB, II, et III en exécution de l'article 4 de l'ordonnance du 5 juin 1977 relative aux permis d'environnement » of 4 March 1999: it draws up the installation of class IB, II and III (MB of the 07/08/99).
c. The “Ordonnance portant diverses modifications intéressant les permis d'environnement » of 6 December. 2001: it modifies some points of the Environmental Permit (M.B. 02/02/2002).

To define the technical dispositions in the Environmental Permit, all the aspects of the environmental legislation concerning the air, water, noise, the protection of nature, the industrial sectors are checked by the administration.
Only the environmental legislations applicable to the specific “exploitation” are considered in the Environmental Permit. The administration determines also the Best Available Technologies (BAT) and the Best Environmental Practices (BEP) to use. As in the Brussels-Capital Region most of the companies are small (with less than 5 employees), it is necessary to adapt the Environmental Permit on each company. In that context, the companies know their obligations and the authority can integrate and develop in a better way the economical activities within the Brussels-Capital Region.

7. **Question 4**: With reference to article 2, paragraph 2 (c), please provide details of the pollution control measures for $NO_x$ emissions introduced in your country for major stationary sources with a thermal input of at least 100 $MW_{th}$, the construction of which commenced on or before 14 February 1993, taking into consideration the technical annex to the Protocol. Please complete the table below.

**Answer**

As indicated in answer to Q.3 emissions of major stationary sources, as well as the use of BAT, are regulated by regional legislation.

***Flemish Region***

Pollution control measures for major existing stationary sources with a thermal input of at least 100 MW are enforced by imposing emission standards on these installations. Emission standards referred to in table below are imposed by the Flemish legislation VLAREM II (see reference under Q.3).

As mentioned in the answer to Q.3 the modification of 23 April 2004 of VLAREM II - implementing the LCP Directive 2001/80/EC and the objectives of the NEC Directive 2001/81/EC - introduced new emission limit values for large combustion plants (also for existing), gasturbine installations, stationary engines, oil refineries and nitric acid production. The new emission limit values for the existing large combustion installations reported in table below are applicable from 1 January 2008.

See answer to Q.3 for existing large combustion plants authorised after 01/07/87.
See also answer to Q.3 for oil refineries, nitric acid production, waste incineration and other sources. See answer to Q. 44/45 for sinter plants.

| Source category | National emission standards in mg/Nm³ for installations authorised before 01/07/87 | Statistical treatment | Pollution control measures applied |
|---|---|---|---|
| **Power plants and industrial combustion plants (boilers / heaters)** | | | |
| Solid fuels (6% $O_2$) | | | |
| 100-300 MWt | 500 ([1]) | See (*) | ([1]) PM (LNB, …) and/or SNCR/SCR |
| 300-500 MWt | 350 ([1]) | | |
| >500 MWt | 200 ([2]) | | ([2]) PM (LNB, …) and SCR |
| Liquid fuels (3% $O_2$) | | | |
| 100-300 MWt | 300 ([1]) | See (*) | ([1]) PM (LNB, …) and/or SNCR/SCR |
| 300-500 MWt | 250 ([1]) | | |
| >500 MWt | 200 ([2]) | | ([2]) PM (LNB, …) and SNCR/SCR |
| Gaseous fuels (3% $O_2$) | | | |
| 100-300 MWt | 300 ([1]) | See (*) | ([1]) PM (LNB, …) and/or SNCR/SCR |
| 300-500 MWt | 250 ([1]) | | |
| > 500 | 200 ([2]) | | ([2]) PM (LNB, …) and SNCR/SCR |
| Bio-mass (11% $O_2$) | | | |
| 100-300 MWt | 200 ([1]) | See (*) | ([1]) PM (LNB,…) and SCR |
| >300 MWt | 130 ([1]) | | |
| (*) Statistical treatment<br>≥ 100 MWt: continuous measurements: no daily average above emission standard and no hourly average above twice the emission standard | | | |

***Walloon Region***

For the major stationary sources above 100 MWt for which the construction commenced on or before 14 February see answer to Q. 3.

***Brussels-Capital Region***

There are no major existing stationary sources above 100 MWt in the Brussels-Capital Region.

8. **Question 5**: With reference to article 2, paragraph 2 (b), please specify the national $NO_x$ emission standards applied to newly registered mobile sources in all major source categories, taking into consideration the technical annex to the Protocol and the relevant decisions taken within the framework of the Inland Transport Committee of the United Nations Economic Commission for Europe (UNECE). If your country is a Party to the Gothenburg Protocol, you may cross-refer to questions 51–56. Please complete the table below.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol.
See answers to Q.51-56.

9. **Question 6**: With reference to article 4, has your country made unleaded fuel sufficiently available, in particular cases as a minimum along main international transit routes, to facilitate the circulation of vehicles equipped with catalytic converters?

**Answer**

Yes **X** No □

The marketing of leaded petrol in Belgium is prohibited since January 2000.
Belgium is a Party to the Heavy Metals Protocol. See further details under Q.37.

## III. PROTOCOL ON VOLATILE ORGANIC COMPOUNDS[5]

10. The questions in this section are based on the reporting obligation of Parties in accordance with article 8 and enable Parties to provide information on the implementation of the obligations under articles 2.3(a)(i–iii), 2.3(b) and 7 of the Protocol on Volatile Organic Compounds (VOCs).

11. They refer to the following Parties to the Protocol: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Liechtenstein, Lithuania, Luxembourg, Monaco, the Netherlands, Norway, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

12. **Question 7**: With reference to article 7, please provide up-to-date information on the national programmes, policies and strategies your country has developed to implement the obligations under the Protocol that serve as a means of controlling and reducing emissions of VOCs or their transboundary fluxes. If your country is a Party to the Gothenburg Protocol, you may cross-refer to question 39.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol.
See answer to Q.39.

13. **Question 8**: With reference to article 2, paragraph 3 (a) (i), please specify the national or international emission standards applied in your country to control and reduce VOCs emissions from stationary sources, the construction or substantial modification of which commenced after 29 September1999, taking into consideration annex II to the Protocol. Please complete the table below.

**Answer**

Emissions of stationary sources are regulated regional legislation: see answers given below by the different regions. For construction sector and car refinish sectors a product policy is implemented at federal level

[5] 1991 Geneva Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes.

## *Federal Government*

En ce qui concerne les secteurs de la construction et de la reparation automobiles la Belgique appliqué la directive européennes 2004/42/CE transposées par ‘arreté royal du 7 octobre 2005 qui prévoit une interdiction de mise sur le marché de produits au delà d’une certaine quantité de COV contenue :

**_A_. Teneurs maximales en COV pour vernis et peintures (peintures décoratives)**

| | Sous-catégorie de produits | Type | Phase 1 (COV g/l de produit prêt à l'emploi) A partir du 1er janvier 2007 | Phase II (COV g/l de produit prêt à l'emploi) A partir du 1er janvier 2010 |
|---|---|---|---|---|
| a) | Intérieur mate murs et plafonds (brillant ≤ 25@60°) | PA<br>PS | 75<br>400 | 30<br>30 |
| *b)* | Intérieur brillante murs et plafonds (brillant > 25@60°) | PA<br>PS | 150<br>400 | 100<br>100 |
| c) | Extérieur murs support minéral | PA<br>PS | 75<br>450 | 40<br>430 |
| d) | Peintures intérieur/extérieur pour finitions et bardages bois ou métal | PA<br>PS | 150<br>400 | 130<br>300 |
| e) | Vernis et lasures intérieur/extérieur pour finitions, y compris lasures opaques | PA<br>PS | 150<br>500 | 130<br>400 |
| *f)* | Lasures à épaisseur de film minimale intérieur/extérieur | PA<br>PS | 150<br>700 | 130<br>700 |
| *g)* | Impressions | PA<br>PS | 50<br>450 | 30<br>350 |
| *h)* | Impressions fixatrices | PA<br>PS | 50<br>750 | 30<br>750 |
| *i)* | Revêtements monocomposants à fonction spéciale | PA<br>PS | 140<br>600 | 140<br>500 |
| *j)* | Revêtements bicomposants à fonction spéciale pour utilisation finale spécifique, sur sols par exemple | PA<br>PS | 140<br>550 | 140<br>500 |
| *k)* | Revêtements multicolores | PA<br>PS | 150<br>400 | 100<br>100 |
| l) | Revêtements à effets décoratifs | PA<br>PS | 300<br>500 | 200<br>200 |

***(PA : Phase aqueuse - PS Phase solvant)***

**_B_. Teneurs maximales en COV pour les produits de retouche de véhicules**

| | Sous-catégories de produits | Revêtements | COV g/l de produit prêt à l'emploi (*) A partir du 1er janvier 2007 |
|---|---|---|---|
| a) | Préparation et nettoyage | Produit préparatoire<br>Pré-nettoyant | 850<br>200 |
| *b)* | Bouche-pores et mastic pour carrosserie/produit de rebouchage | Tous types | 250 |
| c) | Primaire | Primaire surfaceur et primaire divers (pour métaux)<br>Peinture primaire réactive | 540<br>780 |
| d) | Couche de finition | Tous types | 420 |
| e) | Finitions spéciales | Tous types | 840 |

(*) Sauf pour la sous-catégorie *a),* la teneur en eau du produit prêt à l'emploi doit être déduite.

***Flemish Region***

Emission standards referred to in tables below for stationary sources are imposed by the 'Order of the Flemish Government of 1 June 1995 concerning General and Sectoral provisions relating to Environmental Safety and subsequent modifications' (VLAREM II).

General emission limit values in the Flemish legislation VLAREM II apply for those source categories for which no specific sectoral emission limit values in VLAREM II are imposed.

| Product | General emission limit value |
|---|---|
| 44 organic products (phenol, formaldehyde, 1,2-dichloroethane, 1,1-dichloroethylene, chloromethane, acetaldehyde, trichloromethane, …) | 20 mg/Nm3 (mass flow = or > 100 g/h) |
| 37 organic products (toluene, 1,1,1-trichloroethane, tetrachloroethylene, trichloroethylene, chlorobenzene, o-xylene, m-xylene, p-xylene, …) | 100 mg/Nm3 (mass flow = or > 2000 g/h) |
| 19 organic products (acetone, alkylalcohol, dimethyl ether, ethyl acetate, butyl acetate, propyl acetate, …) | 150 mg/Nm3 (mass flow = or > 3000 g/h) |

Sectoral emission limit values in VLAREM II exist for the solvent-using sector and the production of 1,2-dichloroethane: see table below.

| Source category | Emission standards | Units & statistical treatment * | Pollution control measures applied |
|---|---|---|---|
| **Use of solvents** | | | |
| Industrial surface coating | 90 | mg / $Nm^3$ | - Conversion to paints with low % VOC and high solids<br>- Incineration<br>- Activated carbon adsorption |
| Paper surface coating | 90 | mg / $Nm^3$ | - Incineration |

| | | | |
|---|---|---|---|
| Car manufacturing | 60<br>120 | g / $m^2$ top layer<br>g / $m^2$ basic layer + varnish | - Conversion to paints with low % VOC and high solids<br>- Water based paints<br>- Incineration<br>- Activated carbon adsorption |
| Printing | 500<br><br><br><br>50<br><br>100<br><br>150 | mg / $Nm^3$ ethanol (max 25%)<br><br>Other (> 5 kg / h) :<br>mg / $Nm^3$ (thermal incineration)<br>mg / $Nm^3$ (catalytic incineration)<br>mg / $Nm^3$ (solvent recuperation) | - Conversion to inks with low % VOC and high solids<br>- Water based inks<br>- Incineration<br>- Activated carbon adsorption |
| Metal degreasing | 100<br><br><br><br><br><br>150 | mg / $Nm^3$ sum 1,1,1-trichloroethane, tri-, tetra-chloroethylene<br>(> 2 kg / h)<br><br>mg / $Nm^3$ dichloromethane (> 3 kg / h ): | - Closed machines<br>- Deep cooling for the reduction of solvent concentration<br>- Activated carbon adsorption |
| Dry-cleaning | 100<br><br><br><br><br><br>150 | mg / $Nm^3$ tetrachloroethylene, trichloroethylene (>2 kg / h):<br><br>mg / $Nm^3$ hydrocarbons (> 3 kg / h): | - Closed machines<br>- Deep cooling for the reduction of solvent concentration<br>- Activated carbon adsorption |
| Flat wood panelling | 90 | mg / $Nm^3$ | - Conversion to coatings with low % VOC |
| **Organic chemical industry**<br><br>Production of 1,2-dichloroethane | <br><br><br><br>5 | <br><br><br><br>mg / $Nm^3$ 1,2-dichloroethane | - Regular inspection and maintenance<br>- Vapour recovery units<br>- Incineration<br>- Activated carbon adsorption |

*** Statistical treatment:**

| **Measuring frequency** | **Compliance** |
|---|---|
| 1° < monthly | any measured value < or = emission limit value |

| | |
|---|---|
| 2° > or = monthly | a) any measured value ≤ emission limit value, or<br>b) i) any daily average from hour values ≤ emission limit value and<br>ii) not more than about 5% exceedings of hour values in function of the number of samples, and<br>iii) any hour average < 2 times emission limit value |

The allowed number of samples not meeting the emission limiting values - as a function of the number of samples - is prescribed in art. 4.4.4 of VLAREM II.

The European solvent directive 1999/13/EC was introduced into the Flemish legislation VLAREM II in 2001. All emission limit values and/or target emission entered into force in the period 2005 - 2007. This regulation coexists with the other emission limit values for organic substances as described in the table above.
For details on emission limit values we refer to the table in annex IIA ‘thresholds and emission controls’ of the directive 1999/13/EC (publication: 1999L0013). These emission limit values of annex II were introduced in VLAREM II unchanged. For the details on these emission limit values see answers to Q. 47 and 48..

***Walloon Region***

The European solvent directive 1999/13/EC was introduced into Walloon legislation in 2002: Order of the Walloon Government of 18 July 2002 concerning sectoral provisions for installations and activities using solvents. As indicated above we refer to answers to Q.47 and 48 for details on the emission limit values.

***Brussels-Capital Region***

The European solvent directive 1999/13/EC was introduced into Brussels legislation in 2003 and 2006:

a. « Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter à certaines installations de mise en peinture ou retouche de véhicules ou parties de véhicules utilisant des solvants » of 15 May 2003 (MB of the 12/06/2003)
b. « Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à la réduction des émissions de composés organiques volatils dans les installations de production de vernis, laques, peintures, encres ou pigments utilisant des solvants » of 3 July 2003 (M.B. 06/08/2003) concerning sectoral provisions for installations and activities using solvents.
c. « Arrêté du Gouvernement de la Région de Bruxelles-Capitale modifiant l'arrêté du 15 mai 2003 fixant des conditions d'exploiter à certaines installations de mise en peinture ou retouche de véhicules ou parties de véhicules utilisant des solvants » of 21 November 2006 (M.B. 23/11/2006): the article 3 of the Arrêté of 15 May 2003 is updated and it

transposes the directive 2004/42/EC of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC.

As indicated above we refer to answers to Q.47 and 48 for details on the emission limit values.

In addition see answer to Q.3 about Environmental Permit.

14. **Question 9**[6]: With reference to article 2, paragraph 3 (b) (i), please indicate BAT that are economically feasible and applied in your country to control and reduce VOCs emissions from the stationary sources in major source categories, the construction of which commenced on or before 29 September1999, taking into consideration annex II to the Protocol. Please complete the table below.

**Answer**

The use of BAT to control VOC emissions of stationary sources is (for most part) regulated by regional legislation: see answers given below by the different regions.

***Flemish Region***

| **Existing stationary source in major source categories**[1/] | **BAT applied** | **Comments (Optional)** |
|---|---|---|
| Use of solvents | Solvent Dir 1999/13/EC will force most of the installations that use solvents, to use BAT.<br>Vehicle refinishing: obligation to use HVLP pistols and closed pistol cleaning from 2005 onwards<br>Dry cleaning: obligation to use entirely closed dry cleaning machines with activated C filter | For the printing industry, the solvent directive doesn't always force industrial sites to use BAT. Therefore the environmental administration is preparing additional legislation. |
| Organic Chemical industry | LDAR<br>Flaring | See LDAR/Flaring Petroleum Industry |

[6] The question refers only to Parties in those areas in which national or international tropospheric ozone standards are exceeded or where transboundary fluxes originate or are expected to originate.

| | | |
|---|---|---|
| Waste | Valorisation of landfill gasses. | If there are no techno-economical constraints, all lanfills that contain biodegradable waste, should collect the gasses and flare them or use them for energy production from June 2005 onwards. |
| Petroleum industry | Stage I regulation (also in Q12)<br><br>LDAR<br>Flaring | In practice most of the emission from storage and handling of volatile refinery products (naphtha, crude oil,…) is also being controlled by the same techniques as for petrol: floating roof tanks and vapour recovery units. As planned in the NEC reduction programme, the environmental administration is preparing legislation for these products.<br>Many companies have started up a LDAR programme although at the moment there is no general legislation. But as planned in the NEC reduction programme LDAR should be introduced in all Industrial sites with relevant fugitive emissions by 2010. At the moment the environmental administration is elaborating guidelines for a LDAR programme. |

***Walloon Region***

| *The Walloon Region* | | |
|---|---|---|
| **Existing stationary source in major source categories[1/]** | **BAT applied** | **Comments (Optional)** |
| Use of solvents | Vehicle refinishing:<br>Dir. 2004/42/EC imposes maximum contents organic solvents in all the products used in body.<br><br>Printing industry:<br>Solvent directive 1999/13/EC for large installations.<br><br>Dry cleaning:<br>Dir. 1999/13/EC: we can estimate that for 2010, the whole will be composed by machines with recycling (equipment recovering and recycling solvents - machines known as "closed"). | Printing industry:<br><br>The great majority of printing works are small workshops which use "cold offset" which generate few emissions.<br>The large installations, which use other techniques are subjected to the requirements of directive 99/13/EC and were equipped with techniques of capture and destruction of the effluents |
| Storage of gasoline<br><br>Service-stations | Directive 94//63/EC (Stage I A)<br><br>Directive 94/63/EC (Stage IB) | This directive imposes a whole of preventive measures to limit the emissions. They imply a monitoring of the sealing of the tanks and the recovery of the gasoline vapors at the time of the transfers.<br>Establishes emission limits with regard to the filling and bulk storage tanks.<br>Now, a directive known as "Stage II" was to in theory regulate the emissions with the filling of the tanks of the vehicles. It has never happen but the regional authorities prevented its publication at the time of the transposition of directive 94/63/EC by including there an obligation of recovery of the gasoline vapors and their re-injection in the cistern of the station. |

***Brussels-Capital Region***

In the table below AGRBC means « Arrêté du Gouvernement de la Région de Bruxelles-Capitale ».

| Existing stationary source in major source categories[1/] | BAT applied | Comments (Optional) |
|---|---|---|
| Use of solvents | Solvent directive 1999/13/EC will force most of the installations that use solvents, to use BAT: it is implemented in the AGRBC of 15 May 2003 (M.B. 12/06/2003) and on the 3rd July 2003 (M.B. 06/08/2003).<br>Directive 2004/42/EC to reduce the VOC from organic solvent in paint and varnish for vehicles: implementation in AGRBC on 21 November 2006 (M.B. 23/11/2006) | Dry cleaning, printing industry, vehicles construction, vehicles repairing and wood treatment are concerned by this directives.<br>For cars, products with low solvent concentrations are used.<br>For dry cleaner, the equipment must be tight. |
| Gas station | Directive 94/63/EC implemented in<br>▪ « AGRBC fixant les conditions d'exploiter au stockage d'essence et à sa distribution » of the 10th October 1996 (M.B. 24/12/1996)<br>▪ "AGRBC fixant les conditions d'exploiter des stations-service » of the 21st January 1999 (M.B. 24/03/1999) completed with the "AGRBC modifiant le AGRBC du 21 janvier 1999 fixant les conditions d'exploiter des stations-service » on 9th December 2004 (M.B. 13/01/2005) | When the tank of the gas station is filled, the gas emitted have to be recovered: the emission of the COV due to delivery of gasoline will be decreased of about 95% (Stage I).<br>The 2nd Arrêté fixes how to recover the gas when the tank of each vehicles is filled: it will reduce of about 75% of the COV emission due to the technology used (Stage II). |

| | | |
|---|---|---|
| Waste | Directive 2000/76/EC implemented on 21 November 2002 in « AGRBC relatif à l'incinération des déchets » (M.B. 20/02/2003) linked to the cremation of the waste.<br>Directive 2001/80/EC implemented in « AGRBC relatif à la limitation des émissions de certains polluants dans l'atmosphère en provenance des grandes installations de combustion » of 21 November 2002 (M.B. 21/12/2002) linked to the limitation of the emission of some pollutants from large plants. | DéNOx is installed on the waste incinerator since 2006. |

15. **Question 10**[7]: With reference to article 2, paragraph 3 (b)(ii), please indicate the techniques applied in your country to reduce VOCs emissions from petrol distribution and motor vehicle refuelling operations and to reduce the volatility of petrol, taking into consideration annex II (IV.B, paras. 39–44) and annex III (IV, paras. 27–34) to the Protocol.

**Answer**

The control of VOC emissions from petrol distribution and motor vehicle refuelling operations is regulated by regional legislation. Product standards like the volatility of petrol are regulated on national level by the Federal Government. Also the requirements for mobile tanks transporting petrol from one terminal to another are regulated by federal legislation. All Belgian refineries are located in Flanders.

***Federal Government***

En 1996 a été créé le Fonds d'Analyses des Produits pétroliers.
Depuis cette année cet organisme contrôle la conformité avec les normes légales des carburants vendus en Belgique à raison de 200 échantillons par semaine; il en résulte que le paramètre tension de vapeur est en général bien respecté.
Par la transposition de la directive 98/70/CE (en Arrêté Royal du 20 Mars 2000 remplaçant

[7] The question refers only to Parties in those areas in which national or international tropospheric ozone standards are exceeded or where transboundary fluxes originate or are expected to originate.

l'arrêté royal du 26 septembre 1997 relatif aux dénominations, aux caractéristiques et à la teneur en plomb des essences pour les véhicules à moteur), modifiée par la directive 2003/17/CE, toutes deux réglementant les spécifications environnementales des essences et du diesel, les autorités belges ont imposé une nouvelle réduction de la tension de vapeur pour toutes les essences, la pression de vapeur ne peut dépasser 60 kPa pendant la période estivale (du 1er mai au 30 septembre).
The requirements imposed by article 5 of the Directive 94/63/EC on design and operation mode of mobile tanks transporting petrol from one terminal to another are regulated by the Royal Decree (Arrêté Royal) of 11 July 2001.

***Flemish Region***

Directive 94/63/EC (VOC reduction from petrol distribution between terminals and service stations: Stage I) is translated in the Flemish legislation VLAREM II of 1 June 1995.
In addition a Stage II regulation is included in the Flemish legislation VLAREM II through a modification of VLAREM II on 20 April 2001.

| Source of emission | Emission control measures | |
|---|---|---|
| Petrol marketing terminals | Floating roof tanks and vapour recovery unit for loading mobile containers | Translation of 94/63/EC into Flemish law |
| Petrol service stations | Vapour balance on road tankers (Stage I)<br><br>Vapour balance during refuelling of cars (Stage II) for petrol distribution installations with a throughput exceeding 100 $m^3$ / year. | Translation of 94/63/EC into Flemish law<br><br>Based on Flemish BAT study. |

***Walloon Region***

Arrêté du Gouvernement wallon du 23 mai 1996 en ce qui concerne les dépôts de liquides inflammables, visant à limiter les émissions de COV lors du stockage de l'essence et de sa distribution des terminaux aux stations services, en application de la directive 94/63 du 20.12.94. (Stage 1)

***Brussels-Capital Region***

The Directive 94/63/EC on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations was

transposed in the Brussels legislation in the « Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant les conditions d'exploiter au stockage d'essence et à sa distribution » of 10 October 1996 (M.B. 24/12/1996) (Stage I) and in the « Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à la limitation des émissions de certains polluants dans l'atmosphère en provenance des grandes installations de combustion » of 21 January 1999 (M.B. 21/12/2002) (Stage II). Stage I and Stage II apply for all gas stations in the Brussels-Capital Region.

16. **Question 11**: With reference to article 2, paragraph 3 (a)(ii), please provide details of the national or international measures applied to products containing solvents, taking into consideration annex II.V to the Protocol. Please indicate whether there is labelling of products specifying their VOCs content.

**Answer**

***Federal Government***

We make reference to the Directive 2004/42/EC on the limitation of emissions of VOC compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending directive 1999/13/EC. A labelling is specified in this directive. This directive was translated into federal law in 2005 (Royal Decree of 7 October 2005 on the reduction of VOC contents in certain paints and varnishes and in vehicle refinishing products).

17. **Question 12**: With reference to article 2, paragraph 3 (a)(iii), please specify the national or international emission standards applied in your country to newly registered mobile sources, taking into consideration annex III to the Protocol. Please complete the table below. If your country is a Party to the Gothenburg Protocol, you may cross-refer to questions 51–56.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol.
See answers to Q.51-56.

## IV. THE 1994 SULPHUR PROTOCOL

18. The questions in this section are based on the reporting obligation of Parties in accordance with article 5, paragraph 1 (a) and (c), and enable Parties to provide information on the implementation of the obligations under articles 2.5 and 4.1 of the Protocol. By virtue of article 2, paragraph 5, questions 15 and 16 do not apply to Parties subject to the United States/Canada Air Quality Agreement of 1998.

19. They refer to the following Parties to the Protocol: Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, the Netherlands, Norway, Slovakia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the European Community.

20. **Question 13**: With reference to article 4, paragraph 1(a), please provide details of the national strategies, policies and programmes your country has adopted to implement obligations under article 2 of the Protocol. If your country is a Party to the Gothenburg Protocol, you may cross-refer to question 39.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol.
See answer to Q.39.

21. **Question 14**: With reference to article 2, paragraph 4, please provide details of how your country is making use of the most effective measures, appropriate to your country's particular circumstances, for reducing sulphur emissions for new and existing sources. This could include measures to:

(a) Increase energy efficiency;

(b) Increase the use of renewable energy;

(c) Reduce the sulphur content of particular fuels and to encourage the use of fuel with low sulphur content, including the combined use of high-sulphur with low-sulphur or sulphur-free fuel;

(d) Apply BAT not entailing excessive costs, using the guidance in annex IV.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol. So for most answers we can refer to the answers provided for to Q.39. Under Q.39 we refer to our NEC reduction programme

including a range on measures to reduce SO2 emissions.

**a) en b)** In answering on questions a) and b) under Q.14 we refer to our climate policy plans which are described in more detail under Q.39.

**c)** In answering on question c) under Q.14 (reduction of the sulphur content of fuels) and the substitution to fuels with lower S-content we can refer to the answers under Q.17, Q.39, Q57 and Q58. Some more details are given below:

***Federal Government***

*Les essences et le diesel routier*

A partir de janvier 2002, suite à une taxe incitativee, le diesel routier distribué en Belgique a 50 mg/kg de soufre et non 350 mg/kg comme l'autorise la directive européenne 98/70/CE jusqu'en 2005. La Belgique anticipe donc 3 ans à l'avance l'exigence de la directive imposant 50 mg/kg à partir de 2005. 5,6 millions de tonnes de diesel ont été consommés durant 2002. Ce niveau à été porté à 10 mg /kg le 1er janvier 2009,.

De même l'essence 98 d'octane a 50 mg/kg de soufre à partir de janvier 2002, mais l'essence 95 d'octane a gardé la teneur autorisée par la directive à savoir 150 mg/kg. En 2002, les livraisons s'élevaient à environ 700 000 tonnes d'essence 98 d'octane et 1 400 000 tonnes d'essences 95 d'octane. Toutefois à partir de 2003, toutes les essences sont livrées avec 50 mg/kg de soufre, comme pour le diesel la Belgique a anticipé l'étape 2005 de la directive 98/70/CE.Ce niveau à été poté à 10mg :kg le 1er janvier 2009

*Les combustibles (=gasoils de chauffage + les combustibles lourds)*

En transposant en droit interne la directive 99/32/CE, plusieurs arrêtés royaux ont été adoptés. Pour le gasoil de chauffage, la teneur en soufre a été limitée à 0,2 % (valeur appliquée en Belgique depuis le 1/1/1989), la teneur en soufre sera réduite à 0,1 % à partir du 1er janvier 2008. Pour le fuel lourd un autre arrêté du 7 mars 2001 limite à 1 % la teneur en soufre à partir du 1er janvier 2003, comme le prévoit la directive. Un 3ème arrêté du 7 mars 2001 interdit la vente des gasoils à usage maritime si la teneur en soufre dépasse 0,2%.

En outre, un nouveau type de gasoil de chauffage a été autorisé à la vente en Belgique par l'arrêté du 3 octobre 2002: le gasoil de chauffage extra. Ce gasoil de chauffage, légèrement différent du gasoil classique convient parfaitement aux chaudières à haut rendement, mais en plus il ne contient que 50 mg/kg de soufre au lieu des 2000 mg/kg autorisés par la directive 99/32/CE. Il est plus cher que le gasoil classique, à cause de la

désulfuration poussée, mais les autorités compétentes ont décidé de promouvoir le gasoil extra en taxant progressivement le gasoil classique afin que les 2 combustibles auront un prix identique. Actuellement, le gasoil extra représenterait 5 % du total des ventes de gasoils (5 millions de tonnes), il est surtout consommé comme carburant défiscalisé par les chemins de fer et par les propriétaires d'une chaudière à haut rendement, les bénéfices d'une moindre consommation compensant le surcoût.

Enfin, le Fonds d'Analyse des Produits pétroliers a étendu ses contrôles aux gasoils de chauffage depuis le 1er juillet 2005.

**d)** In answering on question d) under Q.14 (application of BAT) we refer to the answer under Q.26. For existing IPPC installations the application of BAT is mandatory from October 2007.

22. **Question 15**: With reference to article 2, paragraph 5 (a), and annex V, please provide details of the emission limit values applied in your country to all major stationary combustion sources, the construction or substantial modification of which was authorized after 31 December 1995. If your country is a Party to the Gothenburg Protocol, you may cross-refer to questions 40 and 41. Please complete the table below.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol.
See answers to Q.40 and 41.

23. **Question 16**: With reference to article 2, paragraph 5 (b), and annex V, please provide details of the emission limit values applied in your country to major stationary combustion sources, the construction of which was authorized on or before 31 December 1995. If other emission limitations or other appropriate provisions are applied, please describe these, taking due account of the conditions for such alternatives as specified in article 2, paragraph 5 (b). If your country is a Party to the Gothenburg Protocol, you may cross-refer to question 41. Please complete the table below.

**Answer**

Belgium is a Party to the 1999 Gothenburg Protocol.
See answer to Q.41.

24. **Question 17**: With reference to article 2, paragraph 5 (c), and annex V, please provide details of the national standards for the sulphur content of gas oil applied in your country. Please complete the table below.

**Answer**

Directive 98/70/EC reduced the maximum sulphur content in diesel for on-road vehicles to following maximum allowed limits:
- from 1 January 2000: 350 mg/ kg (0,035%);
- from 1 January 2005: 50 mg/kg (0,005%)

Directive 2003/17/EC further reduced the maximum allowed sulphur content to 10 mg/kg (applicable to all marketed diesel fuel for on-road vehicles from 1 January 2009).

Directive 1999/32/EC reduced the maximum sulphur contents in gas-oil for heating to 0,2 % (from 1 January 2000) and to 0,1% (from 1 January 2008).

Directives 98/70/EC, 1999/32/EC and 2003/17/EC were translated in national legislation (see references in table below).

| Type | Sulphur content | National legislation |
|---|---|---|
| 1. Diesel for on-road vehicles | 350 ppm (from 01/01/2000)<br>50 ppm (from 01/01/2005)<br>10 ppm (from 01/01/2009) | Royal Decree of 20/03/2000 ([a])<br>Royal Decree of 20/03/2000 ([a])<br>Royal Decree of 22/02/2005 ([b]) |
| 2. Other types (e.g. diesel for off-road vehicles gas oil for inland navigation, for heating, etc.) | 0,2% (from 01/07/2000)<br>0,1% (from 01/01/2008) | Royal Decree of 03/10/2002 ([c])<br>Royal Decree of 03/10/2002 ([c]) |

([a]) Royal Decree of 20 March 2000 replacing Royal Decree of 28 October 1996 relating to the name, the characteristics and sulphur content of diesel fuels for on-road vehicles.
([b]) Royal Decree of 22 February 2005 modifying Royal Decree of 20 March 2000 replacing Royal Decree of 28 October 1996 relating to the name, the characteristics and sulphur content of diesel fuels for on-road vehicles.
([c]) Royal Decree of 3 October 2002 replacing Royal Decree of 7 March 2001 concerning the name, the characteristics and the sulphur content of gas-oil for heating.

The Royal Decree of 3 October 2002 also regulates the marketing of gas-oil extra with a maximum sulphur content of 50 ppm (0,005%)..

## V. PROTOCOL ON PERSISTENT ORGANIC POLLUTANTS

25. The questions in this section are based on the reporting obligation of Parties in accordance with article 9, paragraphs 1 (a) and 2, and enable Parties to provide information on the implementation of the obligations under articles 3.1 (a), 3.1 b)(i), 3.1 b)(iii), 3.1 (c), 3.3, 3.5(b)(i), 3.5(b)(ii), 3.5 (b)(v), 3.8 and 7.1 of the 1998 Protocol on Persistent Organic Pollutants (POPs). Questions 28 and 29 are not yet mandatory. They are designed to enable Parties to provide information on progress made towards the implementation of articles 3.5 (b)(iii) and 3.5 (b)(iv) concerning obligations that will become effective in 2011.

26. They refer to the following Parties to the Protocol: Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, the Netherlands, Norway, Republic of Moldova, Romania, Slovakia, Slovenia, Sweden, Switzerland, the United Kingdom and the European Community.

27. **Question 18**: With reference to article 7, paragraph 1, please provide details of the national strategies, policies and programmes your country has developed to discharge its obligations under the Protocol.

**Answer**

***Federal Government***

**Federal government has implemented the so called ROHS directive (2002/95/ec) and WEEE directive (2002/96/ec), transposée au niveau federal par l'arreté royal du 20 octobre 2004, which cuts of the bringing on the market of some POP's in products**

***Flemish Region***

**In 2003 a new Flemish Environmental Policy Plan (2003-2007, MINA 3) has been approved by the Flemish government. In 2007 this plan was updated and prolonged to 2010 (approval by the Flemish Government on 21 December 2007). It fixes inter alia the general strategy of the air pollution policy.**

**This plan carries out the implementation of reduction programs concerning some POPs of the Protocol: PAHs, dioxins/furans, hexachlorobenzene and pesticides. It contains the following actions to control, eliminate or reduce discharges, emissions and losses of persistent organic pollutants:**

- **implementation reduction program dioxins :**
  - **follow up reduction measures major point sources;**
  - **awareness campaigns and reglementation concerning diffuse sources (domestic wood and waste burning);**
  - **measures concerning dioxin-laden residual streams from thermal and metallurgical processes;**
  - **development of target values for dioxin deposition and incorporating these values in the Flemish Environmental Legislation (VLAREM);**
- **implementation reduction program PAHs:**
  - **implementation of reduction measures concerning PAH-containing products**
  - **implementation of reduction measures concerning industrial emissions to air and water**
- **implementation reduction program pesticides:**
  - **measures to reduce the use of pesticides by public sector**
  - **study the feasibility of imposing a levy on the use of pesticides**
  - **awareness campaign concerning the use of pesticides**
  - **yearly evaluation of the reduction program**
- **removal plan PCBs**
  - **supervising the compliance with the existing r**emoval plan for PCB containing equipment and the PCB's present in this equipment (further details, see answer to Q.22)

**Yearly emission inventories are set up for dioxins and PAHs in The Environment and Nature Report of Flanders (MIRA-T). This report can be consulted on http://www.milieurapport.be.**

***Walloon Region***

**With respect to POP's a plan is about to be finalized in the framework of the Stockholm Convention on POPs.**
**As far as air is concerned and up until now, we use to impose limit values through permits, for example within the framework of directive IPPC (dioxins & furans - PCDD/Fs, PCBs "dioxin like" - "total" PCBs - estimated by the sum of the 6 PCB of DIN standard multiplied by 5) - polycyclic aromatic hydrocarbons PAHs, hexachlorobenzene, pentachlorophenol.**

**The following regulations in Wallonia are relevant for POP's :**

- **Décret du 27/06/96 relatif aux déchets et ses arrêtés d'application**
- **AGW du 10/07/97 établissant un catalogue des déchets**
- **AGW du 25/03/99 relatif à l'élimination des PCB/PCT**
- **Décret du 11/03/99 relatif au PE et ses arrêtés d'application y compris ceux fixant**

**les conditions sectorielles**

- **Décret du 27/05/04 relatif au livre II du Code de l'Environnement, constituant le Code de l'eau**
- **AGW du 23/06/00 relatif à l'évaluation et la gestion de la qualité de l'air ambiant (introduction des HAP dans le programme de surveillance)**

***Brussels-Capital Region***

The POP protocol was implemented in an "Ordonnance portant assentiment au Protocole à la convention sur la pollution atmosphérique transfrontière à longue distance, de 1979, relative aux polluants organiques persistants, avec ses annexes, fait à Aarhus le 24 juin 1998" on the 20th April 2006 in the Brussels-Capital Region (M.B. 09/05/2006).
Some aspects of the Protocol are concerning the waste managing containing POP.
Since 1989, the Brussels-Capital Region is in charge of many activities concerning POP issues:

- Following the transposition of the "directive 2004/107/EC of the European parliament and of the council of 15th December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air", which was transposed in the "Arrêté de la Région de Bruxelles-Capitale concernant l'arsenic, le cadmium, le mercure, le nickel et les hydrocarbures aromatiques polycycliques dans l'air ambiant" of the 25th October 2007 (M.B. 07/11/.2007).
- Application of the regulation 850/2004 concerning the POPs and modifying the directive 79/117/CEE of the 29th April 2004.
- Following the LRTAP protocol, the Stockholm Convention of the 22th May 2001 about POPs and working on additional POPs in the annex.
- Following the adoption of the protocol and the convention at the communities level and contribute to European legislation on POPs.
- Following the transposition in the Brussels regulation of the LRTAP Protocol: "Ordonnance portant assentiment au Protocole à la convention sur la pollution atmosphérique transfrontière à longue distance, de 1979, relative aux polluants organiques persistants, avec ses annexes, fait à Aarhus le 24 juin 1998" of the 20th avril 2006 (M.B. 09/05/2006).
- Planning of the measures to identify, determine and decrease as soon as possible the emission of POPs under the European regulation in the Brussels-Capital Region. The Environmental Permit (license) for the PCB/PCT, dioxin, furans and HAP include these measures, as for example in controlling the boilers.
- Achievement of an inventory in the Brussels-Capital Region for 38 POPs coming from the main industrial sources. This inventory will be made at the end of 2008 and will be updated regularly afterwards. In 2004, a POP inventory I was done including 15 POPs.

The Inventory II adds to these 15 POPs 23 new POPs and will cover the period 1990 to 2007.

The emission limit values in the Environmental Permit (license) (see question 3 for more details on Environmental Permit) is in comformity with the European protocol. The regulation about the Environmental Permit is applied on the industries related to activity concerned by the protocol. Some new sectorial "Arrêté du Gouvernement de la Région de Bruxelles-Capitale" should be adopted to regulate or forbidden some substances like PCB/PCT.

28. **Question 19**: With reference to article 3, paragraph 1 (a), please provide details of the measures taken by your country to eliminate the production and use of substances listed in annex I to the Protocol. Please complete the table below.

**Answer**

***Federal Government***

The obligations on elimination of production and use referred to in article 1(a) and annex I of the protocol are (mainly) regulated on federal level in Belgium.

Table below shows which regulations (Royal decrees) have been adopted by the Federal Government to prohibit the use of the substances listed in annex I. Bans on the production of the substances listed in annex I however have not been specifically imposed in Belgium. Due to the fact that these substances can not be used on the domestic market (see table below) and due to the fact that export of these substances need to be applied for and approved by the Federal Government and that such export licences are not granted, it can be concluded that it is in fact prohibited to produce the substances listed in annex I in Belgium.

| Substance | Elimination of | Measures taken (e.g. national legislation) |
|---|---|---|
| Aldrin | Production | |
| | Use | Ban for non agricultural use: 1 November 1976<br>Ban for agricultural use: 15May 1976 ([1]) |
| Chlordane | Production | |
| | Use | Ban for non agricultural use: 1 Augustus 1988<br>Ban for agricultural use: 1 January 1981 ([2]) |
| Chlordecone | Production | |
| | Use | Ban for non agricultural use: 31 December 1997<br>Never brought on the market for agricultural use |
| DDT | Production | |
| | Use | Ban for non agricultural use: 1 November 1976<br>Ban for agricultural use: 22 November 1974 ([3]) |
| Dieldrin | Production | |

| | | |
|---|---|---|
| | Use | Ban for non agricultural use: 1 November 1976<br>Ban for agricultural use: 22 November 1974 ([3]) |
| Endrin | Production | |
| | Use | Never brought on the market for non agricultural use<br>Never acknowledged for agricultural use |
| Heptachlor | Production | |
| | Use | Never brought on the market for non agricultural use<br>Ban for agricultural use: 15May 1976 ([1]) |
| Hexabromobiphenyl | Production | The OECD has negotiated an agreement with industry to not produce or to sell this substance in Belgium (Royal Decree of 15 March 2004) |
| | Use | |
| Hexachlorobenzene | Production | |
| | Use | Never brought on the market for non agricultural use<br>Ban for agricultural use: 22 November 1974 ([3]) |
| Mirex | Production | |
| | Use | Never brought on the market for non agricultural use<br>Never brought on the market for agricultural use |
| PCBs | Production | Ban on production: 9 July 1986 ([4]) |
| | Use | Ban on use in new applications from the date of the Royal Decree of 9 July 1986 (thus July 1986) |
| Toxaphene | Production | |
| | Use | Never brought on the market for non agricultural use<br>Ban for agricultural use: 22 November 1974 ([3]) |

([1]) Royal Decree of 14 November 1975
([2]) Royal Decree of 15 January 1981
([3]) Royal Decree of 12 June 1974
([4]) Royal Decree of 9 July 1986 regulating substances and preparations containing PCB and PCT

29. **Question 20**: With reference to article 3, paragraph 1 (b) (i), please provide details of the measures your country has taken to ensure that the destruction or disposal of substances listed in annex I is undertaken in an environmentally sound manner, taking into account relevant international regimes, in particular the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention).

**Answer**

***Belgium***

As indicated in the answer to question 19 all the annex I substances have been banned for

production and for use for a considerable amount of years now or were never brought on the market in Belgium. For the existing PCB containing equipment regional removal and decontamination plans have been adopted (see further details in answer to Q.22).

In case of old stocks (overdue stocks and leftovers in small quantities) and forbidden products and their packages, the annex I substances (destined for destruction / disposal) are considered as dangerous wastes in Belgium. They are treated as such in the application of the European Directives on dangerous wastes and the Belgian regional legislations. Collected old stocks and forbidden products are incinerated in specially adapted and permitted incineration facilities (in compliance with IPPC requirements: use of BAT).
The transboundary movement of substances listed in annex I for removal or destruction as waste is regulated by the European Regulation 1013/2006 of 14 June 2006 on shipments of waste (see further details in answer to Q.21 below).

30. **Question 21**: With reference to article 3, paragraph 1 (b) (iii), please provide details of the 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 international regimes, in particular the Basel Convention.

**Answer**

***Belgium***

The transboundary movement of substances listed in annex I is regulated by the European Regulation 1013/2006 of 14 June 2006 on shipments of waste. This regulation replaces the previous Regulation of 259/93 of 1 February 1993.
Regulation 1013/2006 establishes new procedures and control regimes for the transboundary shipment of wastes, depending on the origin, destination and route of the shipment, the type of waste shipped and the type of treatment to be applied to the waste at its destination (removal, useful application, …). Also the procedures for prior notification of shipment have been renewed. A shipment can not occur without prior consent of the land of shipment, the land of destination and the land of transit. Notifications need to be accompanied with a contract stipulating the useful application or removal of the wastes. Furthermore the shipment needs to be fully covered by a deposit or equivalent insurance policy.
This new regulation - like the previous regulation 259/93 - takes into consideration and is in compliance with the requirements of the Basel Convention.

**In application of the proximity principle (article 11,1 of the Regulation 1013/2006) by which foreign countries can refuse the import of dangerous waste that has to be removed in their country, these wastes have to be removed on the national territory**

**unless there is insufficient capacity to remove certain substances (like PCBs). In that case the export of these substances can only be granted if the foreign installation meets at least the same decontamination quality of the domestic installations (e.g. application of BAT according to the IPPC Directive). Export of PCB containing equipment for disposal (landfilling or incineration) is prohibited. The import of equipment containing PCB as waste is allowed as long as our decontamination plants have capacity available. The legislation 850/2004 is respected.**

31. **Question 22**: With reference to article 3, paragraph 1 (c), please provide details of the measures taken to restrict the substances listed in annex II to the uses described in that annex. Please complete the table below.

**Answer**

***Federal Government and Regions***

| Substance | Measures taken (e.g. national legislation) |
|---|---|
| DDT | Use is banned: see answer to Q.19 |
| HCH (mixed isomers) | Use of HCH containing less than 9,0% of the gamma isomer is banned by Directive 79/117/EC (1981)<br>Use of HCH (lindane)is banned in the EU market (noted in regulation 304/2003). Use of HCH (lindane) is banned in Belgium for agricultural and non agricultural purposes. Use by veterinaries was subjected to authorisation of federal public service of public health, security of the food chain and the environment. But it was not produced in Belgium any more since 2007. |
| Lindane (HCH gamma isomer) | |

| | |
|---|---|
| PCBs | Production and bringing on the market of PCB's and of equipment containing PCB's has been banned since 1986 by the Royal Decree of 9 July 1986 regulating substances and preparations containing PCB and PCT. The ban on use in new applications stems from the date of the Royal Decree of 9 July 1986.<br>The conditions on<br>a) the elimination of the use of identifiable PCB's in equipment containing PCB's in volumes > 5 dm³and having a concentration of ≥ 0,05% as soon possible, but no later than 31 December 2010;<br>b) the destruction or decontamination in an environmentally sound manner of liquid PCBs reffered to in a) and other liquid PCBs containing > 0,005% PCB's not in equipment, as soon as possible, but no later than 31 December 2015;<br>c) the decontamination or disposal of equipment referred in a) in an environmentally sound manner<br>are covered by Orders of the regions ([1]) in implementing Directive 96/59/EC ([1]) adopting plans on the phasing out / removal of existing PCB containing equipment<br>In addition Belgium is committed to international agreements leading to the total destruction of all identifiable PCB's (Parcom 92/3; conclusion of the third International Conference on the Protection of the North sea) |

([1]) Directive 96/59/ was implemented in following regional legislations:

a. Flemish region:
   - Section 5.8.8 of the Flemish Waste legislation VLAREA
   - Order of the Flemish Government of 17 March 2000 concerning the decision of the removal plan for PCB containing equipment and the PCB's present in this equipment (article 5.5.8.6 of the Flemish Waste legislation VLAREA refers to this plan)
b. Walloon region: Order of the Walloon Government of 25 March 1999 concerning the removal of PCB's and PCT's
c. Brussels-Capital Region: "Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à la planification et à l'élimination des polychlorobiphényles (PCB) et des polychloroterphényles (PCT)of 4 March 1999 ( M.B. 04/08/1999) concerning the planning of the removal of PCB's and PCT's.

The plans foresee the removal / decontamination of registered PCB containing equipment (equipment containing PCB's in volumes > 1 dm³ and having a concentration of ≥ 0,05%) before 31 December 2005. In some cases the use until the end of the year 2010 is allowed. Equipment with a PCB content between 50 and 500 ppm can be used until the end of the lifetime. In case of leakage refilling of PCB's is not allowed.

32. **Question 23**: Has your country granted any exemptions in accordance with article 4, paragraph 2 of the Protocol?

**Answer**

Yes ☐ No **X**

33. **Question 24**: Did your country apply any of the exemptions allowed for in annex I, other than those identified in annex II?

**Answer**

Yes ☐ No **X**

34. **Question 25**: With reference to article 3, paragraph 3, please provide details of the measures taken in your country to ensure that wastes and articles still in use containing the substances listed in annexes I, II, or III, upon becoming wastes, are destroyed or disposed of in an environmentally sound manner.

**Answer**

***Belgium***

Regarding the disposal or destruction of substances listed in annex I or II, upon becoming wastes, see answers to Q.20, Q.21 and Q.22. Specifically, for the identification and removal of existing PCB containing equipment we refer to the regional plans mentioned in the answer to Q.22.

***Flemish Region***

**Some research has been done towards the PCB containing components in kitchen articles and office articles. As result of this research, the phasing out plan stipulates that capacitors which may contain PCB's have to be considered as PCB containing capacitors (phasing out plan, art.13).**
**Towards the mineral oil filled transformers, the phasing out plan stipulates that the transformer oil has to be checked on PCB's as soon as the transformer in case is moved, repared, sold, … (phasing out plan, art.5,§1). If the mineral oil contains more than 0.005 weight % of PCB's the transformer has to be considered a PCB containing transformer (phasing out plan, art.5,§2).**

**Concerning PAHs and dioxins/furans the inventories done in the framework of The Environment and Nature Report of Flanders are an import element of the strategy for identifying articles still in use and wastes containing PAHs and dioxins/furans.**
**For PAHs, progress has been made in previous years concerning their identification in tar containing asphalt (see answers in previous questionnaires).**

**For dioxins/furans the dioxin-laden residual streams from thermal and metallurgical processes have been identified and inventoried and the pathways of the dioxin containing wastes from source to destination have been traced. The situations which possibly cause spread out of dioxins towards the environment or possibly threaten human health, have been identified and measures have been taken (imposing ELVs.)**

***Walloon Region***

**See answer to Q. 18.**

***Brussels-Capital Region***

PCB

The destruction of the equipment containing PCB (polychlorobiphényles) or PCT (polychloroterphényles) have to be regulated under two "Arrêtés" :

- The « Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à la planification et à l'élimination des polychlorobiphényles (PCB) et des polychloroterphényles (PCT) » on 4th March 1999 (M.B. 04/08/1999) concerning the inventory of the company, who have equipment with PCB or PCT.
- The « Arrêté ministériel établissant un plan régional d'élimination et de décontamination des PCB/PCT » on 20th December 1999 (M. B. 31/12/1999) fixes the concrete measures to destroy the equipment and the time schedule to do it. All equipment with PCB were destroyed before 30th June 2005 except few of them which have to be destroyed at the latest on December 31st 2010 in agreement with the Directive 96/59/CE of the Council on 16th September 1996.

Equipment with PCB has to be destroyed in a collector registered in the Brussels-Capital Region. The equipment is open and clean 5 times. Wood, paper of the equipment are burned and then energy is recovering. The copper, iron and the aluminium are recycling. The company in charge of the destruction of the equipment has to send a certificate of elimination to the owner of the equipment, which has to send it to the Brussels-Capital Region via IBGE-BIM. Since 1999, an inventory of equipment with PCB has been done. It is updated when a request to have a new Environment Permit (license) or to modify the current Environmental Permit has been sent to the Brussels-Capital Region. Since 2000, 3861 on 3953 equipments

with PCB were eliminated. Some of the equipment left are now treated and some are still temporary in activity and will be destroy at the latest at the end of 2010.

PAH

The "directive 2004/107/EC of the European parliament and of the council of 15th December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air"was transposed in the « Arrêté du Gouvernement de la Région de Bruxelles-Capitale concernant l'arsenic, le cadmium, le mercure, le nickel et les hydrocarbures aromatiques polycycliques dans l'air » of 25th October 2007 (M. B. 07/11/2007). The benzo(a)pyrene is used as a tracer for the PAH. In 2012, the mean annual concentration of benzo(a)pyrene must be below the limit values of 1 ng/$m^3$.
Since 1990, the emission of the PAH decreased of about more than 70% mainly due to the decreasing of the PAH emitted by the residential sector: the emission was of about 3 Mg in 1990 and was 0.80 Mg in 2006. Gas replaces, indeed, more and more the oil fuel to heat the residential sector: the gas combustion emits less PAH compared to oil fuel combustion, which explains this decrease.

Dioxin-furan

Dioxin and furans emitted by the industry are spread in most of the human products : food, textile, …The air, water and soil and the human/animal body are contaminated by them.
To decrease the contamination by these components, the Brussels-Capital Region transposes several European directives:

- Directive 2000/76/EC of 4 December 2000 on the incineration of waste was transposed in the « Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à l'incinération des déchets » on the 21st November 2002 (M.B. 21/12/2002).
- Directive 2004/107/EC of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air was transposed in the « Arrêté du Gouvernement de la Région de Bruxelles-Capitale concernant l'arsenic, le cadmium, ler mercure, le nickel et les hydrocarbures aromatiques polycycliques dans l'air » of the 25th October 2007 (M. B. 07/11/2007).

In addition to the transposition of the previous directives, the Brussels-Capital Region applies the « Règlement (CE) n° 850/2004 du Parlement européen et du Conseil du 29th avril 2004 concernant les polluants organiques persistants et modifiant la directive 79/117/CEE ».

The industries adopt also more environmental-friendly habits in using more efficient and cleaner technology.

The emissions of the dioxin and furans in the Brussels-Capital Region are decreased by a factor of 10 from 1995 to 2005. During this period, the incinerators for hospital were closed, the consumption of coal in the residential sector decreased and in 1999, the plume coming from the Siomab incinerator were treated. Moreover, a DéNOx system is operated at the incinerator of domestic waste since 2006, which reduces also the quantity of dioxins and furans by a factor of 10.

35. **Question 26**: With reference to article 3, paragraph 5 (b)(i), and annex V, please explain how you ensure the application of BAT, to each new stationary source (construction commenced after 23 October 2005) within a major stationary source category for which that annex identifies BAT, for example through national legislation, permitting procedures, guidance, etc.

**Answer**

The European IPPC Directive 96/61/EC concerning integrated pollution prevention and control is applicable in the EU countries. This Directive sets common rules for permitting and controlling industrial installations, among which those referred to in annex V of the POP's protocol. The IPPC Directive is implemented in Belgium in regional legislation.

**In essence, the IPPC Directive is about minimising pollution from various industrial sources throughout the European Union. Operators of industrial installations covered by Annex I of the IPPC Directive are required to obtain an authorisation (environmental permit) from the authorities in the EU countries.**

**New installations have been required to meet the requirements of the IPPC Directive since 30 October 1999. The IPPC Directive is based on an integrated approach (1) and the application of best available techniques (BAT) (2).**

**(1) The integrated approach means that the permits must take into account the whole environmental performance of the plant, covering e.g. emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents, and restoration of the site upon closure. The purpose of the Directive is to ensure a high level of protection of the environment taken as a whole.**
**(2) The permit conditions including emission limit values (ELVs) must be based on BAT as defined in the IPPC Directive. To give guidance to the licensing authorities and companies to determine BAT, the Commission organises an exchange of information between experts from the EU Member States, industry and environmental organisations. This work is co-ordinated by the European IPPC Bureau. This results in the adoption and publication by the Commission of the BAT Reference Documents (the so-called**

**BREFs).**

***Flemish Region***

**The Flemish environmental legislation VLAREM I (Order of the Flemish Government of 6 February 1991 concerning Environmental Licences) and VLAREM II (Order of the Flemish Government of 1 June 1995 concerning General and Sectoral provisions relating to Environmental Safety) fully comply with the IPPC requirements. The permit procedures, the integrated approach and the obligation to apply BAT required by the IPPC Directive are all fully implemented in the Flemish VLAREM legislation.**

**The Flemish legislation VLAREM I and II also impose the principle of applying BAT for smaller installations falling outside the scope of the IPPC Directive. For these activities the Flemish agency Vito develops separate Flemish BAT documents. Article 4.1.2.1 of VLAREM II imposes the following: "*The operator should act with due diligence and always use the best available techniques for the protection of man and environment - this both with the selection of the treatment methods for emissions, as well as with the selection of measures for reduction at source (adapted production techniques and methods, raw materials management, etc.). This obligation also holds for modifications to classified establishments, as well as for activities which in themselves do not require a licence or a notification*"**

***Walloon Region***

**See also answer to Q.18.**

Globally BAT-related emission values are only available for PCDD/ Fs.
Il order to enforce a reduction of the emissions of PAHs and hexachlorobenzene, it was necessary to develop homemade Emission Limit Values for benzo(a)pyrene and HCB on a toxicological basis (ambient air quality standards or guidelines, excess unit risk of cancer…) taking into account a dilution factor between the stack discharge and ground level.
For PAHs, a new approach is currently under development for assessing a toxicological B(a)P equivalent to complex mixtures of PAHs (to which people are always exposed, in practice).
All categories of annex V are concerned except the anode production and the primary aluminium production which do not exist in Wallonia.

List of categories of activities requiring permits:

- Waste incineration, including co-incineration
- Thermal metallurgical processes as:

  - iron and steel;
  - production of aluminium: no primary aluminium production in Wallonia;
  - and other non-ferrous metals;
- Combustion plants providing energy;
- Specific chemical production processes;
- Coke production;
- Sinter plants
- Secondary aluminium production;
- Wood preservation installations;
- Anode production: no anode production in Wallonia
- Firing installations for wood.

The following categories are covered by good housekeeping campaign, awareness campaign about negative impacts on health of incomplete combustion, federal product standards as far as quality of fuel and quality of paintings are concerned, etc. (according to BAT described in chapter V):

- Residential combustion;
- Domestic wood and coal coating;
- Open fires such as refuse burning, forest fires and after-crop burning."

***Brussels-Capital Region***

The directive 96/61/EC concerning integrated pollution prevention and control of the 24th September 1996 was transposed in the Brussels-Capital Region in the “Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d’exploitation pour certai-
nes installations industrielles classés” of 11st October 2007 (M. B. 31/10/2007): the IPPC companies have to give information about emissions from their installations to IBGE-BIM.

In 2006, 13 companies have been registered as an IPPC company. They represent different sectors: textile, pharmaceutical, agro-industrial, waste and dirt treatment, metallurgy.
Since 2007, each company has to give annually information on their emissions in the air and water, on the waste production, on their installations during the last civil year.
To treat these information from IPPC companies, a specific procedure was established taking account the recommendations of the European parliament concerning the criteria for the environmental inspections in the Brussels-Capital Region (Recommendation of the European parliament and of the council of 4th April 2001 providing for minimum criteria for environmental inspections in the Member States 2001/331/EC). It respects also the IPPC directive for the conditions to revise the authorization (see question 3 on Environmental

Permit (license)).

The IPPC companies have to respect several prescriptions to have their Environmental Permit (license) necessary to work on. In this permit, the limit values of the emissions and the conditions are determined in considering the Best Available Technology (BAT) and have to integrate the criteria of Rational Use of Energy. The Environmental Permit integrates also the obligations on the energy and the waste of the IPPC directive.

An evaluation of the current permit was done in 2005 to be sure that they respect the obligation of the directive.
If it is not the case, these permits have to be updated by the Brussels-Capital Region.
The improvement of the quality of the environment is linked partly to the decrease of the emissions from the IPPC companies. In addition to the obligations of the directives, the Brussels-Capital Region adapts the conditions to obtain the permit in function of the BAT and the BET (Best Environmental Practices), which are determined for each sectors .
The BAT and the BEP are then implemented in the Environmental Permit. Delay to respect these new conditions can be applied for the current Environmental Permit.
The Brussels-Capital Region adopts specific measures for specific stationary sources (see below for example) to reduce the POP and PAH emissions, listed in annex V of the Protocol:

7 a) Filters and DéNOx process were applied on the plume emitted by the waste incinerator

7 b) Filters are added on the funnel of the FMM plant, which emits secondary production of lead.

7 d) In the Brussels-Capital Region, few POP emission are emitted by the domestic sector.

7 e) No chemical production in the Brussels-Capital Region

8 a) See question 25

8 c) The cokerie was closed in 1993

8 d) No aluminum production

9 a) The emission of HCB was included in the Inventory II (under construction).

9 b) No metallurgic industry

9 c) No fuel with chlorine.

36. **Question 27**: With reference to article 3, paragraph 5 (b)(ii), and annex IV, please provide details of the limit values applied to each new stationary source (construction commenced after 23 October 2005) within a category referred to in that annex. Please complete the table below.

**Answer**

Emissions of major stationary sources referred to in annex IV of the protocol are regulated by regional legislation: see answers below:

***Flemish Region***

Emission limit values referred to in table below are imposed by the Flemish legislation VLAREM II (see reference under Q.3). The European Directive 2000/76/EC on waste incineration (including emission limit values for PCDD/F) was implemented in the Flemish legislation VLAREM II on 12 December 2003, maintaining the already applied limit value for PCDD/F of 0,1 ng TEQ/Nm³.

| **Major new stationary sources** | **Limit values for PCDD/F (in ng TE/m$^3$, based on 11% oxygen in flue gas)** | **Other emission reduction strategies (if applicable)** |
|---|---|---|
| A. Municipal solid waste (>3 tons/hour) | 0,1 | |
| B. Medical solid waste (>1 ton/hour) | 0,1 | |
| C. Hazardous waste (>1 ton/hour) | 0,1 | |

***Walloon Region***

The European Directive 2000/76/EC on waste incineration - imposing an emission limit value of 0,1 ng TEQ/Nm³ of PCDD/F for the incineration of municipal, medical and hazardous waste - has been implemented into Walloon legislation by the 'Order of the Walloon Government of 27 February 2003on incineration and co-incineration of waste'.

***Brussels-Capital Region***

The European Directive 2000/76/EC on waste incineration - imposing an emission limit value of 0,1 ng TEQ/Nm³ of PCDD/F for the incineration of municipal, medical and hazardous waste - has been implemented into Brussels legislation by the "" Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à l'incinération des déchets" of 21 November 2002 on incineration of wastes (M.B. 20/02/2003).

37. **Question 28**[8]: With reference to article 3, paragraph 5 (b)(iii), and annex V, please provide information on progress made towards applying BAT to each existing stationary

[8] Not mandatory. The obligation will become effective after 23 October 2011.

source (construction commenced on or before 23 October 2005) within a major stationary source category for which that annex identifies BATs, in so far as this is technically and economically feasible. If your country intends to apply, as an alternative, different strategies that will achieve equivalent emission reductions, please describe these.

**Answer**

Not mandatory yet.

38. **Question 29**[8]: With reference to article 3, paragraph 5 (b)(iv), and annex IV, please provide information on progress made towards applying limit values to each existing stationary source (construction commenced on or before 23 October 2005) within a category mentioned in that annex, in so far as this is technically and economically feasible. If your country intends to apply, as an alternative, different strategies that will achieve equivalent emission reduction, please describe these.

**Answer**

Not mandatory yet.

39. **Question 30**: With reference to article 3, paragraph 5 (b) (v), and taking into consideration annex VII, please provide details of the measures taken to control emissions from mobile sources. Please complete the table below.

**Answer**

Most important measures to control emissions from mobile sources are the European Directives on emission limit values for mobile sources and the European Directives on fuel characteristics for diesel and petrol. These Directives have all been implemented into national legislation. For more details on the applied limit values for mobile sources we refer to the answers to Q.51 up to Q.54: see table below.

| **Mobile source categories for POPs** | **Measures (e.g. limit values, national legislation, guidance)** |
|---|---|
| A. Diesel-fuelled passenger cars | See answer to Q.51 |
| B. Heavy duty vehicles | See answer to Q.52 en Q.53 |

| | |
|---|---|
| C. Off-road engines | See answer to Q.54 |

(See also answers to Q. 55 and Q.56 for limit values for motorcycles and mopeds)

For more details on the applied fuel characteristics for diesel and petrol we refer to the answers to Q.57 and Q.58.

**The emission of dioxins/furans by mobile sources is related to the use of leaded fuels. Leaded fuels contain scavengers and other halogenated additives, which are transformed to dioxins/furans when burned in the engine. The amount of additives depends on the amount of lead. By a Royal Decree of 1987 the lead concentration in petrol was reduced from 0.4 to 0.15 gram per litre. The Royal Decree of 29 December 1992 installed a lower price for petrol without lead. Since then, less lead containing fuel was consumed. From the first of April 1999 on, the petrol distributing sector in Belgium brought on the market a fuel containing a substitute for lead. From this date on, practically no lead containing fuel was sold anymore. In compliance with the European Guideline 98/70/EC, the commercialization of leaded petrol is prohibited in Belgium from the first of January 2000 (lead content of unleaded petrol is below 0,005 g/l). (see further answer to Q.57).**

**The emission of PAHs by mobile sources is related with the emission of particles. PAHs adsorb on these particles which are emitted mainly by diesel consuming vehicles. All PAHs concerning objectives and reduction targets from the POPs protocol can be reached by implementation of the appropriate European Directives (see further answers to Q.51 to Q.54 and to Q.58).**

40. **Question 31**: With reference to article 3, paragraph 8, please provide the available (historical) information you have collected relating to the production and sales of the substances listed in annexes I and II to the Protocol. Please complete the table below.

| Substance | Production (quantity per year) | Sales (quantity per year) |
|---|---|---|
| Aldrin | | |
| Chlordane | | |
| Chlordecone | | |
| DDT | | |
| Dieldrin | | |
| Endrin | | |
| Heptachlor | | |
| Hexabromobiphenyl | | |

| | | |
|---|---|---|
| Hexachlorobenzene | | |
| Mirex | | |
| PCBs | | |
| Toxaphene | | |
| HCH | | |

**Answer**

The substances listed in table above have neither been produced nor sold in Belgium in the last years.

## VI. THE 1998 PROTOCOL ON HEAVY METALS

41. The questions in this section are based on the reporting obligation of Parties in accordance with article 7, paragraphs 1 (a) and 2 and enable Parties to provide information on the implementation of the obligations under articles 3.1, 3.2 (a), 3.2 (b), 3.3 and 5.1 of the Protocol. Questions 35 and 36 are not yet mandatory. They are designed to enable Parties to provide information on progress made towards implementation of articles 3.2 (c) and 3.2 (d) concerning obligations that will be in force in 2011. Question 38 concerns an obligation that will enter into force in 2008.

42. They refer to the following Parties to the Protocol: Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, the Netherlands, Norway, Republic of Moldova, Romania, Slovakia, Slovenia, Sweden, Switzerland, the United Kingdom, the United States and the European Community.

43. **Question 32**: With reference to article 5, paragraph 1, please provide details of the national strategies, policies and programmes your country has developed to discharge its obligations under the Protocol.

**Answer**

***Federal Government***

**See answer to Q.18 regarding the use of the community eco-label award scheme. The award of the label to specific products is based on the definition of a set of criteria for the product that establishes that the product is environmentally friendly. The criteria used also include inter alia restrictions on heavy metals.**

**« La Belgique suit les travaux de la Commission Européenne concernant les substances énumérées à l'annexe I du présent protocole et l'état de la situation est le suivant :**

| **substances concernées** | **n° directive** | AR transposant |
|---|---|---|
| **carbonate et sulfate de Pb** | **89/677/CEE** | **05/11/1990** |
| **Pb** | **91/157/CEE** | **17/03/1997** |
| **Pb** | **93/86/CEE** | **17/03/1997** |
| **composés CMR du Pb** | **97/10/CEE** | **05/10/1998** |
| **Pb** | **97/56/CEE** | **09/01/2000** |
| | **99/43/CEE** | **09/01/2000** |
| **Pb** | **98/101/CE** | **20/08/2000** |

| | | |
|---|---|---|
| | **(ATP 91/157 /CEE)** | |
| **Limitation marché CRM substances** | **DIR 2001/59/EC (28e ATP 67/548)** | 17/07/2002 **(modifiant AR 24/05/1982)** |
| **Piles et Batteries Hg (non numéroté) et composés du Hg** | **2006/66/EC** | **27/03/2009** |
| **Hg (non numéroté)** | **93/86/CEE** | **17/03/1997** |
| Hg | **98/101/CE (ATP 91/157 /CEE)** | **20/08/2000** |
| **Hg composés du Hg ROHS : Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques et collecte des déchets: Waste Electrical and Electronic Equipment** | 2002/95/EC et 2002/96/EC | **12/10/2004** |
| **Hg - Limitation de marché Measuring devices** | **REACH annex XVII** | |
| **composés du Hg (excluant mercure métallique: Hg) PIC Prior Information Consent procedure applying on Hg compounds + pesticides** | **Rotterdam convention, February 24, 2004** | **Loi spéciale 13/01/2003** |
| **composés du Hg MRLs pesticides in foodstuff** | **2004/59/EC** | **21/10/ 2004 (modifiant AR 13/03/2000)** |
| **cadmium et ses composés** | **91/338/CEE** | **25/02/1996** |
| **cadmium (non numérotés)** | **91/157/CEE** | **17/03/1997** |
| **cadmium (non numérotés)** | **93/86/CEE** | **17/03/1997** |
| **cadmium et ses composés (CMR)** | **97/10/CE** | **05/10/1998** |

**“**

***Flemish Region***

**In 2003 a new Flemish Environmental Policy Plan (2003-2007, MINA 3) has been approved by the Flemish government. In 2007 this plan was updated and prolonged to 2010 (approval by the Flemish Government on 21 December 2007). It fixes inter alia the general strategy of the air pollution policy.**

**Emission reduction objectives for heavy metals of 70 % for 2010 with 1995 a reference year have been set out in the MINA-3 plan. In the update this objective remained unmodified. The reduction objective of 70 % for Cadmium has already been achieved. For lead and mercury the reduction objective is in reach. Several studies determining the reduction potential of some major stationary sources (power plants, ferrous and non-ferrous metal industry, chemical industry and refineries) were used as a basis for the current reduction policy and aided in achieving the postulated reduction objectives.**

**The Flemish Environmental Policy Plan MINA -3 also includes the implementation of action programmes concerning fine dust. In this respect it is important to notice that the reduction of dust emissions has a positive effect on the reduction of emissions of heavy metals bound to these fine particles. A Flemish reduction plan on fine dust was agreed on 23 December 2005 (.**

**Yearly emission inventories are set up for heavy metals (Hg, Cd, Cu, Zn, Pb, As, Cr, Ni) in The Environment and Nature Report of Flanders (MIRA-T). This report can be consulted on http://www.milieurapport.be.**

**The Flemish Environmental Legislation (VLAREM) imposes an emission limit value towards air for all activities exceeding a set threshold value defined as total emission load. For some specific sectors more severe emission limit values have been set. See further answer to Q.34.**

***Walloon Region***

**Comme pour les autres polluants, en RW la politique de réduction métaux s'articule surtout autour de l'octroi des permis d'exploiter aux entreprises fixant des conditions d'exploitation.**
**En outre, de grandes sources fixes telles que les incinérateurs, la co-incinération, les grandes installations de combustion sont réglementées spécifiquement en application des directives européennes et des décisions et recommandations OSPAR.**
**Le secteur verrier fait l'objet d'un accord de branche en RW qui vise notamment les métaux lourds.**
**En matière de qualité de l'air, des valeurs limites et des valeurs limites sont déterminées pour les particules en suspension et le plomb.**
**Par ailleurs, les dépôts des métaux lourds suivants sont mesurés par le réseau de surveillance de la qualité de l'air : aluminium, antimoine, arsenic, baryum, cadmium, calcium, chrome, cuivre, fer, magnésium, manganèse, mercure, molybdène, nickel, plomb, sélénium, silicium, titane, vanadium, zinc. Et la plupart de ces métaux sont également dosés sur les poussières fines. »**

***Brussels-Capital Region***

See also question 3 on Environmental Permit (license) and question 26.
The protocol for the heavy metals concerns cadmium (Cd), lead (Pb) and mercury (Hg). The use of gasoline without lead and the use of the BAT for the industrial processes imply that the emissions are lower than the values than in 1990.
In the context of the international obligations, an inventory of the emissions in the air and water for 7 heavy metals coming from the most important industrial sources in the Brussels-Capital Region was done in 2004. The conclusion is that the emission from the main industrial sources in Cd, Pb and Hg respect the obligations of the international agreement OSPAR and the LRTAP protocol on heavy metals.
In the Brussels-Capital Region, the "BAT department" of IBGE-BIM followed the evolution of the European work on mercury and evaluates their impact on the Brussels-Capital Region. The inventory of the heavy metals shows that the decrease of the mercury emission is less than the other heavy metals. Nevertheless, the mercury emission is under the limit value imposed by the European Union.
In 2003, the mercury emissions are mainly emitted by the incinerator of the domestic wastes (about 90%) and the cremation of deceased humans (10%). The mercury emissions from the incinerator at Neder-Over-Heembeek are below the limit fixed by the Aarhus Protocol.
In addition, the emissions of mercury from the incinerator of domestic wastes and the crematorium were evaluated and give new ways to apply measures to decrease further the mercury emissions.

44. **Question 33**: With reference to article 3, paragraph 2 (a), and annex III, please explain how you ensure the application of BAT to each new stationary source within a major source category (construction or substantial modification commenced after 29 December 2005) for which that annex identifies BAT, for example through national legislation, permitting procedures, guidance, etc.

**Answer**

As explained in the answer to Q.26 the European IPPC Directive 96/61/EC concerning integrated pollution prevention and control is applicable in the EU countries. This Directive sets common rules for permitting and controlling industrial installations. All stationary sources listed in annex II and referred to in annex III are covered by the IPPC Directive. The IPPC Directive is implemented in Belgium in regional legislation.

For further details, see answer to Q.26.

45. **Question 34**: With reference to article 3, paragraph 2 (b), annex II and annex V, please provide details of the limit values applied to each new stationary source within a major stationary source category. If different emission reduction strategies that achieve equivalent overall emission reductions are applied, please describe these. Please complete the table below.

**Answer**

**Emissions of stationary sources referred to in question 34 are regulated by regional legislation: see answers below by the different regions.**
**No alternative emission reduction strategies are used in Belgium.**

***Flemish Region***

**Emission limit values referred to in table below for new stationary sources are imposed by the Flemish legislation VLAREM II (see reference under Q.3).**
**Emission limit values for LCP in VLAREM II were modified on 23 April 2004, implementing the LCP Directive 2001/80/EC.**
**Emission limit values for waste incineration and cement industry (co-incinerating waste) in VLAREM II were modified on 12 December 2003, implementing the Waste incineration Directive 2000/76/EC.**

**VLAREM II imposes a general emission limit for PM of 50 mg/Nm³ (in case PM emission exceeds 500 g/h) and 150 mg/Nm³ (in case PM emission is below 500 g/h). For lead a general emission limit value of 5 mg/Nm³ is imposed in case total emission load exceeds 25 g/h.**
**These general emission limit (GEL) apply for those categories for which no specific sectoral emission limit values in VLAREM II are imposed.**

| Category annex II | New stationary sources | Pollutant | ELV (in mg/ $m^3$) (24-hour average) | % $O_2$ in flue gas |
|---|---|---|---|---|
| 1 | Combustion of solid fuels (≥ 50 MW)<br>Combustion of liquid fuels (≥ 50 MW) | PM<br>PM | 15-25<br>15-30 | 6<br>3 |
| 2 | Sinter plants | PM | 50 (GEL) | n.a |
| | Pellet plants:<br>(a) grinding, drying<br>(b) pelletizing<br>or: | PM<br>PM | no pellet plants in Belgium (for new permits: ELV will be based on BAT | |

| | | | | |
|---|---|---|---|---|
| | **(c) total plant emissions** | PM | guaranteeing ELV < 25mg/Nm³: see answer to Q.33 and 26) | |
| 3 | Blast furnaces | PM | 50 (GEL) | n.a |
| | Electric arc furnaces | PM | 20 | n.a |
| 5 and 6 | Production of copper and zinc (incl. Imperial Smelting furnaces) | PM | 20 | n.a |
| | Production of lead | PM | 10 | n.a |
| 7 | Cement industry | PM | 30 | n.a |
| 8 | Glass industry | Pb | 5 (GEL) | 8 / 13 |
| 9 | Chlor-alkali plants (mercury cell process) | Hg | The construction of new plants using the Hg cell process has been prohibited since 1999 (article 5.7.5.1 of VLAREM II) | |
| 10 and 11 | Hazardous waste incineration | PM<br>Hg | 10<br>0,05 ([a]) | 11<br>11 |
| | Medical waste incineration | PM | 10 | 11 |
| | Municipal waste incineration | PM<br>Hg | 10<br>0,05 ([a]) | 11<br>11 |

([a]) average of 0,5 to 8 hour measurement period < 0,05 mg/Nm³

***Walloon Region***

The LCP Directive 2001/80/EC has been implemented in 2002 in Walloon legislation ("Order of the Walloon Government of 13 November 2002 on sectoral provisions for thermal power plants and other combustion installations for electricity production with an installed capacity of 50 MWt or more, including combustion installations for steam and warm water production") without changing the emission limit values of the LCP Directive.
The Waste Directive 2000/76/EC on waste incineration imposing emission limit values for waste incineration and cement industry (co-incinerating waste) is implemented in Walloon legislation by the 'Order of the Walloon Government of 27 February 2003 on incineration and co-incineration of waste'.

No specific legislation exists in the Walloon region regulating emission limit values of sinter plants, blast furnaces, electric arc furnaces, production of copper, zinc and lead and glass industry. Emission limit values for these sources are imposed through individual environmental permits and are based on BAT (requirements of the IPPC directive have been implemented in the Walloon permit legislation). The Gothenburg protocol has been adopted in the Walloon region by the Order of Walloon Government of 25 March 2004. So as a minimum the limit values for sinter plants, blast furnaces, electric arc furnaces, production of

copper, zinc and lead and glass industry as mentioned in the protocol are therefore applied.

| **Category annex II** | **New stationary sources** | **Pollutant** | **ELV (in mg/ $m^3$) (24-hour average)** | **% $O_2$ in flue gas** |
|---|---|---|---|---|
| 1 | Combustion of solid fuels (≥ 50 MW)<br>Combustion of liquid fuels (≥ 50 MW) | PM<br>PM | 30-50<br>30-50 | 6<br>3 |
| 2 | Sinter plants | PM | 50 | n.a. |
| | Pellet plants:<br>(a) grinding, drying<br>(b) pelletizing<br>or:<br>**(c) total plant emissions** | <br>PM<br>PM<br><br>PM | no pellet plants in Belgium (for new permits: ELV will be based on BAT guaranteeing ELV < 25mg/Nm³: see answer to Q.33 and Q.26) | |
| 3 | Blast furnaces | PM | 50 | n.a |
| | Electric arc furnaces | PM | 20 | n.a |
| 5 and 6 | Production of copper and zinc (incl. Imperial Smelting furnaces) | PM | 20 | n.a |
| | Production of lead | PM | 10 | n.a |
| 7 | Cement industry | PM | 30 | n.a |
| 8 | Glass industry | Pb | 5 | |
| 9 | Chlor-alkali plants (mercury cell process) | Hg | The construction of new plants using the Hg cell process has been prohibited since 2000 | |
| 10 and 11 | Hazardous waste incineration | PM<br>Hg | 10<br>0,05 ([a]) | 11<br>11 |
| | Medical waste incineration | PM | 10 | 11 |
| | Municipal waste incineration | PM<br>Hg | 10<br>0,05 ([a]) | 11<br>11 |

([a]) average of 0,5 to 8 hour measurement period < 0,05 mg/Nm³

***Brussels-Capital Region***

The LCP Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants has been implemented in 2002 in Brussels legislation (« Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à la limitation des émissions de certains polluants dans l'atmosphère en provenance des grandes installations de combustion » of 21 November 2002; M.B. 21/12/2002) without changing the emission limit values of the LCP Directive.

The Waste Directive 2000/76/EC on waste incineration imposing emission limit values for waste incineration and cement industry (co-incinerating waste) is implemented in Brussels

legislation by the "Arrêté du Gouvernement de la Région de Bruxelles-Capitale relatif à l'incinération des déchets" of 21 November 2002 (M.B. 21/12/2002).
In the Brussels-Capital Region, a DéNOx system is operated to treat the emissions of the incinerator since 2006. The NOx in the plume of the incinerator will be reduced in azote and water in using ammonium.

Up to now there are no large combustion plants, no sinter and pellet plants, no cement plants, no blast furnaces, no electric arc furnaces, no production of copper, zinc and lead, no glass industry and no chlor-alkali plants present in the Brussels-Capital Region.

| **Category annex II** | **New stationary sources** | **Pollutant** | **ELV (in mg/ $m^3$) (24-hour average)** | **% $O_2$ in flue gas** |
|---|---|---|---|---|
| 1 | Combustion of solid fuels (≥ 50 MW)<br>Combustion of liquid fuels (≥ 50 MW) | PM<br>PM | 30-50<br>30-50 | 6<br>3 |
| 2 | Sinter plants | PM | | |
| | Pellet plants:<br>(a) grinding, drying<br>(b) pelletizing<br>or:<br>**(c) total plant emissions** | <br>PM<br>PM<br><br>PM | no pellet plants in Belgium (for new permits: ELV will be based on BAT guaranteeing ELV < 25mg/$Nm^3$: see answer to Q.33 and Q.26) | |
| 3 | Blast furnaces | PM | | n.a |
| | Electric arc furnaces | PM | | n.a |
| 5 and 6 | Production of copper and zinc (incl. Imperial Smelting furnaces) | PM | | n.a |
| | Production of lead | PM | | n.a |
| 7 | Cement industry | PM | 30 | n.a |
| 8 | Glass industry | Pb | | |
| 9 | Chlor-alkali plants (mercury cell process) | Hg | | |
| 10 and 11 | Hazardous waste incineration | PM<br>Hg | 10<br>0,05 ([a]) | 11<br>11 |
| | Medical waste incineration | PM | 10 | 11 |
| | Municipal waste incineration | PM<br>Hg | 10<br>0,05 ([a]) | 11<br>11 |

46. **Question 35**[9]: With reference to article 3, paragraph 2 (c), and annex III, please provide information on progress made towards applying BAT to each existing stationary

[9] Not mandatory. The obligation will become effective after 29 December 2011.

source (construction commenced on or before 29 December 2005) within a major stationary source category for which annex III identifies BAT. If your country intends, as an alternative, to apply different strategies that will achieve equivalent emission reductions, please describe these.

**Answer**

Not mandatory yet.

47. **Question 36**[9]: With reference to article 3, paragraph 2 (d), and annex V, please provide information on progress made towards applying limit values to each existing stationary source (construction commenced on or before 29 December 2005) within a major stationary source category, in so far as this is technically and economically feasible. If your country intends, as an alternative, to apply different strategies that will achieve equivalent emission reductions, please describe these. Please complete the table below.

**Answer**

Not mandatory yet.

48. **Question 37**: With reference to article 3, paragraph 3 and annex VI, paras. 1 to 4, please describe the product control measures being applied to marketed petrol in accordance with the conditions and timescales specified in annex VI. If leaded petrol with a lead content above 0.013 g/l is marketed for use by old on-road vehicles, indicate what percentage of total petrol sales it represents.

**Answer**

***Federal Government***

**By a Royal Decree of 1987 the lead concentration in petrol was reduced from 0.4 to 0.15 gram per litre. The Royal Decree of 29 December 1992 installed a lower price for petrol without lead. Since then, less lead containing fuel was consumed. From the first of April 1999 on, the petrol distributing sector in Belgium brought on the market a fuel containing a substitute for lead. From this date on, practically no lead containing fuel was sold anymore. In compliance with the European Directive 98/70/EC, the commercialization of leaded petrol is prohibited in Belgium from the first of January 2000. From 1 January 2000 the unleaded petrol sold in Belgium must - according to the fuel characteristics of the European Directive - have a lead content below 0,005 g/l.**

**European Directive 97/70 was** implemented in national legislation by the Royal Decree of 20 March 2000 concerning the name, the characteristics en the lead content of petrol fuels for motor vehicles (amended by 22 February 2005).

49. **Question 38**: With reference to article 3, paragraph 3, and annex VI, paragraph 5, please describe the measures applied to limit the mercury content in batteries, in accordance with the conditions and timescales specified in annex VI. Please complete the table below.

**Answer**

The maximum allowed mercury level in alkaline manganese batteries is currently regulated by the EU Directive 2006/66/EC, transposed into Belgian national legislation through the Royal Decree of 27 March 2009 (see article 4): for both alkaline manganese batteries, prolonged use, and other manganese batteries (except button cells), the limit value for Hg is 0,0005 % per weight. The EU Directive 2006/66/EC repeals directive 91/157/EEC which imposed Hg limits in alkaline batteries of 0,025% (0,05% for prolonged use), similar to what is currently prescribed by paragraph 5 of annex VI in the HM protocol.

## VII. GOTHENBURG PROTOCOL

50. The questions in this section are based on the reporting obligation of Parties in accordance with article 7, paragraph 1 (a), and enable Parties to provide information on the implementation of the obligations under articles 3.2, 3.3, 3.5, 3.8 and 6.1 (a) of the Protocol. Any Party that applies different emission reduction strategies that achieve equivalent overall emission levels for all source categories together, in accordance with article 3.2 and 3.3 and article 7 (a)(i), may go directly to question 49. By virtue of article 3.10 (b), questions 59–66 do not apply to the United States.

51. They refer to the following Parties to the Protocol: Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, the United States and the European Community.

52. **Question 39**: With reference to article 6, paragraph 1(a), please provide details of the supporting strategies, policies and programmes your country has adopted to facilitate the implementation of its obligations under article 3 of the Protocol. Where pollutant specific policies, strategies or programmes are used, please make a clear distinction between (a) sulphur; (b) $NO_x$; (c) VOCs; and (d) ammonia.

**Answer**

***Belgium***

The obligations of article 3 of the Gothenburg protocol (ceilings and technology obligations) are for the member states of the European Union also addressed by European legislation (directives and regulations).
Regarding the emission ceilings we can refer to the NEC Directive that sets the same $SO_2$, $NO_X$, VOC and $NH_3$ ceilings for Belgium as the Gothenburg protocol. The mandatory national emission reduction programme (NEC reduction programme) that was elaborated to reduce emissions of $NO_X$, $SO_2$, VOC and $NH_3$ in the framework of the NEC Directive will therefore at the same time facilitate the implementation of the ceilings of the Gothenburg protocol.
Regarding the technology obligations of the Gothenburg protocol we can refer to several European directives more or less covering the same obligations and all transposed into regional and/or national legislation: the IPPC directive 96/61/EC, the LCP directive 2001/80/EC, the directive 94/63/EC on VOC emissions from petrol storage and distribution, the directive 2000/76/EC on waste incineration, the directive 1999/32 on S content in liquid fuels, the solvent directive 1999/13, the directive 2003/17/EC on the quality of petrol and diesel fuels, several directives to control emissions from vehicles, trucks, motorcycles and off-road mobile sources and other.

The national NEC reduction programme includes information on the adopted and planned policies and measures in Belgium to achieve the emission ceilings of the NEC directive and the Gothenburg protocol. Belgium is a federal state and the legislation regarding environmental policy is to a large extent the responsibility of the regions. The competence of the federal government with respect to environmental issues is more or less restricted to product regulations. Therefore the Belgian ceilings were divided into 4 parts: a national ceiling for the emissions of non-stationary sources and a ceiling for each of the regions for its stationary sources. In accordance with this division, the Belgian NEC reduction programme consists of:

- a reduction programme for non-stationary sources;
- a reduction programme for stationary sources, consisting of
  - a federal part, describing the measures implemented or planned by the federal government;
  - a contribution from each of the regions, in which the federal measures are taken into account besides the measures implemented or planned within the region concerned.

The reduction programme for the non-stationary sources takes on the one hand the technological measures provided for by European directives and regulations into account. On the other hand additional measures are taken or planned in Belgium. These measures are intended to influence the mobility evolution (controlling the growth of road traffic and providing alternatives for road traffic) and to promote environmental friendly vehicles and fuels (with financial stimuli or sensitisation).

Besides the national NEC reduction programme also other important policies and programmes have been developed in Belgium which simultaneously facilitate the implementation of the obligations of the Gothenburg protocol. Especially the climate policy plans, developed by the regions and the federal government to reach European and Kyoto targets on the reduction of green house gases, are important to mention since they have significant synergies on the $SO_2$, $NO_X$, VOC and ammonia emissions. These climate policy plans include inter alia several measures to increase the rational use of energy (energy efficiency) and the use of renewable energy and CHP and will therefore lead to a reduction of energy consumption and energy related emissions of $SO_2$, $NO_X$, VOC and ammonia.

The obligation in the Gothenburg protocol to apply BAT is for Belgium also covered by the IPPC Directive. For more details we refer to the answer under Q.26.

***Flemish Region***

A first version of the Flemish NEC reduction programme elaborated in the framework of the NEC directive was finalised and approved in 2003. An updated version of the Flemish NEC

reduction programme was approved by the Flemish Government on 9 March 2007. The Flemish NEC reduction programme is also incorporated as an action in the Flemish Environmental Policy Plan (2003 - 2007, MINA 3), recently updated and prolonged to 2010 (approval by the Flemish Government on 21 December 2007). This plan fixes inter alia the general strategy of the air pollution policy and in relation to the Gothenburg protocol contains thematic strategies to address acidification, photochemical pollution, eutrophication and climate change. It is complementary to classical approach of applying air quality standards and emission limit values (imposed by the Flemish environmental legislation VLAREM and/or by individual permits).

The updated Flemish NEC reduction programme contains horizontal as well as pollutant specific measures to address the $NO_X$, $SO_2$, VOC and ammonia emissions. Furthermore distinction is made between measures for non-stationary sources (1) and measures for stationary sources (2).

(1) Measures for non-stationary sources:
For non-stationary sources the Flemish NEC reduction programme - on top of to the European obligations (Euro standards, fuel quality, …) - includes as mentioned above measures to influence the mobility evolution (controlling the growth of road traffic and providing alternatives for road traffic) and to promote environmental friendly vehicles and fuels (with financial stimuli or sensitisation). Some of these measures are already implemented; others are still in the planning phase. Regarding the measures to influence the mobility evolution the NEC reduction programme refers to the Flemish transport policy plan adopted by the Flemish Government on 17 October 2003. As explained in the NEC reduction programme a part of this transport policy plan - containing measures for a sustainable mobility to 2010 - has already been implemented.

(2) Measures for stationary sources:
For stationary sources the Flemish NEC reduction programme contains on the one hand horizontal measures like the implementation of the IPPC directive (application of BAT), the assessment of IEA, climate policy measures and sensitisation and on the other hand pollutant specific measures. The measures for stationary sources were selected on the basis of an extended study programme of the emission reduction potentials of all the main industrial sectors in the Flemish region. The selected measures are imposed by the Flemish environmental legislation VLAREM or through individual permits or sectoral agreements. The most important measures which have been implemented so far are:
- sectoral agreement with the electricity producers to reduce emissions of $SO_2$ and $NO_X$;
- modification of the Flemish legislation (VLAREM) imposing stricter emission limit values for combustion plants ($SO_2$ and $NO_X$), gas turbine installations ($SO_2$ and $NO_X$), stationary engines ($SO_2$ and $NO_X$), refineries ($SO_2$ and $NO_X$), waste incineration ($NO_X$), storage and distribution (VOC), stage II vapour recovery and car assembling (VOC);
- company specific measures in the chemical industry (VOC), at the production of paint

and ink (VOC);

- measures in the agricultural sector to reduce emissions of ammonia: reduction of live stock, low-emission manure application, feeding measures, low-emission housing systems and manure processing.

Additional measures are planned in the electricity sector, the refinery sector, the chemical, the iron and steel sector and other. With respect to $NO_X$ the introduction of and economic instrument (tax) is considered.

For more details of the NEC reduction programme see web-site http://ec.europa.eu/environment/air/pollutants/implem_nec_directive.htm

In the chapter on horizontal measures the Flemish NEC reduction programme (see above) refers to some climate policy measures which reduce the energy consumption and therefore the energy related emissions of especially $SO_2$ and $NO_X$. For details on these measures we refer to the Flemish climate policy plan of 2006 - 2O12 (to be consulted on the web-site http://www.lne.be/themas/klimaatverandering/klimaatconferentie/vlaams-klimaatbeleidsplan-2006-2012/flemish-climate-policy-plan-2006-2012). Most important measures envisaged in the Flemish climate policy plan with positive synergies on $SO_2$ and $NO_X$ emissions are focussed on increasing the rational use of energy and increasing the use of renewable energy and CHP:

- energy performance regulation for the residential and tertiary sector;
- public service obligations for the distribution grid administrators;
- tax reduction for energy saving measures (insulation, double glazing, …);
- stricter regulation regarding maintenance and inspection of heating systems
- increase the use of renewable energy and CHP: promoted through a system of green current certificates and CHP certificates.
- Benchmarking agreement for the large, energy intensive industries; $CO_2$ emission trading

***Walloon Region***

A first version of the Walloon NEC reduction programme elaborated in the framework of the NEC directive was finalised in 2003 and approved by the Walloon Government on 25 March 2004. This programme, containing measures for stationary and non-stationary sources and for the 4 pollutants ($SO_2$, $NO_X$, VOC and ammonia), was updated in 2007. As mentioned above the measures for non-stationary sources in the updated programme include - on top of to the European obligations (Euro standards, fuel quality, …) - measures to influence the mobility evolution and to promote environmental friendly vehicles and fuels. For stationary sources horizontal (implementation of European directives as IPPC) as well as pollutant and sector specific measures are envisaged in the updated programme. For more details of this updated programme we refer to:

http://ec.europa.eu/environment/air/pollutants/implem_nec_directive.htm .

***Brussels-Capital Region***

See also Question 3 for Environmental Permit (license) and BAT.

In order to fulfil the regional obligations set by the "Air Quality" Framework Directive (1996/62/EC ), the daughter Directives, the NEC Directive and the Kyoto Protocol, the government of the Brussels-Capital Region approved on 13 November 2002, the Structural Improvement Plan relating to Air Quality and Global Warming 2002-2010, also known as the Air-Climate Plan. This Plan was prepared by the IBGE-BIM (Institut Bruxellois de Gestion de l'Environnement), the Administration of Equipment and mobility (Administration des Equipements et Déplacements , AED), the Brussels public transport company (Société des Transports Intercommunaux de Bruxelles , STIB), the Administration of land-use planning and housing ( Administration de l'Aménagement du Territoire et du Logement, AATL) and the cabinets of the competent Brussels Ministers and Secretaries of State.
In designing the Plan, IBGE followed, among others, the sectoral working groups set up by the Flemish Region. Additional consultations, within the Brussels-Capital Region, were conducted with persons responsible for the waste incinerator and sectors emitting volatile organic compounds (VOC), such as car body shops and printers. Lastly, the services sector and industry were consulted via the Environment Council.
This Plan entails 81 prescriptions and measures distributed over the following areas:

- The reduction of emissions from transport, a major source of urban pollution, by improving the technology of vehicles, and a policy to reduce motor traffic, including parking regulations, company mobility plans, improvements in public transport, etc.
- The reduction of emissions caused by energy consumption of buildings, which are major emitters of greenhouse gases, via an environmental policy for the rational use of energy (RUE).
- The promotion of renewable energy;
- The reduction of emissions from industrial activities via a policy for technological progress and the use of products generating less pollution, including regulations on the use of solvents-based products for companies emitting volatile organic compounds (VOC);
- The reduction of emissions from individual incineration and household consumption of solvents (uncontrolled emissions);

A technical and economic analysis of these prescriptions was conducted in 2004. The decrease in emissions and their cost were defined for each prescription. The study led to the establishment of priorities, budgeting and programming for the various measures.
This Air-Climate Plan is subject to assessment and may be amended every two years. It was recently evaluated in mid-2006. This evaluation reviews the additional measures adopted

since the establishment of the Plan and stresses that priority must be given to reducing energy consumption by 2010 (the Kyoto Protocol) and, on the longer term, to the establishment of a "No Carbon Region". It is to be noted that the energy and the environment responsibilities lie now with a single Minister.
The environmental targets of the Air-Climate Plan were strengthened by other regional plans. The Regional Development Plan calls for a 20% reduction in traffic in relation to 1999 levels by the year 2010.
The Air Ordinance was also followed by a "clean vehicle decree" July 2003, which sets up a 20% quota of clean vehicles for the fleets of Brussels administrations. This target must be met not later than October 2008.
The "transport" aspects of the Air-Climate Plan have been strengthened in 2006, by the action plan "Bruxell'Air". It is the result of the close cooperation between the Environment and Energy Minister and the Mobility Minister. Furthermore, it introduces financial tools related to the withdrawal and destruction of vehicles prior to EURO II (regional act of 7 September 2006) and emergency plans in the event of pollution peaks.

***Federal Government***

Plan fédéral de lutte contre l'acidification et l'ozone troposphérique.
Ce plan compilent un ensemble de mesures structurelles à l'initiative des différentes autorités compétentes ainsi que quelques actions conjointes. Le plan fédéral - et national - de lutte contre l'acidification et l'ozone troposphérique 2004-2007 est arrivé à échéance fin 2007. Les conclusions relatives à l'évaluation de ce plan ainsi que la préparation du plan suivant sont en cours.
https://portal.health.fgov.be/pls/portal/docs/PAGE/INTERNET_PG/HOMEPAGE_MENU/MILIEU1_MENU/OZONE1_MENU/OZONE1_DOCS/PLAN%20NATIONAL_FR.PDF

En ce qui concerne les appareils de chauffage (non traité à la question 14).

L'Arrêté Royal du 8 janvier 2004 réglemente les émissions de $NO_X$ et de CO des appareils de chauffage central alimentés en combustible gazeux et liquide et d'un débit calorifique inférieur ou égal à 400 kW. Le scope concerne les chaudières et les brûleurs. Les objectifs de cette réglementation sont de fixer des valeurs limites d'émissions de $NO_X$ et de CO par type de combustible. Les appareils de chauffage doivent répondre à ces valeurs limites d'émissions lors de leurs mises sur le marché.

Cet arrêté royal est modifié par l'arrêté royal du 17 juillet 2009. Le scope est étendu aux générateurs d'air chaud. De nouvelles valeurs limites d'émissions sont fixées et planifiées en deux phases (2010 et 2012). Pour les appareils de chauffage alimentés en combustible liquide,

Le nouvel AR fixe des valeurs maximales d'indice de suie. Ce paramètre est en lien avec les émissions de particules ; plus l'indice de suie est faible, plus les émissions de particules sont réduites.

Disposition en vigueur avant le 01/01/2010

| **Réglementation** | **AR 4 janvier 2004** | |
|---|---|---|
| Types produits | **Entré en vigueur 2005** | |
| | mg/kWh $NO_X$ | mg/kWh CO |
| Chaudière | | |
| Chaudière murale<br>Équipée d'un brûleur atmosphérique<br>P ≤ 400 kW | ≤150 | ≤110 |
| Équipée d'un brûleur air soufflé<br>P ≤ 400 kW | ≤120 | ≤110 |
| Brûleur | | |
| à air soufflé<br>P ≤ 400 kW | ≤120 | ≤110 |
| Générateur d'air chaud | | |
| Chaudière | | |
| Équipée d'un brûleur atmosphérique<br>P ≤ 400 kW | ≤150*1,3 | ≤110*1,1 |
| Équipée d'un brûleur air soufflé<br>P ≤ 400 kW | ≤120*1,3 | ≤110*1,1 |
| Brûleur | | |
| à air soufflé<br>P ≤ 400 kW | ≤120*1,3 | ≤110*1,1 |
| Chaudière | | |
| Équipée d'un brûleur air soufflé<br>P ≤ 70 kW | ≤120 | ≤110 |
| Équipée d'un brûleur air soufflé<br>70 ≤ P ≤ 400 kW | ≤185 | ≤110 |
| Générateur d'air chaud | | |
| Brûleurs | | |
| Air soufflé<br>P ≤ 70 kW | ≤120 | ≤110 |
| Air soufflé<br>70 ≤ P ≤ 400 kW | ≤185 | ≤110 |

Arreté royal du 17 juillet 2009

| Combustible gazeux | À partir du 1er janvier 2010 | | À partir du 1er janvier 2012 | |
|---|---|---|---|---|
| | mg/kWh $NO_X$ | mg/kWh CO | mg/kWh $NO_X$ | mg/kWh CO |
| 1. Chaudière murale | mesurés conformément à la norme NBN EN 297 ou NBN EN 483 ou NBN EN 656 | | | |
| Puissance ≤ 400 kW | ≤ 70 | ≤ 110 | ≤ 70 | ≤ 110 |
| 2. Chaudière sol | mesurés conformément à la norme NBN EN 297ou NBN EN 483 ou NBN EN 656 | | | |
| Puissance ≤ 400 kW | ≤ 100 | ≤ 110 | ≤ 70 | ≤ 110 |
| 3. Brûleur à air soufflé | mesurés conformément à la norme NBN EN 676 | | | |
| Puissance ≤ 70 kW | ≤ 100 | ≤ 110 | ≤ 70 | ≤ 110 |
| 70 Kw < puissance ≤ 400 kW | ≤ 120 | ≤ 110 | ≤ 100 | ≤ 110 |
| 4. Générateur d'air chaud | mesurés conformément à la norme NBN EN 621, NBN EN 778, NBN EN 1020 et NBN EN 1319 | | | |
| et équipé d'un brûleur atmosphérique | ≤ 200 | ≤ 300 | ≤ 150 | ≤ 110 |
| et équipé d'un brûleur premix | ≤ 150 | ≤ 110 | ≤ 100 | ≤ 110 |
| et équipé d'un brûleur automatique à air soufflé P ≤ 70 kW | ≤ 100 | ≤ 110 | ≤ 70 | ≤ 110 |
| et équipé d'un brûleur automatique à air soufflé 70 < P ≤ 400 kW | ≤ 120 | ≤ 110 | ≤ 100 | ≤ 110 |
| Appareils alimentés en gaz propane | Dans le cas des appareils mis sur le marché pour fonctionner au gaz propane, les valeurs des niveaux d'émissions fixés aux points 1,2, 3 et 4 sont multipliés pour le : $NO_X$ par 1,3 CO par 1,1 | | | |

| Combustible liquide | À partir du 1er janvier 2010 | | | À partir du 1er janvier 2012 | | |
|---|---|---|---|---|---|---|
| 1. Chaudière | mg/kWh $NO_X$ | mg/kWh CO | | mg/kWh $NO_X$ | mg/kWh CO | |
| Puissance ≤ 70 kW | mesurés conformément à la norme NBN EN 303-4, NBN EN 303-2 et NBN EN 304 | | | | | |
| | ≤ 120 | ≤ 60 | | ≤ 115 | ≤ 60 | |
| 70 < Puissance ≤ 400 kW | mesurés conformément à la norme NBN EN 303-4, NBN EN 303-2 et NBN EN 304 | | | | | |
| | ≤ 185 | ≤ 110 | | ≤ 150 | ≤ 100 | |
| 2. Générateur d'air chaud | mg/kWh $NO_X$ | | | mg/kWh CO | | |
| Puissance ≤ 70 kW | mesurés conformément à la norme NBN EN 13832 | | | | | |
| | ≤ 120 | ≤ 60 | | ≤ 115 | ≤60 | |
| 70 < Puissance ≤ 400 kW | mesurés conformément à la norme NBN EN 13832 | | | | | |
| | ≤ 185 | ≤ 110 | | ≤ 150 | ≤100 | |
| 3. Brûleur | mg/kWh $NO_X$ | mg/kWh CO | Indice de suie | mg/kWh $NO_X$ | mg/kWh CO | Indice de suie |
| | mesurés conformément à la norme NBN EN 267 | | | | | |
| à air soufflé Puissance ≤ 70 kW | ≤ 120 | ≤ 60 | ≤ 1 | ≤ 115 | ≤ 60 | ≤ 0,5 |
| à air soufflé 70 < Puissance ≤ 400 kW | ≤ 185 | ≤ 110 | ≤ 1 | ≤ 150 | ≤ 110 | ≤ 0,5 |
| à air soufflé et à gazéification Puissance ≤ 70 kW | ≤ 120 | ≤ 60 | ≤ 0,5 | ≤ 115 | ≤ 60 | ≤ 0,3 |
| à air soufflé et à gazéification 70 < Puissance ≤ 400 kW | ≤ 185 | ≤ 110 | ≤ 0,5 | ≤ 150 | ≤ 110 | ≤ 0,3 |

53. **Question 40**: With reference to article 3, paragraph 2, and annex IV, paragraph 9, specify the limit values for sulphur emissions applied to each new stationary source (construction or substantial modification commenced after 17 May 2006) in your country

within stationary source categories identified in that annex. If you have applied alternative emission reduction strategies, please go to question 49. Please complete the table below.

**Answer**

Emissions of stationary sources referred to in question 40 are regulated by regional legislation: see answers below by the different regions.
Belgium ratified the Gothenburg protocol on 18 September 2007. The protocol entered into force for Belgium 90 days later or 17 December 2007. According to annex VII of the Gothenburg protocol the date at which the limit values referred to in article 3, paragraph 2 need to be applied for Belgium is 17 December 2008 for new stationary sources. Reported emission limit values in tables below for the different regions are new emission limit values applicable for installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003.
No alternative emission reduction strategies for large combustion plants are used in Belgium.

***Flemish region***

Emission limit values referred to in table below for large combustion plants are imposed by the Flemish legislation VLAREM II and the modification of 23 April 2004.
The modification of 23 April 2004 of VLAREM II - implementing the LCP Directive 2001/80/EC and the objectives of the NEC Directive 2001/81/EC - introduced new emission limit values for large combustion plants, gas turbine installations, stationary engines, oil refineries and nitric acid production.

| **Stationary source category** | **$O_2$ in flue gas (%)** | **Limit value ($mg/Nm^3$) ([a])** |
|---|---|---|
| Solid fuels > 50 | 6 | 200 |
| Biomass > 50 MWt | 11 | 50 |
| Liquid fuels 50 - 100 MWt | 6 | 850 |
| Liquid fuels 100 - 600 MWt | 6 | 200 |
| Liquid fuels > 600 MWt | 3 | 150 |
| Gaseous fuels in general | 3 | 35 |
| Blast furnace gas | 3 | 200 |
| Cokes oven gas | 3 | 400 |
| Liquefied gas | 3 | 5 |
| New combustion plants in refineries > 50 MWt | 3 | 600 |

([a]) for installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003.

***Walloon Region and Brussels-Capital Region***

The LCP Directive 2001/80/EC has been implemented in 2002 in Brussels (1) and Walloon (2) law without changing the emission limit values of the LCP Directive.
(1) Arrêté du Gouvernement de la Région de Bruxelles-Capitale of 21 November 2002 on the limitation of emissions of certain pollutants into the air from large combustion plants
(2) Arrêté of the Walloon Government of 13 November 2002 on sectoral provisions for thermal power plants and other combustion installations for electricity production with an installed capacity of ≥ 50 MW, including combustion installations for steam and warm water production.

Following emission limit values apply for the Walloon and Brussels-Capital Region.

| **Stationary source category** | **$O_2$ in flue gas (%)** | **Limit value (mg/Nm³) ([a])** | **Alternative: desulphu-rization rate for domestic solid fuel** |
|---|---|---|---|
| Solid fuels 50 -100 MWt | 6 | 850 | 92 |
| Solid fuels 100 - 300 MWt | 6 | 200 | 92 |
| Solid fuels > 300 MWt | 6 | 200 | 95 |
| Biomass 50 - 300 MWt | 6 | 200 | 92 |
| Biomass > 300 MWt | 6 | 200 | 95 |
| Liquid fuels 50 - 100 MWt | 6 | 850 | |
| Liquid fuels 100 - 300 MWt | 6 | 400 to 200 (linear decrease) | |
| Liquid fuels > 300 MWt | 3 | 200 | |
| Gaseous fuels in general | 3 | 35 | |
| Blast furnace gas | 3 | 200 | |
| Cokes oven gas | 3 | 400 | |
| Liquefied gas | 3 | 5 | |
| New combustion plants in refineries > 50 MWt | 3 | 600 | |

([a]) for installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003.

54. **Question 41**: With reference to article 3, paragraph 3 and annex IV, paragraph 9, please provide details of the limit values for sulphur emissions applied in your country to each existing stationary source (construction commenced on or before 17 May 2006) within a stationary source category identified in that annex, in so far as it is technically and

economically feasible and taking into consideration the costs and advantages. If you have applied alternative emission reduction strategies, please go to question 49. Please complete the table below.

**Answer**

Emissions of stationary sources referred to in question 41 are regulated by regional legislation: see answers below by the different regions.
Belgium ratified the Gothenburg protocol on 18 September 2007. The protocol entered into force for Belgium 90 days later or 17 December 2007. According to annex VII of the Gothenburg protocol the date at which the limit values referred to in article 3, paragraphs 3 need to be applied for Belgium is 1 January 2008 for existing stationary sources.
No alternative emission reduction strategies for large combustion plants are used in Belgium.

***Flemish region***

Emission limit values referred to in table below for large combustion plants are imposed by the Flemish legislation VLAREM II and the modification of 23 April 2004.
The modification of 23 April 2004 of VLAREM II - implementing the LCP Directive 2001/80/EC and the objectives of the NEC Directive 2001/81/EC - introduced new emission limit values for large combustion plants, gas turbine installations, stationary engines, oil refineries and nitric acid production.
Reported emission limit values in table below are new emission limit values applicable from 1 January 2008 for installations for which the license for operation was requested before 27 November 2002 and which were put into operation before 27 November 2003. For installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003 see answer to Q.40.

| Stationary source category | $O_2$ in flue gas (%) | Limit value ($mg/Nm^3$) ([a]) | Limit value ($mg/Nm^3$) ([b]) |
|---|---|---|---|
| Solid fuels 50 -100 MWt | 6 | 1050 | 1050 |
| Solid fuels 100 - 300 MWt | 6 | 850 | 850 |
| Solid fuels > 300 MWt | 6 | 250 | 200 |
| Biomass > 50 MWt | 11 | 50 | 50 |
| Liquid fuels 50 - 100 MWt | 6 | 1020 | 1020 |
| Liquid fuels 100 - 300 MWt | 6 | 1020 | 1020 |
| Liquid fuels 300 - 400 MWt | 3 | 1020 | 200 |
| Liquid fuels 400 - 500 MWt | 3 | 1020 to 400 (linear decrease) | 200 |
| Liquid fuels 500 - 600 MWt | 3 | 400 | 200 |
| Liquid fuels > 600 MWt | 3 | 400 | 150 |

| | | | |
|---|---|---|---|
| Gaseous fuels in general | 3 | 35 | 35 |
| Blast furnace gas | 3 | 800 | 800 |
| Cokes oven gas | 3 | 400 | 400 |
| Liquefied gas | 3 | 5 | 5 |
| combustion plants in refineries > 50 MWt | 3 | 1000 | 1000 |

([a]) for installations which were licensed before 1 July 1987.
([b]) for installations for which the license for operation was requested before 27 November 2002 and which were put into operation before 27 November 2003.

***Walloon Region***

The LCP Directive 2001/80/EC has been implemented in 2002 in Walloon legislation ("Order of the Walloon Government of 13 November 2002 on sectoral provisions for thermal power plants and other combustion installations for electricity production with an installed capacity of 50 MWt or more, including combustion installations for steam and warm water production") without changing the emission limit values of the LCP Directive.
Reported emission limit values in table below are new emission limit values applicable from 1 January 2008 for installations for which the license for operation was requested before 27 November 2002 and which were put into operation before 27 November 2003. For installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003 see answer to Q.40.

| **Stationary source category** | **$O_2$ in flue gas (%)** | **Limit value ($mg/Nm^3$) ([a])** | **Alternative: desulphu-rization rate for domestic solid fuel** |
|---|---|---|---|
| Solid fuels 50 -100 MWt | 6 | 2000 | 60 |
| Solid fuels 100 - 500 MWt | 6 | 2000 to 400 (linear decrease) | 75 (≤ 300 MWt)<br>90 (> 300 MWt) |
| Solid fuels > 500 MWt | 6 | 400 | 92 / 94 |
| Liquid fuels 50 - 100 MWt | 6 | 2000 | |
| Liquid fuels 100 - 300 MWt | 6 | 2000 to 400 (linear decrease) | |
| Liquid fuels > 300 MWt | 3 | 400 | |
| Gaseous fuels in general | 3 | 35 | |
| Blast furnace gas | 3 | 800 | |
| Cokes oven gas | 3 | 800 | |
| Liquefied gas | 3 | 5 | |

| | | | |
|---|---|---|---|
| New combustion plants in refineries > 50 MWt | 3 | 1000 | |

([a]) for installations for which the license for operation was requested before 27 November 2002 and which were put into operation before 27 November 2003.

***Brussels-Capital Region***

No large combustion plants above 50 MWt for which construction commenced on or before 17 May 2006 exist in the Brussels-Capital Region. For legislation on new installations after 17 May 2006, see answer to Q.40.

55. **Question 42**: With reference to article 3, paragraph 2, and annex IV, paragraphs 11 and 12, please provide details of the limit values currently applied in your country for sulphur recovery for new and existing Claus plants and sulphur dioxide emissions from new and existing installations for titanium dioxide ($TiO_2$) production.

**Answer**

***Flemish Region***

Emission standards for Claus plants (1) and Titanium dioxide production (2) are imposed by the Flemish legislation VLAREM II.
(1) Following sulphur recovery rates apply for Claus plants with capacities above 50 tonnes of sulphur a day:
- licensed on or after 1 January 2004: 99,5 %
- licensed before 1 January 2004: 99 %

(2) An emission standard of 10 kg of $SO_2$ equivalent per tonne of Titanium dioxide produced applies for the Titanium dioxide production in the Flemish Region.

***Walloon Region and Brussels-Capital Region***

No Claus plants or Titanium production in the Walloon and Brussels-Capital Region.
In case in the future Claus plants or Titanium production would be installed in the Walloon or Brussels-Capital Region, at a minimum the emission standards of annex IV of the Gothenburg protocol will be applied. The environmental permits will be based on BAT (see also answer to Q.26; requirements of the IPPC directive are included in the regional permit legislation) and will include emission standards equal or below emission standards of annex IV of the Gothenburg protocol.

56. **Question 43**: With reference to article 3, paragraph 2, and annex IV, paragraph 10, please provide details of the limit value for sulphur content of gas oil that is currently applied in your country.

**Answer**

Applied limit values for sulphur content of gas oil in Belgium:
0,2 % from 1 July 2000
0,1% from 1 January 2008
See answer to Q. 17. for further details.

57. **Question 44**: With reference to article 3, paragraph 2 and annex V, please provide details of the limit values for $NO_x$ emissions applied to each new stationary source (construction or substantial modification commenced after 17 May 2006) within stationary source categories identified in that annex. If you have applied alternative emission reduction strategies, please go to question 49. Please complete the table below.

**Answer**

Emissions of stationary sources referred to in question 44 are regulated by regional legislation: see answers below by the different regions.
Belgium ratified the Gothenburg protocol on 18 September 2007. The protocol entered into force for Belgium 90 days later or 17 December 2007. According to annex VII of the Gothenburg protocol the date at which the limit values referred to in article 3, paragraph 2 need to be applied for Belgium is 17 December 2008 for new stationary sources.
No alternative emission reduction strategies are used in Belgium.

***Flemish region***

Emission limit values referred to in table below are imposed by the Flemish legislation VLAREM II and the modification of 23 April 2004.
The modification of 23 April 2004 of VLAREM II - implementing the LCP Directive 2001/80/EC and the objectives of the NEC Directive 2001/81/EC - introduced new emission limit values for large combustion plants, gasturbine installations, stationary engines and nitric acid production.

At the moment there is no cement production in the Flemish region. VLAREM II imposes an emission limit value for $NO_X$ of 500 mg/$Nm^3$ for new cement kilns co-incinerating waste

(translation of Directive 2000/76/EC on waste incineration in VLAREM II by modification of 12 December 2003).

| Stationary source category | $O_2$ in flue gas (%) | license | Limit value ($mg/Nm^3$) |
|---|---|---|---|
| **A. Boilers** | | | |
| 1. Solid fuels 50-100 $MW_{th}$ | 6 | ([a]) | 150 |
| 2. Solid fuels 100-300 $MW_{th}$ | 6 | ([a]) | 150 |
| 3. Solid fuels >300 $MW_{th}$ | 6 | ([a]) | 150 |
| 4. Liquid fuels 50-100 $MW_{th}$ | 3 | ([a]) | 150 |
| 5. Liquid fuels 100-300 $MW_{th}$ | 3 | ([a]) | 150 |
| 6. Liquid fuels>300 $MW_{th}$ | 3 | ([a]) | 150 |
| 7. Natural gas 50-300 $MW_{th}$ | 3 | ([a]) | 100 |
| 8. Natural gas >300 $MW_{th}$ | 3 | ([a]) | 100 |
| 9. Other gases | 3 | ([a]) | 200 |
| 10. Biomass 50 - 300 $MW_{th}$ | 11 | all | 200 |
| 11. Biomass >300 $MW_{th}$ | 11 | all | 130 |
| **B. Onshore combustion turbines >50 $MW_{th}$** | | | |
| 1.a Natural gas | 15 | ([a]) | 50 |
| 1.b Other gases | 15 | ([a]) | 75 |
| 2. Liquid fuels | 15 | ([a]) | 120 |
| **C. Cement production** | | | |
| Cement kilns co-incinerating waste | 10 | ([b]) | 500 |
| **D. Stationary engines** | | | |
| 1. Spark ignition engines, 4-stroke, >1 $MW_{th}$: Lean-burn engines | 5 | Licensed on or after 1 January 2005 | 500 |
| 2. Spark ignition engines, 4-stroke, >1 $MW_{th}$: other engines | 5 | Licensed on or after 1 January 2005 | 500 |
| 3. Compression ignition (=Diesel) engines, >5 $MW_{th}$: natural gas (jet ignition engines) | 5 | Licensed on or after 1 January 2005 | 500 |
| 4. Compression ignition (=Diesel) engines, >5 $MW_{th}$: heavy fuel oil | 5 | Licensed on or after 1 January 2005 | 500 |
| 5. Compression ignition (=Diesel) engines, >5 $MW_{th}$: diesel oil or gas oil | 5 | Licensed on or after 1 January 2005 | 500 |
| **E. Sinter plants** | | all | 400 |
| **F. Nitric acid production, excl. acid concentration units** | | Licensed on or after 1 January 2004 | 350 |

([a]) for installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003.

([b]) for installations punt into service on or after 28 December 2002.

***Walloon Region***

The LCP Directive 2001/80/EC has been implemented in 2002 in Walloon legislation ("Order of the Walloon Government of 13 November 2002 on sectoral provisions for thermal power plants and other combustion installations for electricity production with an installed capacity of 50 MWt or more, including combustion installations for steam and warm water production") without changing the emission limit values of the LCP Directive.

Emission limit values for the cement industry are derived from the Directive 2000/76/EC on waste incineration which includes emission limit values for cement kilns co-incinerating waste; implemented in Walloon legislation by the 'Order of the Walloon Government of 27 February 2003 on incineration and co-incineration of waste'.

Following emission limit values apply for the Walloon Region.

| **Stationary source category** | **$O_2$ in flue gas (%)** | **license** | **Limit value ($mg/Nm^3$)** |
|---|---|---|---|
| **A. Boilers** | | | |
| 1. Solid fuels 50-100 $MW_{th}$ | 6 | ([a]) | 400 |
| 2. Solid fuels 100-300 $MW_{th}$ | 6 | ([a]) | 200 |
| 3. Solid fuels >300 $MW_{th}$ | 6 | ([a]) | 200 |
| 4. Liquid fuels 50-100 $MW_{th}$ | 3 | ([a]) | 400 |
| 5. Liquid fuels 100-300 $MW_{th}$ | 3 | ([a]) | 200 |
| 6. Liquid fuels>300 $MW_{th}$ | 3 | ([a]) | 200 |
| 7. Natural gas 50-300 $MW_{th}$ | 3 | ([a]) | 150 |
| 8. Natural gas >300 $MW_{th}$ | 3 | ([a]) | 100 |
| 9. Other gases | 3 | ([a]) | 200 |
| 10. Biomass 50 - 100 $MW_{th}$ | 6 | ([a]) | 400 |
| 11. Biomass 50 - 100 $MW_{th}$ | 6 | ([a]) | 300 |
| 12. Biomass >300 $MW_{th}$ | 6 | ([a]) | 200 |
| **B. Onshore combustion turbines >50 $MW_{th}$** | | | |
| 1.a Natural gas | 15 | ([a]) | 50 (b) |
| 1.b Other gases | 15 | ([a]) | 120 |
| 2. Liquid fuels | 15 | ([a]) | 120 |
| **C. Cement production** | | | |
| Cement kilns co-incinerating waste | 10 | ([c]) | 500 |
| **D. Stationary engines** ([d]) | | | |
| **E. Sinter plants** ([d]) | 16 | | 400 |

| | | | |
|---|---|---|---|
| **F. Nitric acid production, excl. acid concentration units** ([d]) | | | 350 |

([a]) for installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003.
([b]) 75 mg/Nm³ in cases similar as cases mentioned in footnote b) to table 2 of annex V of the Gothenburg protocol.
([c]) for installations punt into service on or after 28 December 2002.
([d]) No specific legislation exists in the Walloon region regulating emission limit values of these sources. Emission limit values for these sources are imposed through individual environmental permits and are based on BAT (requirements of the IPPC directive have been implemented in the Walloon permit legislation: see also answer to Q.26); for stationary engines emission limit values are based on VLAREM II (see table above) and TA luft.

***Brussels-Capital Region***

The LCP Directive 2001/80/EC has been implemented in 2002 in Brussels law ("Arrêté du Gouvernement de la Région de Bruxelles-Capitale" of 21 November 2002 on the limitation of emissions of certain pollutants into the air from large combustion plants", M.B. 21/12/2002) without changing the emission limit values of the LCP Directive. See values for boilers and combustion turbines reported in table above for the Walloon region.
There is no cement industry, no sinter production and no nitric acid production in the Brussels-Capital Region. Neither are there any large combustion plants installed on the Brussels territory up to now.
The whole Gothenburg protocol has been transposed in the « Ordonnance portant assentiment au Protocole à la Convention de 1979 sur la pollution atmosphérique transfrontière à longue distance relatif à la réduction de l'acidification, de l'eutrophisation et de l'ozone troposphérique, avec annexes, signés à Göteborg le 30 novembre 1999 «  of 12 July 2007 (M.B. 27/07/2007).

58. **Question 45**: With reference to article 3, paragraph 3, and annex V, please provide details of the limit values for $NO_x$ emissions applied in your country to each existing stationary source (construction commenced on or before 17 May 2006) within a stationary source category identified in that annex, in so far as it is technically and economically feasible and taking into consideration the costs and advantages. If you have applied alternative emission reduction strategies, please go to question 49. Please complete the table below.

**Answer**

Emissions of stationary sources referred to in question 45 are regulated by regional legislation: see answers below by the different regions.

Belgium ratified the Gothenburg protocol on 18 September 2007. The protocol entered into force for Belgium 90 days later or 17 December 2007. According to annex VII of the Gothenburg protocol the date at which the limit values referred to in article 3, paragraphs 3 need to be applied for Belgium is 1 January 2008 for existing stationary sources.
No alternative emission reduction strategies for large combustion plants are used in Belgium.

***Flemish region***

Emission limit values referred to in table below are imposed by the Flemish legislation VLAREM II and the modification of 23 April 2004.
The modification of 23 April 2004 of VLAREM II - implementing the LCP Directive 2001/80/EC and the objectives of the NEC Directive 2001/81/EC - introduced new emission limit values for large combustion plants, gasturbine installations, stationary engines, oil refineries and nitric acid production.

Reported emission limit values in table below for boilers and combustion turbines are new emission limit values applicable from 1 January 2008 for installations for which the license for operation was requested before 27 November 2002 and which were put into operation before 27 November 2003. For installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003 see answer to Q.44.

There is no cement production in the Flemish Region.

| **Stationary source category** | **$O_2$ in flue gas (%)** | **Limit value ($mg/Nm^3$) ([a])** | **Limit value ($mg/Nm^3$) ([b])** |
|---|---|---|---|
| **A. Boilers** | | | |
| 1. Solid fuels 50-100 $MW_{th}$ | 6 | 500 | 400 - 500 |
| 2. Solid fuels 100-300 $MW_{th}$ | 6 | 500 | 200 - 500 |
| 3. Solid fuels 300 - 500 $MW_{th}$ | 6 | 350 | 200 - 350 |
| 4. Solid fuels > 500 $MW_{th}$ | 6 | 200 (300) | 200 |
| 5. Liquid fuels 50-100 $MW_{th}$ | 3 | 300 | 300 |
| 6. Liquid fuels 100-300 $MW_{th}$ | 3 | 300 | 300 |
| 7. Liquid fuels 300 - 500 $MW_{th}$ | 3 | 250 | 200 |
| 8. Liquid fuels >500 $MW_{th}$ | | 200 | 200 |
| 9. Natural gas 50-300 $MW_{th}$ | 3 | 300 | 150 - 300 |
| 10. Natural gas 300 -500 $MW_{th}$ | 3 | 250 | 100 - 150 |
| 11. Natural gas >500 $MW_{th}$ | | 200 | 100 - 150 |
| 12. Other gases | 3 | 200 - 300 | 200 - 300 |
| 13. Biomass 50 - 300 $MW_{th}$ | 11 | 200 | 200 |
| 14. Biomass >300 $MW_{th}$ | 11 | 130 | 130 |

| | | | |
|---|---|---|---|
| **B. Onshore combustion turbines >50 $MW_{th}$** | | | |
| 1.a Natural gas | 15 | 150 | 75 - 150 |
| 1.b Other gases | 15 | 200 | 75 - 200 |
| 2. Liquid fuels | 15 | 200 | 120 - 200 |

([a]) for installations which were licensed before 1 July 1987.
([b]) for installations for which the license for operation was requested before 27 November 2002 and which were put into operation before 27 November 2003.

| Stationary source category | $O_2$ in flue gas (%) | license | Limit value ($mg/Nm^3$) |
|---|---|---|---|
| **E. Sinter plants** | | all | 400 |
| **F. Nitric acid production, excl. acid concentration units** | | Licensed before 1 January 2004 | 450 |

***Walloon Region***

The LCP Directive 2001/80/EC has been implemented in 2002 in Walloon legislation ("Order of the Walloon Government of 13 November 2002 on sectoral provisions for thermal power plants and other combustion installations for electricity production with an installed capacity of 50 MWt or more, including combustion installations for steam and warm water production") without changing the emission limit values of the LCP Directive.
Reported emission limit values in table below for boilers are new emission limit values applicable from 1 January 2008 for installations for which the license for operation was requested before 27 November 2002 and which were put into operation before 27 November 2003. For installations for which the license for operation was requested on or after 27 November 2002 or which were put into operation after 27 November 2003 see answer to Q.44.

Emission limit values for the cement industry are derived from the Directive 2000/76/EC on waste incineration which includes emission limit values for cement kilns co-incinerating waste; implemented in Walloon legislation by the 'Order of the Walloon Government of 27 February 2003 on incineration and co-incineration of waste'. Reported value is for plants put into service before 28 December 2002. For new plants, see answer to Q. 44.

The Gothenburg protocol has been adopted in the Walloon region by the Order of Walloon Government of 25 March 2004. Limit values for sinter plants, nitric acid production and onshore combustion turbines are therefore the same as mentioned in the protocol.

| Stationary source category | $O_2$ in flue gas (%) | Limit value ($mg/Nm^3$) |
|---|---|---|
| **A. Boilers** | | |
| 1. Solid fuels 50-100 $MW_{th}$ | 6 | 600 |
| 2. Solid fuels 100-500 $MW_{th}$ | 6 | 600 |

| | | |
|---|---|---|
| 3. Solid fuels >500 $MW_{th}$ | 6 | 500 (600) |
| 4. Liquid fuels 50-100 $MW_{th}$ | 3 | 450 |
| 5. Liquid fuels 100-500 $MW_{th}$ | 3 | 450 |
| 6. Liquid fuels>500 $MW_{th}$ | 3 | 400 |
| 7. Natural gas 50-500 $MW_{th}$ | 3 | 300 |
| 8. Natural gas >500 $MW_{th}$ | 3 | 200 |
| 9. Other gases 50 - 500 MWt | 3 | 300 |
| 10. other gases > 500 MWt | 3 | 200 |
| **B. Onshore combustion turbines >50 $MW_{th}$** | | |
| 1.a Natural gas | 15 | 150 |
| 2. Liquid fuels | 15 | 200 |
| **C. Cement production** | | |
| Cement kilns co-incinerating waste | 10 | 800 |
| **E. Sinter plants** | | |
| ([a]) | 16 | 400 |
| **F. Nitric acid production, excl. acid concentration units** | | |
| ([a]) | | 450 |

([a]) No specific legislation exists in the Walloon region regulating emission limit values of these sources. Emission limit values for these sources are imposed through individual environmental permits and are based on BAT

***Brussels-Capital Region***

There are no existing stationary sources referred to in question 45 present in the Brussels-Capital Region.

59. **Question 45bis**: Please describe how your country applies best available techniques (BAT) to mobile sources and to each new or existing stationary source with regard to the Gothenburg Protocol obligations and taking into account guidance documents I to V adopted by the Executive Body at its seventeenth session (decision 1999/1)

**Answer**

Regarding the application of BAT to stationary sources, pleas see answers to questions 26 and 33.
Regarding the application of BAT to mobile sources we can refer to the harmonised regulation of emission standards at Community level (most recent regulations: Regulation 715/2007 and 595/2009 on type approval of motor vehicles with respect to emissions from passenger cars

and heavy duty vehicles). Both regulations enforce the application of BAT to ensure the Euro emission standards.

60. **Question 46**: With reference to article 3, paragraphs 2 and 3, and annex VI, please provide details of the limit values for VOCs emissions applied in your country to new stationary sources (construction or substantial modification commenced after 17 May 2006) for the stationary source category defined in table I of that annex and to existing stationary sources (construction commenced on or before 17 May 2006), in so far as it is technically and economically feasible and taking into consideration the costs and advantages. If you have applied alternative emission reduction strategies, please go to question 49. Please complete the table below.

**Answer**

***Flemish Region***

| Source category | Limit value (g VOC/Nm$^3$) | Flemish legislation |
|---|---|---|
| **Storage and distribution of petrol, excluding loading of seagoing ships:** Vapour recovery unit serving storage and distribution facilities at refinery tank farms or terminals with petrol throughput of 5000 m$^3$ annually | for new and existing installations:<br><br>35 g VOC/Nm³ until 31/12/2007<br><br>10 g VOC/Nm³ from 01/01/2008 | Introduced in Flemish legislation VLAREM II:<br><br>by modification of VLAREM II on 19 January 1999<br><br>by modification of VLAREM II on 23 April 2004 |

***Walloon Region***

Since the Walloon region has adopted the Gothenburg protocol, the limit value for VOC is the same as mentioned in the protocol.

| Source category | Limit value (g VOC/Nm$^3$) | Walloon legislation |
|---|---|---|

| | | |
|---|---|---|
| **Storage and distribution of petrol, excluding loading of seagoing ships:** Vapour recovery unit serving storage and distribution facilities at refinery tank farms or terminals with petrol throughput of 5000 $m^3$ annually | Gothenburg protocol imposes 10 g VOC/Nm³ | Order of Walloon Government of 23 May 1996 concerning the filling of vehicle fuel tanks and the Order of 4 April 1999 concerning measures to control the VOC emissions from storage and distribution of petrol. Order of Walloon Government of 25 March 2004 concerning adoption of Gothenburg protocol |

***Brussels-Capital Region***

Since the Brussels-Capital region has adopted the Gothenburg protocol, the limit value for VOC is the same as mentioned in the protocol.

| Source category | Limit value (g VOC/$Nm^3$) | Brussels legislation |
|---|---|---|
| **Storage and distribution of petrol, excluding loading of seagoing ships:** Vapour recovery unit serving storage and distribution facilities at refinery tank farms or terminals with petrol throughput of 5000 $m^3$ annually | Gothenburg protocol imposes 10 g VOC/Nm³ | Ordonnance portant assentiment au Protocole à la Convention de 1979 sur la pollution atmosphérique transfrontière à longue distance relatif à la réduction de l'acidification, de l'eutrophisation et de l'ozone troposphérique, avec annexes, signés à Göteborg le 30 novembre 1999 » of 12 July 2007 (M.B. 27/07/07). (transposing Gothenburg protocol) |

61. **Question 47**: With reference to article 3, paragraphs 2 and 3, and annex VI, please provide details of the limit values for VOCs emissions applied in your country to new stationary sources (construction or substantial modification commenced after 17 May 2006) for the stationary source categories defined in Tables II, V, VI,VIII, IX, X, XI, XII, XIV and XV of that annex and to existing stationary sources (construction commenced on or before 17 May 2006), in so far as it is technically and economically feasible and taking into

consideration the costs and advantages. If you have applied alternative emission reduction strategies, please go to question 49.

**Answer**

The VOC emissions of stationary sources referred to in question 47 are regulated by the European Directive 1999/13/EC on the limitation of VOC due to the use of organic solvents in certain activities and installations.

For the Flemish region directive 1999/13 has been implemented in the Flemish legislation VLAREM I and II in 2001: modification of 20 April 2001
For the Walloon region directive 1999/13 has been implemented in the ‘Order of the Walloon Government of 18 July 2002 concerning sectoral provisions for installations and activities using organic solvents.
For the Brussels-Capital Region directive 1999/13 has been implemented in 14 Arrêtés on 8 November 2001 (M.B. 04/12/2001).

a. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter à certaines activités de revêtements de surfaces
b. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter à certaines installations dans l'industrie de revêtement de véhicules
c. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations de production de vernis, laques, peintures, encres ou pigments
d. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations de fabrication de produits pharmaceutiques
e. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations réalisant la stratification de bois ou de plastique
f. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations réalisant le nettoyage de surfaces
g. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations réalisant le revêtement de cuir
h. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations réalisant la conversion du caoutchouc
i. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations réalisant le revêtement de fil de bobinage
j. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations d'extraction d'huiles végétales et de graisses animales et activités de raffinage d'huiles végétales
k. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations de fabrication de chaussures et pantoufles ou parties de celles-ci

l. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter à certaines activités d'impression
m. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter aux installations d'imprégnation du bois (M.B. 04/12/2001)
n. Arrêté du Gouvernement de la Région de Bruxelles-Capitale fixant des conditions d'exploiter à certaines installations de mise en peinture ou retouche de véhicules ou parties de véhicules

All emission limit values in waste, fugitive limit values and total emission limit values of directive 1999/13 are implemented in the Flemish, Walloon and Brussels legislation without any changes to the values. Therefore for details on limit values we refer to annex IIA (part I 'thresholds and emission controls') of the European Directive 1999/13: see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0013:EN:NOT

Furthermore the European Directive 1999/13 provides the possibility to make use of a reduction scheme allowing the operator to achieve by other means emission reductions, equivalent to those achieved if the emission limit values were to be applied. The requirements of such a reduction scheme are prescribed in annex IIB of the directive and as such implemented in the Flemish, Walloon and Brussels legislations.

62. Please complete table below

See annex IIA (part I 'thresholds and emission controls') of the European Directive 1999/13 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0013:EN:NOT

63. **Question 48**: With reference to article 3, paragraphs 2 and 3, and annex VI, please provide details of the limit values for VOCs emissions applied in your country to new stationary sources (construction or substantial modification commenced after 17 May 2006) for the stationary source categories defined in tables III, IV, VII and XIII of that annex and to existing stationary sources (construction commenced on or before 17 May 2006), in so far as it is technically and economically feasible and taking into consideration the costs and advantages. If you have applied alternative emission reduction strategies, please go to question 49. Please complete the table below.

**Answer**

The VOC emissions of stationary sources referred to in question 48 are - like the VOC emissions of the stationary sources referred to in question 47 - also regulated by the European Directive 1999/13/EC on the limitation of VOC due to the use of organic solvents in certain

activities and installations. For further details see answer to Q.47 and annex IIA (part I ‘thresholds and emission controls’ and part II ‘the vehicle coating industry’) of the European Directive 1999/13: see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0013:EN:NOT.

64. **Question 49**: With reference to article 7, paragraph 1(a)(i), please specify whether your country, instead of applying the measures referred to in articles 3.2 and 3.3, has applied any alternative emission reduction strategies to achieve overall emission levels for all source categories together, equivalent to those resulting from the measures. Please provide details of any such strategies and the way in which overall emission levels are achieved.

**Answer**

No alternative emission reduction strategies are used in Belgium by the different regions for the control of $SO_2$ and $NO_X$ emissions of the stationary sources referred to in articles 3.2 and 3.3 and further specified in annexes IV and V.
For the VOC emissions of stationary sources referred to in articles 3.2 and 3.3 (more specific those stationary sources covered by tables 2 to 21 in annex VI) the European Directive 1999/13/EC offers the possibility - as indicated in the answer to Q.48 - to make use of a reduction scheme allowing the operator to achieve by other means emission reductions, equivalent to those achieved if the emission limit values were to be applied. The requirements of this reduction scheme are prescribed in annex IIB of the directive and as such implemented in the Flemish, Walloon and Brussels legislations: see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0013:EN:NOT

65. **Question 50**: With reference to article 7, paragraph 1(a)(ii), where your country, taking into consideration the costs and advantages, considers certain limit values, as specified in accordance with article 3.3, not to be technically and economically feasible for specific existing stationary sources, please provide a justification for this.

**Answer**

There are no specific emission limit values, as specified in accordance with article 3.3, which are considered by Belgium as not technically or economically feasible.

66. **Question 51**: With reference to article 3, paragraph 5 and annex VIII, please provide details of the most recent limit values applied in your country to new passenger cars and light-duty vehicles. Please complete the table below.

**Answer**

Recent limit values applied in Belgium to new passenger cars and light duty vehicles are the Euro 4 standards. European Directive 98/69/EC on Euro 3 and 4 standards has been implemented in national legislation by the Royal Decree of 1 December 1999 amending the Royal Decree of 26 February 1981.

In 2007 the European Regulation 715/2007 on Euro 5 and 6 standards for new passenger cars and commercial vehicles was adopted. The regulation shall apply for the Member States from 2009. Translation into national legislation is not required.
Table below contains the Euro 4 standards.

| Cate-gory, class | Reference mass (RW) (kg) | Date of appli-cation | Limit values | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | CO | | HC | NOx | | HC+NOx | | Particul ates |
| | | | L1(g/km) | | L2 (g/km) | L3(g/km) | | L2+L3 (g/km) | | L4 (g/km) |
| | | | Petrol | Diesel | Petrol | Petrol | Diesel | Petrol | Diesel | Diesel |
| M | All | 01/01/2006 | 1,0 | 0,50 | 0,10 | 0,08 | 0,25 | - | 0,30 | 0,025 |
| N1 (I) | RW≤1305 | 01/01/2006 | 1,0 | 0,50 | 0,10 | 0,08 | 0,25 | - | 0,30 | 0,025 |
| N1 (II) | 1305< RW≤1760 | 01/01/2007 | 1,81 | 0,63 | 0,13 | 0,10 | 0,33 | - | 0,39 | 0,04 |
| N1 (III) | 1760<RW | 01/01/2007 | 2,27 | 0,74 | 0,16 | 0,11 | 0,39 | - | 0,46 | 0,06 |

67. **Question 52**: With reference to article 3, paragraph 5 and annex VIII, please provide details of the most recent limit values applied in your country to new heavy-duty vehicles if the ESC/ELR test[1/] is used. Please complete the table below.

Directive 2005/55/EC replacing Directive 1999/96/EC gives EURO III, IV and V standards for heavy duty vehicles. The EURO III, IV and V standards have been implemented in national legislation by the Royal Decree of 5 December 2000 amending the Royal Decree of 26 February 1981, and further modified by the Royal Decree of 25 September 2006.

Table below contains the EURO IV and V standards (according to ESC / ELR testing), currently applicable in Belgium.

| Date of application | CO (g/kWh) | HC (g/kWh) | NOx (g/kWh) | Particu-lates (g/kWh) | Smoke (m-1) |
|---|---|---|---|---|---|
| **EURO IV (01/01/2006)** | **1,5** | **0,46** | **3,5** | **0,02** | **0,5** |
| **EURO V (01/10/2009)** | **1,5** | **0,46** | **2,0** | **0,02** | **0,5** |

In 2009 the European Regulation 595/2009 on Euro VI standards for new heavy duty vehicles was adopted. The new standards are mandatory from 2013. Translation into national legislation is not required.

68. **Question 53**: With reference to article 3, paragraph 5, and annex VIII, please provide details of the most recent limit values applied in your country to new heavy-duty vehicles if the ETC test[1] is used. Please complete the table below.

**Answer**

Directive 2005/55/EC replacing Directive 1999/96/EC indicates EURO III, IV and V standards for heavy duty vehicles. The EURO III, IV and V standards have been implemented in national legislation by the Royal Decree of 5 December 2000 amending the Royal Decree of 26 February 1981, and further modified by the Royal Decree of 25 September 2006.

Table below contains the EURO IV and V standards (according to ETC testing), currently applicable in Belgium.

| Date of application | CO (g/kWh) | Non-methane HC (g/kWh) | Methane (g/kWh) | $NO_x$ (g/kWh) | Particu-lates (g/kWh) |
|---|---|---|---|---|---|
| **EURO IV (01/01/2006)** | **4,0** | **0,55** | **1,1** | **3,5** | **0,03** |
| **EURO V (01/10/2009)** | **4,0** | **0,55** | **1,1** | **2,0** | **0,03** |

In 2009 the European Regulation 595/2009 on Euro VI standards for new heavy duty vehicles was adopted. The new standards are mandatory from 2013. Translation into national legislation is not required.

69. **Question 54**: With reference to article 3, paragraph 5, and annex VIII, please provide details of the most recent limit values applied in your country to new diesel engines for non-road mobile machines (ISO 8178). Please complete the table below.

**Answer**

The emission limit values of Directive 97/68/EC amended by Directives 2002/88/EC and 2004/26/EC have been fully implemented into national legislation by the Royal Decree of 3 February 1999 and amendments. Following stage II limit values apply.

| Net power (p) (kW) | date of application | CO (g/kWh) | HC (g/kWh) | $NO_x$ (g/kWh) | PM (g/kWh) |
|---|---|---|---|---|---|
| 130≤ P<560 | 31/12/2001 | 3,5 | 1,0 | 6,0 | 0,2 |
| 75≤ P<130 | 31/12/2002 | 5,0 | 1,0 | 6,0 | 0,3 |
| 37≤ P<75 | 31/12/2003 | 5,0 | 1,3 | 7,0 | 0,4 |
| 18≤ P<37 | 31/12/2000 | 5,5 | 1,5 | 8,0 | 0,8 |

70. **Question 55**: With reference to article 3, paragraph 5, and annex VIII, please provide details of the most recent limit values applied in your country to new motorcycles and three- and four-wheelers (> 50 $cm^3$; > 45 km/h). Please complete the table below.

**Answer**

The emission limit values of Directive 97/24/EC amended by Directives 2002/51/EC have been fully implemented into national legislation by the Royal Decree of 8 November 1998 and 2 October 2003.
The most recent limit values applied to new motorcycles (stage III) and 3- and 4-wheelers (stage II) are indicated in table below. Limit values for 2-stroke and 4-stroke are the same.

| Engine type | date of application | CO (g/km) | HC (g/km) | $NO_x$ (g/km) |
|---|---|---|---|---|
| **Motorcycles** | | | | |
| < 150 cc | 01/01/2006 | 2,0 | 0,8 | 0,15 |
| ≥ 150 cc | 01/01/2006 | 2,0 | 0,3 | 0,15 |
| **3- and 4-wheelers** | | | | |
| Positive ignition | 01/01/2003 | 7,0 | 1,5 | 0,4 |
| Compression ignition | 01/01/2003 | 2,0 | 1,0 | 0,65 |

71. **Question 56**: With reference to article 3, paragraph 5, and annex VIII, please provide details of the most recent limit values applied in your country to new mopeds (≤ 50 $cm^3$; ≤ 45 km/h) [1/]. Please complete the table below.

**Answer**

The emission limit values of Directive 97/24/EC have been implemented into national legislation by the Royal Decree of 8 November 1998.
The most recent limit values applied to new mopeds (Stage II) are indicated in table below.

| **date of application** | **CO (g/km)** | **HC+ $NO_x$ (g/km)** |
|---|---|---|
| 17/6/2002 | 1,0 (*) | 1,2 |

(*) for 3- and 4-wheelers: 3,5 g/km

72. **Question 57**: With reference to article 3, paragraph 5, and annex VIII, tables VIII and X please provide details of the limit values applied in your country to petrol. Please complete the table below.

**Answer**

Limit values for petrol are regulated by Directive 98/70/EC, amended by Directive 2003/17/EC and very recently by Directive 2009/30/EC (with new limit values from 2011). These limit values are implemented in national legislation by the Royal Decree of 20 March 2000 concerning the name, the characteristics en the lead content of petrol fuels for motor vehicles, amended by 22 February 2005.

| **Parameter** | **Limits** | | **Date of application** |
|---|---|---|---|
| | **minimum** | **maximum** | |
| 1. Research octane number | 95 | | 01/01/2000 |
| 2. Motor octane number | 85 | | 01/01/2000 |
| 3. Reid vapour pressure, summer period (in kPa) | | 60,0 | 01/01/2000 |
| 4. Distillation: | | | 01/01/2000 |
| (a) Evaporated at 100° C (in %v/v) | 46,0 | | 01/01/2000 |
| (b) Evaporated at 150° C (in %v/v) | 75,0 | | 01/01/2000 |
| 5. Hydrocarbon analysis: | | | 01/01/2000 |
| (a) Olefins ( in %v/v) | | 18,0 | 01/01/2000 |
| (b) Aromatics | | 42,0 | 01/01/2000 |
| | | 35,0 | 01/01/2005 |
| (c) Benzene | | 1,0 | 01/01/2000 |
| 6. Oxygen content (in %m/m) | | 2,7 | 01/01/2000 |
| | | 3,7 | 01/01/2011 |
| 7. Oxygenates (in %v/v): | | | 01/01/2000 |
| (a) Methanol, stabilizing agents must be added | | 3 | 01/01/2000 |

| | | | |
|---|---|---|---|
| (b) Ethanol, stabilizing agents may be necessary | | 5<br>10 | 01/01/2000<br>01/01/2011 |
| (c) Iso-propyl alcohol | | 10<br>12 | 01/01/2000<br>01/01/2011 |
| (d) Tert-butyl alcohol | | 7<br>15 | 01/01/2000<br>01/01/2011 |
| (e) Iso-butyl alcohol | | 10<br>15 | 01/01/2000<br>01/01/2011 |
| (f) Ethers containing 5 or more C atoms / mol | | 15<br>22 | 01/01/2000<br>01/01/2011 |
| 8. Other oxygenates ( in %v/v) | | 10<br>15 | 01/01/2000<br>01/01/2011 |
| 9. Sulphur content (in mg/kg) | | 150<br>50<br>10 | 01/01/2000<br>01/01/2005<br>01/01/2009 |

73. **Question 58**: With reference to article 3, paragraph 5 and annex VIII, tables IX and XI, please provide details of the limit values applied in your country to diesel fuel. Please complete the table below.

**Answer**

Limit values for diesel are regulated by Directive 98/70/EC, amended by Directive 2003/17/EC and very recently by Directive 2009/30/EC (with new limit values from 2011). These limit values are implemented in national legislation by the Royal Decree of 20 March 2000 replacing Royal Decree of 28 October 1996 relating to the name, the characteristics and sulphur content of diesel fuels for on-road vehicles, further amended by 22 February 2005.

| **Parameter**[1/] | **Limits** | | **date of application** |
|---|---|---|---|
| | **Minimum** | **Maximum** | |
| 1. Cetane number | 51,0 | | 01/01/2000 |
| 2. Density at 15$^{o}$ C (in kg/m$^{3}$ ) | | 845 | 01/01/2000 |
| 3. Distillation point: 95% (in $^{o}$C) | | 360 | 01/01/2000 |
| 4. Polycyclic aromatic hydrocarbons (in % m/m) | | 11<br>8 | 01/01/2000<br>01/01/2011 |
| 5. Sulphur content (in mg/kg) | | 350<br>50<br>10 | 01/01/2000<br>01101/2005<br>01/01/2009 |

74. **Question 59**: With reference to article 3, paragraph 8 (a) and annex IX, paragraph 3, have you established, published and disseminated an advisory code on good agricultural practice to control ammonia emissions? If so, please provide details of its provisions, relevant to:

(a) Nitrogen management, taking account of the whole nitrogen cycle;
(b) Livestock feeding strategies;
(c) Low-emission manure spreading techniques;
(d) Low-emission manure storage systems;
(e) Low-emission animal housing systems;
(f) Possibilities for limiting ammonia emissions from the use of mineral fertilizers.

**Answer**

There are no agricultural sources of ammonia emissions in the Brussels-Capital Region. Answer below is limited to the Flemish and Walloon region.

***Flemish Region***

**The ministry of the Flemish Community published following codes of good practice reflecting on aspects referred to in question 59:**

**(a) Code of good agricultural practices - nutrients: arable farming**
**(b) Code of good agricultural practices - nutrients: grassland and fodder crops**
**(c) Code of good agricultural practices - nutrients: full ground vegetables and fruit growing**

**The Flemish Land Agency published a Code of good agricultural practice on the use of effluents from manure processing.**

**The codes provide guidance and recommendations for the application of agricultural nutrients in such a way that environmental demands are met. More specifically with regard to ammonia emissions advice on low-ammonia application is provided.**

***Walloon Region***

**The code of good practice reflecting aspects referred to in question 59 has been adopted and is linked with the nitrate Directive.**

75. **Question 60**: With reference to article 3, paragraph 8 (a), and annex IX, paragraph 4, please provide details of the steps taken in your country to limit ammonia emissions from the use of solid fertilizers based on urea.

**Answer**

**According to the available information, the use of urea as solid fertilizer is limited in Belgium due to its acidifying properties. Therefore, no specific policy measures have been taken yet to reduce ammonia emissions due to the use of solid fertilizers on the basis of urea.**

76. **Question 61**: With reference to article 3, paragraph 8 (a), and annex IX, paragraph 5, please indicate whether the use of ammonium carbonate fertilizers is prohibited in your country and specify the relevant legislation.

**Answer**

**Since ammonia carbonate in itself isn't mentioned in annex I to the Royal Decree of January 7th 1998 on the trade in fertilizers, soil improvement products and production substrates, it can't be traded as a fertilizer in Belgium.**
**This means that the use of ammonia carbonate as fertilizer is forbidden in Belgium.**

77. **Question 62**: With reference to article 3, paragraph 8 (a), and annex IX, paragraph 6, please explain how your country ensures the use of the low-emission slurry application techniques listed in guidance document V (ECE/EB.AIR/WG.5/2007/13), taking into account local soil and geomorphological conditions, slurry type and farm structure.

**Answer**

***Flemish Region***

**In Flanders, low-emission application of animal manure and organic fertilizers is mandatory (Art. 22 of the Manure Decree of 26 December 2006):**
**1° Farmyard manure with low ammonia content, organic fertilizers with low ammonia content and spent mushroom compost with low ammonia content (low ammonia content = less than 20% of the total N is ammonium-N) have to be incorporated into the soil within 24 hours after application.**
**2° Animal manure and organic fertilizers, other than those referred to in 1°, have to be applied to**

**a) grassland using sod-injection, slit-coulter or trailing hoses techniques**
**b) non-cultivated crop land using manure injection or by spreading and incorporation in the soil in two consecutive passages (whereby the manure is**

**incorporated into the soil within 2 hours after application). On Saturdays livestock manure has to be incorporated into the soil immediately.**

**c) cultivated crop land using manure injection or trailing hose techniques**

**3° In deviation from 1° and 2° the following fertilisers must not be applied in a low emission manner:**

**a) farmyard manure or spent mushroom compost applied to grassland;**

**b) farmyard manure, spent mushroom compost or compost used for defined cultivation of wood;**

**c) drainage water (= excess feed water from plant cultivation on growing mediums that is not re-used as feed water**

**This means that only techniques with a reduction potential of at least 30% are allowed.**

***Walloon Region***

**There is no mandatory manure injection technique in Wallonia. According to the "Arrêté du Gouvernement wallon relatif à la gestion durable de l'azote en agriculture"( 10 octobre 2002, following the nitrates directive) , the manure must be incorporated within the 24 hours following its application in case of bare soils without vegetal cover.**

78. **Question 63**: With reference to article 3, paragraph 8 (a), and annex IX, paragraph 7, please provide details of the measures taken in your country to limit ammonia emissions from solid manure application, and in particular whether there is a requirement that solid manure applied to land to be ploughed is incorporated within at least 24 hours of spreading.

**Answer**

***Flemish Region***

See answer to Q.62.

***Walloon Region***

**According to the "Arrêté du Gouvernement wallon relatif à la gestion durable de l'azote en agriculture"( 10 octobre 2002, following the nitrates directive) , the manure must be incorporated within the 24 hours following its application in case of bare soils without vegetal cover.**

79. **Question 64**: With reference to article 3, paragraph 8 (a), and annex IX, paragraph 8, please provide details on the use in your country of the low-emission storage systems for new slurry stores (construction commenced after 17 May 2006) on large pig and poultry farms (2,000 fattening pigs, or 750 sows or 40,000 poultry) or techniques that have been shown to reduce emissions by 40 per cent or more compared to the reference listed in guidance document V (ECE/EB.AIR/WG.5/2007/13).

**Answer**

***Flemish Region***

**According to VLAREM II (decision of the Flemish Government of 1 June 1995, and subsequent modifications, regarding general and sector-specific conditions concerning environmental hygiene) manure storage capacity has to be large enough to store animal manure for at least 6 months (VLAREM II art 5.9.2.3 §1) in case of slurry and for at least 3 months (VLAREM II art. 5.9.2.2 §5) in case of stable manure.**

**In addition, art 9 §1 of the Manure Decree of 26 December 2006 stipulates that by 31 December 2011 at the latest, every holding must have a capacity for storing livestock manure:**

**1° of at least 9 months for animals that are kept in stables;**
**2° of at least 6 months for animals with outdoor access;**
**3° of at least 3 months for farmyard manure.**

**The obligation does not apply where the farmer can show that the quantity of fertiliser in excess of the actual storage capacity will be disposed of in a manner that will not damage the environment. This obligation also does not apply to poultry where the manure remains in the coop and is disposed of after each round.**

**Rules for good craftsmanship for the construction of slurry storages are set out in chapters I, II and III of annex 5.9 of VLAREM II. Furthermore Art. 5.9.2.3 §4 and Art. 5.28.2.3 §2. specifically stipulate that slurry depots situated outside the stables, with an exception of the necessary ventilation pipes, have to be sealed from the outside air and prescribes the allowed covering techniques. Chapter IV of annex 5.9 describes further recommendations for outside slurry storage covering. Flemish regulation thus sets requirements to minimize ammonia emission from outside slurry storage, not only for large pig and poultry farms but for all livestock farms.**

***Walloon Region***

**L'Arrêté du Gouvernement wallon du 3 mars 2005 relatif au Livre II du Code de l'environnement, contenant le Code de l'eau stipule notamment qu'afin de pouvoir respecter aisément les périodes d'épandage, les infrastructures destinées au stockage des lisiers et des purins doivent permettre le stockage pendant 6 mois au moins.**

**L'arrêté ministériel du 1er avril 2004 relatif à la mise en conformité des infrastructures de stockage des effluents d'élevage prescrit notamment les conditions de stockages des effluents d'élevage.**

**Lors d'une demande de permis d'environnement concernant des exploitations de 2000 porcs à l'engrais, de 750 truies ou de 40000 volailles, l'administration de l'environnement est chargée de la remise d'avis. L'administration vérifie alors si la mise en œuvre des MTD préconisée par la directive IPPC est effective.**

80. **Question 65**: With reference to article 3, paragraph 8 (a) and annex IX, paragraph 9, please provide details of whether emission reductions of 40 per cent have been achieved in your country for existing slurry stores (construction commenced on or before 17 May 2006) on large pig and poultry farms (2,000 fattening pigs, or 750 sows or 40,000 poultry).

**Answer**

***Flemish Region***

**According to VLAREM II (art 5.28.2.3 §9) as of 1 January 1998 all existing outside slurry storages have to fulfil the requirements as stipulated in art 5.28.2.3.§2 b) to f), which include the covering of the slurry storage (see also Q.64). These requirements apply to all livestock farms and not only to large pig and poultry farms. Flemish regulation thus has set requirements to minimize ammonia emission also from existing outside slurry storage.**

***Walloon Region***

**See answer to Q.64**

81. **Question 66**: With reference to article 3, paragraph 8 (a) and annex IX, paragraph 10, please provide details of the use in your country of housing systems for new animal housing on large pig and poultry farms which have been shown to reduce emissions by 20 per cent or more compared to the reference listed in guidance document V

(ECE/EB.AIR/WG.5/2007/13).

**Answer**

***Flemish Region***

**According to Art.5.9.2.1bis of VLAREM II al new animal housing for pigs and poultry has to be low emission housing as far as there is a housing system described for that animal category in the 'list of low ammonia emission stable systems'. Only stable systems that occur on the 'list of low ammonia emission stable systems' (Ministerial Decision of 19 March 2004) are allowed to be build in new animal housing. This list prescribes the construction, operation and other demands the new housing systems have to comply to. These housing systems have shown to reduce ammonia emissions by 40 to 50%.**

***Walloon Region***

**L'avant-projet d'arrêté du Gouvernement wallon déterminant les conditions sectorielles relatives aux activités d'élevage ou d'engraissement de porcins prévoit dans son chapitre II "implantation et construction" que, pour les nouveaux établissements pouvant héberger, en un ou plusieurs bâtiments ou infrastructures, plus de 2000 porcs de 30 kg et plus ou plus de 750 truies, l'exploitant prévoit une technique de logement permettant une réduction des émissions d'ammoniac ($NH_3$) par rapport aux systèmes de logement de référence.**

**L'avant-projet d'arrêté du Gouvernement wallon déterminant les conditions sectorielles relatives aux activités d'élevage ou d'engraissement de poulettes, poules reproductrices, poules pondeuses et poulets de chair détaille les conditions d'exploitation et les conditions de stockage des effluents d'élevage.**

## VIII. FEEDBACK ON THE QUESTIONNAIRE

82. Question 67: Have you encountered difficulties in answering this questionnaire, whether technical or interpretative? Please provide further details by completing the table below.

**Table 34: Question 67**

| Question No | Problem | Suggestion for improvement |
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