COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 21.12.2007
COM(2007) 844 final

2007/0286 (COD)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on industrial emissions (integrated pollution prevention and control)

(Recast)

(presented by the Commission)

[COM(2007) 843 final]
[SEC(2007) 1679]
[SEC(2007) 1682]

EXPLANATORY MEMORANDUM

1) CONTEXT OF THE PROPOSAL

Grounds for and objectives of the proposal

The Lisbon Agenda, the Sixth Community Environment Action Programme as well as the EU Sustainable Development Strategy have been important drivers for the process of reviewing the Directive on integrated pollution prevention and control (IPPC) and related legislation on industrial emissions. One of their main elements concerns the achievement of environmental improvements while at the same time ensuring cost-effectiveness and encouraging technical innovation. Furthermore, the review has been identified in the context of Better Regulation and has been included in the EC's simplification rolling programme covering the period 2006-2009.

General context

Industrial activities are an important part of our economy. However, they also contribute to environmental pollution and to the production of waste and use of energy. Despite a reduction of emissions over the past decades, industrial activities remain a major source of pollutants.

The IPPC Directive covers some 52 000 installations. Emissions to air from these installations represent a large share of total emissions of key pollutants and far exceed the objectives set out in the Thematic Strategy on Air Pollution. Without further reduction of emissions from IPPC installations, the positive health and environmental effects to be obtained from these objectives will not materialise.

Industrial activities also lead to other significant environmental impacts, for example on water, soil and waste. An integrated approach taking into account cross-media effects in permitting is therefore essential.

The central element of such an approach is the implementation of Best Available Techniques (BAT). This is defined as using established techniques which are the most effective in achieving a high level of environmental protection as a whole and which can be implemented in the relevant sector under economically and technically viable conditions, taking into account the costs and advantages.

An information exchange on BAT is being organized by the Commission with Member States and other stakeholders to establish BAT reference documents (BREFs) indicating what is regarded as BAT at EU level for each industrial sector.

Industrial installations are also covered by sectoral directives, which set out operating conditions and other technical requirements. In relation to the IPPC Directive, these provisions are to be considered as minimum requirements.

Existing provisions in the area of the proposal

This proposal aims to revise and recast the following separate instruments into a single legal act.

Council Directive 78/176/EEC of 20 February 1978 on waste from the titanium dioxide industry, *OJ L 54, 25.2.1978, p. 19*

Council Directive 82/883/EEC of 3 December 1982 on procedures for the surveillance and

monitoring of environments concerned by waste from the titanium dioxide industry, *OJ L 378, 31.12.1982, p. 1*

Council Directive 92/112/EEC of 15 December 1992 on procedures for harmonizing the programmes for the reduction and eventual elimination of pollution caused by waste from the titanium dioxide industry, *OJ L 409, 31.12.1992, p. 11* (the last three being known collectively as: "TiO2 Directives").

Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control ("IPPC Directive"), *OJ L 257, 10.10.1996, p. 26*

Council Directive 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations ("VOC Solvents Directive"), *OJ L 85, 29.3.1999, p. 1*

Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste ("Waste Incineration Directive"), *OJ L 332, 28.12.2000, p. 91*

Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants ("LCP Directive"), *OJ L 309, 27.11.2001, p. 1*

Consistency with other policies and objectives of the Union

This proposal is consistent with Article 175 of the Treaty establishing the European Community and aims to provide a high level of protection for human health and the environment.

2) CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT

Consultation of interested parties

Consultation methods, main sectors targeted and general profile of respondents

The review process began at the end of 2005 and is based on an extensive programme of studies and continuous consultation with stakeholders, including the setting up of an Advisory Group, the organization of a Stakeholders' Hearing and an internet consultation.

Summary of responses and how they have been taken into account

An internet consultation was organised during the period 17 April – 18 June 2007. About 450 responses were received and analysed.

A large majority of the respondents agreed that:

- EU legislation should continue to cover all the main environmental impacts of the IPPC installations in an integrated way;

- BAT should remain the key principle in preventing/minimising the risk of pollution from industrial installations and that BREFs should play a central role in BAT implementation;
- certain minimum rules should be set at EU level regarding the issue of inspection and additional actions defined in the field of the monitoring and reporting of emissions;
- specific research can help to identify new techniques for consideration as potential future BAT;
- unnecessary monitoring and reporting requirements should be removed from operators and all the reporting requirements from Member States to the Commission should be combined and streamlined.

All background information is available on a public CIRCA website[1] dedicated to this initiative.

Collection and use of expertise

Scientific fields /areas of expertise concerned

The following areas of expertise have been used in developing this proposal: (1) assessment of health and environmental impacts from industrial emissions (to air, water, soil) (2) environmental technologies to prevent or mitigate industrial emissions (3) economic analysis and modelling (4) estimation of health impacts including quantification in monetary terms (5) estimation of ecosystem benefits (6) expertise in the permitting and control of industrial installations.

Methodology used

The principal methodologies used were expert meetings and the commissioning of an extensive programme of studies, including modelling and collection of detailed information on implementation through case studies and also sectoral and geographical assessment.

Main organisations/experts consulted

A wide range of experts from Member States, scientific experts, industry, environmental NGOs and specialized consultants were consulted.

Summary of advice received and used

The evidence that the Commission received may be summarised as follows: (i) industrial emissions can lead to serious risks to human health and the environment but can be prevented and controlled in a cost-effective way through the application of Best Available Techniques, (ii) a strengthening of current provisions is necessary in order to exploit the potential of BAT for the benefit of the environment and to support Member States in implementing such provisions, (iii) interactions between different pieces of legislation should be streamlined and

[1] http://circa.europa.eu/Public/irc/env/ippc_rev/library

certain provisions on reporting and monitoring simplified to reduce unnecessary administrative burdens and to enhance the current implementation practice.

Means used to make the expert advice publicly available

All reports (in both draft and final forms) from experts and contacts, as well as comments and contributions from stakeholders, have been routinely uploaded to the internet for public dissemination.

Impact assessment

The main problems identified in the Impact Assessment (IA) relate (1) to shortcomings in the current legislation that lead to unsatisfactory implementation and difficulties in Community enforcement actions and, thereby, to loss of health and environmental benefits and (2) to the complexity and lack of coherence of parts of the current legal framework. These problems not only make it difficult to achieve the objectives laid down in the EU Sustainable Development Strategy and in particular the Thematic Strategies, but also have the potential to create distortion of competition due to big differences in environmental standards and unnecessary administrative burdens.

The IA, on the basis of these findings, assessed a number of policy options with the aim of identifying a cost-effective package of measures to address the above issues. The assessment has led the Commission to propose the following:

As regards the inconsistencies and complexity of the current legislation, the Commission is proposing a single Directive which combines, by means of a recast, the IPPC Directive and six sectoral Directives.

In addition, a revision of certain provisions of the existing legislation is necessary in order to address the shortcomings in the actual application of BAT, the problems raised by certain unclear requirements (for instance on BAT-based permitting or permit review), the lack of provisions on enforcement and the limitations of the legislation in terms of meeting the objectives of the Thematic Strategies. Some of the main amendments of the legislation that are recommended are the following:

- clarification and strengthening of the concept of BAT;
- revision of the minimum emission limit values for Large Combustion Plants and installations producing titanium dioxide to align them with BAT standards;
- creation of a Committee to adapt existing non-essential technical requirements to scientific and technical progress or establish the type and format of the reporting by the Member States;
- introduction of provisions on inspection and environmental improvements;
- stimulating innovation and the development and deployment of new techniques;
- simplifying and clarifying certain provisions on permitting, monitoring and reporting to cut unnecessary administrative burdens;
- extending and clarifying the scope and provisions of the legislation to better contribute to the objectives of the Thematic Strategies.

The IA report is accessible on http://ec.europa.eu/environment/ippc/index.htm.

3) LEGAL ELEMENTS OF THE PROPOSAL

Summary of the proposed action

The aim of the current proposal is to revise and merge seven separate existing Directives related to industrial emissions into a single Directive.

The use of the recasting technique makes it possible to combine in a single text both the substantive amendments proposed to the Directives and those of their original provisions which remain unchanged.

Furthermore, the proposal will strengthen or add certain provisions to ensure better implementation and enforcement of the legislation by national authorities with the aim of achieving a high level of environmental protection, while simplifying legislation and at the same time reducing unnecessary administrative burdens. Clearer provisions will allow better monitoring and enforcement of the legislation through Community actions.

Legal basis

The primary objective of the Directive is the protection of the environment. This proposal is therefore based on Article 175 EC.

Subsidiarity principle

The subsidiarity principle applies insofar as the proposal does not fall under the exclusive competence of the Community.

The objectives of the proposal cannot be sufficiently achieved by the Member States for the following reasons:

The existing legislation sets minimum standards for the prevention and control of industrial emissions throughout the Community. This principle is maintained in the proposal. In addition, most industrial emissions (for instance to air or water) are of a transboundary nature. All Member States must therefore take measures in order that the risks to the population and the environment in each Member State can be reduced.

Community action will better achieve the objectives of the proposal for the following reasons.

The major thrust of this proposal is to amend and simplify existing legislation related to industrial emissions which applies minimum standards for the prevention and control of industrial emissions across the whole Community. Industrial emissions contribute substantially to overall emissions to air, water and soil as well as to the generation of waste and the use of energy. Industrial emissions generally also have substantial transboundary components, which means that pollutants emitted into the air or in water contribute to the pollution measured in other Member States. The scale of the problem demands Community-

wide action. Individual Member States cannot solve the problems alone, and concerted action at the EU scale is required.

The proposal concentrates on simplifications to existing legislation and on the strengthening of some provisions to improve implementation by Member States and enforcement of the legislation through Community actions. The proposal leaves the means of implementation, enforcement and compliance to be decided by the appropriate Member State authorities, thus ensuring minimum standards of protection for the environment and for all citizens of the EU.

The proposal therefore complies with the subsidiarity principle.

Proportionality principle

The proposal complies with the proportionality principle for the following reasons.

The chosen legal instrument is a directive, as (1) the proposal aims to recast and simplify existing directives; and (2) it establishes objectives whilst leaving the details of implementation to the Member States.

The proposal introduces a number of innovations that will reduce the unnecessary financial and administrative burden, in particular by encouraging, at Member State level, a combined permitting of installations which are subject to different pieces of legislation at EU level, by simplifying the monitoring and reporting requirements and by moving towards a shared information system and electronic reporting on industrial emissions. In addition, certain reporting requirements will be repealed.

Although the proposal introduces more specific provisions on enforcement, compliance and permit reviews, it leaves sufficient flexibility to the authorities of the Member States to establish the most cost-effective implementation regimes to achieve the objectives of the legislation. Furthermore, the proposal will clarify the current scope of the legislation to avoid the present inconsistent and non-harmonized interpretations by the Member States. A limited number of additional sectors are proposed for inclusion in the legislation based on a thorough analysis of the impacts showing the necessity, the value added and the proportionality of such an extension.

The proposal therefore complies with the proportionality principle.

Choice of instruments

Proposed instruments: directive.

Other means would not be adequate for the following reasons:

The aim of the current proposal is to merge and simplify seven existing directives into a single instrument. Given this, and the fact that the existing legislation sets Community

objectives while leaving the choice of measures for compliance to the Member States, the best instrument is a directive.

4) BUDGETARY IMPLICATION

The proposal has no implication for the Community budget.

5) ADDITIONAL INFORMATION

Simplification

The proposal provides for simplification of legislation and simplification of administrative procedures for public authorities (EU or national).

The recast will simplify and streamline existing provisions. Redundant provisions and unnecessary obligations will be repealed, while reporting and monitoring requirements will be simplified by a move towards electronic reporting. This should assist Member States' actions to reduce unnecessary administrative burdens, since the largest savings come from changing implementation practices at Member State level. This reflects the nature of the legislation, which provides the framework and the principles rather than the details on implementation.

The proposal is included in the Commission's rolling programme for simplification of the *acquis communautaire* and its Work and Legislative Programme under the reference CLWP 2007/ENV/002.

Repeal of existing legislation

The adoption of the proposal will lead to the repeal of seven existing Directives.

Review/revision/sunset clause

The Commission will review the implementation of legislation and report every three years to the Council and the European Parliament.

Correlation table

The Member States are required to communicate to the Commission the text of national provisions transposing the Directive as well as a correlation table between those provisions and this Directive.

European Economic Area

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.

Detailed explanation of the proposal

The scope of application of the present Directives has not been changed. The proposal applies to activities listed in Annex I (corresponding to the scope of the current IPPC Directive) and in Part 1 of Annex VII (corresponding to the scope of the current VOC Solvents Directive), to combustion plants, to waste incineration plants and waste co-incineration plants and to installations producing titanium dioxide. However, the present scope of Annex I has been slightly amended to include some additional activities such as combustion installations between 20 and 50 MW, the preservation of wood and wood products and the production of wood panels.

The proposal is structured in seven chapters. Chapter I is the general umbrella part setting common provisions applying to all industrial activities covered by this Directive. Chapter II covers activities set out in Annex I and lays down special provisions for those activities by amending the current requirements of the IPPC Directive. Chapters III to VI contain minimum technical requirements for large combustion plants, waste incineration plants, solvents installations and titanium dioxide installations, respectively. Chapter VII contains provisions on competent authorities, reporting by Member States, committee, penalties and the standard closing provisions.

Comments on the Articles

The comments on the Articles only relate to those Articles which are new or where substantive changes have been introduced.

- **Determination of permit conditions for activities listed in Annex I (Articles 14 to 17)**

In order to achieve a high level of protection for the environment as a whole, the permit should include all the necessary measures and should also include emission limit values for polluting substances, appropriate requirements to protect the soil and groundwater as well as monitoring requirements. The conditions of the permit should be set on the basis of best available techniques.

In order to determine what is considered best available techniques and to limit the imbalances in the Community as regards the level of emissions of industrial activities, the Commission adopts the reference documents for the best available techniques, hereinafter "BAT reference documents" as a result of an exchange of information with stakeholders.

A detailed analysis has revealed that there are significant shortcomings in the implementation of best available techniques due to vague provisions on BAT in the current legislation, the large degree of flexibility left for competent authorities to deviate from it in the permitting process and the unclear role of the BREFs. As a result, permits issued for implementing the IPPC Directive often include conditions that are not based on BAT as described in the BREFs with little, if any, justification for such deviation.

As a result of these shortcomings, the environmental benefits originally intended have not been delivered and distortions in the internal market remain significant.

In order to address these shortcomings, the proposal lays down provisions to strengthen and clarify the use of BAT. The proposal requires that BAT reference documents are the reference for setting permit conditions and that emission limit values do not exceed the emission levels associated with the best available techniques as described in those BAT reference documents.

In order to take into account certain specific circumstances, the proposal enables competent authorities to grant derogations to allow emission limit values to exceed the emission levels

associated with the best available techniques as described in the BAT reference documents. However, such derogations should be based on well defined criteria and should not exceed the emission limit values set out in Chapters III to VI of this Directive. In addition, such derogations, together with their justification should be made available to the public.

Furthermore, in order for operators to test emerging techniques which could provide for higher level of environmental protection, the proposal introduces a possibility for the competent authority to grant temporary derogations from emission levels associated with the best available techniques as described in the BAT reference documents.

The proposal also introduces a new requirement to monitor periodically the soil and groundwater on the site of the installations in order to ensure that appropriate information is available to protect these media from contamination by dangerous substances.

- **Provisions on compliance and increase environmental improvements for activities listed in Annex I (Articles 22, 24 and 25)**

The provisions in the current acquis on compliance reporting, inspections and permit reviews are vague resulting in large variations between Member States in the application of the legislation, and consequent sub-optimal levels of environmental protection and distortion of the internal market.

The proposal therefore lays down more specific provisions to ensure an effective implementation and enforcement of this Directive. As results, a new provision is introduced to require operators to regularly report on compliance with permit conditions to the competent authority. Member States should also ensure that the operator and the competent authority take necessary measures in a case of non-compliance with this Directive.

The proposal also introduces a requirement for permit conditions be reconsidered and, where necessary, updated after a new or updated BAT Reference Document is adopted in order to take account of developments in the best available techniques or other changes regarding the operation of an installation.

Furthermore, the proposal introduces requirements for Member States to provide for a system of environmental inspections. Those new provisions are largely based on the Recommendation 2001/331/EC providing for minimum criteria for environmental inspections in the Member States.

Those changes introduced will help in securing and, in certain cases, speeding up implementation of BAT thereby contributing to the achievement of the objectives of the Thematic Strategies and reducing distortion of competition.

- **Site closure and remediation for activities listed in Annex I (Article 23)**

Industrial activities can lead to significant negative impacts on the quality of soil and groundwater due to the use, manufacture or release of dangerous substances. The provisions of the current acquis are vague on the requirement regarding site closure and remediation after cessation of activities.

In order to clarify these requirements and help achieving the objectives of the Thematic Strategy on Soil protection, the proposal requires that a baseline report is established by the operators to provide quantified information on the state of soil and groundwater contamination. Upon definitive cessation of activities, the operator is required to remediate the site and return to that state.

- **Emission limit values for combustion plants (Articles 33 and 35, Parts 1 and 2 of Annex V)**

Emissions to air from large combustion plants present a large share of total emissions of key pollutants and far exceed the objectives set out in the Thematic Strategy on Air Pollution. Without a further reduction of emissions from these plants, the positive health and environmental effects to be obtained from these objectives will not materialise. It is therefore necessary to set more stringent emission limit values, aligned with best available techniques, for certain categories of combustion plants and pollutants.

- **Monitoring requirements for waste incineration plants and waste co-incineration plants (Article 43 and 35, Part 6 of Annex VI)**

In order to simplify the legislation and reduce unnecessary administrative costs while not altering the level of environmental protection, the proposal introduces some further derogation to the current minimum requirements for monitoring of certain emissions generated by waste incineration plants and waste co-incineration plants. These derogations can be granted by the competent authority only under specific conditions laid down in the proposal.

- **Emission limit values and reporting requirements for installations producing titanium dioxide (Articles 63 to 64, Parts 1, 3 and 4 of Annex VIII)**

Installations producing titanium dioxide can give rise to significant pollution into air and water. In order to reduce these impacts, the proposal introduces some more stringent emission limit values, aligned with best available techniques, for certain polluting substances.

- **Implementing measures**

The Directive confers implementing powers on the Commission. The cases in which implementing powers have been conferred are specifically listed in each relevant article. The measures to be adopted by the Commission will be subject to the regulatory procedure with scrutiny in accordance with Articles 5a (1) to (4), and 7 of Decision 1999/468/EC.

The implementing measures will be used in particular to establish criteria for the granting of the derogation from the emission levels associated with the best available techniques as described in the BAT reference documents and to adapt the non-essential minimum requirements set out in Annexes V to VIII to scientific and technical progress.

↓ 96/61/EC (adapted)
⇨ new

2007/0286 (COD)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

⇨on industrial emissions ⇦ ~~concerning~~ (integrated pollution prevention and control)

(Text with EEA relevance)

⇨ THE EUROPEAN PARLIAMENT AND ⇦ THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article ~~130s~~ ⌦ 175 ⌫ (1) thereof,

Having regard to the proposal from the Commission[2],

Having regard to the opinion of the ⌦ European ⌫ Economic and Social Committee[3],

Having regard to the opinion of the Committee of the Regions[4],

Acting in accordance with the procedure laid down in Article ~~189c~~ ⌦ 251 ⌫ of the Treaty[5],

Whereas:

⇩ new

(1) A number of substantial changes are to be made to Council Directive 78/176/EEC of 20 February 1978 on waste from the titanium dioxide industry[6], Council Directive 82/883/EEC of 3 December 1982 on procedures for the surveillance and monitoring of environments concerned by waste from the titanium dioxide industry[7], Council Directive 92/112/EEC of 15 December 1992 on procedures for harmonizing the programmes for the reduction and eventual elimination of pollution caused by waste from the titanium dioxide industry[8], Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control[9], Council Directive 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic

2 OJ C […], […], p. […].
3 OJ C […], […], p. […].
4 OJ C […], […], p. […].
5 OJ C […], […], p. […].
6 OJ L 54, 25.2.1978, p. 19. Directive as last amended by Directive 91/692/EEC (OJ L 377, 31.12.1991, p. 48).
7 OJ L 378, 31.12.1982, p. 1. Directive as last amended by Regulation (EC) No 807/2003 (OJ L 122, 16.5.2003, p. 36).
8 OJ L 409, 31.12.1992, p. 11.
9 OJ L 257, 10.10.1996, p. 26. Directive as last amended by Regulation (EC) No 166/2006 (OJ L 33, 4.2.2006, p. 1).

compounds due to the use of organic solvents in certain activities and installations[10], Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste[11] and Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants[12]. In the interests of clarity, these Directives should be recast.

(2) In order to prevent, reduce and as far as possible eliminate pollution arising from industrial activities in compliance with the 'polluter pays' principle and the principle of pollution prevention, it is necessary to establish a general framework for the control of the main industrial activities giving priority to intervention at source and ensuring prudent management of natural resources.

(3) Different approaches to controlling emissions into the air, water or soil separately may encourage the shifting of pollution between the various environmental media rather than protecting the environment as a whole. It is therefore appropriate to provide an integrated approach to prevention and control of emissions into air, water or soil, to waste management, to efficient use of energy and to prevention of accidents.

(4) It is appropriate to revise the legislation related to industrial installations in order to simplify and clarify the existing provisions, reduce unnecessary administrative burdens and implement the conclusions of the Commission Communications on the Thematic Strategy for Air Pollution[13], the Thematic Strategy for Soil Protection[14] and the Thematic Strategy for the Prevention and Recycling of Waste[15] adopted as a follow-up of Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme[16]. Those Thematic Strategies set objectives to protect human health and the environment which cannot be met without further reductions of emissions arising from industrial activities.

(5) In order to guarantee the prevention and control of pollution, each installation should operate only if it holds a permit or in the case of certain installations and activities using organic solvents, only if it holds a permit or if it is registered.

(6) In order to facilitate granting of permits, Member States should be able to set requirements for certain categories of installations in general binding rules.

(7) In order to avoid double regulation, the permit of an installation covered by Directive 2003/87 of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC[17] should not include an emission limit value for the emissions of greenhouse gases except where it is necessary to ensure that no

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[10] OJ L 85, 29.3.1999, p. 1. Directive as last amended by Directive 2004/42/EC (OJ L 143, 30.4.2004, p. 87).

[11] OJ L 332, 28.12.2000, p. 91.

[12] OJ L 309, 27.11.2001, p. 1. Directive as last amended by Directive 2006/105/EC (OJ L 363, 20.12.2006, p. 368).

[13] COM(2005) 446 final of 21.9.2005.

[14] COM(2006) 231 final of 22.9.2006.

[15] COM(2005) 666 final of 21.15.2005.

[16] OJ L 242, 10.9.2002, p. 1.

[17] OJ L 275, 25.10.2003, p. 32. Directive as amended by Directive 2004/101/EC (OJ L 338, 13.11.2004, p. 18).

significant local pollution is caused or where an installations is temporarily excluded from that scheme.

(8) Operators should submit an application for a permit to the competent authority which contains the information that is necessary for setting the permit conditions. Operators should be able to use information resulting from the application of Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of public and private projects on the environment[18] and of Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances[19] when submitting an application for a permit.

(9) The permit should include all the necessary measures to achieve a high level of protection for the environment as a whole and should also include emission limit values for polluting substances, appropriate requirements to protect the soil and groundwater as well as monitoring requirements. The conditions of the permit should be set on the basis of best available techniques.

(10) In order to determine what is considered best available techniques and to limit the imbalances in the Community as regards the level of emissions of industrial activities, the Commission should adopt the reference documents for the best available techniques, hereinafter "BAT reference documents" as a result of an exchange of information with stakeholders. Those BAT reference documents should be the reference for setting permit conditions. They can be supplemented by other sources.

(11) In order to take into account certain specific circumstances, competent authorities should be able to grant derogations to allow emission limit values to exceed the emission levels associated with the best available techniques as described in the BAT reference documents. Such derogations should be based on well defined criteria and should not exceed emission limit values set out in this Directive.

(12) In order to enable operators to test emerging techniques which could provide for a higher level of environmental protection, the competent authority should also be able to grant temporary derogations from emission levels associated with the best available techniques as described in the BAT reference documents.

(13) Changes to an installation may give rise to higher levels of pollution. The competent authority should therefore be notified of any planned change which might affect the environment. Substantial changes to installations which may have significant negative effects on humans or the environment should be subject to the reconsideration of a permit to ensure that the installations concerned continue to meet the requirements of this Directive.

(14) The spreading of livestock manure and slurry can lead to significant impacts on the quality of the environment. In order to ensure the prevention and control of these impacts in an integrated way, it is necessary that manure and slurry generated by activities covered by this Directive are spread by the operator or by third parties using best available techniques. In order to provide Member States with flexibility in meeting these requirements, the application of best available techniques to operator or third party spreading may be specified within the permit or in other measures.

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[18] OJ L 175, 5.7.1985, p. 40. Directive as last amended by Directive 2003/35/EC (OJ L 156, 25.6.2003, p. 17).

[19] OJ L 10, 14.1.1997, p. 13. Directive as last amended by Directive 2003/105/EC (OJ L 345, 31.12.2003, p. 97).

(15) In order to take account of developments in the best available techniques or other changes regarding the changes to an installation, permit conditions should be reconsidered regularly and, where necessary, updated, in particular where the Commission adopts a new or updated BAT reference document.

(16) It is necessary to ensure that the operation of an installation does not lead to a deterioration of the quality of soil and groundwater. Permit conditions should therefore include the monitoring of soil and groundwater and the operator should remediate the site upon definitive cessation of activities.

(17) In order to ensure an effective implementation and enforcement of this Directive, operators should regularly report on compliance with permit conditions to the competent authority. Member States should ensure that the operator and the competent authority take necessary measures in a case of non-compliance with this Directive and provide for a system of environmental inspections.

(18) Effective public participation in decision-making is necessary to enable the public to express, and the decision-maker to take account of, opinions and concerns which may be relevant to those decisions, thereby increasing the accountability and transparency of the decision-making process and contributing to public awareness of environmental issues and support for the decisions taken. Members of the public concerned should have access to justice in order to contribute to the protection of the right to live in an environment which is adequate for personal health and well-being.

(19) Large combustion plants contribute greatly to emissions of polluting substances into the air resulting in a significant impact on human health and the environment. In order to reduce that impact and to work towards meeting the requirements of Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants[20] and the objectives set in the Commission Communication on the Thematic Strategy for Air Pollution, it is necessary to set more stringent emission limit values at Community level for certain categories of combustion plants and pollutants.

(20) In case of a sudden interruption in the supply of low-sulphur fuel or gas resulting from a serious shortage, the competent authority should be able to grant temporary derogations to allow emissions of the combustion plants concerned to exceed the emission limit values set out in this Directive.

(21) The operator concerned should not operate a combustion plant for more than 24 hours after malfunctioning or breakdown of abatement equipment and unabated operation should not exceed 120 hours in a twelve month period in order to limit the negative effects of pollution on the environment. However, where there is an overriding need of energy supplies or it is necessary to avoid an overall increase of emissions by operation of another combustion plant, competent authorities should be able to grant a derogation from these time limits.

(22) In order to ensure a high level of environmental and human health protection and to avoid transboundary movements of waste to plants operating at lower environmental standards, it is necessary to maintain and set stringent operational conditions, technical requirements and emission limit values for plants incinerating or co-incinerating waste within the Community.

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[20] OJ L 309, 27.11.2001, p. 22. Directive as last amended by Council Directive 2006/105/EC (OJ L 363, 20.12.2006, p. 368).

(23) The use of organic solvents in certain activities and installations gives rise to emissions of organic compounds into the air which contribute to the local and transboundary formation of photochemical oxidants which causes damage to natural resources and has harmful effects on human health. It is therefore necessary to take preventive action against the use of organic solvents and establish the requirement to comply with emission limit values for organic compounds and appropriate operating conditions. It should be possible to grant derogations from compliance with the emission limit values to operators where other measures, such as the use of low-solvent or solvent-free products or techniques, provide alternative means of achieving equivalent emission limits.

(24) Installations producing titanium dioxide can give rise to significant pollution into air and water. In order to reduce these impacts, it is necessary to set at Community level more stringent emission limit values for certain polluting substances.

(25) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission[21].

(26) In particular, power should be conferred on the Commission to establish criteria for the granting of derogations from the emission levels associated with the best available techniques as described in the BAT reference documents and for the determining of the frequency of periodic monitoring and of the content of the baseline report, as well as the criteria to be used for the appraisal of environmental risks. Power should also be conferred on the Commission to adopt measures concerning the development and application of emerging techniques, to set in certain cases an average emission limit value for sulphur dioxide, to set the date from which continuous measurements of the emissions to air of heavy metals, dioxins and furans shall be carried out, to establish the type and format of the information to be made available by the Member States to the Commission on the implementation of this Directive and to adapt Annexes V to VIII to scientific and technical progress. In the case of waste incineration plants and waste co-incineration plants, this may include the establishment of criteria to allow derogations from continuous monitoring of total dust emissions. Since those measures are of general scope and are designed to amend non-essential elements of this Directive, or to supplement this Directive by the addition of new non-essential elements, they must be adopted in accordance with the regulatory procedure with scrutiny provided for in Article 5a of Decision 1999/468/EC.

(27) Member States should lay down rules on penalties applicable to infringements of the provisions of this Directive and ensure that they are implemented. Those penalties should be effective, proportionate and dissuasive.

(28) In order to provide existing installations sufficient time to technically adapt to the new requirements of this Directive, some of the new requirements should apply to those installations after a fixed period from the date of application of this Directive. Combustion plants need sufficient time to install the necessary abatement measures to meet the emission limit values set out Annex V.

(29) Since the objectives of the action to be taken to ensure a high level of environmental protection and the improvement of environmental quality cannot be sufficiently

[21] OJ L 184, 17.7.1999, p. 23. Decision as amended by Decision 2006/512/EC (OJ L 200, 22.7.2006, p. 11).

achieved by the Member States and can therefore, by reason of the transboundary nature of pollution from industrial activities, be better achieved at Community level, the Community may adopt measures in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.

(30) This Directive respects the fundamental rights and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union. In particular, this Directive seeks to promote the application of Article 37 of the Charter of Fundamental Rights of the European Union.

(31) The obligation to transpose this Directive into national law should be confined to those provisions which represent a substantive change as compared with the earlier Directives. The obligation to transpose the provisions which are unchanged arises under the earlier Directives.

(32) This Directive should be without prejudice to the obligations of the Member States relating to the time-limits for transposition into national law and application of the Directives set out in Annex IX, Part B.

↓ 96/61/EC (adapted)

HAVE ADOPTED THIS DIRECTIVE:

CHAPTER I

⌦ Common provisions ⌫

Article 1

~~Purpose and scope~~ ⌦ Subject matter ⌫

~~The purpose of~~ ~~t~~This Directive ~~is to achieve~~ ⌦ lays down rules on ⌫ integrated prevention and control of pollution arising from ~~the~~ ⌦ industrial ⌫ activities ~~listed in Annex I~~.

It ⌦ also ⌫ lays down ~~measures~~ ⌦ rules ⌫ designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land ~~from the abovementioned activities, including measures concerning~~ ⌦ and to prevent generation of ⌫ waste, in order to achieve a high level of protection of the environment taken as a whole~~, without prejudice to Directive 85/337/EEC and other relevant Community provisions~~.

⇩ new

Article 2

Scope

1. This Directive shall apply to industrial activities giving rise to pollution referred to in Chapters II to VI.

2. This Directive shall not apply to research activities, development activities or the testing of new products and processes.

↓ 96/61/EC (adapted)

Article ~~2~~ 3

Definitions

For the purposes of this Directive ⌦ the following definitions shall apply ⌫:

(1)~~1.~~ 'substance' ~~shall~~ means any chemical element and its compounds, with the exception of ⌦ the following substances: ⌫

(a) radioactive substances ~~within the meaning of~~ ⌦ as defined in ⌫ Council Directive ~~80/836/Euratom~~ 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation[22]; ~~and~~

(b) genetically modified ~~organisms within the meaning of~~ ⌦ micro-organisms as defined in ⌫ Council Directive 90/219/EEC (GMO) of 23 April 1990 on the contained use of genetically modified micro-organisms[23]; ~~and~~

⌦ (c) genetically modified organisms as defined in ⌫ Directive ~~90/220/EEC~~[24] 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/200/EEC[25];

(2)~~2.~~ 'pollution' ~~shall~~ means the direct or indirect introduction, as a result of human activity, of substances, vibrations, heat or noise into the air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment;

(3)~~3.~~ 'installation' ~~shall~~ means a stationary technical unit ~~where~~ ⌦ within which ⌫ one or more activities listed in Annex I ⌦ or in Part 1 of Annex VII ⌫ are carried out, and any other directly associated activities ⌦ on the same site ⌫ which have a technical connection with the activities ~~carried out on that site~~ ⌦ listed in those Annexes ⌫ and which could have an effect on emissions and pollution;

~~4. 'existing installation` shall mean an installation in operation or, in accordance with legislation existing before the date on which this Directive is brought into effect, an installation authorized or in the view of the competent authority the subject of a full request for authorization, provided that that installation is put into operation no later than one year after the date on which this Directive is brought into effect;~~

(4)~~5.~~ 'emission' ~~shall~~ means the direct or indirect release of substances, vibrations, heat or noise from individual or diffuse sources in the installation into the air, water or land;

(5)~~6.~~ 'emission limit value~~s~~' ~~shall~~ means the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission, which may not be exceeded during one or more periods of time. ~~Emission limit values may also be laid down for certain groups,~~

22 OJ L 159, 29.6.1996, p. 1.

23 OJ No L 117, 8. 5. 90, p. 1.

24 ~~Council Directive 90/220/EEC of 23 April 1990 on the deliberate release into the environment of genetically modified organisms (OJ No L 117, 8. 5. 1990, p. 15). Directive as amended by Commission Directive 94/15/EC (OJ No L 103, 22. 4. 1994, p. 20).~~

25 OJ L 106, 17.4.2001, p. 1.

~~families or categories of substances, in particular for those listed in Annex III. The emission limit values for substances shall normally apply at the point where the emissions leave the installation, any dilution being disregarded when determining them. With regard to indirect releases into water, the effect of a water treatment plant may be taken into account when determining the emission limit values of the installation involved, provided that an equivalent level is guaranteed for the protection of the environment as a whole and provided this does not lead to higher levels of pollution in the environment, without prejudice to Directive 76/464/EEC or the Directives implementing it;~~

(6)~~7.~~ 'environmental quality standard' ~~shall~~ means the set of requirements which must be fulfilled at a given time by a given environment or particular part thereof, as set out in Community legislation;

~~8. 'competent authority` shall mean the authority or authorities or bodies responsible under the legal provisions of the Member States for carrying out the obligations arising from this Directive;~~

(7)~~9.~~ 'permit' ~~shall~~ means ~~that part or the whole of~~ a written ~~decision (or several such decisions) granting~~ authorisation to operate all or part of an installation ⌦ or combustion plant, waste incineration plant or waste co-incineration plant ⌫ ~~, subject to certain conditions which guarantee that the installation complies with the requirements of this Directive. A permit may cover one or more installations or parts of installations on the same site operated by the same operator~~;

(8)~~10.~~ ~~(a) 'change in operation` shall mean a change in the nature or functioning, or an extension, of the installation which may have consequences for the environment;~~

~~(b)~~ 'substantial change' ~~shall~~ means a change in ~~operation~~ ⌦ the nature or functioning, or an extension, of an installation or combustion plant, waste incineration plant or waste co-incineration plant ⌫ which~~, in the opinion of the competent authority,~~ may have significant negative effects on ~~human beings~~ ⌦ humans ⌫ or the environment;

~~For the purposes of this definition, any change to or extension of an operation shall be deemed to be substantial if the change or extension in itself meets the thresholds, if any, set out in Annex I;~~

(9)~~11.~~ 'best available techniques' ~~shall~~ means the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing ~~in principle~~ the basis for emission limit values ⌦ and other permit conditions ⌫ designed to prevent and, where that is not practicable, ~~generally~~ to reduce emissions and the impact on the environment as a whole:

(a) 'techniques' ~~shall~~ includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned~~;~~,;

(b) 'available' techniques ~~shall~~ means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator~~;~~,;

(c) 'best' ~~shall~~ means most effective in achieving a high general level of protection of the environment as a whole.

~~In determining the best available techniques, special consideration should be given to the items listed in Annex IV;~~

(10)~~12.~~ 'operator' ~~shall~~ means any natural or legal person who operates or controls the installation ⌦ or combustion plant, waste incineration plant or waste co-incineration plant ⌫ or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the installation ⌦ or plant ⌫ has been delegated;

↓ 2003/35/EC Art. 4.1(b) (adapted)

(11)~~13.~~ 'the public' ~~shall~~ means one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups;

(12)~~14.~~ 'the public concerned' ~~shall~~ means the public affected or likely to be affected by, or having an interest in, the taking of a decision on the issuing or the updating of a permit or of permit conditions; ~~for the purposes of this definition, non-governmental organisations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest;~~

⇩ new

(13) 'emerging technique' means a novel technique for an industrial activity that, if commercially developed, could provide a higher general level of protection of the environment or higher cost savings than existing best available techniques;

(14) 'dangerous substances' means dangerous substances or preparations as defined in Council Directive 67/548/EC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances[26] and Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations[27];

(15) 'baseline report' means quantified information on the state of soil and groundwater contamination by dangerous substances;

(16) 'routine inspection' means an environmental inspection carried out as part of a planned inspection programme;

(17) 'non-routine inspection' means environmental inspections carried out in response to complaints or in the investigation of accidents, incidents and occurrences of non-compliance;

↓ 2001/80/EC Art.2 (adapted)

(18)~~6.~~ 'fuel' means any solid, liquid or gaseous combustible material used to fire a combustion plant ~~with the exception of waste covered by Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants[28], Council Directive 89/429/EEC of 21 June 1989 on the reduction of air pollution from existing municipal waste incineration plants[29], and Council Directive 94/67/EC of 16 December 1994~~

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[26] OJ 196, 16.8.1967, p. 1.
[27] OJ L 200, 30.7.1999, p. 1
[28] ~~OJ L 163, 14.6.1989, p. 32.~~
[29] ~~OJ L 203, 15.7.1989, p. 50.~~

~~concerning the incineration of hazardous waste[30] or any subsequent Community act repealing and replacing one or more of these Directives~~;

(19)~~(7)~~ 'combustion plant' means any technical apparatus in which fuels are oxidised in order to use the heat thus generated;

(20)~~(11)~~ 'biomass' means ⌦ any of the following: ⌫

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

(b) the following waste used as a fuel:

(~~a~~i) vegetable waste from agriculture and forestry;

(~~b~~ii) vegetable waste from the food processing industry, if the heat generated is recovered;

(~~c~~iii) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;

(~~d~~iv) cork waste;

(~~e~~v) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating~~, and which includes in particular such wood waste originating from construction and demolition waste~~;

(21)~~8.~~ 'multi-fuel firing ~~unit~~ ⌦ combustion plant ⌫ ' means any combustion plant which may be fired simultaneously or alternately by two or more types of fuel;

(22)~~12.~~ 'gas turbine' means any rotating machine which converts thermal energy into mechanical work, consisting mainly of a compressor, a thermal device in which fuel is oxidised in order to heat the working fluid, and a turbine;

↓ 2000/76/EC Art. 3 (adapted)

~~1~~(23) '~~«~~waste~~»~~' means ~~any solid or liquid~~ waste as defined in Article 3(a)~~1(a)~~ of Directive 20../…/EC of the European Parliament and of the Council on waste[31] ~~75/442/EEC~~;

~~2~~(24) '~~«~~hazardous waste~~»~~' means ~~any solid or liquid~~ ⌦ hazardous ⌫ waste as defined in Article 3(b)~~1(4)~~ of ~~Council~~ Directive 20../…/EC ~~91/689/EEC of 12 December 1991 on hazardous waste~~;

(25)~~3.~~ 'mixed municipal waste' means waste from households as well as commercial, industrial and institutional waste~~s~~ which~~,~~ because of its nature and composition is similar to waste from households, but excluding fractions indicated ~~in the Annex to Decision 94/3/EC~~ under heading 20 01 of the Annex to Commission Decision 2000/532/EC of 3 May 2000 establishing the European Waste List[32] that is~~are~~ collected separately at source and excluding the other wastes indicated under heading 20 02 of that Annex;

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30 ~~OJ L 365, 31.12.1994, p. 34.~~

31 OJ L

32 OJ L 226, 6.9.2000, p. 3.

(26)~~4.~~ ⌦ 'waste ⌫ incineration plant' means any stationary or mobile technical unit and equipment dedicated to the thermal treatment of waste~~s~~, with or without recovery of the combustion heat generated~~:~~ ⌦ , through ⌫ ~~This includes~~ the incineration by oxidation of waste as well as other thermal treatment processes ~~such as pyrolysis, gasification or plasma process in so far as~~ if the substances resulting from the treatment are subsequently incinerated;

(27)~~5.~~ ⌦ 'waste ⌫ co-incineration plant' means any stationary or mobile ~~plant~~ ⌦ technical unit ⌫ whose main purpose is the generation of energy or production of material products and~~:~~ which uses waste~~s~~ as a regular or additional fuel~~;~~ or in which waste is thermally treated for the purpose of disposal ⌦ through the incineration by oxidation of waste as well as other thermal treatment processes if the substances resulting from the treatment are subsequently incinerated ⌫ ;

(28)~~7.~~ 'nominal capacity' means the sum of the incineration capacities of the furnaces of which ~~an~~ ⌦ a waste ⌫ incineration plant ⌦ or a waste co-incineration plant ⌫ is composed, as specified by the constructor and confirmed by the operator, with due account being taken~~, in particular,~~ of the calorific value of the waste, expressed as the quantity of waste incinerated per hour;

(29)~~10.~~ 'dioxins and furans' means all polychlorinated dibenzo-p-dioxins and dibenzofurans listed in ~~Annex I~~ Part 2 of Annex VI ;

(30)~~13.~~ 'residue' means any liquid or solid ⌦ waste ⌫ ~~material (including bottom ash and slag, fly ash and boiler dust, solid reaction products from gas treatment, sewage sludge from the treatment of waste waters, spent catalysts and spent activated carbon) defined as waste in Article 1(a) of Directive 75/442/EEC,~~ which is generated by ~~the~~ ⌦ a waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration ~~process, the exhaust gas or waste water treatment or other processes within the incineration or co-incineration~~ plant;

⇓ 1999/13/EC Art. 2 (adapted)

~~16(~~31) 'organic compound' ~~shall~~ means any compound containing at least the element carbon and one or more of hydrogen, halogens, oxygen, sulphur, phosphorus, silicon or nitrogen, with the exception of carbon oxides and inorganic carbonates and bicarbonates;

(32)~~17.~~ 'volatile organic compound' ~~(VOC)~~ ~~shall~~ means any organic compound ⌦ as well as the fraction of creosote, ⌫ having at 293,15 K a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the particular conditions of use. ~~For the purpose of this Directive, the fraction of creosote which exceeds this value of vapour pressure at 293,15 K shall be considered as a VOC~~;

(33)~~18.~~ 'organic solvent' ~~shall~~ means any ~~VOC~~ ⌦ volatile organic compound ⌫ which is used ⌦ for any of the following: ⌫

(a) alone or in combination with other agents, and without undergoing a chemical change, to dissolve raw materials, products or waste materials;

(b) ~~or is used~~ as a cleaning agent to dissolve contaminants;

(c) ~~or~~ as a dissolver;

(d) ~~or~~ as a dispersion medium;

(e) ~~or~~ as a viscosity adjuster;

(f) ~~or~~ as a surface tension adjuster;

(g) ~~or~~ a plasticiser;

(h) ~~or~~ as a preservative;

(34)~~20.~~ 'coating' ~~shall~~ means ~~any preparation, including all the organic solvents or preparations containing organic solvents necessary for its proper application, which is used to provide a decorative, protective or other functional effect on a surface~~ ⌦ coating as defined in Article 2(8) of Directive 2004/42/EC of the European Parliament and of the Council 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 ⌫ ;

~~*Article 5*~~

~~**Requirements for the granting of permits for existing installations**~~

~~1. Member States shall take the necessary measures to ensure that the competent authorities see to it, by means of permits in accordance with Articles 6 and 8 or, as appropriate, by reconsidering and, where necessary, by updating the conditions, that existing installations operate in accordance with the requirements of Articles 3, 7, 9, 10, 13, the first and second indents of 14, and 15 (2) not later than eight years after the date on which this Directive is brought into effect, without prejudice to specific Community legislation.~~

~~2. Member States shall take the necessary measures to apply the provisions of Articles 1, 2, 11, 12, 14, third indent, 15 (1), (3) and (4), 16, 17 and 18 (2) to existing installations as from the date on which this Directive is brought into effect.~~

🡻 96/61/EC Art. 4 (adapted)

Article 4

~~Permits for new installations~~ ⌦ **Obligation to hold a permit** ⌫

1. Member States shall take the necessary measures to ensure that no ~~new~~ installation ⌦ or combustion plant, waste incineration plant or waste co-incineration plant ⌫ is operated without a permit ~~issued in accordance with this Directive, without prejudice to the exceptions provided for in Council Directive 88/609/EEC of 24 November 1988 on the limitation of emissions of certain pollutants into the air from large combustion plants[33]~~.

🡻 1999/13/EC Art. 3 (adapted)

⌦ By way of derogation from the first subparagraph, Member States may set a procedure for the registration of installations covered only by Chapter V. ⌫

🡻 1999/13/EC Art. 2 (adapted)

~~8. registration shall mean a~~ ⌦ The ⌫ procedure~~,~~ ⌦ for registration shall be ⌫ specified in a ⌦ binding ⌫ ~~legal~~ act~~,~~ ~~involving~~ ⌦ and include ⌫ at least ⌦ a ⌫ notification to the competent authority by the operator of the intention to operate an installation ~~or activity falling within the scope of this Directive;~~ .

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33 ~~OJ No L 336, 7. 12. 1988, p. 1. Directive as last amended by Directive 90/656/EEC (OJ No L 353, 17. 12. 1990, p. 59).~~

↓ 96/61/EC Art. 2(9) (adapted)

2. A permit may cover ⌦ two ⌫ ~~one~~ or more installations or parts of installations ~~on the same site~~ operated by the same operator ⌦ on the same site or on different sites ⌫.

⇩ new

Where a permit covers two or more installations, each installation shall comply with the requirements of this Directive.

Article 5

Operators

Two or more natural or legal persons may be the joint operator of an installation or combustion plant, waste incineration plant or waste co-incineration plant, or may be the operators of different parts of an installation or plant.

↓ 96/61/EC (adapted)

Article 6~~8~~

~~Decisions~~ ⌦ Granting of a permit ⌫

1. ~~Without prejudice to other requirements laid down in national or Community legislation,~~ The~~the~~ competent authority shall grant a permit ~~containing conditions guaranteeing that~~ ⌦ if ⌫ the installation complies with the requirements of this Directive ~~or, if it does not, shall refuse to grant the permit~~.

~~All permits granted and modified permits must include details of the arrangements made for air, water and land protection as referred to in this Directive.~~

~~*Article 7*~~

~~**Integrated approach to issuing permits**~~

2. Member States shall take the measures necessary to ensure that the conditions of, and ⌦ the procedures ⌫ ~~procedure~~ for the ~~grant~~ ⌦ granting ⌫ of, the permit are fully coordinated where more than one competent authority ⌦ or more than one operator ⌫ is involved ⌦ or more than one permit is issued ⌫, in order to guarantee an effective integrated approach by all authorities competent for this procedure.

↓ 96/61/EC Art. 9 (adapted)

3.~~2.~~ In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EEC applies, any relevant information obtained or conclusion arrived at pursuant to Articles 5, 6, ~~and~~ 7 and 9 of that Directive shall be ~~taken into consideration~~ ⌦ examined and used ⌫ for the purposes of granting ~~a~~ ⌦ the ⌫ permit.

Article 7

⌦ General binding rules ⌫

~~8.~~ Without prejudice to the obligation to ~~implement~~ ⌦ hold ⌫ a permit ~~procedure pursuant to this Directive~~, Member States may ~~prescribe~~ ⌦ include ⌫ ~~certain~~ requirements for certain categories of installations, ⌦ combustion plants, waste incineration plants or waste co-incineration plants ⌫ in general binding rules, ~~instead of including them in individual permit conditions, provided that an integrated approach and an equivalent high level of environmental protection as a whole are ensured~~.

🡻 96/61/EC (adapted)

⌦ Where general binding rules are adopted, the permit may simply include a reference to such rules. ⌫

⇩ new

Article 8

Reporting on compliance

Member States shall take the necessary measures to ensure the following:

(1) that the operator provides the competent authority with a report on compliance with the permit conditions at least every twelve months;

🡻 96/61/EC Art. 14 (adapted)

(2) ⌦ that ⌫ the operator ~~regularly~~ informs the competent authority ~~of the results of the monitoring of releases and~~ without delay of any incident or accident significantly affecting the environment.

Article 9~~14~~

⌦ **Non-compliance** ⌫ ~~**Compliance with permit conditions**~~

1. Member States shall take the necessary measures to ensure that~~:~~ the conditions of the permit are complied with ~~by the operator~~, ~~when operating the installation,~~

🡻 1999/13/EC Art.10 (adapted)
⇨ new

2. ~~Member States shall take appropriate measures to ensure that,~~ If ~~if~~ it is found that the requirements of this Directive have been breached ⌦ , Member States shall ensure the following ⌫ :

(a) ⌦ that ⌫ the operator ⌦ immediately ⌫ informs the competent authority~~; and~~

(b) ⌦ that the operator ⌫ ⇨ and the competent authority ⇦ ~~takes~~ ⌦ take the ⌫ measures ⌦ necessary ⌫ to ensure that compliance is restored within the shortest possible time~~.~~;

~~(b)~~ ~~i~~In cases of ~~non-compliance~~ ⌦ a breach ⌫ causing ~~immediate~~ danger to human health ⌦ or the environment ⌫ and as long as compliance is not restored ~~under the conditions of paragraph (a)~~ in accordance with point (b) of the first subparagraph, ⌦ the ⌫ operation

⌦ of the installation or combustion plant, waste incineration plant or waste co-incineration plant shall be ⌫ ~~of the activity is~~ suspended.

↓ 2003/87/EC Art. 26 (adapted)

Article 10

⌦ Emission of greenhouse gases ⌫

1. Where emissions of a greenhouse gas from an installation are specified in Annex I to Directive 2003/87/EC in relation to an activity carried out in that installation, the permit shall not include an emission limit value for direct emissions of that gas, unless necessary to ensure that no significant local pollution is caused.

2. For activities listed in Annex I to Directive 2003/87/EC ~~of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC~~[34], Member States may choose not to impose requirements relating to energy efficiency in respect of combustion units or other units emitting carbon dioxide on the site.

3. Where necessary, the competent authorities shall amend the permit as appropriate.

4. ~~The three preceding subparagraphs~~ Paragraphs 1 to 3 shall not apply to installations which are temporarily excluded from the scheme for greenhouse gas emission allowance trading within the Community in accordance with Article 27 of Directive 2003/87/EC.

↓ 96/61/EC (adapted)

CHAPTER II

⌦ Special provisions for activities listed in Annex I ⌫

⇩ new

Article 11

Scope

This Chapter shall apply to the activities set out in Annex I and, where applicable, reaching the capacity thresholds set out in that Annex.

↓ 96/61/EC (adapted)

Article 12~~3~~

General principles governing the basic obligations of the operator

34 ~~OJ L 275, 25.10.2003, p. 32~~

Member States shall take the necessary measures to provide that the ~~competent authority ensure that~~ installations are operated in ⌦ accordance with the following principles ⌫ ~~such a way that~~:

(1)~~(a)~~ all the appropriate preventive measures are taken against pollution~~;~~,;

(2) ~~in particular through application of~~ the best available techniques ⌦ are applied ⌫;

(3)~~(b)~~ no significant pollution is caused;

(4)~~(c)~~ waste production is avoided in accordance with Directive 20../../EC ~~Council Directive 75/442/EEC of 15 July 1975 on waste~~;

(5) where waste is produced, it is recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;

(6)~~(d)~~ energy is used efficiently;

(7)~~(e)~~ the necessary measures are taken to prevent accidents and limit their consequences;

(8)~~(f)~~ the necessary measures are taken upon definitive cessation of activities to avoid any ~~pollution~~ risk ⌦ of pollution ⌫ and return the site of operation to ~~a satisfactory state~~ ⌦ the state defined in accordance with Article 23(2) and (3) ⌫ .

~~For the purposes of compliance with this Article, it shall be sufficient if Member States ensure that the competent authority take account of the general principles set out in paragraph 1 when they determine the conditions of the permit.~~

Article 13~~6~~

Applications for permits

1. Member States shall take the necessary measures to ensure that an application ~~to the competent authority~~ for a permit includes a description of ⌦ the following ⌫ :

(a) the installation and its activities;

(b) the raw and auxiliary materials, other substances and the energy used in or generated by the installation;

(c) the sources of emissions from the installation;

(d) the conditions of the site of the installation;

⇩ new

(e) where applicable, a baseline report;

🡻 96/61/EC

(f) the nature and quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment;

(g) the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation;

(h) ~~where necessary,~~ measures for the prevention and recovery of waste generated by the installation;

(i) further measures planned to comply with the general principles of the basic obligations of the operator as provided for in Article ~~3~~ 12;

(j) measures planned to monitor emissions into the environment;

↓ 2003/35/EC Art. 4.2 (adapted)

(k) the main alternatives ⌦ to the proposed technology, techniques and measures ⌫~~, if any,~~ studied by the applicant in outline.

↓ 96/61/EC

An application for a permit shall also include a non-technical summary of the details referred to in the first subparagraph ~~above indents~~.

2. Where information supplied in accordance with the requirements provided for in Directive 85/337/EEC or a safety report prepared in accordance with Directive 96/82/EC ~~82/501/EEC of 24 June 1982 on the major-accident hazards of certain industrial activities~~ or other information produced in response to other legislation fulfils any of the requirements of paragraph 1 ~~this Article~~, that information may be included in, or attached to, the application.

⇩ new

Article 14

BAT reference documents

1. The Commission shall adopt BAT reference documents based on the results of the information exchange referred to in Article 29.

2. The BAT reference documents shall in particular describe the best available techniques, the associated emission levels and associated monitoring, the monitoring of soil and groundwater and remediation of the site and the emerging techniques, giving special consideration to the criteria listed in Annex III. The Commission shall review and update the BAT reference documents as appropriate.

↓ 96/61/EC (adapted)

Article 15~~9~~

~~Conditions of the permit~~ ⌦ Permit conditions ⌫

1. Member States shall ensure that the permit includes all measures necessary for compliance with the requirements of Articles ~~3~~12 and ~~10~~19 ~~for the granting of permits in order to achieve a high level of protection for the environment as a whole by means of protection of the air, water and land~~.

~~2. In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EEC applies, any relevant information obtained or conclusion arrived at pursuant to~~

~~Articles 5, 6 and 7 of that Directive shall be taken into consideration for the purposes of granting the permit.~~

~~3~~. ⌦ Those measures ⌫ ~~The permit~~ shall include ⌦ at least the following: ⌫

(a) emission limit values for ~~pollutants~~ ⌦ polluting substances ⌫, ~~in particular, those~~ listed in Annex ~~III,~~ II ⌦ and for other polluting substances which are ⌫ likely to be emitted from the installation concerned in significant quantities, having regard to their nature and their potential to transfer pollution from one medium to another ~~(water, air and land).~~ ;

(b) ~~If necessary, the permit shall include~~ appropriate requirements ensuring protection of the soil and groundwater and measures concerning the management of waste generated by the installation;~~.~~ ~~Where appropriate, limit values may be supplemented or replaced by equivalent parameters or technical measures.~~

(c) ~~5. The permit shall contain~~ suitable release monitoring requirements, specifying measurement methodology and frequency, evaluation procedure and an obligation to supply the competent authority ⌦ regularly with the results of the monitoring of releases and ⌫ with ⌦ other ⌫ data required for checking compliance with the permit;~~.~~

~~For installations under subheading 6.6 in Annex I, the measures referred to in this paragraph may take account of costs and benefits.~~

⇩ new

(d) requirements of periodic monitoring in relation to dangerous substances likely to be found on site having regard to the possibility of soil and groundwater contamination at the site of the installation;

🡻 96/61/EC (adapted)

(e) ~~6. The permit shall contain~~ measures relating to ~~conditions other than normal operating conditions. Thus, where there is a risk that the environment may be affected, appropriate provision shall be made for~~ start-up, leaks, malfunctions, momentary stoppages and definitive cessation of operations;

(f) ~~In all circumstances, the conditions of the permit shall contain~~ provisions on the minimis≠ation of long distance or transboundary pollution ~~and ensure a high level of protection for the environment as a whole~~.

~~The permit may also contain temporary derogations from the requirements of paragraph 4 if a rehabilitation plan approved by the competent authority ensures that these requirements will be met within six months and if the project leads to a reduction of pollution.~~

~~7. The permit may contain such other specific conditions for the purposes of this Directive as the Member State or competent authority may think fit.~~

2. ~~Where appropriate~~ ⌦ For the purpose of point (a) of the first paragraph, emission ⌫ limit values may be supplemented or replaced by equivalent parameters or technical measures.

~~For installations under subheading 6.6 in Annex I, emission limit values laid down in accordance with this paragraph shall take into account practical considerations appropriate to these categories of installation.~~

⇩ new

3. BAT reference documents shall be the reference for setting the permit conditions.

4. Where an installation or part of an installation is not covered by BAT reference documents or where those documents do not address all the potential environmental effects of the activity, the competent authority shall determine the best available techniques for the installation or activities concerned, based on the criteria listed in Annex III, and shall set the permit conditions accordingly.

5. For installations referred to in point 6.6 of Annex I, paragraphs 1 to 4 shall apply without prejudice to the legislation related to animal welfare.

🡻 96/61/EC Art. 2 (adapted)

Article 16

Emission limit values, equivalent parameters and technical measures

1.~~6.~~ The emission limit values for ⌦ polluting ⌫ substances shall ~~normally~~ apply at the point where the emissions leave the installation ⌦ , and ⌫ any dilution ⌦ prior to that point shall be ⌫ ~~being~~ disregarded when determining ⌦ those values ⌫ ~~them~~.

With regard to indirect releases ⌦ of polluting substances ⌫ into water, the effect of a water treatment plant may be taken into account when determining the emission limit values of the installation ⌦ concerned ⌫ ~~involved~~, provided that an equivalent level ~~is guaranteed for the~~ ⌦ of ⌫ protection of the environment as a whole ⌦ is guaranteed ⌫ and provided this does not lead to higher levels of pollution in the environment ~~without prejudice to Directive 76/464/EEC or the Directives implementing it;~~.

🡻 96/61/EC Art. 9

2~~4~~. Without prejudice to Article 19 ~~10~~, the emission limit values and the equivalent parameters and technical measures referred to in paragraphs 1 and 2 of Article 15 ~~paragraph 3~~ shall be based on the best available techniques, without prescribing the use of any technique or specific technology~~, but taking into account the technical characteristics of the installation concerned, its geographical location and the local environmental conditions. In all circumstances, the conditions of the permit shall contain provisions on the minimization of long-distance or transboundary pollution and ensure a high level of protection for the environment as a whole~~.

⇩ new

The competent authority shall set emission limit values that do not exceed the emission levels associated with the best available techniques as described in the BAT reference documents.

3. By derogation from the second subparagraph of paragraph 2, the competent authority may, in specific cases, on the basis of an assessment of the environmental and economic costs and

benefits taking into account the technical characteristics of the installation concerned, its geographical location and the local environmental conditions, set emission limit values that exceed the emission levels associated with the best available techniques as described in the BAT reference documents.

Those emission limit values shall however not exceed the emission limit values set out in Annexes V to VIII, where applicable.

The Commission may establish criteria for the granting of the derogation referred to in this paragraph.

Those measures, designed to amend non-essential elements of this Directive, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

4. Paragraphs 2 and 3 shall apply to the spreading of livestock manure and slurry outside the site of the installation referred to in point 6.6 of Annex I. Member States may include those requirements in measures other than a permit.

5. The competent authority may grant temporary derogations from the requirements of paragraph 2 and from points (1) and (2) of the first subparagraph of Article 12 for increases in emissions which result from the testing and use of emerging techniques provided that within 6 months of the granting of the derogation the use of those techniques is either stopped or the activity achieves at least the emission levels associated with the best available techniques.

Article 17

Monitoring requirements

1. The monitoring requirements referred to in Article 15(1) (c) and (d) shall, where applicable, be based on the conclusions on monitoring as described in the BAT reference documents.

2. The frequency of the periodic monitoring referred to in Article 15(1) (d) shall be determined by the competent authority in a permit for each individual installation or in general binding rules.

Without prejudice to the first subparagraph, periodic monitoring shall be carried out at least once every seven years.

The Commission may establish criteria for the determination of the frequency of the periodic monitoring.

Those measures designed to amend non-essential elements of this Directive, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

Article 18

General binding rules

↓ 96/61/EC Art. 9(8) (adapted)

1. ⌦ When adopting ⌫ ~~Without prejudice to the obligation to implement a permit procedure pursuant to this Directive, Member States may prescribe certain requirements for certain categories of installations in~~ general binding rules, ~~instead of including them in individual permit conditions, provided that~~ ⌦ Member States shall ensure ⌫ an integrated

approach and a~~n equivalent~~ high level of environmental protection ~~as a whole are ensured~~ ⌦ equivalent to that achievable with individual permit conditions ⌫.

⇩ new

2. General binding rules shall be based on the best available techniques, without prescribing the use of any technique or specific technology.

Member States shall ensure that general binding rules contain emission limit values, or equivalent parameters or technical measures, that do not exceed the emission levels associated with the best available techniques as described in the BAT reference documents.

3. Member States shall ensure that general binding rules are kept up to date with developments in the best available techniques.

Where the Commission adopts a new or updated BAT reference document, Member States shall, within four years of publication, where necessary, reconsider and update the general binding rules for the installations concerned.

4. General binding rules adopted in accordance with paragraphs 1 to 3 shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication.

🡻 96/61/EC (adapted)
⇨ new

Article 19~~10~~

~~Best available techniques and~~ eEnvironmental quality standards

Where an environmental quality standard requires stricter conditions than those achievable by the use of the best available techniques, additional measures shall ~~in particular~~ be ~~required~~ ⌦ included ⌫ in the permit, without prejudice to other measures which ⌦ may ⌫ ~~might~~ be taken to comply with environmental quality standards.

Article 20~~11~~

Developments in best available techniques

Member States shall ensure that the competent authority follows or is informed of developments in best available techniques~~:~~ ⇨ and of the publication of any new or revised BAT reference documents. ⇦

Article 21~~12~~

Changes by operators to installations

1. Member States shall take the necessary measures to ensure that the operator informs the competent ⌦ authority ⌫ ~~authorities~~ of any planned change in the ⌦ nature or functioning, or an extension ⌫ ~~operation~~ of the installation ⌦ which may have consequences for the environment ⌫ ~~as referred to in Article 2 (10) (a)~~. Where appropriate, the competent ⌦ authority ⌫ ~~authorities~~ shall update the permit ~~or the conditions~~.

2. Member States shall take the necessary measures to ensure that no substantial change ~~in the operation of the installation within the meaning of Article 2 (10) (b)~~ planned by the operator is made without a permit issued in accordance with this Directive.

The application for a permit and the decision by the competent authority ⌦ shall ⌫ ~~must~~ cover those parts of the installation and those ~~aspects~~ ⌦ details ⌫ listed in Article ~~6~~13 which may be affected by the ⌦ substantial ⌫ change. ~~The relevant provisions of Articles 3 and 6 to 10 and Article 15 (1), (2) and (4) shall apply *mutatis mutandis*.~~

🡻 96/61/EC Art. 2(10)(b) (adapted)

3.~~(b) For the purposes of this definition,~~ Any change ⌦ in the nature or functioning ⌫ ~~to~~ or ⌦ an ⌫ extension of an ⌦ installation ⌫ ~~operation~~ shall be deemed to be substantial if the change or extension in itself ~~meets~~ ⌦ reaches the capacity ⌫ thresholds~~, if any,~~ set out in Annex I.

🡻 96/61/EC (adapted)

Article 22~~13~~

Reconsideration and updating of permit conditions by the competent authority

1. Member States shall take the necessary measures to ensure that ⌦ the ⌫ competent ⌦ authority ⌫ ~~authorities~~ periodically ⌦ reconsiders all ⌫ ~~reconsider~~ permit conditions and, where necessary ⌦ to ensure compliance with this Directive, updates those ⌫, ~~update permit~~ conditions.

⇩ new

2. On request of the competent authority the operator shall submit all the information necessary for the purpose of reconsidering the permit conditions.

When reconsidering permit conditions the competent authority shall use any information resulting from monitoring or inspections.

3. Where the Commission adopts a new or updated BAT reference document, Member States shall, within four years of publication, ensure that the competent authority, where necessary, reconsiders and updates the permit conditions for the installations concerned.

The first subparagraph shall apply to any derogation granted in accordance with Article 16(3).

🡻 96/61/EC (adapted)
⇨ new

4~~2~~. The ~~reconsideration~~ ⌦ permit conditions ⌫ shall be ~~undertaken in any event where~~ ⌦ reconsidered and, where necessary, updated at least in the following cases ⌫:

(a) the pollution caused by the installation is of such significance that the existing emission limit values of the permit need to be revised or new such values need to be included in the permit;~~.~~

(b) ~~substantial changes~~ ⇨ developments ⇦ in the best available techniques ~~make it possible to reduce~~ ⌦ allow for the significant reduction of ⌫ emissions ~~significantly~~ ~~without imposing excessive costs~~;~~,~~

(c) the operational safety ~~of the process or activity~~ requires other techniques to be used;~~,~~

(d) ⇨ where it is necessary to comply with an environmental quality standard in accordance with Article 19. ⇦

~~- new provisions of Community or national legislation so dictate.~~

⇩ new

Article 23

Site closure and remediation

1. Without prejudice to Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage[35] and to Directive 20../../EC of the European Parliament and of the Council establishing a framework for the protection of soil and amending Directive 2004/35/EC[36] the competent authority shall ensure that the permit conditions imposed to ensure the respect of the principle set out in point (8) of Article 12 are implemented upon definitive cessation of activities.

2. Where the activity involves the use, production or release of dangerous substances having regard to the possibility of soil and groundwater contamination at the site of the installation, the operator shall prepare a baseline report before starting operation of an installation or before a permit for an installation is updated. That report shall contain the quantified information necessary to determine the initial state of the soil and the groundwater.

The Commission shall establish criteria on the content of the baseline report.

Those measures designed to amend non-essential elements of this Directive, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

3. Upon definitive cessation of the activities, the operator shall assess the state of the soil and groundwater contamination by dangerous substances. Where the installation has caused any pollution by dangerous substances of soil or groundwater compared to the initial state established in the baseline report referred to in paragraph 2, the operator shall remediate the site and return it to that initial state.

4. Where the operator is not required to prepare a baseline report referred to in paragraph 2, the operator shall take the necessary measures upon definitive cessation of the activities to ensure that the site does not pose any significant risk to human health and the environment.

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[35] OJ L 143, 30.4.2004, p. 56.

[36] OJ L

⇩ new

Article 24

Reporting on compliance

The report on compliance referred to in point (1) of Article 8 shall include a comparison between the operation of the installation, including the level of emissions, and the best available techniques as described in the BAT reference documents.

Article 25

Inspections

1. Member States shall set up a system of inspections of installations.

That system shall include on site inspections.

🡻 96/61/EC (adapted)

~~*Article 14*~~

~~**Compliance with permit conditions**~~

Member States shall ~~take the necessary measures to~~ ensure that~~:~~

~~- the conditions of the permit are complied with by the operator when operating the installation,~~

~~- the operator regularly informs the competent authority of the results of the monitoring of releases and without delay of any incident or accident significantly affecting the environment,~~

~~-~~ operators ~~of installations~~ afford ~~the representatives of~~ the competent ⌦ authorities ⌫ ~~authority~~ all necessary assistance to enable ⌦ those authorities ⌫ ~~them~~ to carry out any ⌦ on site ⌫ inspections ~~within the installation~~, to take samples and to gather any information necessary for the performance of their duties for the purposes of this Directive.

⇩ new

2. Member States shall ensure that all installations are covered by an inspection plan.

3. Each inspection plan shall include the following:

(a) general assessment of relevant significant environmental issues;

(b) the geographical area covered by the inspection plan;

(c) a register of the installations covered by the inspection plan and a general appraisal of their state of compliance with the requirements of this Directive;

(d) provisions for its revision;

(e) an outline of the programmes for routine inspections pursuant to paragraph 5;

(f) procedures for non-routine inspections pursuant to paragraph 6;

(g) where necessary, provisions on the co-operation between different inspection authorities.

4. Based on the inspection plans, the competent authority shall regularly draw up inspection programmes, determining the frequency of site visits for different types of installations.

Those programmes shall include at least one site visit every twelve months, for each installation, unless those programmes are based on a systematic appraisal of the environmental risks of the particular installations concerned.

The Commission shall establish criteria on the appraisal of the environmental risks.

Those measures designed to amend non-essential elements of this Directive, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

5. Routine inspections shall be sufficient for the examination of the full range of relevant environmental effects from the installation concerned.

Routine inspections shall ensure that the operator complies with the permit conditions.

Routine inspections shall also serve to assess the effectiveness of the permit requirements.

6. Non-routine inspections shall be carried out to investigate serious environmental complaints, serious environmental accidents, incidents and occurrences of non-compliance as soon as possible and, where appropriate, before the issue, reconsideration or update of a permit.

7. Following each routine and non-routine inspection, the competent authority shall prepare a report describing the findings as to compliance of the installation with the requirements of this Directive and conclusions on whether any further action is necessary.

The report shall be notified to the operator concerned and made publicly available within two months after the inspection takes place.

The competent authority shall ensure that all the necessary actions identified in the report are taken within a reasonable period.

↓ 96/61/EC

Article 26~~15~~

Access to information and public participation in the permit procedure

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↓ 2003/35/EC Art. 4.3 (adapted)

1. Member States shall ensure that the public concerned are given early and effective opportunities to participate in the ~~procedure for~~ ⌦ following procedures ⌫ :

(a) issuing ⌦ of ⌫ a permit for new installations;~~,~~

(b) issuing ⌦ of ⌫ a permit for any substantial change ~~in the operation of an installation~~;~~,~~

(c) updating of a permit or permit conditions for an installation in accordance with ~~Article 13, paragraph 2, first indent,~~ point (a) of Article 22(4).

⇩ new

(d) adoption of general binding rules as provided for in Articles 7 and 18.

🡻 2003/35/EC Art. 4.3 (adapted)

The procedure set out in Annex IV ~~V~~ shall apply ~~for the purposes of~~ ⌦ to ⌫ such participation.

⇩ new

2. Points (a) and (b) of paragraph 1 shall not apply where all of the following conditions are met:

(a) the new installation or substantial change is subject to Directive 85/337/EEC;

(b) general binding rules cover all of the necessary permit conditions;

(c) there is no need to impose any stricter requirements to comply with Article 19.

🡻 2003/35/EC Art. 4.3 (adapted)

3~~5~~. When a decision ⌦ on granting, reconsideration or updating of a permit, or on the adoption or updating of general binding rules ⌫ has been taken, the competent authority ~~shall inform the public in accordance with the appropriate procedures and~~ shall make available to the public the following information:

(a) the content of the decision, including a copy of the permit ~~and of any conditions~~ and any subsequent updates; ~~and~~

(b) ~~having examined the concerns and opinions expressed by the public concerned,~~ the reasons ~~and considerations~~ on which the decision is based; ~~, including information on the public participation process.~~

⇩ new

(c) the results of the consultations held before the decision was taken and an explanation of how they were taken into account in that decision;

(d) the title of the BAT reference documents relevant to the installation or activity concerned;

(e) how the emission limit values included in the permit or the general binding rules have been determined in relation to the best available techniques and associated emission levels as described in the BAT reference documents;

(f) where a derogation is granted in accordance with Article 16(3), the reasons for that derogation and the conditions imposed;

(g) the result of the reconsideration of general binding rules as referred to in Articles 18(3) and of permits as referred to in Article 22(1), (3) and (4);

↓ 96/61/EC (adapted)

(h)2. t~~T~~he results of monitoring of releases as required under the permit conditions ~~referred to in Article 9~~ and held by the competent authority ~~must be made available to the public~~.

43. Paragraphs 1, 2 and 3 shall apply subject to the restrictions laid down in Article 4(1) and (2) of Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information ~~Article 3 (2) and (3) of Directive 90/313/EEC~~.

↓ 2003/35/EC Art. 4.3 (adapted)

Article 27~~15a~~

Access to justice

1. Member States shall ensure that, in accordance with the relevant national legal system, members of the public concerned ⌦ have access to a review procedure before a court of law or another independent and impartial body established by law to challenge the substantive or procedural legality of decisions, acts or omissions subject to Article 26 when one of the following conditions is met ⌫:

(a) ⌦ they have ⌫ ~~having~~ a sufficient interest; ~~or alternatively,~~

(b) ⌦ they maintain ⌫ ~~maintaining~~ the impairment of a right, where administrative procedural law of a Member State requires this as a precondition.

~~have access to a review procedure before a court of law or another independent and impartial body established by law to challenge the substantive or procedural legality of decisions, acts or omissions subject to the public participation provisions of this Directive.~~

2. Member States shall determine at what stage the decisions, acts or omissions may be challenged.

3. What constitutes a sufficient interest and impairment of a right shall be determined by ~~the~~ Member States, consistently with the objective of giving the public concerned wide access to justice.

To this end, the interest of any non-governmental organisation ⌦ promoting environmental protection and⌫ meeting ~~the~~ ⌦ any ⌫ requirements ~~referred to in Article 2(14)~~ ⌦under national law ⌫ shall be deemed sufficient for the purpose of ~~subparagraph~~ point (a) of ~~this Article~~ paragraph 1.

Such organisations shall also be deemed to have rights capable of being impaired for the purpose of ~~subparagraph~~ point (b) of ~~this Article~~ paragraph 1.

4. The provisions of ~~this Article~~ paragraphs 1, 2 and 3 shall not exclude the possibility of a preliminary review procedure before an administrative authority and shall not affect the requirement of exhaustion of administrative review procedures prior to recourse to judicial review procedures, where such a requirement exists under national law.

Any such procedure shall be fair, equitable, timely and not prohibitively expensive.

5. ~~In order to further the effectiveness of the provisions of this Article,~~ Member States shall ensure that practical information is made available to the public on access to administrative and judicial review procedures.

↓ 96/61/EC

Article 28~~17~~

Transboundary effects

↓ 2003/35/EC Art. 4.5(a) (adapted)

1. Where a Member State is aware that the operation of an installation is likely to have significant negative effects on the environment of another Member State, or where a Member State ⌦ which is ⌫ likely to be significantly affected so requests, the Member State in whose territory the application for a permit pursuant to Article 4 or Article ~~12(2)~~ 21(2) was submitted shall forward to the other Member State any information required to be given or made available pursuant to Annex ~~V~~ IV at the same time as it makes it available to ~~its own nationals~~ ⌦ the public ⌫ .

Such information shall serve as a basis for any consultations necessary in the framework of the bilateral relations between the two Member States on a reciprocal and equivalent basis.

↓ 96/61/EC (adapted)

2. Within the framework of their bilateral relations, Member States shall ~~see to it~~ ⌦ ensure ⌫ that in the cases referred to in paragraph 1 the applications are also made available for an appropriate period of time to the public of the Member State likely to be affected so that it will have the right to comment on them before the competent authority reaches its decision.

↓ 2003/35/EC Art. 4.5(b) (adapted)

3. The results of any consultations pursuant to paragraphs 1 and 2 ~~must~~ ⌦ shall ⌫ be taken into consideration when the competent authority reaches a decision on the application.

4. The competent authority shall inform any Member State~~s~~ which has been consulted pursuant to paragraph 1~~s~~ of the decision reached on the application and shall forward to it the information referred to in Article ~~15(5)~~ 26(3). That Member State shall take the measures necessary to ensure that that information is made available in an appropriate manner to the public concerned in its own territory.

↓ 96/61/EC (adapted)
⇨ new

Article 29~~16~~

Exchange of information

~~1. With a view to exchanging information, Member States shall take the necessary measures to send the Commission every three years, and for the first time within 18 months of the date on which this Directive is brought into effect, the available representative data on the limit values laid down by specific category of activities in accordance with Annex I and, if appropriate, the best available techniques from which those values are derived in accordance with, in particular, Article 9. On subsequent occasions the data shall be supplemented in accordance with the procedures laid down in paragraph 3 of this Article.~~

~~2.~~ The Commission shall organise ~~organize~~ an exchange of information ⌦ with ⌫ ~~between~~ Member States, ~~and~~ the industries concerned ~~on best available techniques, associated monitoring, and developments in them.~~ ⇨ and non-governmental organisations promoting environmental protection on the following: ⇦

⇩ new

(a) the performance of installations in terms of emissions, pollution, consumption and nature of raw materials, use of energy or generation of waste;

🡻 96/61/EC (adapted)

(b) ⌦ the ⌫ ~~on best available~~ techniques ⌦ used ⌫, associated monitoring, and ⌦ their ⌫ developments ~~in them~~.

~~Every three years~~ ~~the Commission shall publish the results of the exchanges of information.~~

~~3. Reports on the implementation of this Directive and its effectiveness compared with other Community environmental instruments shall be established in accordance with the procedure laid in Article 5 and 6 of Directive 91/692/EEC. The first report shall cover the three years following the date on which this present Directive is brought into effect as referred to in Article 21. The Commission shall submit the report to the Council, accompanied by proposals if necessary.~~

~~4. Member States shall establish or designate the authority or authorities which are to be responsible for the exchange of information under paragraphs 1, 2 and 3 and shall inform the Commission accordingly.~~

⇩ new

Article 30

Emerging techniques

Member States shall establish incentives for operators to develop and apply emerging techniques.

For the purpose of the first subparagraph, the Commission shall adopt measures to determine the following:

(a) the type of industrial activities for prioritised development and application of emerging techniques; ;

(b) indicative targets for Member States regarding the development and application of emerging techniques;

(c) the tools to assess the progress made in developing and applying emerging techniques.

Those measures, designed to amend non-essential elements of this Directive, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

↓ 96/61/EC (adapted)

~~*Article 18*~~

~~**Community emission limit values**~~

~~1. Acting on a proposal from the Commission, the Council will set emission limit values, in accordance with the procedures laid down in the Treaty, for:~~

~~- the categories of installations listed in Annex I except for the landfills covered by categories 5.1 and 5.4 of that Annex,~~

~~and~~

~~- the polluting substances referred to in Annex III,~~

~~for which the need for Community action has been identified, on the basis, in particular, of the exchange of information provided for in Article 16.~~

~~2. In the absence of Community emission limit values defined pursuant to this Directive, the relevant emission limit values contained in the Directives referred to in Annex II and in other Community legislation shall be applied as minimum emission limit values pursuant to this Directive for the installations listed in Annex I.~~

~~Without prejudice to the requirements of this Directive, the technical requirements applicable for the landfills covered by categories 5.1 and 5.4 of Annex I, shall be fixed by the Council, acting on a proposal by the Commission, in accordance with the procedures laid down in the Treaty.~~

↓ 2001/80/EC Art. 1 (adapted)

CHAPTER III

⌦ Special provisions for combustion plants ⌫

Article 31~~1~~

⌦ Scope ⌫

~~This Directive~~ This chapter shall apply to combustion plants ⌦ designed for production of energy ⌫, the rated thermal input of which is equal to or greater than 50 MW, irrespective of the type of fuel used ~~(solid, liquid or gaseous)~~.

~~*Article 2*~~

~~For the purpose of this Directive:~~

~~(1) "emission" means the discharge of substances from the combustion plant into the air;~~

~~(2) "waste gases" means gaseous discharges containing solid, liquid or gaseous emissions; their volumetric flow rates shall be expressed in cubic metres per hour at standard temperature (273 K) and pressure (101,3 kPa) after correction for the water vapour content, hereinafter referred to as (Nm3/h);~~

~~(3) "emission limit value" means the permissible quantity of a substance contained in the waste gases from the combustion plant which may be discharged into the air during a given period; it shall be calculated in terms of mass per volume of the waste gases expressed in mg/Nm3, assuming an oxygen content by volume in the waste gas of 3 % in the case of liquid and gaseous fuels, 6 % in the case of solid fuels and 15 % in the case of gas turbines;~~

~~(4) "rate of desulphurisation" means the ratio of the quantity of sulphur which is not emitted into the air at the combustion plant site over a given period to the quantity of sulphur contained in the fuel which is introduced into the combustion plant facilities and which is used over the same period;~~

~~(5) "operator" means any natural or legal person who operates the combustion plant, or who has or has been delegated decisive economic power over it;~~

~~(6) "fuel" means any solid, liquid or gaseous combustible material used to fire the combustion plant with the exception of waste covered by Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants[37] (9), Council Directive 89/429/EEC of 21 June 1989 on the reduction of air pollution from existing municipal waste incineration plants[38] (10), and Council Directive 94/67/EC of 16 December 1994 concerning the incineration of hazardous waste[39] (11) or any subsequent Community act repealing and replacing one or more of these Directives;~~

~~(7) "combustion plant" means any technical apparatus in which fuels are oxidised in order to use the heat thus generated.~~

~~This Directive shall apply only to combustion plants designed for production of energy with the exception of those which make direct use of the products of combustion in manufacturing processes. In particular,~~ ~~this Directive~~ This chapter shall not apply to the following combustion plants:

(a) plants in which the products of combustion are used for the direct heating, drying, or any other treatment of objects or materials ~~e.g. reheating furnaces, furnaces for heat treatment~~ ;

(b) post-combustion plants ~~i.e. any technical apparatus~~ designed to purify the waste gases by combustion which ⌦ are ⌫ ~~is~~ not operated as ~~an~~ independent combustion ~~plant~~ ⌦ plants ⌫ ;

(c) facilities for the regeneration of catalytic cracking catalysts;

(d) facilities for the conversion of hydrogen sulphide into sulphur;

(e) reactors used in the chemical industry;

(f) coke battery furnaces;

(g) cowpers;

(h) any technical apparatus used in the propulsion of a vehicle, ship or aircraft;

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37 ~~OJ L 163, 14.6.1989, p. 32.~~

38 ~~OJ L 203, 15.7.1989, p. 50.~~

39 ~~OJ L 365, 31.12.1994, p. 34.~~

(i) gas turbines used on offshore platforms;

⌦ (j) plants which use any solid or liquid waste as a fuel other than waste referred to in point (a) of Article 38(2) ⌫

~~(j) gas turbines licensed before 27 November 2002 or which in the view of the competent authority are the subject of a full request for a licence before 27 November 2002 provided that the plant is put into operation no later than 27 November 2003 without prejudice to Article 7(1) and Annex VIII(A) and (B);~~

~~Plants powered by diesel, petrol and gas engines shall not be covered by this Directive.~~

~~(8) "multi-fuel firing unit" means any combustion plant which may be fired simultaneously or alternately by two or more types of fuel;~~

~~(9) "new plant" means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence was granted on or after 1 July 1987;~~

~~(10) "existing plant" means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence was granted before 1 July 1987;~~

~~(11) "biomass" means products consisting of any whole or part of a vegetable matter from agriculture or forestry which can be used as a fuel for the purpose of recovering its energy content and the following waste used as a fuel:~~

~~(a) vegetable waste from agriculture and forestry;~~

~~(b) vegetable waste from the food processing industry, if the heat generated is recovered;~~

~~(c) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;~~

~~(d) cork waste;~~

~~(e) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating, and which includes in particular such wood waste originating from construction and demolition waste;~~

~~(12) "gas turbine" means any rotating machine which converts thermal energy into mechanical work, consisting mainly of a compressor, a thermal device in which fuel is oxidised in order to heat the working fluid, and a turbine.~~

~~(13) "Outermost Regions" means the French Overseas Departments with regard to France, the Azores and Madeira with regard to Portugal and the Canary Islands with regard to Spain.~~

⇩ new

Article 32

Aggregation rules

1. Where the waste gases of two or more separate combustion plants are discharged through a common stack, the combination formed by such plants shall be considered as a single combustion plant and their capacities added.

↓ 2001/80/EC Art. 2(7) (adapted)

2. Where two or more separate ⌦ combustion plants which have been granted a permit or have submitted a complete application after the date referred to in Article 72(2) ⌫ ~~new plants~~ are installed in such a way that, taking technical and economic factors into account, their waste gases could~~, in the judgement of the competent authorities,~~ be discharged through a common stack, the combination formed by such plants shall be ~~regarded~~ ⌦ considered ⌫ as a single ⌦ combustion plant ⌫ ~~unit~~ ⌦ and their capacities added. ⌫

↓ 2001/80/EC

~~*Article 3*~~

~~1. Not later than 1 July 1990 Member States shall draw up appropriate programmes for the progressive reduction of total annual emissions from existing plants. The programmes shall set out the timetables and the implementing procedures.~~

~~2. In accordance with the programmes mentioned in paragraph 1, Member States shall continue to comply with the emission ceilings and with the corresponding percentage reductions laid down for sulphur dioxide in Annex I, columns 1 to 6, and for oxides of nitrogen in Annex II, columns 1 to 4, by the dates specified in those Annexes, until the implementation of the provisions of Article 4 that apply to existing plants.~~

~~3. When the programmes are being carried out, Member States shall also determine the total annual emissions in accordance with Annex VIII(C).~~

~~4. 4. If a substantial and unexpected change in energy demand or in the availability of certain fuels or certain generating installations creates serious technical difficulties for the implementation by a Member State of its programme drawn up under paragraph 1, the Commission shall, at the request of the Member State concerned and taking into account the terms of the request, take a decision to modify, for that Member State, the emission ceilings and/or the dates set out in Annexes I and II and communicate its decision to the Council and to the Member States. Any Member State may within three months refer the decision of the Commission to the Council. The Council, acting by a qualified majority, may within three months take a different decision.~~

~~*Article 4*~~

~~1. Without prejudice to Article 17 Member States shall take appropriate measures to ensure that all licences for the construction or, in the absence of such a procedure, for the operation of new plants which in the view of the competent authority are the subject of a full request for a licence before 27 November 2002, provided that the plant is put into operation no later than 27 November 2003 contain conditions relating to compliance with the emission limit values laid down in part A of Annexes III to VII in respect of sulphur dioxide, nitrogen oxides and dust.~~

↓ 2001/80/EC Art. 9 (adapted)

Article 33

⌦ Emission limit values ⌫

1. Waste gases from combustion plants shall be discharged in ⌦ a ⌫ controlled ⌦ way ⌫ ~~fashion~~ by means of a stack, ⌦ containing one or more flues ⌫ , ~~The licence referred to in Article 4 and licences for combustion plants covered by Article 10 shall lay down the discharge conditions. The competent authority shall in particular ensure that~~ the ~~stack~~ height ⌦ of which ⌫ is calculated in such a way as to safeguard ⌦ human ⌫ health and the environment.

↓ 2001/80/EC (adapted)

2. ~~Member States shall take appropriate measures to ensure that all licences for the construction or, in the absence of such a procedure, for the operation of new plants, other than those covered by paragraph 1, contain conditions relating to compliance with~~ ⌦ All permits for installations containing combustion plants which have been granted a permit or have submitted a complete application before the date referred to in Article 72(2) provided that such plant is put into operation no later than one year after that date shall include conditions ensuring that emissions to air from these plants do not exceed ⌫ the emission limit values laid down in Part 1~~B~~ of Annex~~es~~ V~~III to VII~~ ~~in respect of sulphur dioxide, nitrogen oxides and dust~~.

⌦ 3. All permits for installations containing combustion plants not covered by paragraph 2 shall include conditions ensuring that emissions to the air from these plants do not exceed the emission limit values laid down in Part 2 of Annex V. ⌫

↓ 2001/80/EC Art. 7 (adapted)

4~~2~~. The competent authority may ~~allow~~ ⌦ grant a derogation ⌫ ~~a suspension~~ for a maximum of six months from the obligation to comply with the emission limit values provided for in paragraphs 2 and 3 ~~Article 4~~ for sulphur dioxide in respect of a ⌦ combustion ⌫ plant which to this end normally uses low-sulphur fuel, in cases where the operator is unable to comply with ⌦ those ⌫ ~~these~~ limit values because of an interruption in the supply of low-sulphur fuel resulting from a serious shortage.

⌦ Member States shall immediately inform ⌫ the~~The~~ Commission ⌦ of any derogation granted under the first subparagraph ⌫ ~~shall immediately be informed of such cases.~~

5~~3~~. The competent authority may ~~allow~~ ⌦ grant ⌫ a derogation from the obligation to comply with the emission limit values provided for in paragraphs 2 and 3 ~~Article 4~~ in cases where a ⌦ combustion ⌫ plant ~~which normally~~ ⌦ using ⌫ ~~uses~~ only gaseous fuel~~, and which would otherwise need to be equipped with a waste gas purification facility,~~ has to resort exceptionally~~, and for a period not exceeding 10 days except where there is an overriding need to maintain energy supplies,~~ to the use of other fuels because of a sudden interruption in the supply of gas ⌦ and for this reason would need to be equipped with a waste gas purification facility ⌫ . ⌦ The period for which such a derogation is granted shall not exceed 10 days except where there is an overriding need to maintain energy supplies. ⌫

The ⌦ operator shall immediately inform the ⌫ competent authority ~~shall immediately be informed~~ of each specific case ⌦ referred to in the first subparagraph ⌫ ~~as it arises~~.

Member States shall inform the Commission immediately of ⌦ any derogation granted under the first ⌫ ~~the cases referred to in this~~ subparagraph.

🡻 2001/80/EC (adapted)

~~*Article 10*~~

6. Where a combustion plant is extended ~~by at least 50 MW~~, the emission limit values ⌦ specified ⌫ ~~as set~~ in part ~~2~~B of Annex~~es~~ ~~V~~VIII to VII shall apply to the ~~new~~ part of the plant ⌦ affected by the change ⌫ and shall be ⌦ set ⌫ ~~fixed~~ in relation to the ⌦ rated ⌫ thermal ~~capacity~~ ⌦ input ⌫ of the entire ⌦ combustion ⌫ plant. ~~This provision shall not apply in the cases referred to in Article 8(2) and (3).~~

~~Where the operator of a combustion plant is envisaging a change according to Articles 2(10)(b) and 12(2) of Directive 96/61/EC, the emission limit values as set out in part B of Annexes III to VII in respect of sulphur dioxide, nitrogen oxides and dust shall apply.~~

🡻 2001/80/EC Art. 4 (adapted)

~~3. Without prejudice to Directive 96/61/EC and Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management[40], Member States shall, by 1 January 2008 at the latest, achieve significant emission reductions by:~~

~~(a) taking appropriate measures to ensure that all licences for the operation of existing plants contain conditions relating to compliance with the emission limit values established for new plants referred to in paragraph 1; or~~

~~(b) ensuring that existing plants are subject to the national emission reduction plan referred to in paragraph 6;~~

~~and, where appropriate, applying Articles 5, 7 and 8.~~

~~4. Without prejudice to Directives 96/61/EC and 96/62/EC, existing plants may be exempted from compliance with the emission limit values referred to in paragraph 3 and from their inclusion in the national emission reduction plan on the following conditions:~~

~~(a) the operator of an existing plant undertakes, in a written declaration submitted by 30 June 2004 at the latest to the competent authority, not to operate the plant for more than 20000 operational hours starting from 1 January 2008 and ending no later than 31 December 2015;~~

~~(b) the operator is required to submit each year to the competent authority a record of the used and unused time allowed for the plants' remaining operational life.~~

~~5. Member States may require compliance with emission limit values and time limits for implementation which are more stringent than those set out in paragraphs 1, 2, 3 and 4 and in Article 10. They may include other pollutants, and they may impose additional requirements or adaptation of plant to technical progress.~~

~~40 OJ L 296, 21.11.1996, p. 55.~~

6. Member States may, without prejudice to this Directive and Directive 96/61/EC, and taking into consideration the costs and benefits as well as their obligations under Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants[41] and Directive 96/62/EC, define and implement a national emission reduction plan for existing plants, taking into account, *inter alia*, compliance with the ceilings as set out in Annexes I and II.

The national emission reduction plan shall reduce the total annual emissions of nitrogen oxides (NO_x), sulphur dioxide (SO_2) and dust from existing plants to the levels that would have been achieved by applying the emission limit values referred to in paragraph 3 to the existing plants in operation in the year 2000, (including those existing plants undergoing a rehabilitation plan in 2000, approved by the competent authority, to meet emission reductions required by national legislation) on the basis of each plant's actual annual operating time, fuel used and thermal input, averaged over the last five years of operation up to and including 2000.

The closure of a plant included in the national emission reduction plan shall not result in an increase in the total annual emissions from the remaining plants covered by the plan.

The national emission reduction plan may under no circumstances exempt a plant from the provisions laid down in relevant Community legislation, including inter alia Directive 96/61/EC.

The following conditions shall apply to national emission reduction plans:

(a) the plan shall comprise objectives and related targets, measures and timetables for reaching these objectives and targets, and a monitoring mechanism;

(b) Member States shall communicate their national emission reduction plan to the Commission no later than 27 November 2003;

(c) within six months of the communication referred to in point (b) the Commission shall evaluate whether or not the plan meets the requirements of this paragraph. When the Commission considers that this is not the case, it shall inform the Member State and within the subsequent three months the Member State shall communicate any measures it has taken in order to ensure that the requirements of this paragraph are met;

(d) the Commission shall, no later than 27 November 2002, develop guidelines to assist Member States in the preparation of their plans.

7. Not later than 31 December 2004 and in the light of progress towards protecting human health and attaining the Community's environmental objectives for acidification and for air quality pursuant to Directive 96/62/EC, the Commission shall submit a report to the European Parliament and the Council in which it shall assess:

(a) the need for further measures;

(b) the amounts of heavy metals emitted by large combustion plants;

(c) the cost-effectiveness and costs and advantages of further emission reductions in the combustion plants sector in Member States compared to other sectors;

(d) the technical and economic feasibility of such emission reductions;

[41] See p. 22 of this Edition of the Official Journal.

(e) the effects of both the standards set for the large combustion plants sector including the provisions for indigenous solid fuels, and the competition situation in the energy market, on the environment and the internal market;

(f) any national emission reduction plans provided by Member States in accordance with paragraph 6.

The Commission shall include in its report an appropriate proposal of possible end dates or of lower limit values for the derogation contained in footnote 2 to Annex VI A.

8. The report referred to in paragraph 7 shall, as appropriate, be accompanied by related proposals, having regard to Directive 96/61/EC.

↓ 2001/80/EC

Article 5

By way of derogation from Annex III:

(1) Plants, of a rated thermal input equal to or greater than 400 MW, which do not operate more than the following numbers of hours a year (rolling average over a period of five years),

– until 31 December 2015, 2000 hours;

– from 1 January 2016, 1500 hours;

shall be subject to a limit value for sulphur dioxide emissions of 800 mg/Nm^3.

This provision shall not apply to new plants for which the licence is granted pursuant to Article 4(2).

(2) Until 31 December 1999, the Kingdom of Spain may authorise new power plants with a rated thermal input equal to or greater than 500 MW burning indigenous or imported solid fuels, commissioned before the end of 2005 and complying with the following requirements:

(a) in the case of imported solid fuels, a sulphur dioxide emission limit value of 800 mg/Nm^3;

(b) in the case of indigenous solid fuels, at least a 60 % rate of desulphurisation,

provided that the total authorised capacity of such plants to which this derogation applies does not exceed:

– 2000 MWe in the case of plants burning indigenous solid fuels;

– in the case of plants burning imported solid fuels either 7500 or 50 % of all the new capacity of all plants burning solid fuels authorised up to 31 December 1999, whichever is the lower.

Article 6

In the case of new plants for which the licence is granted pursuant to Article 4(2) or plants covered by Article 10, Member States shall ensure that the technical and economic feasibility of providing for the combined generation of heat and power is examined. Where this

~~feasibility is confirmed, bearing in mind the market and the distribution situation, installations shall be developed accordingly.~~

↓ 2001/80/EC (adapted)

Article ~~34~~7

⊠ Malfunction or breakdown of the abatement equipment ⊠

1. Member States shall ensure that provision is made in the ~~licences or~~ permits ~~referred to in Article 4~~ for procedures relating to malfunction or breakdown of the abatement equipment.

2. In case of a breakdown the competent authority shall ~~in particular~~ require the operator to reduce or close down operations if a return to normal operation is not achieved within 24 hours, or to operate the plant using low polluting fuels.

~~In any case~~ The~~the~~ ~~competent authority~~ ⊠ operator ⊠ shall ~~be notified~~ ⊠ notify the competent authority ⊠ within 48 hours ⊠ after the malfunction or breakdown of the abatement equipment ⊠ .

~~In no circumstances shall~~ The~~the~~ cumulative duration of unabated operation ⊠ shall not ⊠ ~~in any twelve-month period~~ exceed 120 hours ⊠ in any twelve-month period ⊠ .

The competent authority may ~~allow exceptions~~ ⊠ grant a derogation from ⊠ ~~to~~ the ⊠ time ⊠ limits ⊠ set out in the first and third subparagraphs ⊠ ~~of 24 hours and 120 hours above~~ in ⊠ one of the following ⊠ cases ~~where, in their judgement~~:

(a) there is an overriding need to maintain energy supplies, ~~or~~

(b) the ⊠ combustion ⊠ plant with the breakdown would be replaced for a limited period by another plant which would cause an overall increase in emissions.

↓ 2001/80/EC (adapted)

Article 35~~12~~

⊠ Monitoring of emissions into air ⊠

1. Member States shall ~~take the necessary measures to~~ ensure ⊠ that ⊠ the monitoring ⊠ of air polluting substances is carried out ⊠ in accordance with Part 3 of Annex V~~VIII(A),~~ ~~of emissions from the combustion plants covered by this Directive and of all other values required for the implementation of this Directive. Member States may require that such monitoring shall be carried out at the operator's expense~~.

⇩ new

2. The installation and functioning of the automated monitoring equipment shall be subject to control and to annual surveillance tests as set out in Part 3 of Annex V.

3. The competent authority shall determine the location of the sampling or measurement points to be used for monitoring of emissions.

4. All monitoring results shall be recorded, processed and presented in a way as to enable the competent authority to verify compliance with the operating conditions and emission limit values which are included in the permit.

↓ 2001/80/EC (adapted)

Article 36

⌦ Compliance with emission limit values ⌫

⌦ The emission limit values for air shall be regarded as being complied with if the conditions set out in Part 4 of Annex V are fulfilled. ⌫

↓ 2001/80/EC (adapted)
⇨ new

Article 37~~8~~

⌦ Multi-fuel firing combustion plants ⌫

1. In the case of ~~plants with~~ a multi- ⌦ fuel ⌫ firing ⌦ combustion plant ⌫ ~~unit~~ involving the simultaneous use of two or more fuels, ~~when granting the licence referred to in Articles 4(1) or 4(2), and in the case of such plants covered by Articles 4(3) or 10,~~ the competent authority shall set the emission limit values ⌦ in accordance with the following steps ⌫ ~~as follows~~:

(a) ~~firstly by taking~~ ⌦ take ⌫ the emission limit value relevant for each individual fuel and pollutant corresponding to the rated thermal input of the ⌦ entire ⌫ combustion plant as ⌦ set out ⌫ ~~given~~ in Parts 1 and 2 of Annex~~es~~ V~~III to VII~~,

(b) ~~secondly by determining~~ ⌦ determine ⌫ fuel-weighted emission limit values, which are obtained by multiplying the ~~above~~ individual emission limit value ⌦ referred to in point (a) ⌫ by the thermal input delivered by each fuel, ~~the product of multiplication being divided~~ ⌦ and dividing the product of multiplication ⌫ by the sum of the thermal inputs delivered by all fuels,

(c) ~~thirdly by aggregating~~ ⌦ aggregate ⌫ the fuel-weighted ⌦ emissions ⌫ limit values.

2. In ⌦ case of ⌫ multi- ⌦ fuel ⌫ firing ⌦ combustion plants ⌫ ~~units~~ using the distillation and conversion residues from ⌦ refining of ⌫ crude-oil ~~refining~~ for own consumption, alone or with other fuels, ⇨ the Commission may amend paragraph 1 to set an average emission limit value for sulphur dioxide covering all such plants with a rated thermal input of 50 MW or more.⇦ ~~the provisions for the fuel with the highest emission limit value (determinative fuel) shall apply, notwithstanding paragraph 1 above, if during the operation of the combustion plant the proportion contributed by that fuel to the sum of the thermal inputs delivered by all fuels is at least 50 %.~~

⇩ new

Those measures, designed to amend non-essential elements of this Directive, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

↓ 2001/80/EC (adapted)
→1 Corrigendum, OJ L 319, 23.11.2002, p. 30

Where the proportion of the determinative fuel is lower than 50 %, the emission limit value is determined on a pro rata basis of the heat input supplied by the individual fuels in relation to the sum of the thermal inputs delivered by all fuels as follows:

(a) firstly by taking the emission limit value relevant for each individual fuel and pollutant corresponding to the rated heat input of the combustion plant as given in Annexes III to VII,

(b) secondly by calculating the emission limit value of the determinative fuel (fuel with the highest emission limit value according to Annexes III to VII and, in the case of two fuels having the same emission limit value, the fuel with the higher thermal input); this value is obtained by multiplying the emission limit value laid down in Annexes III to VII for that fuel by a factor of two, and subtracting from this product the emission limit value of the fuel with the lowest emission limit value,

(c) thirdly by determining the fuel-weighted emission limit values, which are obtained by multiplying the calculated fuel emission limit value by the thermal input of the determinative fuel and the other individual emission limit values by the thermal input delivered by each fuel, the product of multiplication being divided by the sum of the thermal inputs delivered by all fuels,

(d) fourthly by aggregating the fuel-weighted emission limit values.

3. As an alternative to paragraph 2, the following average emission limit values for sulphur dioxide may be applied (irrespective of the fuel combination used):

(a) for plants referred to in Article 4(1) and (3): 1000 mg/Nm^3, averaged over all such plants within the refinery;

(b) for new plants referred to in Article 4(2): 600 mg/Nm^3, averaged over all such plants within the refinery, with the exception of gas turbines.

The competent authorities shall ensure that the application of this provision does not lead to an increase in emissions from existing plants.

4. In the case of plants with a multi-firing unit involving the alternative use of two or more fuels, when granting the licence referred to in Article 4(1) and (2), and in the case of such plants covered by Articles 4(3) or 10, the emission limit values set out in Annexes III to VII corresponding to each fuel used shall be applied.

Article 11

In the case of construction of combustion plants which are likely to have significant effects on the environment in another Member State, the Member States shall ensure that all appropriate information and consultation takes place, in accordance with Article 7 of Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment[42].

42 OJ L 175, 5.7.1985, p. 40. Directive as last amended by Council Directive 97/11/EC (OJ L 73, 14.3.1997, p. 5).

Article 13

Member States shall take appropriate measures to ensure that the operator informs the competent authorities within reasonable time limits about the results of the continuous measurements, the checking of the measuring equipment, the individual measurements and all other measurements carried out in order to assess compliance with this Directive.

Article 15

1. Member States shall, not later than 31 December 1990, inform the Commission of the programmes drawn up in accordance with Article 3(1).

At the latest one year after the end of the different phases for reduction of emissions from existing plants, the Member States shall forward to the Commission a summary report on the results of the implementation of the programmes.

An intermediate report is required as well in the middle of each phase.

2. The reports referred to in paragraph 1 shall provide an overall view of:

(a) all the combustion plants covered by this Directive,

(b) emissions of sulphur dioxide, and oxides of nitrogen expressed in tonnes per annum and as concentrations of these substances in the waste gases,

(c) measures already taken or envisaged with a view to reducing emissions, and of changes in the choice of fuel used,

(d) changes in the method of operation already made or envisaged,

(e) definitive closures of combustion plants already effected or envisaged, and

(f) where appropriate, the emission limit values imposed in the programmes in respect of existing plants.

When determining the annual emissions and concentrations of pollutants in the waste gases, Member States shall take account of Articles 12, 13 and 14.

3. Member States applying Article 5 or the provisions of the Nota Bene in Annex III or the footnotes in Annex VI.A shall report thereon annually to the Commission.

Article 17

1. Directive 88/609/EEC shall be repealed with effect from 27 November 2002, without prejudice to paragraph 2 or to the obligations of Member States concerning the time limits for transposition and application of that Directive listed in Annex IX hereto.

2. In the case of new plants licensed ➔1 before 27 November 2002 as specified in Article 4(1) ← of this Directive, Article 4(1), Article 5(2), Article 6, Article 15(3), Annexes III, VI, VIII and point A.2 of Annex IX to Directive 88/609/EEC as amended by Directive 94/66/EC shall remain in effect until 1 January 2008 after which they shall be repealed.

3. References to Directive 88/609/EEC shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex X hereto.

↓ 2000/76/EC (adapted)

Chapter IV

⌦ Special provisions for waste incineration plants and waste co-incineration plants ⌫

↓ 2000/76/EC (adapted)

~~*Article 1*~~

~~**Objectives**~~

~~The aim of this Directive is to prevent or to limit as far as practicable negative effects on the environment, in particular pollution by emissions into air, soil, surface water and groundwater, and the resulting risks to human health, from the incineration and co-incineration of waste.~~

~~This aim shall be met by means of stringent operational conditions and technical requirements, through setting emission limit values for waste incineration and co-incineration plants within the Community and also through meeting the requirements of Directive 75/442/EEC.~~

↓ 2000/76/EC (adapted)

Article 3~~2~~

Scope

1. This ~~Directive~~ Chapter ⌦ shall apply to ⌫ ~~covers~~ ⌦ waste ⌫ incineration ⌦ plants ⌫ and ⌦ waste ⌫ co-incineration plants ⌦ which incinerate or co-incinerate solid or liquid waste. ⌫

~~*Article 3*~~

~~**Definitions**~~

For the purposes of this Chapter ~~Directive~~ ⌦ waste incineration plants and waste co-incineration plants shall include ⌫

~~1. "waste" means any solid or liquid waste as defined in Article 1(a) of Directive 75/442/EEC;~~

~~2. "hazardous waste" means any solid or liquid waste as defined in Article 1(4) of Council Directive 91/689/EEC of 12 December 1991 on hazardous waste(19).~~

~~For the following hazardous wastes, the specific requirements for hazardous waste in this Directive shall not apply:~~

~~(a) combustible liquid wastes including waste oils as defined in Article 1 of Council Directive 75/439/EEC of 16 June 1975 on the disposal of waste oils(20) provided that they meet the following criteria:~~

~~(i) the mass content of polychlorinated aromatic hydrocarbons, e.g. polychlorinated biphenyls (PCB) or pentachlorinated phenol (PCP) amounts to concentrations not higher than those set out in the relevant Community legislation;~~

~~(ii) these wastes are not rendered hazardous by virtue of containing other constituents listed in Annex II to Directive 91/689/EEC in quantities or in concentrations which are inconsistent with the achievement of the objectives set out in Article 4 of Directive 75/442/EEC; and~~

~~(iii) the net calorific value amounts to at least 30 MJ per kilogramme,~~

~~(b) any combustible liquid wastes which cannot cause, in the flue gas directly resulting from their combustion, emissions other than those from gasoil as defined in Article 1(1) of Directive 93/12/EEC(21) or a higher concentration of emissions than those resulting from the combustion of gasoil as so defined;~~

~~3. "mixed municipal waste" means waste from households as well as commercial, industrial and institutional waste, which because of its nature and composition is similar to waste from households, but excluding fractions indicated in the Annex to Decision 94/3/EC(22) under heading 20 01 that are collected separately at source and excluding the other wastes indicated under heading 20 02 of that Annex;~~

~~4. «incineration plant» means any stationary or mobile technical unit and equipment dedicated to the thermal treatment of wastes with or without recovery of the combustion heat generated. This includes the incineration by oxidation of waste as well as other thermal treatment processes such as pyrolysis, gasification or plasma processes in so far as the substances resulting from the treatment are subsequently incinerated.~~

~~This definition~~ ~~covers~~ ~~the site and the entire incineration plant including~~ all incineration lines ⌦ or co-incineration lines ⌫ , waste reception, storage, on site pretreatment facilities, waste-fuel and air-supply systems, boiler, facilities for the treatment of ~~exhaust~~ ⌦ waste ⌫ gases, on-site facilities for treatment or storage of residues and waste water, stack, devices and systems for controlling incineration ⌦ or co-incineration ⌫ operations, recording and monitoring incineration ⌦ or co-incineration ⌫ conditions~~;~~.

~~5. « co-incineration plant» means any stationary or mobile plant whose main purpose is the generation of energy or production of material products and: which uses wastes as a regular or additional fuel; or in which waste is thermally treated for the purpose of disposal.~~

If~~if~~ co-incineration takes place in such a way that the main purpose of the plant is not the generation of energy or production of material products but rather the thermal treatment of waste, the plant shall be regarded as ~~an~~ ⌦ a waste ⌫ incineration plant. ~~within the meaning of point 4;~~

~~This definition covers the site and the entire plant including all co-incineration lines, waste reception, storage, on site pretreatment facilities, waste-, fuel- and air-supply systems, boiler, facilities for the treatment of exhaust gases, on-site facilities for treatment or storage of residues and waste water, stack devices and systems for controlling incineration operations, recording and monitoring incineration conditions;~~

~~6. "existing co-incineration or co-incineration plant" means an incineration or co-incineration plant:~~

~~(a) which is in operation and has a permit in accordance with existing Community legislation before 28 December 2002, or,~~

~~(b) which is authorised or registered for incineration or co-incineration and has a permit issued before 28 December 2002 in accordance with existing~~

~~Community legislation, provided that the plant is put into operation not later than 28 December 2003, or~~

~~(c) which, in the view of the competent authority, is the subject of a full request for a permit, before 28 December 2002, provided that the plant is put into operation not later than 28 December 2004;~~

~~7. «nominal capacity» means the sum of the incineration capacities of the furnaces of which an incineration plant is composed, as specified by the constructor and confirmed by the operator, with due account being taken, in particular, of the calorific value of the waste, expressed as the quantity of waste incinerated per hour;~~

~~8. «emission» means the direct or indirect release of substances, vibrations, heat or noise from individual or diffuse sources in the plant into the air, water or soil;~~

~~9. «emission limit values» means the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission, which may not be exceeded during one or more periods of time;~~

~~10. «dioxins and furans» means all polychlorinated dibenzo-p-dioxins and dibenzofurans listed in Annex I;~~

~~11. «operator» means any natural or legal person who operates or controls the plant or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the plant has been delegated;~~

~~12. «permit» means a written decision (or several such decisions) delivered by the competent authority granting authorisation to operate a plant, subject to certain conditions which guarantee that the plant complies with all the requirements of this Directive. A permit may cover one or more plants or parts of a plant on the same site operated by the same operator;~~

~~13. «residue» means any liquid or solid material (including bottom ash and slag, fly ash and boiler dust, solid reaction products from gas treatment, sewage sludge from the treatment of waste waters, spent catalysts and spent activated carbon) defined as waste in Article 1(a) of Directive 75/442/EEC, which is generated by the incineration or co-incineration process, the exhaust gas or waste water treatment or other processes within the incineration or co-incineration plant.~~

↓ 2000/76/EC Art. 2 (adapted)

2. ~~The following plants shall however be excluded from the scope of this Directive:~~ ⌦ This Chapter shall not apply to the following plants: ⌫

(a) plants treating only the following wastes:

⌦ (i) waste listed in point (b) of Article 3(21), ⌫

~~(i) vegetable waste from agriculture and forestry;~~

~~(ii) vegetable waste from the food processing industry, if the heat generated is recovered;~~

~~(iii) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;~~

~~(iv) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment~~

~~with wood preservatives or coating, and which includes in particular such wood waste originating from construction and demolition waste~~;

~~(v) cork waste;~~

(ii~~v~~i) radioactive waste,

(iii~~vi~~i) animal carcasses as regulated by ~~Directive 90/667/EEC without prejudice to its future amendments~~ Regulation (EC) No 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption[43];

(iv~~vii~~i) waste resulting from the exploration for, and the exploitation of, oil and gas resources from off-shore installations and incinerated on board the installations;

(b) experimental plants used for research, development and testing in order to improve the incineration process and which treat less than 50 tonnes of waste per year.

↓ 2000/76/EC (adapted)

Article 3~~9~~4

Applications ⌦ for ⌫ ~~and~~ permits

~~1. Without prejudice to Article 11 of Directive 75/442/EEC or to Article 3 of Directive 91/689/EEC, no incineration or co-incineration plant shall operate without a permit to carry out these activities.~~

~~2. Without prejudice to Directive 96/61/EC, the~~ ⌦ An ⌫ application for a permit for ~~an~~ ⌦ a waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant ~~to the competent authority~~ shall include a description of the measures which are envisaged to guarantee that ⌦ the following requirements are met ⌫ :

(a) the plant is designed, equipped and will be ⌦ maintained and ⌫ operated in such a manner that the requirements of this Chapter ~~Directive~~ are ⌦ met ⌫ taking into account the categories of waste to be incinerated ⌦ or co-incinerated ⌫ ;

(b) the heat generated during the incineration and co-incineration process is recovered as far as practicable ~~e.g.~~ through ~~combined heat and power,~~ the ⌦ generation ⌫ ~~generating~~ of ~~process~~ ⌦ heat ⌫ , steam or ⌦ power ⌫ ~~district heating~~;

(c) the residues will be minimised in their amount and harmfulness and recycled where appropriate;

(d) the disposal of the residues which cannot be prevented, reduced or recycled will be carried out in conformity with national and Community legislation.

~~3. The permit shall be granted only if the application shows that the proposed measurement techniques for emissions into the air comply with Annex III and, as regards water, comply with Annex III paragraphs 1 and 2.~~

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[43] OJ L 273, 10.10.2002, p. 1.

Article 40

⌦ Permit conditions ⌫

14. The permit ⌦ shall include the following ⌫ ~~granted by the competent authority for an incineration or co-incineration plant shall, in addition to complying with any applicable requirement laid down in Directives 91/271/EEC, 96/61/EC, 96/62/EC, 76/464/EEC and 1999/31/EC~~:

(a) ⌦ a ⌫ list ⌦ of all ⌫ ~~explicitly the~~ categories of waste which may be treated~~. The list shall use~~ ⌦ using ⌫ at least the categories of waste set up in the European Waste List established by Commission Decision 2000/532/EC ~~European Waste Catalogue (EWC), if possible~~, and ~~contain~~ ⌦ containing ⌫ information on the quantity of ⌦ each category of ⌫ waste, where appropriate;

(b) ~~include~~ the total waste incinerating or co-incinerating capacity of the plant;

⬇ 2000/76/EC Art. 8(6) (adapted)

~~6. The permit shall:~~

(c~~a~~) ~~establish emission~~ ⌦ the ⌫ limit values for ⌦ emissions to air and water; ⌫ ~~the polluting substances referred to in Annex IV, in accordance with paragraph 2 and in order to meet the requirements referred to in paragraph 3(a);~~

(d~~b~~) ~~set operational control parameters for waste water at least~~ the ⌦ requirements ⌫ for the pH, temperature and flow ⌦ of waste water discharges; ⌫

⬇ 2000/76/EC (adapted)

(c~~e~~) ~~specify~~ the sampling and measurement procedures ⌦ and frequencies ⌫ ~~used to satisfy the obligations imposed for periodic measurements of each air and water pollutants~~ ⌦ to be used to comply with the conditions set for emission monitoring ⌫ ;~~.~~

⬇ 2000/76/EC Art. 13 (adapted)

(f) ~~1. The competent authority shall lay down in the permit~~ the maximum permissible period of any technically unavoidable stoppages, disturbances, or failures of the purification devices or the measurement devices, during which the ⌦ emissions ⌫ ~~concentrations in the discharges~~ into the air and ~~the purified waste water of the regulated substances~~ ⌦ the discharges of waste water ⌫ may exceed the prescribed emission limit values.

⬇ 2000/76/EC (adapted)

2~~5~~. ⌦ In addition to the requirements set out in paragraph 1, ⌫ the~~The~~ permit granted ~~by the competent authority~~ to ~~an~~ ⌦ a waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant using hazardous waste shall ⌦ include the following ⌫ ~~in addition to paragraph 4~~:

(a) ⌦ a ⌫ list ⌦ of ⌫ the quantities of the different categories of hazardous waste which may be treated;

(b) ~~specify~~ the minimum and maximum mass flows of those hazardous wastes, their lowest and maximum calorific values and their maximum contents of ~~pollutants, e.g.~~ PCB, PCP, chlorine, fluorine, sulphur, heavy metals ⌦ and other polluting substances ⌫ .

3~~6~~. ~~Without prejudice to the provisions of the Treaty,~~ Member States may list the categories of waste to be ⌦ included ⌫ ~~mentioned~~ in the permit which can be co-incinerated in ⌦ certain ⌫ ~~defined~~ categories of ⌦ waste ⌫ co-incineration plants.

~~7. Without prejudice to Directive 96/61/EC,~~ 4. The~~the~~ competent authority shall periodically reconsider and, where necessary, update permit conditions.

~~9. If an incineration or co-incineration plant does not comply with the conditions of the permit, in particular with the emission limit values for air and water, the competent authority shall take action to enforce compliance.~~

Article 41~~7~~

⌦ Control of emissions ⌫ ~~Air emission limit values~~

⬇ 2000/76/EC Art. 6(5) (adapted)

1~~5~~. ~~Incineration and co-incineration plants shall be designed, equipped, built and operated in such a way as to prevent emissions into the air giving rise to significant ground-level air pollution; in particular, exhaust~~ ⌦ Waste ⌫ gases ⌦ from waste incineration plants and waste co-incineration plants ⌫ shall be discharged in a controlled ⌦ way ⌫ ~~fashion and in conformity with relevant Community air quality standards~~ by means of a stack the height of which is calculated in such a way as to safeguard human health and the environment.

⬇ 2000/76/EC (adapted)

2~~1~~.⌦ Emissions to air from waste incineration plants and waste co-incineration plants shall not exceed the emission limit values set out in parts 3 and 4 of Annex VI or determined in accordance with part 4 of that Annex ⌫ ~~Incineration plants shall be designed, equipped, built and operated in such a way that the emission limit values set out in Annex V are not exceeded in the exhaust gas.~~

~~2. Co-incineration plants shall be designed, equipped, built and operated in such a way that the emission limit values determined according to or set out in Annex II are not exceeded in the exhaust gas.~~

If in a ⌦ waste ⌫ co-incineration plant more than 40 % of the resulting heat release comes from hazardous waste, ⌦ or the plant co-incinerates untreated mixed municipal waste, ⌫ the emission limit values set out in Part 3 of Annex VI ~~V~~ shall apply.

~~3. The results of the measurements made to verify compliance with the emission limit values shall be standardised with respect to the conditions laid down in Article 11.~~

~~4. In the case of co-incineration of untreated mixed municipal waste, the limit values will be determined according to Annex V, and Annex II will not apply.~~

~~5. Without prejudice to the provisions of the Treaty, Member States may set emission limit values for polycyclic aromatic hydrocarbons or other pollutants.~~

~~*Article 8*~~

~~Water discharges from the cleaning of exhaust gases~~

~~1. Waste water from the cleaning of exhaust gases discharged from an incineration or co-incineration plant shall be subject to a permit granted by the competent authorities.~~

3~~2~~. Discharges to the aquatic environment of waste water resulting from the cleaning of ⌦ waste ⌫ ~~exhaust~~ gases shall be limited as far as practicable~~,~~ ⌦ and the concentrations of polluting substances shall not exceed ⌫ ~~at least in accordance with~~ the emission limit values set ⌦ out ⌫ in Part 5 of Annex VI ~~IV~~.

~~3. Subject to a specific provision in the permit, the waste water from the cleaning of exhaust gases may be discharged to the aquatic environment after separate treatment on condition that:~~

~~(a) the requirements of relevant Community, national and local provisions are complied with in the form of emission limit values; and~~

~~(b) the mass concentrations of the polluting substances referred to in Annex IV do not exceed the emission limit values laid down therein.~~

4. The emission limit values shall apply at the point where waste waters from the cleaning of ~~exhaust~~ ⌦ waste ⌫ gases ~~containing the polluting substances referred to in Annex IV~~ are discharged from the ⌦ waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant.

~~Where the waste water from the cleaning of exhaust gases is treated on site collectively with other on-site sources of waste water, the operator shall take the measurements referred to in Article 11:~~

~~(a) on the waste water stream from the exhaust gas cleaning processes prior to its input into the collective waste water treatment plant;~~

~~(b) on the other waste water stream or streams prior to its or their input into the collective waste water treatment plant;~~

~~(c) at the point of final waste water discharge, after the treatment, from the incineration plant or co-incineration plant.~~

~~The operator shall take appropriate mass balance calculations in order to determine the emission levels in the final waste water discharge that can be attributed to the waste water arising from the cleaning of exhaust gases in order to check compliance with the emission limit values set out in Annex IV for the waste water stream from the exhaust gas cleaning process.~~

~~Under no circumstances shall dilution of waste water take place for the purpose of complying with the emission limit values set in Annex IV.~~

~~5.~~ When waste waters from the cleaning of ~~exhaust~~ ⌦ waste ⌫ gases ~~containing the polluting substances referred to in Annex IV~~ are treated outside the ⌦ waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant at a treatment plant intended only for the treatment of this sort of waste water, the emission limit values ~~of~~ ⌦ set out in ⌫ Part 5 of Annex VI ~~IV~~ are to be applied at the point where the waste waters leave the treatment plant. ⌦ Where the waste water from the cleaning of waste gases is treated collectively with other sources of waste water, either on site or off site, ⌫

~~If this off-site treatment plant is not only dedicated to treat waste water from incineration,~~ the operator shall ⌦ make ⌫ ~~take~~ the appropriate mass balance calculations, ⌦ using the results of the measurements set out ⌫ ~~as provided for~~ ⌦ in ⌫ ~~under paragraph 4(a), (b)~~

~~and (c),~~ ⌦ point 2 of Part 6 of Annex VI ⌫ in order to determine the emission levels in the final waste water discharge that can be attributed to the waste water arising from the cleaning of ~~exhaust~~ ⌦ waste ⌫ gases ~~in order to check compliance with the emission limit values set out in Annex IV for the waste water stream from the exhaust gas cleaning process~~.

Under no circumstances shall dilution of waste water take place for the purpose of complying with the emission limit values set ⌦ out ⌫ in Part 5 of Annex VI ~~IV~~.

5~~7~~. ⌦ Waste ⌫ incineration ⌦ plant sites ⌫ and ⌦ waste ⌫ co-incineration plant sites, including associated storage areas for waste, shall be designed and ⌦ operated ⌫ in such a way as to prevent the unauthorised and accidental release of any polluting substances into soil, surface water and groundwater.

~~in accordance with the provisions provided for in relevant Community legislation. Moreover,~~ S~~s~~torage capacity shall be provided for contaminated rainwater run-off from the ⌦ waste ⌫ incineration ⌦ plant site ⌫ or ⌦ waste ⌫ co-incineration plant site or for contaminated water arising from spillage or fire-fighting operations. The storage capacity shall be adequate to ensure that such waters can be tested and treated before discharge where necessary.

~~8. Without prejudice to the provisions of the Treaty, Member States may set emission limit values for polycyclic aromatic hydrocarbons or other pollutants.~~

⇓ 2000/76/EC Art. 13 (adapted)

6~~3~~. Without prejudice to Article ~~6(3)(c)~~45(4)(c), the ⌦ waste ⌫ incineration plant or ⌦ waste ⌫ co-incineration plant or ⌦ individual furnaces being part of a waste incineration plant or waste co-incineration plant ⌫ ~~incineration line~~ shall under no circumstances continue to incinerate waste for a period of more than four hours uninterrupted where emission limit values are exceeded.~~;~~ ~~moreover,~~

The~~the~~ cumulative duration of operation in such conditions over one year shall ⌦ not exceed ⌫ ~~be less than~~ 60 hours.

The ⌦ time limit set out in the second subparagraph shall ⌫ ~~60-hour duration applies~~ ⌦ apply ⌫ to those ⌦ furnaces ⌫ ~~lines of the entire plant~~ which are linked to one single ⌦ waste ⌫ ~~flue~~ gas cleaning device.

⇓ 2000/76/EC (adapted)

Article 42~~13~~

~~Abnormal operating conditions~~ ⌦ Breakdown ⌫

~~2.~~ In the case of a breakdown, the operator shall reduce or close down operations as soon as practicable until normal operations can be restored.

⇓ 2000/76/EC (adapted)

Article 43~~11~~

~~Measurement requirements~~ ⌦ Monitoring of emissions ⌫

1. Member States shall~~, either by specification in the conditions of the permit or by general binding rules,~~ ensure that ⌦ the monitoring of emissions is carried out in accordance with

Parts 6 and 7 of Annex VI ⌫ ~~paragraphs 2 to 12 and 17, as regards air, and paragraphs 9 and 14 to 17, as regards water, are complied with~~.

~~2. The following measurements of air pollutants shall be carried out in accordance with Annex III at the incineration and co-incineration plant:~~

~~(a) continuous measurements of the following substances: NOx, provided that emission limit values are set, CO, total dust, TOC, HCl, HF, SO2;~~

~~(b) continuous measurements of the following process operation parameters: temperature near the inner wall or at another representative point of the combustion chamber as authorised by the competent authority, concentration of oxygen, pressure, temperature and water vapour content of the exhaust gas;~~

~~(c) at least two measurements per year of heavy metals, dioxins and furans; one measurement at least every three months shall however be carried out for the first 12 months of operation. Member States may fix measurement periods where they have set emission limit values for polycyclic aromatic hydrocarbons or other pollutants.~~

~~3. The residence time as well as the minimum temperature and the oxygen content of the exhaust gases shall be subject to appropriate verification, at least once when the incineration or co-incineration plant is brought into service and under the most unfavourable operating conditions anticipated.~~

~~4. The continuous measurement of HF may be omitted if treatment stages for HCl are used which ensure that the emission limit value for HCl is not being exceeded. In this case the emissions of HF shall be subject to periodic measurements as laid down in paragraph 2(c).~~

~~5. The continuous measurement of the water vapour content shall not be required if the sampled exhaust gas is dried before the emissions are analysed.~~

~~6. Periodic measurements as laid down in paragraph 2(c) of HCl, HF and SO2 instead of continuous measuring may be authorised in the permit by the competent authority in incineration or co-incineration plants, if the operator can prove that the emissions of those pollutants can under no circumstances be higher than the prescribed emission limit values.~~

~~7. The reduction of the frequency of the periodic measurements for heavy metals from twice a year to once every two years and for dioxins and furans from twice a year to once every year may be authorised in the permit by the competent authority provided that the emissions resulting from co-incineration or incineration are below 50 % of the emission limit values determined according to Annex II or Annex V respectively and provided that criteria for the requirements to be met, developed in accordance with the procedure laid down in Article 17, are available. These criteria shall at least be based on the provisions of the second subparagraph, points (a) and (d).~~

~~Until 1 January 2005 the reduction of the frequency may be authorised even if no such criteria are available provided that:~~

~~(a) the waste to be co-incinerated or incinerated consists only of certain sorted combustible fractions of non-hazardous waste not suitable for recycling and presenting certain characteristics, and which is further specified on the basis of the assessment referred to in subparagraph (d);~~

~~(b) national quality criteria, which have been reported to the Commission, are available for these wastes;~~

~~(c) co-incineration and incineration of these wastes is in line with the relevant waste management plans referred to in Article 7 of Directive 75/442/EEC;~~

~~(d) the operator can prove to the competent authority that the emissions are under all circumstances significantly below the emission limit values set out in Annex II or Annex V for heavy metals, dioxins and furans; this assessment shall be based on information on the quality of the waste concerned and measurements of the emissions of the said pollutants;~~

~~(e) the quality criteria and the new period for the periodic measurements are specified in the permit; and~~

~~(f) all decisions on the frequency of measurements referred to in this paragraph, supplemented with information on the amount and quality of the waste concerned, shall be communicated on a yearly basis to the Commission.~~

~~8. The results of the measurements made to verify compliance with the emission limit values shall be standardised at the following conditions and for oxygen according to the formula as referred to in Annex VI:~~

~~(a) Temperature 273 K, pressure 101,3 kPa, 11 % oxygen, dry gas, in exhaust gas of incineration plants;~~

~~(b) Temperature 273 K, pressure 101,3 kPa, 3 % oxygen, dry gas, in exhaust gas of incineration of waste oil as defined in Directive 75/439/EEC;~~

~~(c) when the wastes are incinerated or co-incinerated in an oxygen-enriched atmosphere, the results of the measurements can be standardised at an oxygen content laid down by the competent authority reflecting the special circumstances of the individual case;~~

~~(d) in the case of co-incineration, the results of the measurements shall be standardised at a total oxygen content as calculated in Annex II.~~

~~When the emissions of pollutants are reduced by exhaust gas treatment in an incineration or co-incineration plant treating hazardous waste, the standardisation with respect to the oxygen contents provided for in the first subparagraph shall be done only if the oxygen content measured over the same period as for the pollutant concerned exceeds the relevant standard oxygen content.~~

↓ 2000/76/EC (adapted)

~~Article 10~~

~~Control and monitoring~~

~~1. Measurement equipment shall be installed and techniques used in order to monitor the parameters, conditions and mass concentrations relevant to the incineration or co-incineration process.~~

~~2. The measurement requirements shall be laid down in the permit or in the conditions attached to the permit issued by the competent authority.~~

2~~3~~. The ~~appropriate~~ installation and ~~the~~ functioning of the automated ⌦ measuring systems ⌫ ~~monitoring equipment for emissions into air and water~~ shall be subject to control and to ~~an~~ annual surveillance ~~test~~ ⌦ tests as set out in point 1 of Part 6 of Annex VI. ⌫ ~~Calibration has to be done by means of parallel measurements with the reference methods at least every three years.~~

34. The ⌦ competent authority shall determine the ⌫ location of the sampling or measurement points ⌦ to be used for monitoring of emissions ⌫ ~~shall be laid down by the competent authority~~.

~~5. Periodic measurements of the emissions into the air and water shall be carried out in accordance with Annex III, points 1 and 2.~~

↓ 2000/76/EC Art 11 (adapted)

49. All ⌦ monitoring ⌫ ~~measurement~~ results shall be recorded, processed and presented in ⌦ a way ⌫ ~~an appropriate fashion in order~~ to enable the competent ~~authorities~~ ⌦ authority ⌫ to verify compliance with the ~~permitted~~ operating conditions and emission limit values ⌦ which are included in the permit ⌫ ~~laid down in this Directive in accordance with procedures to be decided upon by those authorities~~.

~~10. The emission limit values for air shall be regarded as being complied with if:~~

~~(a) - none of the daily average values exceeds any of the emission limit values set out in Annex V(a) or Annex II;~~

~~- 97 % of the daily average value over the year does not exceed the emission limit value set out in Annex V(c) first indent;~~

~~(b) either none of the half-hourly average values exceeds any of the emission limit values set out in Annex V(b), column A or, where relevant, 97 % of the half-hourly average values over the year do not exceed any of the emission limit values set out in Annex V(b), column B;~~

~~(c) none of the average values over the sample period set out for heavy metals and dioxins and furans exceeds the emission limit values set out in Annex V(c) and (d) or Annex II;~~

~~(d) the provisions of Annex V(c), second indent or Annex II, are met.~~

~~11. The half-hourly average values and the 10-minute averages shall be determined within the effective operating time (excluding the start-up and shut-off periods if no waste is being incinerated) from the measured values after having subtracted the value of the confidence interval specified in point 3 of Annex III. The daily average values shall be determined from those validated average values.~~

~~To obtain a valid daily average value no more than five half-hourly average values in any day shall be discarded due to malfunction or maintenance of the continuous measurement system. No more than ten daily average values per year shall be discarded due to malfunction or maintenance of the continuous measurement system.~~

~~12. The average values over the sample period and the average values in the case of periodical measurements of HF, HCl and SO2 shall be determined in accordance with the requirements of Article 10(2) and (4) and Annex III.~~

513. The Commission~~, acting in accordance with the procedure laid down in Article 17,~~ shall ~~decide~~, as soon as appropriate measurement techniques are available within the Community, ⌦ set ⌫ the date from which continuous measurements of the ~~air emission~~ ⌦ emissions to air of ⌫ ~~limit values for~~ heavy metals and dioxins and furans shall be carried out ~~in accordance with Annex III~~.

⇩ new

Those measures, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

🡻 2000/76/EC Art 11 (adapted)

Article 44

⌦ Compliance with emission limit values ⌫

~~10.~~ The emission limit values for air ⌦ and water ⌫ shall be regarded as being complied with if ⌦ the conditions described in Part 8 of Annex VI are fulfilled ⌫ .

~~14. The following measurements shall be carried out at the point of waste water discharge:~~

~~(a) continuous measurements of the parameters referred to in Article 8(6)(b);~~

~~(b) spot sample daily measurements of total suspended solids; Member States may alternatively provide for measurements of a flow proportional representative sample over a period of 24 hours;~~

~~(c) at least monthly measurements of a flow proportional representative sample of the discharge over a period of 24 hours of the polluting substances referred to in Article 8(3) with respect to items 2 to 10 in Annex IV;~~

~~(d) at least every six months measurements of dioxins and furans; however one measurement at least every three months shall be carried out for the first 12 months of operation. Member States may fix measurement periods where they have set emission limit values for polycyclic aromatic hydrocarbons or other pollutants.~~

~~15. The monitoring of the mass of pollutants in the treated waste water shall be done in conformity with Community legislation and laid down in the permit as well as the frequency of the measurements.~~

~~16. The emission limit values for water shall be regarded as being complied with if:~~

~~(a) for total suspended solids (polluting substance number 1), 95 % and 100 % of the measured values do not exceed the respective emission limit values as set out in Annex IV;~~

~~(b) for heavy metals (polluting substances number 2 to 10) no more than one measurement per year exceeds the emission limit values set out in Annex IV; or, if the Member State provides for more than 20 samples per year, no more than 5 % of these samples exceed the emission limit values set out in Annex IV;~~

~~(c) for dioxins and furans (polluting substance 11), the twice-yearly measurements do not exceed the emission limit value set out in Annex IV.~~

🡻 2000/76/EC (adapted)

Article 45~~6~~

Operating conditions

1. ⌦ Waste ⌫ incineration plants shall be operated in ⌦ a way so as ⌫ to achieve a level of incineration such that the ~~slag and bottom ashes~~ total organic carbon ~~(TOC)~~ content ⌦ of slag and bottom ashes ⌫ is less than 3 % or their loss on ignition is less than 5 % of the dry weight of the material. If necessary, ~~appropriate techniques of~~ waste pre-treatment ⌦ techniques ⌫ shall be used.

2. ⌦ Waste ⌫ incineration plants ⌦ and waste co-incineration plants ⌫ shall be designed, equipped, built and operated in such a way that the gas resulting from ⌦ the incineration or co-incineration of waste ⌫ ~~the process~~ is raised, after the last injection of combustion air, in a controlled and homogeneous fashion and even under the most unfavourable conditions, to a temperature of ⌦ at least ⌫ 850 °C ⌦ for at least two seconds. ⌫ ~~, as measured near the inner wall or at another representative point of the combustion chamber as authorised by the competent authority, for two seconds.~~

If hazardous waste with a content of more than 1 % of halogenated organic substances, expressed as chlorine, ⌦ is ⌫ ~~are~~ incinerated ⌦ or co-incinerated ⌫ , the temperature ⌦ required to comply with the first subparagraph shall be at least 1100°C ⌫ ~~has to be raised to 1 100 °C for at least two seconds~~.

⌦ In waste incineration plants, the temperatures set out in the first and second subparagraphs shall be measured near the inner wall of the combustion chamber. The competent authority may authorize the measurements at another representative point of the combustion chamber. ⌫

3. Each ⌦ combustion chamber ⌫ ~~line~~ of ~~the~~ ⌦ a waste ⌫ incineration plant shall be equipped with at least one auxiliary burner. This burner ⌦ shall ⌫ ~~must~~ be switched on automatically when the temperature of the combustion gases after the last injection of combustion air falls below ⌦ the temperatures set out in paragraph 2 ⌫ ~~850 °C or 1 100 °C as the case may be~~. It shall also be used during plant start-up and shut-down operations in order to ensure that ~~the~~ ⌦ those ⌫ temperatures ⌦ are ⌫ ~~of 850 °C or 1 100 °C as the case may be is~~ maintained at all times during these operations and as long as unburned waste is in the combustion chamber.

~~During start-up and shut-down or when the temperature of the combustion gas falls below 850 °C or 1 100 °C as the case may be,~~ The~~the~~ auxiliary burner shall not be fed with fuels which can cause higher emissions than those resulting from the burning of gasoil as defined in Article 1(1) of Council Directive 93/12/EECof 23 March 1993 relating to the sulphur content of certain liquid fuels[44] ~~5/716/EEC~~, liquefied gas or natural gas.

~~2. Co-incineration plants shall be designed, equipped, built and operated in such a way that the gas resulting from the co-incineration of waste is raised in a controlled and homogeneous fashion and even under the most unfavourable conditions, to a temperature of 850 °C for two seconds. If hazardous wastes with a content of more than 1 % of halogenated organic substances, expressed as chlorine, are co-incinerated, the temperature has to be raised to 1 100 °C.~~

4~~3~~. ⌦ Waste ⌫ incineration ⌦ plants ⌫ and ⌦ waste ⌫ co-incineration plants shall ~~have and~~ operate an automatic system to prevent waste feed ⌦ in the following situations ⌫ :

[44] OJ L 74, 27.3.1993, p. 81.

(a) at start-up, until the temperature ⊠ set out in paragraph 2 ⊠ ~~of 850 °C or 1 100 °C as the case may be~~ or the temperature specified according to Article 46(1) ~~paragraph 4~~ has been reached;

(b) whenever the temperature ⊠ set out in paragraph 2 ⊠ ~~of 850 °C or 1 100 °C as the case may be~~ or the temperature specified according to Article 46(1) ~~paragraph 4~~ is not maintained;

(c) whenever the continuous measurements ~~required by this Directive~~ show that any emission limit value is exceeded due to disturbances or failures of the ⊠ waste gas cleaning ⊠ ~~purification~~ devices.

5~~6~~. Any heat generated by ⊠ waste ⊠ ~~the~~ incineration ⊠ plants ⊠ or ⊠ waste ⊠ ~~the~~ co-incineration ⊠ plants ⊠ ~~process~~ shall be recovered as far as practicable.

6~~7~~. Infectious clinical waste ⊠ shall ⊠ ~~should~~ be placed straight in the furnace, without first being mixed with other categories of waste and without direct handling.

7~~8~~. ⊠ Member States shall ensure that the waste ⊠ ~~The management of the~~ incineration ⊠ plant ⊠ or ~~the~~ ⊠ waste ⊠ co-incineration plant ⊠ is operated and controlled by ⊠ ~~shall be in the hands of~~ a natural person who is competent to manage the plant.

Article 46

Authorisation to change operation conditions

1.~~4.~~ Conditions different from those laid down in paragraphs 1, 2 and 3 of Article 45 and, as regards the temperature, paragraph 4 of that Article ~~3~~ and specified in the permit for certain categories of waste or for certain thermal processes may be authorised by the competent authority, provided the ⊠ other ⊠ requirements of this Chapter ~~Directive~~ are met. Member States may lay down rules governing these authorisations.

2. ⊠ For waste incineration plants, ⊠ the~~The~~ change of the operational conditions shall not cause more residues or residues with a higher content of organic ~~pollutants~~ ⊠ polluting substances ⊠ compared to those residues which could be expected under the conditions laid down in paragraphs 1, 2 and 3 of Article 45.

~~Conditions different from those laid down in paragraph 2 and, as regards the temperature, paragraph 3 and specified in the permit for certain categories of waste or for certain thermal processes may be authorised by the competent authority, provided the requirements of this Directive are met. Member States may lay down rules governing these authorisations. Such authorisation shall be conditional upon at least the provisions for emission limit values set out in Annex V for total organic carbon and CO being complied with.~~

⊠ 3. Waste co-incineration plants, authorised to change operational conditions according to paragraph 1 shall comply with at least the emission limit values set out in Part 3 of Annex VI for total organic carbon and CO. ⊠

~~In the case of co-incineration of their own waste at the place of its production in existing bark~~ Boilers within the pulp and paper industry ⊠ co-incinerating bark waste at the place of its production which were in operation and had a permit before 28 December 2002 and which are authorised to change operational conditions according to paragraph 1 shall comply with ⊠ , ~~such authorisation shall be conditional upon~~ at least the ~~provisions for~~ emission limit values set out in Part 3 of Annex VI ~~V~~ for total organic carbon ~~being complied with.~~

⊠ 4. Member States shall communicate to the Commission ⊠ all~~All~~ operating conditions ⊠ authorised ⊠ ~~determined~~ under ~~this paragraph~~ paragraphs 1, 2 and 3 and the results of

verifications made ~~shall be communicated by the Member State to the Commission~~ as part of the information provided in accordance with the reporting requirements ⌦ under Article 67 ⌫ .

Article 47~~5~~

Delivery and reception of waste

1. The operator of the ⌦ waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant shall take all necessary precautions concerning the delivery and reception of waste in order to prevent or to limit as far as practicable ~~negative effects on the environment, in particular~~ the pollution of air, soil, surface water and groundwater as well as ⌦ other negative effects on the environment, ⌫ odours and noise, and direct risks to human health. ~~These measures shall meet at least the requirements set out in paragraphs 3 and 4.~~

2. The operator shall determine the mass of each category of waste, ~~if possible~~ according to the European Waste List established by Commission Decision 2000/532/EC ~~EWC~~, prior to accepting the waste at the ⌦ waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant.

3. Prior to accepting hazardous waste at the ⌦ waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant, the operator shall ⌦ collect ⌫ ~~have~~ available information about the waste for the purpose of verifying~~, *inter alia*,~~ compliance with the permit requirements specified in Article 40(2) ~~4(5)~~.

That~~This~~ information shall cover ⌦ the following ⌫ :

(a) all the administrative information on the generating process contained in the documents mentioned in paragraph 4(a);

(b) the physical, and as far as practicable, chemical composition of the waste and all other information necessary to evaluate its suitability for the intended incineration process;

(c) the hazardous characteristics of the waste, the substances with which it cannot be mixed, and the precautions to be taken in handling the waste.

4. Prior to accepting hazardous waste at the ⌦ waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant, at least the following ~~reception~~ procedures shall be carried out by the operator:

(a) the checking of ~~those~~ ⌦ the ⌫ documents required by Directive ⌦ 20../…/EC ⌫ ~~91/689/EEC~~ and, where applicable, those required by Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision~~,~~ and control of shipments of waste within, into and out of the European Community[45] and by ⌦ legislation on transport of ⌫ dangerous~~-~~goods ~~transport regulations~~;

(b) the taking of representative samples, unless inappropriate~~, e.g. for infectious clinical waste,~~ as far as possible before unloading, to verify conformity with the information provided for in paragraph 3 by carrying out controls and to enable the competent authorities to identify the nature of the wastes treated.

~~These~~ ⌦ The ⌫ samples ⌦ referred to in point (b) ⌫ shall be kept for at least one month after the incineration or co-incineration ⌦ of the waste concerned ⌫ .

[45] OJ L 30, 6.2.1993, p. 1.

5. The competent ⌦ authority ⌫ ~~authorities~~ may grant exemptions from paragraphs 2, 3 and 4 ⌦ to waste incineration plants or waste co-incineration plants which are a part of an installation covered by Chapter II and only incinerate or co-incinerate waste generated within that installation ⌫ ~~for industrial plants and undertakings incinerating or co-incinerating only their own waste at the place of generation of the waste provided that the requirements of this Directive are met~~.

Article 48~~9~~

Residues

1. Residues ~~resulting from the operation of the incineration or co-incineration plant~~ shall be minimised in their amount and harmfulness. Residues shall be recycled, where appropriate, directly in the plant or outside ~~in accordance with relevant Community legislation~~.

2. Transport and intermediate storage of dry residues in the form of dust~~, such as boiler dust and dry residues from the treatment of combustion gases,~~ shall take place in such a way as to prevent dispersal ⌦ of those residues ⌫ in the environment ~~e.g. in closed containers~~.

3. Prior to determining the routes for the disposal or recycling of the residues ~~from incineration and co-incineration plants~~, appropriate tests shall be carried out to establish the physical and chemical characteristics and the polluting potential of the ~~different incineration~~ residues. ~~The analysis~~ ⌦ Those tests ⌫ shall concern the total soluble fraction and heavy metals soluble fraction.

⬇ 2000/76/EC Art. 4 (adapted)

Article 49

⌦ Substantial change ⌫

~~8.~~ ~~Where the operator~~ ⌦ A change of operation ⌫ of ~~an~~ ⌦ a waste ⌫ incineration ⌦ plant ⌫ or ⌦ a waste ⌫ co-incineration plant ⌦ treating only ⌫ ~~for~~ non-hazardous waste ⌦ in an installation covered by Chapter II ⌫ ~~is envisaging a change of operation~~ which ~~would involve~~ ⌦ involves ⌫ the incineration or co-incineration of hazardous waste~~,~~ ~~this~~ shall be regarded as a substantial change ~~within the meaning of Article 2(10)(b) of Directive 96/61/EC and Article 12(2) of that Directive shall apply~~.

⬇ 2000/76/EC (adapted)

Article 50~~12~~

⌦ Reporting and public information on waste incineration plants and waste co-incineration plants ⌫ ~~Access to information and public participation~~

1. ~~Without prejudice to Council Directive 90/313/EEC[46] and Directive 96/61/EC,~~ Aa~~a~~pplications for new permits for ⌦ waste ⌫ incineration ⌦ plants ⌫ and ⌦ waste ⌫ co-incineration plants shall be made available ~~at one or more locations accessible~~ to the public ⌦ at one or more locations ⌫ ~~, such as local authority offices,~~ for an appropriate period to

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46 ~~Council Directive 90/313/EEC of 7 June 1990 on the freedom of access to information on the environment (OJ L 158, 23.6.1990, p. 56). Directive as last amended by the Accession Act of 1994.~~

enable ⊠ the public ⌫ ~~it~~ to comment on ⊠ the applications ⌫ ~~them~~ before the competent authority reaches a decision. That decision, including at least a copy of the permit, and any subsequent updates, shall also be made available to the public.

2. For ⊠ waste ⌫ incineration ⊠ plants ⌫ or ⊠ waste ⌫ co-incineration plants with a nominal capacity of two tonnes or more per hour ⊠ the report referred to in Article 67 shall include information ⌫ ~~and notwithstanding Article 15(2) of Directive 96/61/EC, an annual report to be provided by the operator to the competent authority~~ on the functioning and monitoring of the plant ⊠ and give account of the running of the incineration or co-incineration process and the level of emissions into air and water in comparison with the emission limit values. That information ⌫ shall be made available to the public. ~~This report shall, as a minimum requirement, give an account of the running of the process and the emissions into air and water compared with the emission standards in this Directive.~~

3. A list of ⊠ waste ⌫ incineration ⊠ plants ⌫ or ⊠ waste ⌫ co-incineration plants with a nominal capacity of less than two tonnes per hour shall be drawn up by the competent authority and shall be made available to the public.

↓ 2000/76/EC (adapted)

~~*Article 14*~~

~~**Review clause**~~

~~Without prejudice to Directive 96/61/EC, the Commission shall submit a report to the European Parliament and the Council before 31 December 2008 based on experience of the application of this Directive, in particular for new plants, and on the progress achieved in emission control techniques and experience in waste management. Furthermore, the report shall be based on the development of the state of technology, of experience in the operation of the plants, of environmental requirements. This report will include a specific section on the application of Annex II.1.1. and in particular on the economic and technical feasibility for existing cement kilns as referred to in the footnote to Annex II.1.1. of respecting the NO_x emission limit value for new cement kilns set out in that Annex. The report shall, as appropriate, be accompanied by proposals for revision of the related provisions of this Directive. However, the Commission shall, if appropriate, propose an amendment for Annex II.3 before the said report, if major waste streams are directed to types of co-incineration plants other than those dealt with in Annex II.1 and II.2.~~

~~*Article 15*~~

~~**Reporting**~~

~~The reports on the implementation of this Directive shall be established in accordance with the procedure laid down in Article 5 of Council Directive 91/692/EEC. The first report shall cover at least the first full three-year period after 28 December 2002 and comply with the periods referred to in Article 17 of Directive 94/67/EC and in Article 16(3) of Directive 96/61/EC. To this effect, the Commission shall elaborate the appropriate questionnaire in due time~~

~~*Article 16*~~

~~**Future adaptation of the directive**~~

~~The Commission shall, in accordance with the procedure laid down in Article 17(2), amend Articles 10, 11 and 13 and Annexes I and III in order to adapt them to technical progress or new findings concerning the health benefits of emission reductions.~~

↓ 1999/13/EC (adapted)

Chapter V

⌦ Special provisions for installations and activities using organic solvents ⌫

Article 51~~1~~

~~Purpose and~~ S~~s~~cope

~~The purpose of this Directive is to prevent or reduce the direct and indirect effects of emissions of volatile organic compounds into the environment, mainly into air, and the potential risks to human health, by providing measures and procedures to be implemented for the activities defined in Annex I, in so far as they are operated above the solvent consumption thresholds listed in Annex IIA.~~

⌦ This chapter shall apply to activities listed in Part 1 of Annex VII and, where applicable, reaching the consumption thresholds set out in Part 2 of that Annex. ⌫

Article 52~~2~~

Definitions

For the purposes of this ~~Directive~~ Chapter ⌦, the following definitions shall apply ⌫:

~~1. installation shall mean a stationary technical unit where one or more activities falling within the scope defined in Article 1 are carried out, and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions;~~

(1)~~2~~ 'existing installation' ⌦ means ⌫ ~~shall mean~~ an installation in operation ~~or, in accordance with legislation existing before the date on which this Directive is brought into effect, an installation which is authorised or registered or, in the view of the competent authority, the subject of a full request for authorisation, provided that the installation is put into operation no later than one year after the date on which this Directive is brought into effect;~~ ⌦ which has been granted a permit before 1 April 2001 or has submitted a complete application for a permit before 1 April 2001 provided that that installation was put in operation no later than 1 April 2002 ⌫;

~~3. small installation shall mean an installation which falls within the lower threshold band of items 1, 3, 4, 5, 8, 10, 13, 16 or 17 of Annex IIA or for the other activities of Annex IIA which have a solvent consumption of less than 10 tonnes/year;~~

~~4. substantial change~~

- ~~for an installation falling within the scope of Directive 96/61/EC, shall have the definition specified in that Directive,~~
- ~~for a small installation, shall mean a change of the nominal capacity leading to an increase of emissions of volatile organic compounds of more than 25 %. Any change that may have, in the opinion of the competent authority, significant negative effects on human health or the environment is also a substantial change,~~

– ~~for all other installations, shall mean a change of the nominal capacity leading to an increase of emissions of volatile organic compounds of more than 10 %. Any change that may have, in the opinion of the competent authority, significant negative effects on human health or the environment is also a substantial change;~~

~~5. competent authority shall mean the authority or authorities or bodies responsible under the legal provisions of the Member States for carrying out the obligations arising from this Directive;~~

~~6. operator shall mean any natural or legal person who operates or controls the installation or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the installation has been delegated;~~

~~7. authorisation shall mean a written decision by which the competent authority grants permission to operate all or part of an installation;~~

~~8. registration shall mean a procedure, specified in a legal act, involving at least notification to the competent authority by the operator of the intention to operate an installation or activity falling within the scope of this Directive;~~

~~9. emission shall mean any discharge of volatile organic compounds from an installation into the environment;~~

~~11.~~(2) 'waste gases' ⌦ means ⌫ ~~shall mean~~ the final gaseous discharge containing volatile organic compounds or other pollutants~~,~~ from a stack or abatement equipment into air;~~,~~ ~~The volumetric flow rates shall be expressed in m^3/h at standard conditions;~~

~~10.~~(3) 'fugitive emissions' ⌦ means ⌫ ~~shall mean~~ any emissions not in waste gases of volatile organic compounds into air, soil and water as well as~~, unless otherwise stated in Annex IIA,~~ solvents contained in any products ⌦ , unless otherwise stated in Part 2 of Annex VII ⌫ . ~~They include uncaptured emissions released to the outside environment via windows, doors, vents and similar openings~~;

~~12.~~(4) 'total emissions' ⌦ means ⌫ ~~shall mean~~ the sum of fugitive emissions and emissions in waste gases;

~~13. emission limit value shall mean the mass of volatile organic compounds, expressed in terms of certain specific parameters, concentration, percentage and/or level of an emission, calculated at standard conditions, N, which may not be exceeded during one or more periods of time;~~

~~14. substances shall mean any chemical element and its compounds, as they occur in the natural state or as produced by industry, whether in solid or liquid or gaseous form;~~

~~15.~~(5) ~~preparation shall mean mixtures or solutions composed of two or more substances;~~ ⌦ 'mixture' means mixture as defined in paragraph 2 of Article 3 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH)[47], ⌫

~~16. organic compound shall mean any compound containing at least the element carbon and one or more of hydrogen, halogens, oxygen, sulphur, phosphorus, silicon or nitrogen, with the exception of carbon oxides and inorganic carbonates and bicarbonates;~~

~~17. volatile organic compound (VOC) shall mean any organic compound having at 293,15 K a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the~~

[47] OJ L 136, 29.5.07, p. 33-280.

~~particular conditions of use. For the purpose of this Directive, the fraction of creosote which exceeds this value of vapour pressure at 293,15 K shall be considered as a VOC;~~

~~18. organic solvent shall mean any VOC which is used alone or in combination with other agents, and without undergoing a chemical change, to dissolve raw materials, products or waste materials, or is used as a cleaning agent to dissolve contaminants, or as a dissolver, or as a dispersion medium, or as a viscosity adjuster, or as a surface tension adjuster, or a plasticiser, or as a preservative;~~

~~19. halogenated organic solvent shall mean an organic solvent which contains at least one atom of bromine, chlorine, fluorine or iodine per molecule;~~

~~20. coating shall mean any preparation, including all the organic solvents or preparations containing organic solvents necessary for its proper application, which is used to provide a decorative, protective or other functional effect on a surface;~~

(6)~~21.~~ 'adhesive' ⌦ means ⌫ ~~shall mean~~ any ~~preparation~~ ⌦ mixture ⌫ , including all the organic solvents or ~~preparations~~ ⌦ mixtures ⌫ containing organic solvents necessary for its proper application, which is used to adhere separate parts of a product;

(7)~~22.~~ 'ink' ⌦ means ⌫ ~~shall mean~~ a ~~preparation~~ ⌦ mixture ⌫ , including all the organic solvents or ~~preparations~~ ⌦ mixtures ⌫ containing organic solvents necessary for its proper application, which is used in a printing activity to impress text or images on to a surface;

(8)~~23.~~ 'varnish' ⌦ means ⌫ ~~shall mean~~ a transparent coating;

(9)~~24.~~ 'consumption' ⌦ means ⌫ ~~shall mean~~ the total input of organic solvents into an installation per calendar year, or any other 12-month period, less any volatile organic compounds ~~VOCs~~ that are recovered for reuse;

(10)~~25.~~ 'input' ⌦ means ⌫ ~~shall mean~~ the quantity of organic solvents and their quantity in ~~preparations~~ ⌦ mixtures ⌫ used when carrying out an activity, including the solvents recycled inside and outside the installation, and which are counted every time they are used to carry out the activity;

(11)~~26.~~ 'reuse ~~of organic solvents~~' ⌦ means ⌫ ~~shall mean~~ the use of organic solvents recovered from an installation for any technical or commercial purpose and including use as a fuel but excluding the final disposal of such recovered organic solvent as waste;

~~27. mass flow shall mean the quantity of VOCs released, in unit of mass/hour;~~

~~28. nominal capacity shall mean the maximum mass input of organic solvents by an installation averaged over one day, if the installation is operated under conditions of normal operation at its design output;~~

~~29. normal operation shall mean all periods of operation of an installation or activity except start-up and shut-down operations and maintenance of equipment;~~

~~30.~~(12)'contained conditions' ⌦ means ⌫ ~~shall mean~~ conditions under which an installation is operated ⌦ so ⌫ ~~such~~ that the volatile organic compounds ~~VOCs~~ released from the activity are collected and discharged in a controlled way either via a stack or abatement equipment and are therefore not entirely fugitive;

~~31. standard conditions shall mean a temperature of 273,15 K and a pressure of 101,3 kPa;~~

~~32. average over 24 hours shall mean the arithmetic average of all valid readings taken during the 24-hour period of normal operation;~~

(13)~~33.~~'start-up and shut-down operations' ⌦ means ⌫ ~~shall mean~~ operations ⌦ excluding ⌫ r~~R~~egularly oscillating activity phases ~~are not to be considered as start-ups and shut-downs~~ whilst bringing an activity, an equipment item or a tank into or out of service or into or out of an idling state~~.~~,

~~*Article 3*~~

~~**Obligations applying to new installations**~~

~~Member States shall adopt the necessary measures to ensure that:~~

~~1. all new installations comply with Articles 5, 8 and 9;~~

~~2. all new installations not covered by Directive 96/61/EC are registered or undergo authorisation before being put into operation.~~

~~*Article 4*~~

~~**Obligations applying to existing installations**~~

~~Without prejudice to Directive 96/61/EC, Member States shall adopt the necessary measures to ensure that:~~

~~1. existing installations comply with Articles 5, 8 and 9 no later than 31 October 2007;~~

~~2. all existing installations must have been registered or authorised by 31 October 2007 at the latest;~~

~~3. those installations to be authorised or registered using the reduction scheme of Annex IIB notify this to the competent authorities by 31 October 2005 at the latest;~~

~~4. where an installation:~~

- ~~undergoes a substantial change, or~~
- ~~comes within the scope of this Directive for the first time following a substantial change,~~

~~that part of the installation which undergoes the substantial change shall be treated either as a new installation or as an existing installation, provided that the total emissions of the whole installation do not exceed those that would have resulted had the substantially changed part been treated as a new installation.~~

↓ 1999/13/EC Art. 5(6) (adapted)

Article 53

⌦ Substitution of hazardous substances ⌫

~~6.~~ Substances or ~~preparations~~ ⌦ mixtures ⌫ which, because of their content of volatile organic compounds ~~VOCs~~, ⌦ are ⌫ classified as carcinogens, mutagens, or toxic to reproduction under ~~Council~~ Directive 67/548/EEC[48], are assigned or need to carry the risk phrases R45, R46, R49, R60~~,~~ or R61, shall be replaced, as far as possible ~~and by taking into~~

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48 ~~OJ 196, 16.8.1967, p. 1. Directive as last amended by Commission Directive 98/98/EC (OJ L 355, 30.12.1998, p. 1).~~

~~account the guidance as mentioned in Article 7(1),~~ by less harmful substances or ~~preparations~~ ⌦ mixtures ⌫ within the shortest possible time.

↓ 1999/13/EC (adapted)

Article ~~5~~4~~5~~

~~Requirements~~ ⌦ Control of emissions ⌫

1. Member States shall take the ~~appropriate~~ ⌦ necessary ⌫ measures ⌦ to ensure either of the following: ⌫ ~~, either by specification in the conditions of the authorisation or by general binding rules to ensure that paragraphs 2 to 12 are complied with.~~

~~2. All installations shall comply with:~~

(a) ~~either~~ ⌦ the emission of volatile organic compounds from installations shall not exceed ⌫ the emission limit values in waste gases and the fugitive emission ⌦ limit ⌫ values, or the total emission limit values, and other requirements laid down in ~~Annex IIA~~ Parts 2 and 3 of Annex VII ⌦ are complied with ⌫ ;

~~or~~

(b) ⌦ installations comply with ⌫ the requirements of the reduction scheme ~~specified~~ ⌦ set out ⌫ in ~~Annex IIB~~Part 5 of Annex VII ⌦ provided that an equivalent emission reduction is achieved compared to that achieved through the application of the emission limit values referred to in point (a) ⌫ .

↓ 1999/13/EC Annex IIB.1 (adapted)

⌦ Member States shall report to the Commission in accordance with Article 67(1) on the progress in achieving the equivalent emission reduction referred to in point (b). ⌫

↓ 1999/13/EC (adapted)

2.~~3.(a)~~ ⌦ By derogation from point (a) of paragraph 1, where the operator ⌫ ~~For fugitive emissions, Member States shall apply fugitive emission values to installations as an emission limit value. However, where it is demonstrated~~ ⌦ demonstrates ⌫ to ~~the satisfaction of~~ the competent authority that for an individual installation ~~this value~~ ⌦ the emission limit value for fugitive emissions ⌫ is not technically and economically feasible, the competent authority ~~can make an exception for such an individual installation~~ ⌦ may allow emissions to exceed that emission limit value ⌫ provided that significant risks to human health or the environment are not to be expected~~. For each derogation,~~ ⌦ and that ⌫ the operator ~~must demonstrate~~ ⌦ demonstrates ⌫ to ~~the satisfaction of~~ the competent authority that the best available ~~technique is~~ ⌦ techniques are ⌫ being used;

3. ⌦ By derogation from paragraph 1, for coating activities covered by item 8 of the Table in Part 2 of Annex VII which cannot be carried out under contained conditions, the competent authority may allow the emissions of the installation not to comply with the requirements set out in that paragraph if the operator demonstrates to the competent authority that such compliance is not technically and economically feasible and that the best available techniques are being used. ⌫

~~3.(b) activities which cannot be operated under contained conditions may be exempted from the controls of Annex IIA, when this possibility is explicitly mentioned in that Annex. The reduction scheme of Annex IIB is then to be used, unless it is demonstrated to the satisfaction of the competent authority that this option is not technically and economically feasible. In this case, the operator must demonstrate to the satisfaction of the competent authority that the best available technique is being used.~~

4. Member States shall report to the Commission on the ~~derogation concerning~~ ⌦ derogations referred to in ⌫ paragraphs ~~(a)~~2 and ~~(b)~~3 in accordance with Article ~~11~~ 67(2).

~~4. For installations not using the reduction scheme, any abatement equipment installed after the date on which this Directive is brought into effect shall meet all the requirements of Annex IIA.~~

5. The ⌦ emissions ⌫ ~~discharge~~ of volatile organic compounds ~~VOCs~~ ~~referred to in paragraphs 6 and 8~~ ⌦ which are assigned or need to carry the risk phrases R40, R45, R46, R49, R60, R61 or R68 ⌫ shall be controlled ~~as emissions from an installation~~ under contained conditions as far as technically and economically feasible to safeguard public health and the environment ⌦ and shall not exceed the emission limit values set out in Part 4 of Annex VII ⌫ .

6.~~5.~~ Installations where two or more activities are carried out, each of which exceeds the thresholds in ~~Annex IIA~~ Part 2 of Annex VII shall:

(a) as regards the substances specified in ~~paragraphs 6, 7 and 8~~ paragraph 5, meet the requirements of that paragraph ~~those paragraphs~~ for each activity individually;

(b) as regards all other substances, either:

(i) meet the requirements of paragraph 1~~2~~ for each activity individually; or

(ii) have total emissions ⌦ of volatile organic compounds ⌫ not exceeding those ~~that~~ ⌦ which ⌫ would have resulted had point (i) been applied.

~~7. For discharges of the VOCs referred to in paragraph 6, where the mass flow of the sum of the compounds causing the labelling referred to in that paragraph is greater than, or equal to, 10 g/h, an emission limit value of 2 mg/Nm³ shall be complied with. The emission limit value refers to the mass sum of the individual compounds.~~

~~8. For discharges of halogenated VOCs which are assigned the risk phrase R40, where the mass flow of the sum of the compounds causing the labelling R40 is greater than, or equal to, 100 g/h, an emission limit value of 20 mg/Nm³ shall be complied with. The emission limit value refers to the mass sum of the individual compounds.~~

~~9. Discharges of those VOCs which, after the entry into force of this Directive, are assigned or need to carry one of the risk phrases mentioned in paragraphs 6 and 8, shall have to comply with the emission limit values mentioned in paragraphs 7 and 8 respectively, within the shortest possible time.~~

7.~~10.~~ All appropriate precautions shall be taken to minimise emissions ⌦ of volatile organic compounds ⌫ during start-up and shut-down ⌦ operations ⌫ .

~~11. Existing installations which operate existing abatement equipment and comply with the following emission limit values:~~

– ~~50 mg C/Nm³ in the case of incineration,~~

– ~~150 mg C/Nm³ in the case of any other abatement equipment,~~

shall be exempt from the waste gases emission limit values in the table in Annex IIA for a period of 12 years after the date referred to in Article 15, provided the total emissions of the whole installation do not exceed those that would have resulted had all the requirements of the table been met.

12. Neither the reduction scheme nor the application of paragraph 11 nor Article 6 exempt installations discharging substances specified in paragraphs 6, 7 and 8 from fulfilling the requirements of those paragraphs.

13. Where a risk assessment is carried out in accordance with Council Regulation (EEC) No 793/93[49] and Commission Regulation (EC) No 1488/94[50] or Council Directive 67/548/EEC and Commission Directive 93/67/EEC[51] of any of the substances causing the labelling R40, R60 or R61 which are controlled under this Directive, the Commission shall consider the conclusions of the risk assessment and shall take the necessary measures as appropriate.

↓ 1999/13/EC

Article 6

National plans

1. Without prejudice to Directive 96/61/EC, Member States may define and implement national plans for reducing emissions from the activities and industrial installations covered by Article 1, excluding activities 4 and 11 of Annex IIA. None of the other activities may be excluded from the scope of this Directive by means of a national plan. These plans shall result in a reduction of the annual emissions of VOCs from existing installations covered by this Directive by at least the same amount and within the same time frame as would have been achieved by applying the emission limits under Article 5(2) and (3) and Annex II, during the validity period of the national plan. The national plan, if necessary updated, will be resubmitted to the Commission every three years.

A Member State which defines and implements national plans may exempt existing installations from implementation of the emission limit values laid down in Article 5(2) and (3) and Annex II. A national plan may under no circumstances exempt an existing installation from the provisions laid down in Directive 96/61/EC.

2. A national plan shall include a list of the measures taken or to be taken to ensure that the aim specified in paragraph 1 will be achieved, including details of the proposed plan monitoring mechanism. It shall also include binding interim reduction targets against which progress towards the aim can be measured. It shall be compatible with the relevant existing Community legislation, including the relevant provisions of this Directive, and shall include:

– an identification of the activity or activities to which the plan applies,

– the reduction in emissions to be achieved by those activities which corresponds to that which would have been achieved by applying the emission limits as specified in paragraph 1,

– the number of installations affected by the plan and their total emissions and the total emission of each of the activities.

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49 OJ L 84, 5.4.1993, p. 1.
50 OJ L 161, 29.6.1994, p. 3.
51 OJ L 227, 8.9.1993, p. 9.

~~The plan shall also include a full description of the range of instruments through which its requirements will be achieved, evidence that these instruments will be enforceable and details of the means by which compliance with the plan will be demonstrated.~~

~~3. The Member State shall submit the plan to the Commission. The plan must be accompanied by supporting documentation sufficient to verify that the aim of paragraph 1 will be achieved, including any documentation specifically requested by the Commission. Existing installations undergoing a substantial change shall remain within the scope of the national plan, provided that they were part of this plan before undergoing such substantial change.~~

~~4. The Member State shall designate a national authority for the collection and evaluation of the information required by paragraph 3 and for the implementation of the national plan.~~

~~(a) 5. The Commission shall inform the committee referred to in Article 13 of the criteria for assessing national plans, one year after the entry into force of this Directive at the latest.~~

~~(b) If the Commission, in considering the plan, the resubmitted plan, or in considering the progress reports submitted by the Member State under Article 11, is not satisfied that the objectives of the plan will be achieved within the prescribed period, it shall inform the Member State and the committee referred to in Article 13 of its opinion and of the reasons for reaching such an opinion. It shall do so within six months of receipt of the plan or report. The Member State shall then notify the Commission and inform the committee, within three months, of the corrective measures it will take in order to ensure that the objectives are achieved.~~

~~6. If the Commission decides within six months of the notification of the corrective measures that those measures are insufficient to ensure that the objective of the plan is achieved within the prescribed period, the Member State shall be obliged to satisfy the requirements of Article 5(2) and (3) and Annex II within the period specified in this Directive in the case of existing installations. The Commission shall inform the committee referred to in Article 13 of its decision.~~

↓ 1999/13/EC (adapted)

Article 55~~8~~

Monitoring ⌦ of emissions ⌫

~~1. Member States shall introduce an obligation for the operator of an installation covered by this Directive to supply the competent authority once a year or on request with data that enables the competent authority to verify compliance with this Directive.~~

~~2. Member States shall ensure that channels to which abatement equipment is connected, and which at the final point of discharge emit more than an average of 10 kg/h of total organic carbon, are monitored continuously for compliance.~~

~~3. In the other cases, Member States shall ensure that either continuous or periodic measurements are carried out. For periodic measurements at least three readings shall be obtained during each measurement exercise.~~

~~4. Measurements are not required in the case where end-of-pipe abatement equipment is not needed to comply with this Directive.~~

~~5. The Commission shall organise an exchange of information on the use of solvent management plans in Member States based on the data for the implementation of this Directive in the three years following the date referred to in Article 15.~~

⌦ Member States shall, either by specification in the conditions of the permit or by general binding rules, ensure that measurements of emissions are carried out in accordance with Part 6 of Annex VII ⌫

↓ 1999/13/EC (adapted)

Article 56~~9~~

Compliance with emission limit values

⌦ The emission limit values in waste gases shall be regarded as being complied with if the conditions set out in Part 8 of Annex VII are fulfilled. ⌫

Article 57

⌦ Reporting on compliance ⌫

~~1. Compliance with the following shall be demonstrated to the satisfaction of the competent authority:~~

⌦ The report on compliance referred to in paragraph 1 of Article 8 shall demonstrate compliance with either of the following ⌫:

(a) emission limit values in waste gases, fugitive emission ⌦ limit ⌫ values and total emission limit values;~~;~~

(b) the requirements of the reduction scheme under ~~Annex IIB~~Part 5 of Annex VII ;~~;~~

(c) ~~the provisions of Article 5(3).~~ ⌦ the derogations granted in accordance with paragraphs 2 and 3 of Article 54⌫

~~Guidance is provided in Annex III on~~ ⌦ The report on compliance may include a ⌫ solvent management plan~~s serving to demonstrate compliance with these parameters~~ ⌦ prepared in accordance with Part 7 of Annex VII ⌫ .

~~Gas volumes may be added to the waste gas for cooling or dilution purposes where technically justified but shall not be considered when determining the mass concentration of the pollutant in the waste gas.~~

~~3. In the case of continuous measurements the emission limit values shall be considered to be complied with if:~~

~~(a) none of the averages over 24 hours of normal operation exceeds the emission limit values, and~~

~~(b) none of the hourly averages exceeds the emission limit values by more than a factor of 1,5.~~

~~4. In the case of periodic measurements the emission limit values shall be considered to be complied with if, in one monitoring exercise:~~

~~(a) the average of all the readings does not exceed the emission limit values, and~~

~~(b) none of the hourly averages exceeds the emission limit value by more than a factor of 1,5.~~

~~5. Compliance with the provisions of Article 5(7) and (8) shall be verified on the basis of the sum of the mass concentrations of the individual volatile organic compounds concerned. For all other cases, compliance shall be verified on the basis of the total mass of organic carbon emitted unless otherwise specified in Annex IIA.~~

↓ 1999/13/EC Art. 2(4) (adapted)

Article 58

⌦ Substantial change to existing installations ⌫

⌦ 1. A change of the maximum mass input of organic solvents by an existing installation averaged over one day, if the installation is operated at its design output under conditions other than start-up and shut-down operations and maintenance of equipment, shall be considered as substantial if it leads to an increase of emissions of volatile organic compounds of more than: ⌫

– ⌦ 25% for an installation having activities falling within the lower threshold band of items 1, 3, 4, 5, 8, 10, 13, 16 or 17 of Part 2 of Annex VII or, for the other activities of Part 2 of Annex VII, having a solvent consumption of less than 10 tonnes per year; ⌫

– ⌦ 10% for all other installations. ⌫

↓ 1999/13/EC Art. 4(4) (adapted)

2.~~4.~~ W~~w~~here an ⌦ existing ⌫ installation~~:~~ undergoes a substantial change, or ~~comes~~ ⌦ falls ⌫ within the scope of this Directive for the first time following a substantial change, that part of the installation which undergoes the substantial change shall be treated either as a new installation or as an existing installation, provided that the total emissions of the whole installation do not exceed those that would have resulted had the substantially changed part been treated as a new installation.

↓ 1999/13/EC Art. 9(2) (adapted)

3.~~2.~~ ~~Following~~ ⌦ In case of ⌫ a substantial change, ⌦ the competent authority shall check ⌫ compliance ~~shall be reverified~~ ⌦ of the installation with the requirements of this Directive ⌫ .

↓ 1999/13/EC (adapted)

Article 59

⌦ Exchange of information on ⌫ s~~S~~ubstitution ⌦ of organic solvents ⌫

~~1.~~ The Commission shall ~~ensure that~~ ⌦ organise ⌫ an exchange of information ~~between~~ ⌦ with the ⌫ Member States ~~and the activities concerned~~ ⌦, the industry concerned and non-governmental organisations promoting environmental protection ⌫ on the use of organic ~~substances~~ ⌦ solvents ⌫ and their potential substitutes ~~takes place. It shall consider~~

~~the questions of:~~ ⌦ and techniques which have the least potential effects on air, water, soil, ecosystems and human health. ⌫

⌦ The exchange of information shall be organized on all of the following: ⌫

(a) fitness for use~~;~~,

(b) potential effects on human health and occupational exposure in particular;

(c) potential effects on the environment~~;~~, ~~and~~

(d) the economic consequences, in particular, the costs and benefits of the options available.

~~with a view to providing guidance on the use of substances and techniques which have the least potential effects on air, water, soil, ecosystems and human health.~~

~~Following the exchange of information, the Commission shall publish guidance for each activity.~~

~~2. Member States shall ensure that the guidance referred to in paragraph 1 is taken into account during authorisation and during the formulation of general binding rules.~~

~~*Article 10*~~

~~**Non-compliance**~~

~~Member States shall take appropriate measures to ensure that, if it is found that the requirements of this Directive have been breached:~~

~~(a) the operator informs the competent authority and takes measures to ensure that compliance is restored within the shortest possible time;~~

~~(b) in cases of non-compliance causing immediate danger to human health and as long as compliance is not restored under the conditions of paragraph (a), operation of the activity is suspended.~~

~~*Article 11*~~

~~**Information systems and reporting**~~

~~1. At intervals of three years, Member States shall send information to the Commission on the implementation of this Directive in the form of a report. The report shall be drawn up on the basis of a questionnaire or outline drafted by the Commission in accordance with the procedure laid down in Article 6 of Directive 91/692/EEC[52]. The questionnaire or outline shall be sent to the Member States six months before the start of the period covered by the report. The report shall be made to the Commission within nine months of the end of the three-year period covered by it. Member States shall publish the reports produced at the same time as they are transmitted to the Commission, subject to the restrictions laid down in Article 3(2) and (3) of Directive 90/313/EEC[53]. The first report shall cover the period of the first three years after the date referred to in Article 15.~~

~~2. The information submitted under paragraph 1 shall, in particular, include sufficient representative data to demonstrate that the requirements of Article 5 and as the case may be, the requirements of Article 6 have been complied with.~~

~~52 OJ L 377, 31.12.1991, p. 48.~~

~~53 OJ L 158, 23.6.1990, p. 56.~~

~~3. The Commission shall draw up a report on the implementation of this Directive on the basis of the data provided by the Member States at the latest five years after the first reports are submitted by the Member States. The Commission shall submit this report to the European Parliament and the Council, accompanied by proposals if necessary.~~

Article 60

~~Public~~ Aaccess to information

~~1. Without prejudice to Directive 90/313/EEC, Member States shall take the necessary measures to ensure that at least applications for authorisation for new installations or for substantial changes of those installations requiring a permit under Directive 96/61/EC are made available for an appropriate period of time to the public, to enable it to comment on them before the competent authority reaches a decision. Without prejudice to Directive 96/61/EC, no obligation to reformat the information for the public is implied.~~

1. The decision of the competent authority, including at least a copy of the ~~authorisation~~ ⌦ permit ⌫ , and any subsequent updates, ~~must also~~ ⌦ shall ⌫ be made available to the public.

The general binding rules applicable for installations and the list of ~~registered and authorised activities~~ ⌦ installations subject to permitting and registration ⌫ shall be made available to the public.

2. The results of ⌦ the ⌫ ~~emission-~~monitoring ⌦ of emissions ⌫ as required under ~~the authorisation or registration conditions referred to in Articles 8 and 9~~ Article 55and held by the competent authority ~~must~~ ⌦ shall ⌫ be made available to the public.

3. Paragraphs 1 and 2 shall apply, subject to the restrictions ~~regarding grounds for refusal by public authorities to provide information, including commercial and industrial confidentiality,~~ laid down in ~~Article 3(2) and (3) of Directive 90/313/EEC.~~ Article 4(1) and (2) of Directive 2003/4/EC.

↓ 78/176/EEC (adapted)

Chapter VI

⌦ Special provisions for installations producing titanium dioxide ⌫

Article 61

⌦ Scope ⌫

⌦ This Chapter shall apply to installations producing titanium dioxide. ⌫

~~*Article 1*~~

~~1. The aim of this Directive is the prevention and progressive reduction, with a view to its elimination, of pollution caused by waste from the titanium dioxide industry.~~

~~2. For the purpose of this Directive:~~

~~(a) «pollution» means the discharge by man, directly or indirectly, of any residue from the titanium dioxide manufacturing process into the environment, the results of which are such as to cause hazards to human health, harm to living resources and to ecosystems, damage to amenities or interference with other legitimate uses of the environment concerned;~~

~~(b) «waste» means:~~

~~– any residue from the titanium dioxide manufacturing process of which the holder disposes or is obliged to dispose under current national legislation;~~

~~– any residue from a treatment process of a residue referred to in the first indent;~~

~~(c) «disposal» means:~~

~~– the collection, sorting, transport and treatment of waste as well as its storage and tipping above ground or underground and its injection into the ground;~~

~~– the discharge thereof into surface water, ground water and the sea, and dumping at sea;~~

~~– the transformation operations necessary for its re-use, recovery or recycling;~~

~~(d) «existing industrial establishments» means those industrial establishments already set up on the date of notification of this Directive;~~

~~(e) «new industrial establishments» means those industrial establishments which are in the process of being set up on the date of entry into force of this Directive or which are set up after that date. Extensions to existing industrial establishments leading to an increase of 15 000 tonnes per year or more in the titanium dioxide on-site production capacity of the establishment concerned shall be treated as new industrial establishments.~~

↓ 82/883/EEC

Article 1

This Directive lays down, pursuant to Article 7 (3) of Directive 78/176/EEC, the procedures for the surveillance and monitoring of the effects on the environment, having regard to its physical, chemical, biological and ecological aspects, of the discharge, dumping, storage on, tipping on or injection into the ground of waste from the titanium dioxide industry.

Article 2

For the purpose of this Directive:

– «environments affected» means the water, the land surface and underground strata and the air in or into which waste from the titanium dioxide industry is discharged, dumped, stored, tipped or injected,

– «sampling point» means the point at which samples are taken.

Article 3

1. The parameters applicable for the surveillance and monitoring referred to in Article 1 are specified in the Annexes.

2. Where a parameter appears in the «mandatory determination» column in the Annexes, sampling and analysis of the samples must be carried out in respect of the environmental components indicated.

3. Where a parameter appears in the «optional determination» column in the Annexes, the Member States shall, if they consider it necessary, have the sampling and analysis of samples carried out for the environmental components indicated.

↓ 92/112/EEC

Article 1

This Directive lays down, as required by Article 9 (3) of Directive 78/176/EEC, procedures for harmonizing the programmes for the reduction and eventual elimination of pollution from existing industrial establishments and is intended to improve the conditions of competition in the titanium dioxide industry.

Article 2

1. For the purposes of this Directive:

(a) where the sulphate process is used:

- solid waste shall mean:

- insoluble ore residues not broken down by sulphuric acid during the manufacturing process,

- copperas, i. e. crystalline ferrous sulphate (FeSO47H2O),

- strong acid waste shall mean:

- the mother liquors arising from the filtration phase following hydrolysis of the titanyl sulphate solution. If these mother liquors are associated with weak acid wastes which overall contain more than 0,5 % free sulphuric acid and various heavy metals (3), the liquors and waste taken together shall be considered strong acid waste,

- treatment waste shall mean:

- filtration salts, sludges and liquid waste arising from the treatment (concentration or neutralization) of strong acid waste and containing various heavy metals, but not including neutralized and filtered or decanted waste containing only traces of heavy metals and which, before any dilution, has a pH value above 5,5,

- weak acid waste shall mean:

- wash waters, cooling waters, condensates and other sludges and liquid wastes, other than those included in the above definitions, containing 0,5 % or less free sulphuric acid,

- neutralized waste shall mean:

- any liquid which has a pH value over 5,5, contains only traces of heavy metals, and is obtained directly by filtration or decantation from strong or weak acid waste after its treatment to reduce its acidity and its heavy metal content,

- dust shall mean:

- all kinds of dust from production plants and in particular ore and pigment dust,

- SOx shall mean:

- gaseous sulphur dioxide and trioxide released in the various stages of the manufacturing and internal waste treatment processes, including acid droplets;

(b) where the chlorine process is used:

- solid waste shall mean:

- insoluble ore residues not broken down by the chlorine during the manufacturing process,

- metal chlorides and metal hydroxides (filtration substances), arising in solid form from the manufacture of titanium tetrachloride,

- coke residues arising from the manufacture of titanium tetrachloride,

- strong acid waste shall mean:

- waste containing more than 0,5 % free hydrochloric acid and various heavy metals (1);

- treatment waste shall mean:

- filtration salts, sludges and liquid waste arising from the treatment (concentration or neutralization) of strong acid waste and containing various heavy metals, but not including neutralized and filtered or decanted waste containing only traces of heavy metals and which, before any dilution, has a pH value over 5,5,

- weak acid waste shall mean:

- wash waters, cooling waters, condensates and other sludges and liquid wastes, other than those included in the above definitions, containing 0,5 % or less free hydrochloric acid,

- neutralized waste shall mean:

~~- any liquid which has a pH value over 5,5, contains only traces of heavy metals, and is obtained directly by filtration or decantation from strong or weak acid waste after its treatment to reduce its acidity and its heavy metal content,~~

~~- dust shall mean:~~

~~- all kinds of dust from production plants and in particular ore, pigment and coke dust,~~

~~- chlorine shall mean:~~

~~- gaseous chlorine released in the various stages of the manufacturing process;~~

~~(c) where the sulphate process or the chlorine process is used~~

~~- dumping shall mean:~~

~~- any deliberate disposal into inland surface waters, internal coastal waters, territorial waters or the high seas of substances and materials by or from ships or aircraft (2)~~

~~2. The terms defined in Directive 78/176/EEC shall have the same meaning for the purposes of this Directive.~~

↓ 92/112/EEC (adapted)

Article 62~~4~~

⌦ Prohibition of the disposal of waste ⌫

Member States shall ⌦ prohibit the disposal ⌫ ~~take the necessary measures to ensure that discharges~~ of ⌦ the following ⌫ waste into any ~~inland surface waters, internal coastal waters, territorial waters and the high~~ ⌦ water body, ⌫ sea ⌦ or ocean ⌫ ~~are prohibited~~:

(1~~a~~) ~~as regards~~ solid waste; ~~, strong acid waste and treatment waste from existing industrial establishments using the sulphate process:~~

~~- by 15 June 1993 in all the abovementioned waters;~~

~~(b) as regards solid waste and strong acid waste from existing industrial establishments using the chlorine process:~~

~~- by 15 June 1993 in all the abovementioned waters.~~

↓ 92/112/EEC Art. 2(1)a (adapted)

(2) the mother liquors arising from the filtration phase following hydrolysis of the titanyl sulphate solution ⌦ from installations applying the sulphate process ⌫ ~~:~~ ~~If these mother liquors are associated with weak~~ ⌦ including the ⌫ acid ~~wastes~~ ⌦ waste associated with such liquors, containing overall more than 0.5% free sulphuric acid and various heavy metals, including acid waste ⌫ which ~~overall~~ ⌦ has been diluted until it contains ⌫ ~~contain more than~~ 0,5 % ⌦ or less ⌫ free sulphuric acid; ~~and various heavy metals (3), the liquors and waste taken together shall be considered strong acid waste,~~

⌦ (3) waste from installations applying the chloride process containing more than 0,5 % free hydrochloric acid and various heavy metals, including such waste which has been diluted until it contains 0.5% or less free sulphuric acid; ⌫

(4) filtration salts, sludges and liquid waste arising from the treatment (concentration or neutralisation) of ~~strong acid~~ ⌦ the ⌫ waste ⌦ mentioned under paragraphs (2) and (3)⌫ and containing various heavy metals, but not including neutralized and filtered or decanted waste containing only traces of heavy metals and which, before any dilution, has a pH value above 5,5.~~;~~

↓ 78/176/EEC

~~*Article 2*~~

~~Member States shall take the necessary measures to ensure that waste is disposed of without endangering human health and without harming the environment, and in particular:~~

~~– without risk to water, air, soil and plants and animals;~~

~~– without deleteriously affecting beauty-spots or the countryside.~~

~~*Article 3*~~

~~Member States shall take appropriate measures to encourage the prevention, recycling and processing of waste, the extraction of raw materials and any other process for the re-use of waste.~~

~~*Article 4*~~

~~1. The discharge, dumping, storage, tipping and injection of waste are prohibited unless prior authorization is issued by the competent authority of the Member State in whose territory the waste is produced. Prior authorization must also be issued by the competent authority of the Member State~~

~~– in whose territory the waste is discharged, stored, tipped or injected;~~

~~– from whose territory it is discharged or dumped.~~

~~2. Authorization may be granted for a limited period only. It may be renewed.~~

~~*Article 5*~~

~~In the case of discharge or dumping, the competent authority may, in accordance with Article 2 and on the basis of the information supplied in accordance with Annex I, grant the authorization referred to in Article 4 provided that:~~

~~(a) the waste cannot be disposed of by more appropriate means;~~

~~(b) an assessment carried out in the light of available scientific and technical knowledge shows that there will be no deleterious effect, either immediate or delayed, on the aquatic environment;~~

~~(c) there is no deleterious effect on boating, fishing, leisure activities, the extraction of raw materials, desalination, fish and shellfish breeding, on regions of special scientific importance or on other legitimate uses of the waters in question.~~

~~*Article 6*~~

~~In the case of storage, tipping or injection, the competent authority may, in accordance with Article 2, and on the basis of the information supplied in accordance with Annex I, grant the authorization referred to in Article 4, provided that:~~

~~(a) the waste cannot be disposed of by more appropriate means;~~

~~(b) an assessment carried out in the light of available scientific and technical knowledge shows that there will be no detrimental effect, either immediate or delayed, on underground waters, the soil or the atmosphere;~~

~~(c) there is no deleterious effect on leisure activities, the extraction of raw materials, plants, animals, on regions of special scientific importance or on other legitimate uses of the environment in question.~~

↓ 92/112/EEC (adapted)

~~*Article 3*~~

~~The dumping of any solid waste, strong acid waste, treatment waste, weak acid waste, or neutralized waste, as referred to in Article 2 shall be prohibited with effect from 15 June 1993.~~

~~*Article 5*~~

~~In the case of Member States which have serious technical and economic difficulties in complying with the date of application referred to in Article 4, the Commission may grant an extension, provided that a programme for the effective reduction of discharges of such waste is submitted to the Commission by 15 June 1993. That programme must result in a definitive ban on such discharges by 30 June 1993.~~

~~No later than three months after adoption of this Directive, the Commission shall be informed of any such cases and shall be consulted thereon. The Commission shall inform the other Member States.~~

~~*Article 11*~~

~~Member States shall take the measures necessary to ensure that all waste from the titanium dioxide industry, and in particular waste subject to prohibition on discharge or dumping into water or on discharge into the atmosphere is:~~

~~- avoided or reused where technically and economically feasible,~~

~~- reused or disposed of without endangering human health or harming the environment.~~

~~The same shall apply to waste arising from the reuse or treatment of the abovementioned waste.~~

↓ 92/112/EEC (adapted)

Article 6~~3~~

⌦ Control of emissions into water ⌫

⌦ 1. Emissions from installations into water shall not exceed the emission limit values set out in Part 1 of Annex VIII. ⌫

~~Member States shall take the necessary measures to ensure that discharges of waste are reduced in accordance with the following provisions~~:

~~(a) from existing industrial establishments using the sulphate process:~~

~~- weak acid waste and neutralized waste shall be reduced by 31 December 1993 in all waters to a value of not more than 800 kg of total sulphate per tonne of titanium dioxide produced (i.e. corresponding to the SO4 ions contained in the free sulphuric acid and in the metallic sulphates);~~

~~(b) from existing industrial establishments using the chlorine process:~~

~~- weak acid waste, treatment waste and neutralized waste shall be reduced by 15 June 1993 in all waters to the following values of total chloride per tonne of titanium dioxide produced (i.e. corresponding to the Cl ions contained in the free hydrochloric acid and in the metallic chlorides):~~

~~- 130 kg using neutral rutile,~~

~~- 228 kg using synthetic rutile,~~

~~- 450 kg using slag.~~

~~In the case of an establishment using more than one type or ore, the values shall apply in proportion to the quantity of these ores used.~~

~~*Article 7*~~

~~Except where inland surface waters are concerned, Member States may defer the date of application referred to in point (a) of Article 6 until 31 December 1994 at the latest if serious technico-economic difficulties so require and provided that a programme of effective reduction of discharges of such waste is submitted to the Commission by 15 June 1993. Such a programme shall enable the following limit value per tonne of titanium dioxide produced to be reached by the date shown:~~

~~- weak acid waste and neutralized waste: 1 200 kg - 15 June 1993,~~

~~- weak acid waste and neutralized waste: 800 kg - 31 December 1994.~~

~~Three months at the latest following adoption of this Directive the Commission shall be informed of such cases, which shall be the subject of consultation with the Commission. The Commission shall inform the other Member States.~~

~~*Article 8*~~

~~1. As regards the requirements of Article 6, Member States may choose to make use of quality objectives coupled with appropriate limit values applied in such a way that the effects in terms of protecting the environment and avoiding distortions of competition are equivalent to that of the limit values laid down in this Directive.~~

~~2. If a Member State chooses to make use of quality objectives, it shall present to the Commission a programme (1) demonstrating that the measures achieve an effect which, in terms of protecting the environment and avoiding distortion of competition, is equivalent to that of the limit values by the dates when these limit values are applied in accordance with Article 6.~~

~~This programme shall be submitted to the Commission at least six months before the Member State proposes to apply the quality objectives.~~

~~This programme shall be assessed by the Commission in accordance with the procedures laid down in Article 10 of Directive 78/176/EEC.~~

~~The Commission shall inform the other Member States.~~

↓ 78/176/EEC (adapted)

~~Article 8~~

2.~~1.~~ ~~The competent authority in the~~ Member State~~s~~ ~~concerned~~ shall take ⌦ the necessary measures to ensure that acute toxicity tests are carried out in accordance with point 1 of Part 2 of Annex VIII and that the results of those tests comply with the values set out in point 2 of Part 2 of Annex VIII. ⌫ ~~all appropriate steps to remedy one of the following situations and, if necessary, shall require the suspension of discharge, dumping, storage, tipping or injection operations:~~

~~(a) if the results of the monitoring provided for in Annex II (A) (1) show that the conditions for the prior authorization referred to in Articles 4, 5 and 6 have not been fulfilled, or~~

~~(b) if the results of the acute toxicity tests referred to in Annex II (A) (2) show that the limits laid down therein have been exceeded, or~~

↓ 82/883/EEC Art. 12 (adapted)

~~(c) if the results of the monitoring which the Member States are obliged to carry out on the environment concerned reveal a deterioration in the area under consideration, or~~

↓ 78/176/EEC (adapted)

~~(d) if discharge or dumping produces a deleterious effect on boating, fishing, leisure activities, the extraction of raw materials, desalination, fish and shellfish breeding, on regions of special scientific importance or on other legitimate uses of the waters in question, or~~

~~(e) if storage, tipping or injection produces a deleterious effect on leisure activities, the extraction of raw materials, plants, animals, on regions of special scientific importance or on other legitimate uses of the environments in question.~~

~~2. If several Member States are concerned, the measures shall be taken after consultation.~~

↓ 78/176/EEC
→1 83/29/EEC Art. 1

~~Article 9~~

~~1. Member States shall draw up programmes for the progressive reduction and eventual elimination of pollution caused by waste from existing industrial establishments.~~

2. The programmes mentioned in paragraph 1 shall set general targets for the reduction of pollution from liquid, solid and gaseous waste, to be achieved by 1 July 1987 at the latest. The programmes shall also contain intermediate objectives. They shall, moreover, contain information on the state of the environment concerned, on measures for reducing pollution and on methods for treating waste that is directly caused by the manufacturing processes.

3. ➔1 By 1 July 1980 at the latest the programmes referred to in paragraph 1 shall be sent to the Commission, which, before 15 March 1983, shall submit suitable proposals to the Council ← for the harmonization of these programmes in regard to the reduction and eventual elimination of pollution and the improvement of the conditions of competition in the titanium dioxide industry. The Council shall act on these proposals within six months of the publication of the opinion of the European Parliament and that of the Economic and Social Committee in the *Official Journal of the European Communities*.

4. Member States shall introduce a programme by 1 January 1982 at the latest.

Article 10

1. The programmes referred to in Article 9 (1) must cover all existing industrial establishments and must set out the measures to be taken in respect of each of them.

2. Where, in particular circumstances, a Member State considers that, in the case of an individual establishment, no additional measures are necessary to fulfil the requirements of this Directive, it shall, within six months of notification of this Directive, provide the Commission with the evidence which has led it to that conclusion.

3. After conducting any independent verification of the evidence that may be necessary, the Commission may agree with the Member State that it is not necessary to take additional measures in respect of the individual establishment concerned. The Commission must give its agreement, with reasons, within six months.

4. If the Commission does not agree with the Member State, additional measures in respect of that establishment shall be included in the programme of the Member State concerned.

5. If the Commission does agree, its agreement will be periodically reviewed in the light of the results of the monitoring carried out pursuant to this Directive and in the light of any significant change in the manufacturing processes or in environmental policy objectives.

Article 11

New industrial establishments shall be subject to applications for prior authorization made to the competent authorities of the Member State on whose territory it is proposed to build the establishments. Such authorizations must be preceded by environmental impact surveys. They may be granted only to firms which give an undertaking to use only such of the materials, processes and techniques available on the market as are least damaging to the environment.

Article 12

Without prejudice to this Directive, Member States may adopt more stringent regulations.

↓ 92/112/EEC (adapted)

Article 6~~9~~

⌦ Prevention and control of emissions into air ⌫

1.~~(iii) Member States shall require means to be installed for preventing~~ The~~the~~ emission of acid droplets ⌦ from the installations shall be prevented ⌫ ;

⌦ 2. Emissions to air from the installations shall not exceed the emission limit values set out in Part 3 of Annex VIII. ⌫

~~*Article 10*~~

~~Member States shall monitor the values and reductions specified in Articles 6, 8 and 9 in relation to the actual production of each establishment.~~

↓ 78/176/EEC (adapted)

Article ~~7~~6~~5~~

⌦ Monitoring of emissions and the environment ⌫

~~1. Irrespective of the method and extent of treatment of the waste in question, its discharge, dumping, storage, tipping and injection shall be accompanied by the monitoring referred to in Annex II of the waste and of the environment concerned having regard to its physical, chemical, biological and ecological aspects~~.

~~2. The monitoring operations shall be carried out periodically by one or more bodies appointed by the Member State the competent authority of which has issued the authorization provided for in Article 4. In the case of cross-frontier pollution between Member States, the body in question shall be appointed jointly by the parties concerned~~.

~~3. Within one year of notification of this Directive, the Commission shall submit to the Council a proposal on the procedures for the surveillance and monitoring of the environments concerned. The Council shall act on this proposal within six months of the publication of the opinion of the European Parliament and that of the Economic and Social Committee in the *Official Journal of the European Communities*.~~

⌦ 1. Member States shall ensure the monitoring of emissions into water in order to enable the competent authority to verify compliance with the permit conditions and Article 63. ⌫

⌦ 2. Member States shall ensure the monitoring of emissions into air in order to enable the competent authority to verify compliance with the permit conditions and Article 64. ⌫

⇩ new

Such monitoring shall include at least monitoring of emissions as set out in Part 5 of Annex VII.

↓ 82/883/EEC (adapted)

~~*Article 4*~~

3~~1~~. Member States shall ⌦ ensure the ⌫ ~~carry out surveillance and~~ monitoring of the ~~environments~~ ⌦ environment ⌫ affected ⌦ by discharges of waste from installations producing titanium dioxide into water in accordance with Part 4 of Annex VIII. ⌫ ~~and of a neighbouring zone deemed to be unaffected, special account being taken of local environmental factors and the manner of disposal, i.e. whether intermittent or continuous.~~

~~2. Except where otherwise specified in the Annexes, Member States shall determine on a case-by-case basis the exact sites from which samples are to be taken, the distance of these sites from the nearest pollutant disposal point and the depth or height at which the samples must be taken.~~

~~The samples must be taken at the same location and depth and under the same conditions in the course of successive sampling operations, for example in the case of tidal waters, at the same time in relation to high tide, tidal coefficient.~~

~~3. For the monitoring and inspection of the environments affected, Member States shall determine the frequency of sampling and analysis for each parameter listed in the Annexes.~~

~~For parameters where determination is mandatory, the frequency of sampling and analysis must not be less than the minimum frequencies indicated in the Annexes. However, once the behaviour, fate and effects of the waste have, as far as possible, been established, and provided there is no significant deterioration in the quality of the environment, Member States may provide for a frequency of sampling and analysis below these frequencies. Should there subsequently be any significant deterioration in the quality of the environment as a result of the waste or of any change in the disposal operation, the Member State shall revert to sampling and analysis at a frequency not less than that specified in the Annexes. If a Member State considers it necessary or advisable, it may distinguish between different parameters, applying this subparagraph to those parameters where no significant deterioration in the quality of the environment has been recorded.~~

~~4. For the monitoring and inspection of an appropriate neighbouring zone deemed to be unaffected, the laying down of the frequency of sampling and analysis shall be assessed by the Member States. When a Member State finds that it is not possible to identify such a neighbouring zone, it shall inform the Commission to that effect.~~

⇩ new

4. Monitoring shall be carried out in accordance with CEN standards or, if CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality.

↓ 82/883/EEC (adapted)

Article 5

1. The reference methods of measurement for determining the parametric values are specified in the Annexes. Laboratories using other methods must ensure that the results obtained are comparable.

2. The containers used to carry the samples, the agents or methods used to preserve a part sample with a view to analysis of one or more parameters, the transport and storage of samples and their preparation for analysis must be such that they do not significantly affect the analytical results.

Article 6

For the surveillance and monitoring of the environments affected, Member States may, at any time, lay down other parameters in addition to those laid down by this Directive.

↓ 78/176/EEC

Article 13

1. For the purposes of this Directive, Member States shall supply the Commission with all the necessary information relating to:

– the authorizations issued pursuant to Articles 4, 5 and 6,

– the results of the monitoring of the environment concerned carried out pursuant to Article 7,

– the measures taken pursuant to Article 8.

They shall also supply the Commission with general information concerning the materials, processes and techniques notified to them pursuant to Article 11.

2. Information acquired as a result of the application of this Article may be used only for the purposes of this Directive.

3. The Commission and the competent authorities of the Member States, their officials and other servants shall not disclose information acquired by them pursuant to this Directive and of a kind covered by the obligation of professional secrecy.

4. Paragraphs 2 and 3 shall not prevent publication of general information or surveys which do not contain information relating to particular undertakings or associations of undertakings.

Article 14

↓ 91/692/EEC Art. 2(1) and Annex I.b

At intervals of three years the Member States shall send information to the Commission on the implementation of this Directive, in the form of a sectoral report which shall also cover other pertinent Community Directives. This report shall be drawn up on the basis of a

questionnaire or outline drafted by the Commission in accordance with the procedure laid down in Article 6 of Directive 91/692/EEC[54]. The questionaire or outline shall be sent to the Member States six months before the start of the period covered by the report. The report shall be sent to the Commission within nine months of the end of the three-year period covered by it.

The first report shall cover the period from 1993 to 1995 inclusive.

The Commission shall publish a Community report on the implementation of the Directive within nine months of receiving the reports from the Member States.

↓ 82/883/EEC

Article 7

1. The report which the Member States are required to forward to the Commission pursuant to Article 14 of Directive 78/176/EEC shall contain details of the surveillance and monitoring operations carried out by the bodies appointed in accordance with Article 7 (2) of that Directive. These details shall, in respect of each environment affected, include the following information:

- a description of the sampling point, including its permanent features, which may be coded, and other administrative and geographical information. This information shall be provided only once when the sampling point is designated,
- a description of the sampling methods used,
- the results of the measurements of the parameters whose determination is mandatory and, where Member States consider it useful, also those of parameters whose determination is optional,
- the methods of measurement and analysis used and, where appropriate, their limit of detection, accuracy and precision,
- changes, adopted in accordance with Article 4 (3), in the frequency of sampling and analysis.

2. The first set of data to be communicated pursuant to paragraph 1 shall be that gathered during the third year following notification of this Directive.

3. The Commission shall, with the prior agreement of the Member State concerned, publish a summary of the information supplied to it.

4. The Commission shall assess the effectiveness of the procedure for the surveillance and monitoring of the environments affected and shall — no later than six years after notification of this Directive — place before the Council, if appropriate, proposals to improve this procedure and, if necessary, to harmonize the methods of measurement including their limit of detection, accuracy and precision and the sampling methods.

Article 8

Member States may derogate from this Directive in the event of flooding or natural disaster or on account of exceptional weather conditions.

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[54] OJ No L 377, 31. 12. 1991, p. 48.

~~*Article 9*~~

~~The requisite amendments to adapt the contents of the Annexes as regards:~~

~~parameters listed in the «optional determination» column,~~

~~reference methods of measurement,~~

~~to scientific and technical progress shall be adopted in accordance with the procedure laid down in Article 11.~~

~~*Article 13*~~

~~Where waste elimination requires that, in accordance with Article 4 (1) of Directive 78/176/EEC, the competent authorities of more than one Member State should issue prior authorizations, the Member States involved shall consult each other on the content and the implementation of the monitoring programme.~~

↓ 96/61/EC (adapted)

Chapter VII

⌦ Committee, transitional and final provisions ⌫

⇩ new

Article 66

Competent authorities

Member States shall designate the competent authorities and bodies responsible for carrying out the obligations arising from this Directive.

Article 67

Reporting by Member States

1. Member States shall ensure that information is made available to the Commission on the implementation of this Directive, on representative data on the emissions and other environmental effects, on emission limit values and on the application of best available techniques in accordance with Articles 15 and 16.

Member States shall develop and regularly upgrade national information systems to make available in an electronic format the information referred to in the first subparagraph.

2. The Commission shall establish the type and format of the information to be made available by the Member States pursuant to paragraph 1.

Those measures designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

3. Within 3 years of the date referred to in Article 71(1), and every three years thereafter, the Commission shall submit to the European Parliament and the Council a report on the implementation of this Directive on the basis of the information referred to in paragraph 1 accompanied by a legislative proposal where appropriate.

Article 68

Amendments of Annexes

On the basis of best available techniques the Commission shall adapt Parts 3 and 4 of Annexe V, Parts 1, 2, 6, 7 and 8 of Annex VI, Parts1, 5, 6, 7 and 8 of Annex VII and Parts 2 and 4 of Annex VIII to scientific and technical progress.

Those measures, designed to amend non-essential elements of this Directive, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 69(2).

↓ 82/883/EEC

~~*Article 10*~~

~~1. A committee on adaptation to technical progress (hereinafter referred to as «the committee»), consisting of representatives of the Member States and chaired by a Commission representative, is hereby set up.~~

↓ 807/2003 Art. 3 and Annex III.34

~~*Article 11*~~

~~1. The Commission shall be assisted by the committee on adaptation to technical progress.~~

↓ 1882/2003 Art. 3 and Annex III.61

Article ~~19~~69

Committee ~~procedure~~

↓ 1882/2003 Art. 1 and Annex I.17, and Art. 3 and Annex III.61

1. The Commission shall be assisted by a committee.

↓ 2000/76/EC

~~*Article 17*~~

~~**Regulatory committee**~~

~~1. The Commission shall be assisted by a regulatory committee.~~

~~2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.~~

↓ 807/2003 Art. 3 and Annex III.34

~~2. Where reference is made to this Article, Articles 5 and 7 of Decision 1999/468/EC[55] shall apply.~~

[55] ~~OJ L 184, 17.7.1999, p. 23.~~

↓ 1882/2003 Art. 1 and Annex I.17, and Art. 3 and Annex III.61

~~2. Where reference is made to this Article, Articles 5 and 7 of Decision 1999/468/EC[56] shall apply, having regard to the provisions of Article 8 thereof.~~

↓ 807/2003 Art. 3 and Annex III.34, 1882/2003 Art. 3 and Annex III.61, 2000/76/EC Art. 17

~~The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.~~

↓ 807/2003 Art. 3 and Annex III.34, 1882/2003 Art. 1 and Annex I.17, and Art. 3 and Annex III.61

~~3. The Committee shall adopt its rules of procedure.~~

↓ 2000/76/EC Art. 17

~~3. The committee shall adopt its own rules of procedure.~~

⇩ new

2. Where reference is made to this paragraph, Articles 5a (1) to (4), and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

↓ 1999/13/EC Art. 14 (adapted)

~~*Article14*~~

~~**Sanctions**~~

~~Member States shall determine the sanctions applicable to breaches of the national provisions adopted pursuant to this Directive and shall take all necessary measures for their implementation. The sanctions determined must be effective, proportionate and dissuasive. Member States shall notify those provisions to the Commission by the date mentioned in Article 15, and shall notify any subsequent modification of them as soon as possible.~~

↓ 2000/76/EC (adapted)

~~*Article 19*~~

~~**Penalties**~~

[56] ~~Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission (OJ L 184, 17.7.1999, p. 23).~~

~~The Member States shall determine penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties thus provided for shall be effective, proportionate and dissuasive. The Member States shall notify those provisions to the Commission by 28 December 2002 at the latest and shall notify it without delay of any subsequent amendment affecting them.~~

↓ 2001/80/EC (adapted)

~~Article 16~~

~~The Member States shall determine the penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties thus provided for shall be effective, proportionate and dissuasive.~~

⇩ new

Article 70

Penalties

Member States shall determine penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties thus provided for shall be effective, proportionate and dissuasive. Member States shall notify those provisions to the Commission by [day/month/year (e.g. 1 January 2011)] at the latest and shall notify it without delay of any subsequent amendment affecting them.

↓

Article 71

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with Articles 2, 3(4), 3(14)-(18), 4(2), 5, 6, 8(1), 9(2) b), 12(8), 13(1) e), 14, 15(1) d), 15(3)-(5), 16(2)-(5), 17, 18 (2)-(4), 22(2)-(3), 22(4) b) and d), 23, 24, 25, 26 (1) d), 26(2), 26(3) c)-g), 29 a)-b), 30, 32, 33(3), 35(2)-(4), 36, 37(2), 43(5), 65(2), 65(4), 66-67 and 70, and Annexes points 1.1, 2.5(c), 3.5, 4.7, 5.2, 5.3, 6.1(c), 6.4(b), 6.6, 6.9, 6.10 of Annex I, point 1(b) of Annex IV, Parts 1-4 of Annex V, point b) of Part 1, points 2.2, 3.1 and 3.2 of Part 4, points 2.5 and 2.6 of Part 6 of Annex VI, point 3 of Part 7 of Annex VII, point 1 and 2(c) of Part 1 and points 2-3 of Part 3 of Annex VIII by [day/month/year (eg 30 June 2012 ie 1.5 years after the entry into force)] at the latest. They shall forthwith communicate to the Commission the text of those provisions and a correlation table between those provisions and this Directive.

They shall apply those provisions from [day/month/year (eg 30 June 2012 ie 1.5 years after the entry into force)].When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 72

Repeal

1. Directives 78/176/EEC, 82/883/EEC, 92/112/EEC, 96/61/EC, 1999/13/EC and 2000/76/EC, as amended by the acts listed in Annex IX, Part A are repealed with effect from [day/month/year (e.g. 1 January 2014 ie 3 years after entry into force)] , without prejudice to the obligations of the Member States relating to the time-limits for transposition into national law and application of the Directives set out in Annex IX, Part B.

2. Directive 2001/80/EC as amended by the acts listed in Annex IX, Part A is repealed with effect from 1 January 2016, without prejudice to the obligations of the Member States relating to the time-limits for transposition into national law and application of the Directives set out in Annex IX, Part B.

3. References to the repealed Directives shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex X.

⇩ new

Article 73

Transitional provisions

1. In relation to installations referred to in Annex I, in points 1.2, 1.3, 1.4, 2.1 to 2.4, points (a) and (b) of point 2.5, points 2.6, 3, 4.1 to 4.6, 5.1, 5.2, points (a) and (b) of point 5.3, point 5.4, points (a) and (b) of point 6.1, points 6.2 to 6.5, points (b) and (c) of point 6.6, points 6.7 and 6.8 as well as installations referred to in point 1.1 with a rated thermal input of 50 MW or more and installations referred to in point (a) of point 6.6 with more than 40 000 places for poultry and which are in operation and hold a permit or which have submitted a complete application for a permit before the date referred to in Article 71(1), provided that those installations are put into operation no later than one year after that date, Member States shall apply the laws, regulations and administrative provisions adopted in accordance with Article 71(1) from [day/month/year (eg 1 January 2014 ie 3 years after entry into force).

2. In relation to installations referred to in Annex I, in point (c) of point 2.5, points (c), (d) and (e) of point 5.3, point (c) of point 6.1, points 6.9 and 6.10 as well as installations referred to in point 1.1 with a rated thermal input below 50 MW and installations referred to in point (a) of point 6.6 with less than 40 000 places for poultry and which are in operation before the date referred to in Article 71(1), Member States shall apply the laws, regulations and administrative provisions adopted in accordance with Article 71(1) from [day/month/year (eg 1 July 2015 ie 4.5 years after entry into force).

3. In relation to combustion plants covered by Chapter III, Member States shall apply the laws, regulations and administrative provisions adopted in accordance with Article 71(1) from 1 January 2016.

4. In relation to combustion plants which co-incinerate waste, point 3.1 of Part 4 of Annex VI shall apply until 31 December 2015.

However, as from 1 January 2016 point 3.2 of Part 4 of Annex VI shall apply in relation to those plants.

↓

Article 74

Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 75

Addressees

This Directive is addressed to the Member States.

Done at Brussels, […]

For the European Parliament	*For the Council*
The President	*The President*
[...]	*[...]*

↓ 96/61/EC (adapted)

ANNEX I

Categories of industrial activities referred to in Article ~~1~~ 11

~~1. Installations or parts of installations used for research, development and testing of new products and processes are not covered by this Directive.~~

~~2.~~ The threshold values given below generally refer to production capacities or outputs. Where ~~one operator carries out~~ several activities falling under the same ~~subheading~~ ⌦ point are operated ⌫ in the same installation ~~or on the same site~~, the capacities of such activities are added together.

⇩ new

When calculating the total rated thermal input of installations referred to in point 1.1, combustion plants with a rated thermal input below 3 MW shall not be included for the purposes of this calculation.

When calculating the total rated thermal input of installations referred to in point 1.1, combustion plants with a rated thermal input below 50 MW and operating no more than 350 hours per year shall not be included for the purposes of this calculation.

↓ 96/61/EC (adapted)
⇨ new

1. Energy industries

1.1 Combustion ⌦ of fuels in ⌫ installations with a ⌦ total ⌫ rated thermal input ~~exceeding 50 MW (*)~~ ⇨ of 20 MW or more ⇦

1.2. ⌦ Refining of ⌫ m~~M~~ineral oil and gas ~~refineries~~

1.3. ⌦ Production of ⌫ c~~C~~oke ~~ovens~~

1.4. ~~Coal~~ Gasification ⌦ or ⌫ ~~and~~ liquefaction ⌦ of fuels ⌫ ~~plants~~

2. Production and processing of metals

2.1. Metal ore (including sulphide ore) roasting or sintering ~~installations~~

2.2. ~~Installations for the~~ Production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour

2.3. ~~Installations for the~~ Processing of ferrous metals:

(a) ⌦ operation of ⌫ hot-rolling mills with a capacity exceeding 20 tonnes of crude steel per hour;

(b) ⌦ operation of ⌫ smitheries with hammers the energy of which exceeds 50 kilojoule per hammer, where the calorific power used exceeds 20 MW;

(c) application of protective fused metal coats with an input exceeding 2 tonnes of crude steel per hour.

2.4. ⌦ Operation of ⌫ f~~F~~errous metal foundries with a production capacity exceeding 20 tonnes ⌦ of good castings ⌫ per day

2.5. ⌦ Processing of non-ferrous metals: ⌫ ~~Installations~~

(a) ~~for the~~ production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes;

(b) ~~for the smelting~~ ⌦ melting ⌫ including the alloyage, of non-ferrous metals, including recovered products, ~~(refining, foundry casting, etc.)~~ with a melting capacity exceeding 4 tonnes per day for lead and cadmium or 20 tonnes per day for all other metals ⌦ and excluding operation of foundries; ⌫

⇩ new

(c) operation of non-ferrous metal foundries producing cast metal products, with a production capacity of good castings exceeding 2,4 tonnes per day for lead and cadmium or 12 tonnes per day for all other metals.

🡻 96/61/EC (adapted)
⇨ new

2.6. ~~Installations for~~ ~~s~~Surface treatment of metals ⌦ or ⌫ ~~and~~ plastic materials using an electrolytic or chemical process where the volume of the treatment vats exceeds 30 m^3

3. Mineral industry

3.1. ~~Installations for the~~ ~~p~~Production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or lime in rotary kilns ~~with a production capacity exceeding 50 tonnes per day~~ or ~~in~~ other furnaces with a production capacity exceeding 50 tonnes per day

3.2. ~~Installations for the~~ ~~p~~Production of asbestos ⌦ or ⌫ ~~and~~ the manufacture of asbestos-based products

3.3. ~~Installations for the~~ ~~m~~Manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day

3.4. ~~Installations for~~ ~~m~~Melting mineral substances including the production of mineral fibres with a melting capacity exceeding 20 tonnes per day

3.5. ~~Installations for the~~ ~~m~~Manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day~~, and/or with a kiln capacity exceeding 4 m3 and~~ ⇨ or ⇦ with a setting density per kiln exceeding 300 kg/m^3

4. Chemical industry

⌦ For the purpose of this section, ⌫ ~~P~~production within the meaning of the categories of activities contained in this section means the production on an industrial scale by chemical ⇨ or biological ⇦ processing of substances or groups of substances listed in ~~Sections~~ points 4.1 to 4.7~~4.6~~

4.1. ~~Chemical installations for the~~ ~~p~~Production of ~~basic~~ organic chemicals, such as:

(a) simple hydrocarbons (linear or cyclic, saturated or unsaturated, aliphatic or aromatic);

(b) oxygen-containing hydrocarbons such as alcohols, aldehydes, ketones, carboxylic acids, esters, acetates, ethers, peroxides, epoxy resins;

(c) sulphurous hydrocarbons;

(d) nitrogenous hydrocarbons such as amines, amides, nitrous compounds, nitro compounds or nitrate compounds, nitriles, cyanates, isocyanates;

(e) phosphorus-containing hydrocarbons;

(f) halogenic hydrocarbons;

(g) organometallic compounds;

(h) basic plastic materials (polymers synthetic fibres and cellulose-based fibres);

(i) synthetic rubbers;

(j) dyes and pigments;

(k) surface-active agents and surfactants.

4.2. ~~Chemical installations for the~~ ~~p~~Production of ~~basic~~ inorganic chemicals, such as:

(a) gases, such as ammonia, chlorine or hydrogen chloride, fluorine or hydrogen fluoride, carbon oxides, sulphur compounds, nitrogen oxides, hydrogen, sulphur dioxide, carbonyl chloride;

(b) acids, such as chromic acid, hydrofluoric acid, phosphoric acid, nitric acid, hydrochloric acid, sulphuric acid, oleum, sulphurous acids;

(c) bases, such as ammonium hydroxide, potassium hydroxide, sodium hydroxide;

(d) salts, such as ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate;

(e) non-metals, metal oxides or other inorganic compounds such as calcium carbide, silicon, silicon carbide.

4.3. ~~Chemical installations for the~~ ~~p~~Production of phosphorous-, nitrogen- or potassium-based fertilizers (simple or compound fertilizers)

4.4. ~~Chemical installations for the~~ ~~p~~Production of ~~basic~~ plant health products ⌦ or ⌫ ~~and~~ of biocides

4.5. ~~Installations using a chemical or biological process for the~~ Production of ~~basic~~ pharmaceutical products ⌦ including intermediates ⌫

4.6. ~~Chemical installations for the~~ ~~p~~Production of explosives

⇩ new

4.7. Production of chemicals for use as fuels or lubricants

🡻 96/61/EC (adapted)
⇨ new

5. Waste management

~~Without prejudice of Article 11 of Directive 75/442/EEC or Article 3 of Council Directive 91/689/EEC of 12 December 1991 on hazardous waste (1).~~

5.1. ~~Installations for the~~ ~~d~~Disposal or recovery of hazardous waste ~~as defined in the list referred to in Article 1 (4) of Directive 91/689/EEC, as defined in Annexes II A and II B (operations R1, R5, R6, R8 and R9) to Directive 75/442/EEC and in Council Directive 75/439/EEC of 16 June 1975 on the disposal of waste oils (2),~~ with a capacity exceeding 10 tonnes per day ⌦ involving the following activities: ⌫

⌦ (a) biological treatment;⌫

⌦ (b) physico-chemical treatment; ⌫

⌦ (c) incineration or co-incineration; ⌫

⌦ (d) blending or mixing; ⌫

⌦ (e) repackaging; ⌫

⌦ (f) storage with a capacity exceeding 10 tonnes of storage; ⌫

⌦ (g) use principally as a fuel or other means to generate energy; ⌫

⌦ (h) solvent reclamation/regeneration; ⌫

⌦ (i) recycling/reclamation of inorganic materials other than metals or metal compounds; ⌫

⌦ (j) regeneration of acids or bases; ⌫

⌦ (k) recovery of components used for pollution abatement; ⌫

⌦ (l) recovery of components from catalysts; ⌫

⌦ (m) oil re-refining or other reuses of oil. ⌫

5.2. ~~Installations for the i~~Incineration of ⇨ non-hazardous ⇦ ~~municipal~~ waste ~~as defined in Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants (3) and Council Directive 89/429/EEC of 21 June 1989 on the reduction of air pollution from existing municipal waste incineration plants (4)~~ with a capacity exceeding 3 tonnes per hour.

5.3. ~~Installations for the~~ ~~d~~Disposal ⇨ or recovery ⇦ of non-hazardous waste ~~as defined in Annex II A to Directive 75/442/EEC under headings D8 and D9,~~ with a capacity exceeding 50 tonnes per day ⌦ involving the following activities: ⌫

⌦ (a) biological treatment; ⌫

⌦ (b) physico-chemical treatment; ⌫

⇩ new

(c) pre-treatment of waste for co-incineration;

(d) treatment of slags and ashes;

(e) treatment of scrap metal.

↓ 96/61/EC (adapted)

5.4 Landfills receiving more than 10 tonnes per day or with a total capacity exceeding 25000 tonnes, excluding landfills of inert waste

6. Other activities

6.1. ~~Industrial plants for the~~ ~~p~~Production ⌦ in industrial -installations ⌫ of:

(a) pulp from timber or other fibrous materials;

(b) paper ⌦ or ⌫ ~~and~~ ⌦ card ⌫ board with a production capacity exceeding 20 tonnes per day;

⇩ new

(c) wood-based panels, with the exception of plywood, with a production capacity exceeding 600 m³ per day.

↓ 96/61/EC (adapted)
⇨ new

6.2. ~~Plants for the~~ ~~p~~Pre-treatment (operations such as washing, bleaching, mercerization) or dyeing of ⌦ textile ⌫ fibres or textiles where the treatment capacity exceeds 10 tonnes per day

6.3. ~~Plants for the~~ ~~t~~Tanning of hides and skins where the treatment capacity exceeds 12 tonnes of finished products per day

6.4. (a) ⌦ Operating ⌫ ~~S~~slaughterhouses with a carcass production capacity greater than 50 tonnes per day

(b) Treatment and processing, ⇨ other than exclusively packaging, of the following raw materials, whether previously processed or unprocessed ⇦ , intended for the production of food products ⇨ for humans or animals from ⇦ :

(i) animal raw materials (other than ⌦ exclusively ⌫ milk) with a finished product production capacity greater than 75 tonnes per day

(ii) vegetable raw materials with a finished product production capacity greater than 300 tonnes per day ~~(average value on a quarterly basis)~~

⇩ new

(iii) a mix of animal and vegetable raw materials with a finished product production capacity in tonnes per day greater than:

– 75 if A is equal to 10 or more; or

– [300- (22.5 x A)] in any other case

where 'A' is the portion of animal material (in percent) of the finished product production capacity

Packaging shall not be included in the final weight of the product.

This subsection shall not apply where the raw material is milk only.

↓ 96/61/EC (adapted)

(c) Treatment and processing of milk ⊠ only ⊠, the quantity of milk received being greater than 200 tonnes per day (average value on an annual basis)

6.5. ~~Installations for the~~ Ddisposal or recycling of animal carcases ⊠or ⊠ ~~and~~ animal waste with a treatment capacity exceeding 10 tonnes per day

6.6 ~~Installations for the~~ Iintensive rearing of poultry or pigs with more than:

~~(a) 40000 places for poultry~~

⇩ new

(a) 40000 places for broilers or 30 000 places for laying hens or 24 000 places for ducks or 11 500 places for turkeys

↓ 96/61/EC

(b) 2 000 places for production pigs (over 30 kg), or

(c) 750 places for sows

⇩ new

In cases of other poultry species than referred in point (a) or different types of species referred in points (a), (b) and (c) reared on the same installation, the threshold shall be calculated on the basis of equivalent nitrogen excretion factors compared to the thresholds set above.

↓ 96/61/EC (adapted)

6.7 ~~Installations for the~~ Ssurface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, with ~~a~~ ⊠ an organic solvent ⊠ consumption capacity of more than 150 kg per hour or more than 200 tonnes per year.

6.8 ~~Installations for the~~ Pproduction of carbon (hard-burnt coal) or electrographite by means of incineration or graphitization.

⇩ new

6.9 Preservation of wood and wood products with a production capacity exceeding 75 m^3 per day.

6.10 Off-site treatment of waste water not covered by Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment[57] and discharged by an installation covered by Chapter I.

[57] OJ L 135, 30.5.1991, p. 40.

↓ 96/61/EC (adapted)

~~ANNEX II~~

~~LIST OF THE DIRECTIVES REFERRED TO IN ARTICLES 18 (2) AND 20~~

~~1. Directive 87/217/EEC on the prevention and reduction of environmental pollution by asbestos~~

~~2. Directive 82/176/EEC on limit values and quality objectives for mercury discharges by the chlor-alkali electrolysis industry~~

~~3. Directive 83/513/EEC on limit values and quality objectives for cadmium discharges~~

~~4. Directive 84/156/EEC on limit values and quality objectives for mercury discharges by sectors other than the chlor-alkali electrolysis industry~~

~~5. Directive 84/491/EEC on limit values and quality objectives for discharges of hexachlorocyclohexane~~

~~6. Directive 86/280/EEC on limit values and quality objectives for discharges of certain dangerous substances included in List 1 of the Annex to Directive 76/464/EEC, subsequently amended by Directives 88/347/EEC and 90/415/EEC amending Annex II to Directive 86/280/EEC~~

~~7. Directive 89/369/EEC on the prevention of air pollution from new municipal waste-incineration plants~~

~~8. Directive 89/429/EEC on the reduction of air pollution from existing municipal waste-incineration plants~~

~~9. Directive 94/67/EC on the incineration of hazardous waste~~

~~10. Directive 92/112/EEC on procedures for harmonizing the programmes for the reduction and eventual elimination of pollution caused by waste from the titanium oxide industry~~

~~11. Directive 88/609/EEC on the limitation of emissions of certain pollutants into the air from large combustion plants, as last amended by Directive 94/66/EC~~

~~12. Directive 76/464/EEC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community~~

~~13. Directive 75/442/EEC on waste, as amended by Directive 91/156/EEC~~

~~14. Directive 75/439/EEC on the disposal of waste oils~~

~~15. Directive 91/689/EEC on hazardous waste~~

↓ 96/61/EC (adapted)
⇨ new

ANNEX II~~III~~

~~Indicative list of the main polluting substances to be taken into account if they are relevant for fixing emission limit values~~ ⌦ List of polluting substances ⌫

AIR

1. Sulphur dioxide and other sulphur compounds
2. Oxides of nitrogen and other nitrogen compounds
3. Carbon monoxide
4. Volatile organic compounds
5. Metals and their compounds
6. Dust ⇨ including fine particulate matter ⇦
7. Asbestos (suspended particulates, fibres)
8. Chlorine and its compounds
9. Fluorine and its compounds
10. Arsenic and its compounds
11. Cyanides
12. Substances and preparations which have been proved to possess carcinogenic or mutagenic properties or properties which may affect reproduction via the air
13. Polychlorinated dibenzodioxins and polychlorinated dibenzofurans

WATER

1. Organohalogen compounds and substances which may form such compounds in the aquatic environment
2. Organophosphorus compounds
3. Organotin compounds
4. Substances and preparations which have been proved to possess carcinogenic or mutagenic properties or properties which may affect reproduction in or via the aquatic environment
5. Persistent hydrocarbons and persistent and bioaccumulable organic toxic substances
6. Cyanides
7. Metals and their compounds
8. Arsenic and its compounds
9. Biocides and plant health products
10. Materials in suspension
11. Substances which contribute to eutrophication (in particular, nitrates and phosphates)

12. Substances which have an unfavourable influence on the oxygen balance (and can be measured using parameters such as BOD, COD, etc.).

⇩ new

13. Substances listed in Annex X of Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy[58].

[58] OJ L 327, 22.12.2000, p. 1.

↓ 96/61/EC (adapted)

ANNEX IIIIV

⌦ Criteria for determining best available techniques ⌫

~~Considerations to be taken into account generally or in specific cases when determining best available techniques, as defined in Article 2(12), bearing in mind the likely costs and benefits of a measure and the principles of precaution and prevention:~~

1. the use of low-waste technology;
2. the use of less hazardous substances;
3. the furthering of recovery and recycling of substances generated and used in the process and of waste, where appropriate;
4. comparable processes, facilities or methods of operation which have been tried with success on an industrial scale;
5. technological advances and changes in scientific knowledge and understanding;
6. the nature, effects and volume of the emissions concerned;
7. the commissioning dates for new or existing installations;
8. the length of time needed to introduce the best available technique;
9. the consumption and nature of raw materials (including water) used in the process and energy efficiency;
10. the need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it;
11. the need to prevent accidents and to minimize the consequences for the environment;
12. ~~the information published by the Commission pursuant to Article 16(2) or by international organizations.~~

↓ 2003/35/EC

ANNEX IV~~V~~

Public participation in decision-making

1. The public shall be informed (by public notices or other appropriate means such as electronic media where available) of the following matters early in the procedure for the taking of a decision or, at the latest, as soon as the information can reasonably be provided:

   (a) the application for a permit or, as the case may be, the proposal for the updating of a permit or of permit conditions in accordance with Article 22 ~~15(1)~~, including the description of the elements listed in Article 13(1) ~~6(1)~~

⇩ new

   (b) the development of new or updated general binding rules in accordance with Article 18, including the proposed requirements of the rules and a non-technical summary of the legal and administrative framework within which the rules will be applied;

↓ 2003/35/EC (adapted)

   (~~b~~c) where applicable, the fact that a decision is subject to a national or transboundary environmental impact assessment or to consultations between Member States in accordance with Article 28 ~~17~~ ;

   (~~c~~d) details of the competent authority responsible for taking the decision, those from which relevant information can be obtained, those to which comments or questions can be submitted, and details of the time schedule for transmitting comments or questions;

   (~~d~~e) the nature of possible decisions or, where there is one, the draft decision;

   (~~e~~f) where applicable, the details relating to a proposal for the updating of a permit or of permit conditions;

   (~~f~~g) an indication of the times and places where, or means by which, the relevant information will be made available;

   (~~g~~h) details of the arrangements for public participation and consultation made pursuant to point 5.

2. Member States shall ensure that, within appropriate time-frames, the following is made available to the public concerned:

   (a) in accordance with national legislation, the main reports and advice issued to the competent authority or authorities at the time when the public concerned were informed in accordance with point 1;

   (b) in accordance with the provisions of Directive 2003/4/EC ~~of the European Parliament and of the Council of 28 January 2003 on public access to environmental information~~, information other than that referred to in point 1 which is relevant for the decision in accordance with Article 6~~8~~ and which only

becomes available after the time the public concerned was informed in accordance with point 1.

3. The public concerned shall be entitled to express comments and opinions to the competent authority before a decision is taken.

4. The results of the consultations held pursuant to this Annex must be taken into due account in the taking of a decision.

5. The detailed arrangements for informing the public (for example by bill posting within a certain radius or publication in local newspapers) and consulting the public concerned (for example by written submissions or by way of a public inquiry) shall be determined by the Member States. Reasonable time-frames for the different phases shall be provided, allowing sufficient time for informing the public and for the public concerned to prepare and participate effectively in environmental decision-making subject to the provisions of this Annex.

↓ 2001/80/EC (adapted)
→1 2006/105/EC Art. 1 and Annex .B(2)
→2 Art. 20 and Annex II, p. 703
→3 Art. 20 and Annex II, p. 703 and Art. 20 and Annex II, p. 704

ANNEX V I

⌦ Technical provisions relating to combustion plants ⌫

Part 1

CEILINGS AND REDUCTION TARGETS FOR EMISSIONS OF SO_2 FROM EXISTING PLANTS[59][60]

Member State	0	1	2	3	4	5	6	7	8	9
	SO_2 emissions by large combustion plants 1980 ktonnes	Emission ceiling (ktonnes/year)			% reduction over 1980 emissions			% reduction over adjusted 1980 emissions		
		Phase 1 1993	Phase 2 1998	Phase 3 2003	Phase 1 1993	Phase 2 1998	Phase 3 2003	Phase 1 1993	Phase 2 1998	Phase 3 2003
Belgium	530	318	212	159	-40	-60	-70	-40	-60	-70
→1 B	→1 1734	→1 141	→1 130	→1 119	→1 -	→1 -	→1 -	→1 -	→1 -	→1 -

[59] Additional emissions may arise from capacity authorised on or after 1 July 1987.

[60] Emissions coming from combustion plants authorised before 1 July 1987 but not yet in operation before that date and which have not been taken into account in establishing the emission ceilings fixed by this Annex shall either comply with the requirements established by this Directive for new plants or be accounted for in the overall emissions from existing plants that must not exceed the ceilings fixed in this Annex.

ulgaria ←	←	0 ←	0 ←	0 ←	19 ←	25 ←	31 ←	19 ←	25 ←	31 ←
→2 Czech Republic ←	→2 1408 ←	→2 919 ←	→2 303 ←	→2 155 ←	→2 -35 ←	→2 -79 ←	→2 -89 ←	→2 -35 ←	→2 -79 ←	→2 -89 ←
Denmark	323	213	141	106	-34	-56	-67	-40	-60	-70
Germany	2225	1335	890	668	-40	-60	-70	-40	-60	-70
→2 Estonia ←	→2 240 ←	→2 123 ←	→2 91 ←	→2 76 ←	→2 -49 ←	→2 -62 ←	→2 -68 ←	→2 -49 ←	→2 -62 ←	→2 -68 ←
Greece	303	320	320	320	+6	+6	+6	-45	-45	-45
Spain	2290	2290	1730	1440	0	-24	-37	-21	-40	-50
France	1910	1146	764	573	-40	-60	-70	-40	-60	-70
Ireland	99	124	124	124	+25	+25	+25	-29	-29	-29
Italy	2450	1800	1500	900	-27	-39	-63	-40	-50	-70

→ 3 Cyprus ←	→ 3 17 ←	→ 3 29 ←	→ 3 32 ←	→ 3 34 ←	→ 3 +71 ←	→ 3 +88 ←	→ 3 +100 ←	→ 3 +71 ←	→ 3 +88 ←	→ 3 +100 ←
→ 3 Latvia ←	→ 3 60 ←	→ 3 40 ←	→ 3 30 ←	→ 3 25 ←	→ 3 -30 ←	→ 3 -50 ←	→ 3 -60 ←	→ 3 -30 ←	→ 3 -50 ←	→ 3 -60 ←
→ 3 Lithuania ←	→ 3 163 ←	→ 3 52 ←	→ 3 64 ←	→ 3 75 ←	→ 3 -68 ←	→ 3 -61 ←	→ 3 -54 ←	→ 3 -68 ←	→ 3 -61 ←	→ 3 -54 ←
Luxembourg	3	1,8	1,5	1,5	-40	-50	-60	-40	-50	-50
→ 3 Hungary ←	→ 3 720 ←	→ 3 429 ←	→ 3 448 ←	→ 3 360 ←	→ 3 -40 ←	→ 3 -38 ←	→ 3 -50 ←	→ 3 -40 ←	→ 3 -38 ←	→ 3 -50 ←
→ 3 Malta ←	→ 3 12 ←	→ 3 13 ←	→ 3 17 ←	→ 3 14 ←	→ 3 +14 ←	→ 3 +51 ←	→ 3 +17 ←	→ 3 +14 ←	→ 3 +51 ←	→ 3 +17 ←
Netherlands	299	180	120	90	-40	-60	-70	-40	-60	-70
Portugal	115	232	270	206	+102	+135	+79	-25	-13	-34
→ 3 Poland	→ 3 2087 ←	→ 3 1454 ←	→ 3 1176 ←	→ 3 1110 ←	→ 3 -30 ←	→ 3 -44 ←	→ 3 -47 ←	→ 3 -30 ←	→ 3 -44 ←	→ 3 -47 ←

←										
→1 ~~Romania~~ ←	→1 ~~561~~ ←	→1 ~~692~~ ←	→1 ~~503~~ ←	→1 ~~518~~ ←	→1 ~~23~~ ←	→1 ~~-10~~ ←	→1 ~~-8~~ ←	→1 ~~23~~ ←	→1 ~~-10~~ ←	→1 ~~-8~~ ←
→3 ~~Slovenia~~ ←	→3 ~~125~~ ←	→3 ~~122~~ ←	→3 ~~98~~ ←	→3 ~~49~~ ←	→3 ~~-2~~ ←	→3 ~~-22~~ ←	→3 ~~-61~~ ←	→3 ~~-2~~ ←	→3 ~~-22~~ ←	→3 ~~-61~~ ←
→3 ~~Slovakia~~ ←	→3 ~~450~~ ←	→3 ~~177~~ ←	→3 ~~124~~ ←	→3 ~~86~~ ←	→3 ~~-60~~ ←	→3 ~~-72~~ ←	→3 ~~-81~~ ←	→3 ~~-60~~ ←	→3 ~~-72~~ ←	→3 ~~-81~~ ←
~~United Kingdom~~	~~3883~~	~~3106~~	~~2330~~	~~1553~~	~~-20~~	~~-40~~	~~-60~~	~~-20~~	~~-40~~	~~-60~~
~~Austria~~	~~90~~	~~54~~	~~36~~	~~27~~	~~-40~~	~~-60~~	~~-70~~	~~-40~~	~~-60~~	~~-70~~
~~Finland~~	~~171~~	~~102~~	~~68~~	~~51~~	~~-40~~	~~-60~~	~~-70~~	~~-40~~	~~-60~~	~~-70~~
~~Sweden~~	~~112~~	~~67~~	~~45~~	~~34~~	~~-40~~	~~-60~~	~~-70~~	~~-40~~	~~-60~~	~~-70~~

ANNEX II

CEILINGS AND REDUCTION TARGETS FOR EMISSIONS OF NO_x FROM EXISTING PLANTS[61][62]

Member State	0	1	2	3	4	5	6
	NO_x emissions (as NO_2) by large combustion plants 1980 ktonnes	NO_x emission ceilings (ktonnes/year)		% reduction over 1980 emissions		% reduction over adjusted 1980 emissions	
		Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2
		1993[63]	1998	1993[64]	1998	1993[65]	1998
Belgium	110	88	66	-20	-40	-20	-40
→1 Bulgaria ←	→1 155 ←	→1 125 ←	→1 95 ←	→1 -19 ←	→1 -39 ←	→1 -19 ←	→1 -39 ←
→3 Czech Republic	→3 403 ←	→3 228 ←	→3 113 ←	→3 -43 ←	→3 -72 ←	→3 -43 ←	→3 -72 ←

[61] Additional emissions may arise from capacity authorised on or after 1 July 1987.

[62] Emissions coming from combustion plants authorised before 1 July 1987 but not yet in operation before that date and which have not been taken into account in establishing the emission ceilings fixed by this Annex shall either comply with the requirements established by this Directive for new plants or be accounted for in the overall emissions from existing plants that must not exceed the ceilings fixed in this Annex.

[63] Member States may for technical reasons delay for up to two years the phase 1 date for reduction in NO_x emissions by notifying the Commission within one month of the notification of this Directive.

[64] Member States may for technical reasons delay for up to two years the phase 1 date for reduction in NO_x emissions by notifying the Commission within one month of the notification of this Directive.

[65] Member States may for technical reasons delay for up to two years the phase 1 date for reduction in NO_x emissions by notifying the Commission within one month of the notification of this Directive.

←							
~~Denmark~~	~~124~~	~~121~~	~~81~~	~~-3~~	~~-35~~	~~-10~~	~~-40~~
~~Germany~~	~~870~~	~~696~~	~~522~~	~~-20~~	~~-40~~	~~-20~~	~~-40~~
→3 ~~Estonia~~ ←	→3 ~~20~~ ←	→3 ~~10~~ ←	→3 ~~12~~ ←	→3 ~~-52~~ ←	→3 ~~-40~~ ←	→3 ~~-52~~ ←	→3 ~~-40~~ ←
~~Greece~~	~~36~~	~~70~~	~~70~~	~~+94~~	~~+94~~	~~0~~	~~0~~
~~Spain~~	~~366~~	~~368~~	~~277~~	~~+1~~	~~-24~~	~~-20~~	~~-40~~
~~France~~	~~400~~	~~320~~	~~240~~	~~-20~~	~~-40~~	~~-20~~	~~-40~~
~~Ireland~~	~~28~~	~~50~~	~~50~~	~~+79~~	~~+79~~	~~0~~	~~0~~
~~Italy~~	~~580~~	~~570~~	~~428~~	~~-2~~	~~-26~~	~~-20~~	~~-40~~
→3 ~~Cyprus~~ ←	→3 ~~3~~ ←	→3 ~~5~~ ←	→3 ~~6~~ ←	→3 ~~+67~~ ←	→3 ~~+100~~ ←	→3 ~~+67~~ ←	→3 ~~+100~~ ←
→3 ~~Latvia~~ ←	→3 ~~10~~ ←	→3 ~~10~~ ←	→3 ~~9~~ ←	→3 ~~-4~~ ←	→3 ~~-10~~ ←	→3 ~~-4~~ ←	→3 ~~-10~~ ←
→3 ~~Lithuania~~ ←	→3 ~~21~~ ←	→3 ~~8~~ ←	→3 ~~11~~ ←	→3 ~~-62~~ ←	→3 ~~-48~~ ←	→3 ~~-62~~ ←	→3 ~~-48~~ ←
~~Luxembourg~~	~~3~~	~~2,4~~	~~1,8~~	~~-20~~	~~-40~~	~~-20~~	~~-40~~
→3 ~~Hungary~~ ←	→3 ~~68~~ ←	→3 ~~33~~ ←	→3 ~~34~~ ←	→3 ~~-51~~ ←	→3 ~~-49~~ ←	→3 ~~-51~~ ←	→3 ~~-49~~ ←

➔3 ~~Malta~~ ←	➔3 ~~1,7~~ ←	➔3 ~~7~~ ←	➔3 ~~2,5~~ ←	➔3 +~~299~~ ←	➔3 +~~51~~ ←	➔3 +~~299~~ ←	➔3 +~~51~~ ←
~~Netherlands~~	~~122~~	~~98~~	~~73~~	~~-20~~	~~-40~~	~~-20~~	~~-40~~
~~Portugal~~	~~23~~	~~59~~	~~64~~	~~+157~~	~~+178~~	~~-8~~	~~0~~
➔3 ~~Poland~~ ←	➔3 ~~698~~ ←	➔3 ~~426~~ ←	➔3 ~~310~~ ←	➔3 -~~39~~ ←	➔3 -~~56~~ ←	➔3 -~~39~~ ←	➔3 -~~56~~ ←
➔1 ~~Romania~~ ←	➔1 ~~135~~ ←	➔1 ~~135~~ ←	➔1 ~~77~~ ←	➔1 -~~1~~ ←	➔1 -~~43~~ ←	➔1 -~~1~~ ←	➔1 -~~43~~ ←
➔3 ~~Slovenia~~ ←	➔3 ~~17~~ ←	➔3 ~~15~~ ←	➔3 ~~16~~ ←	➔3 -~~12~~ ←	➔3 -~~6~~ ←	➔3 -~~12~~ ←	➔3 -~~6~~ ←
➔3 ~~Slovakia~~ ←	➔3 ~~141~~ ←	➔3 ~~85~~ ←	➔3 ~~46~~ ←	➔3 -~~40~~ ←	➔3 -~~67~~ ←	➔3 -~~40~~ ←	➔3 -~~67~~ ←
~~United Kingdom~~	~~1016~~	~~864~~	~~711~~	~~-15~~	~~-30~~	~~-15~~	~~-30~~
~~Austria~~	~~19~~	~~15~~	~~11~~	~~-20~~	~~-40~~	~~-20~~	~~-40~~
~~Finland~~	~~81~~	~~65~~	~~48~~	~~-20~~	~~-40~~	~~-20~~	~~-40~~
~~Sweden~~	~~31~~	~~25~~	~~19~~	~~-20~~	~~-40~~	~~-20~~	~~-40~~

~~ANNEX III~~

Emission limit values ⌦ for combustion plants referred to in Article 33(2) ⌫ ~~FOR SO_2~~

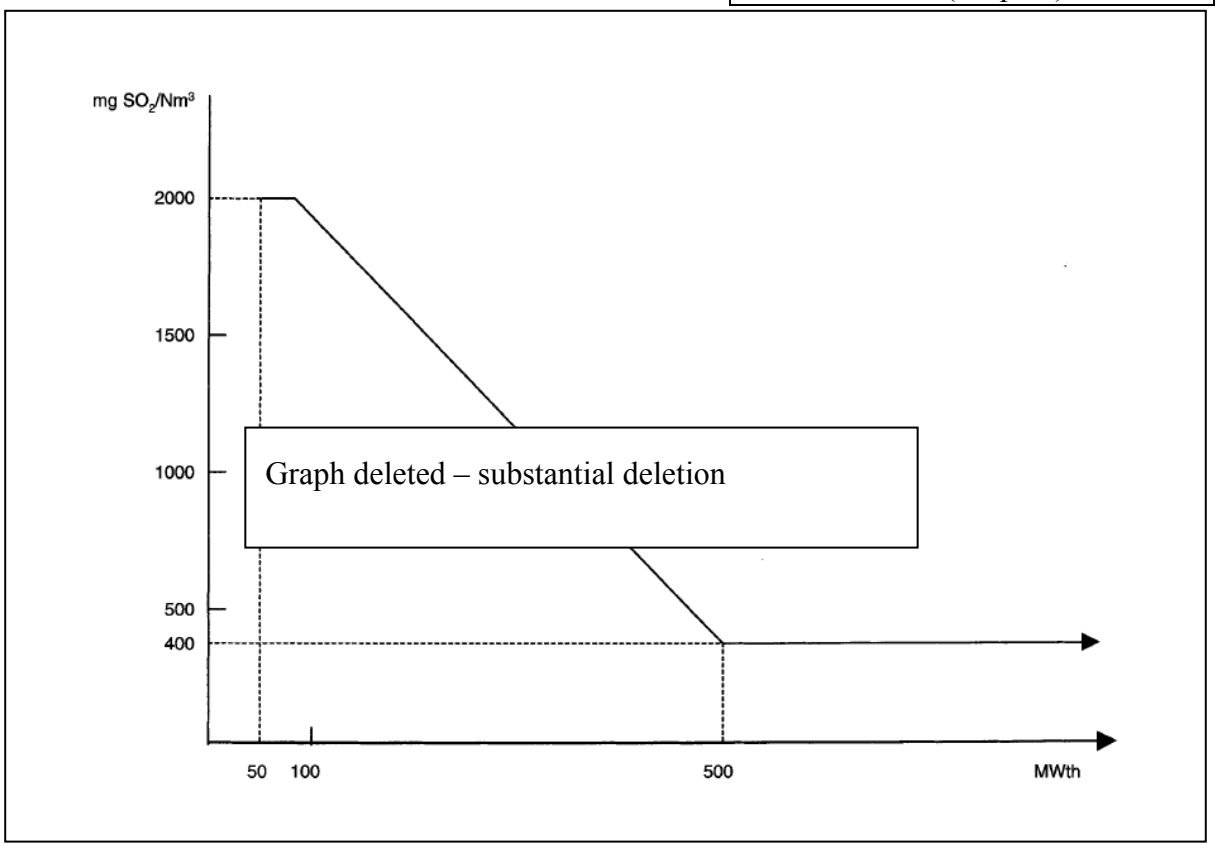
~~SOLID FUEL~~

~~A~~. ~~SO_2 emission limit values expressed in mg/Nm^3 (O_2 content 6 %) to be applied by new and existing plants pursuant to Article 4(1) and 4(3) respectively:~~

⬇ 2001/80/EC Art. 2 (adapted)

⌦ 1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardized O_2 content of 6% for solid fuels, 3% for boilers using liquid and gaseous fuels and 15% for gas turbines and gas engines ⌫.

⬇ 2001/80/EC (adapted)



~~NB.~~

~~Where the emission limit values above cannot be met due to the characteristics of the fuel, a rate of desulphurisation of at least 60 % shall be achieved in the case of plants with a rated thermal input of less than or equal to 100 MWth, 75 % for plants greater than 100 MWth and less than or equal to 300 MWth and 90 % for plants greater than 300 MWth. For plants greater than 500 MWth, a desulphurisation rate of at least 94 % shall apply or of at least 92 % where a contract for the fitting of flue gas~~

desulphurisation or lime injection equipment has been entered into, and work on its installation has commenced, before 1 January 2001.

B. SO_2 emission limit values expressed in mg/Nm^3 (O_2 content 6 %) to be applied by new plants pursuant to Article 4(2) with the exception of gas turbines.

Type of fuel	50 to 100 MWth	100 to 300 MWth	≥ 300 MWth
Biomass	200	200	200
General case	850	200[66]	200

NB.

Where the emission limit values above cannot be met due to the characteristics of the fuel, installations shall achieve 300 mg/Nm^3 SO_2, or a rate of desulphurisation of at least 92 % shall be achieved in the case of plants with a rated thermal input of less than or equal to 300 MWth and in the case of plants with a rated thermal input greater than 300 MWth a rate of desulphurisation of at least 95 % together with a maximum permissible emission limit value of 400 mg/Nm^3 shall apply.

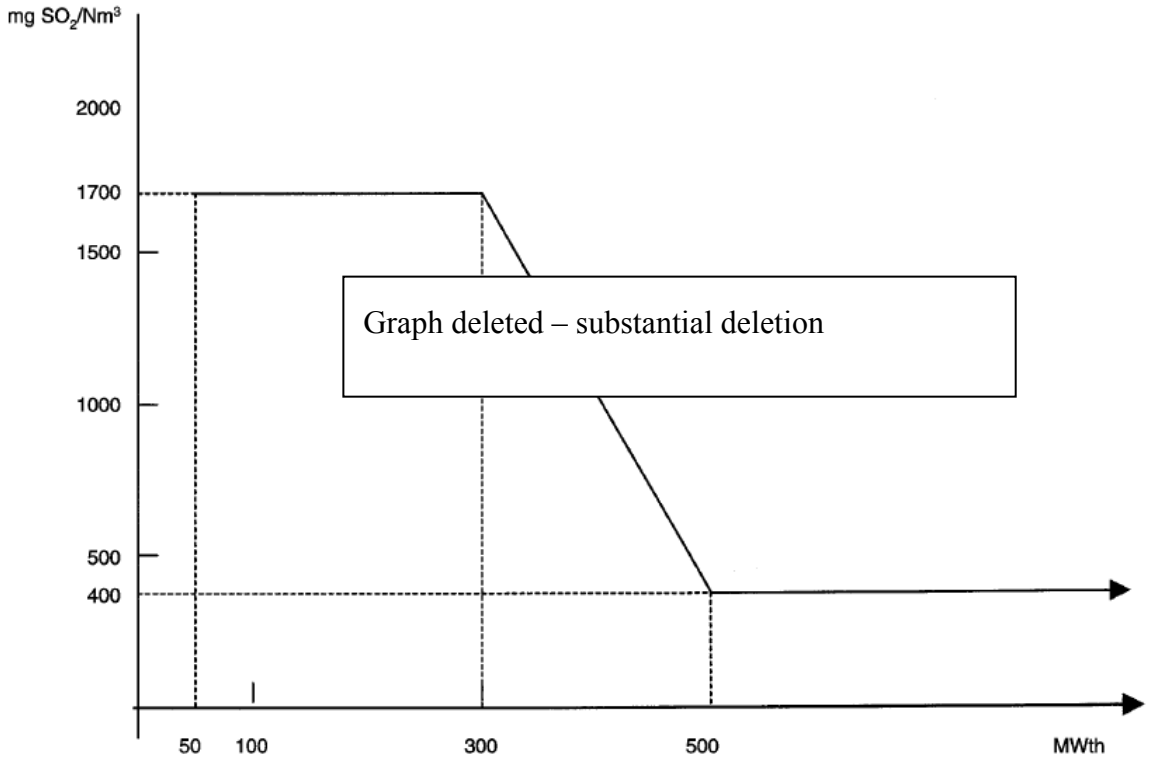
[66] Except in the case of the 'Outermost Regions' where 850 to 200 mg/Nm^3 (linear decrease) shall apply.

~~ANNEX IV~~

~~EMISSION LIMIT VALUES FOR SO_2~~

~~LIQUID FUELS~~

~~A. SO_2 emission limit values expressed in mg/Nm^3 (O_2 content 3 %) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:~~



~~B. SO_2 emission limit values expressed in mg/Nm^3 (O_2 content 3 %) to be applied by new plants pursuant to Article 4(2) with the exception of gas turbines~~

~~50 to 100 MWth~~	~~100 to 300 MWth~~	~~≥ 300 MWth~~
~~850~~	~~400 to 200 (linear decrease)~~[67]	~~200~~

~~In the case of two installations with a rated thermal input of 250 MWth on Crete and Rhodos to be licensed before 31 December 2007 the emission limit value of 1700 mg/Nm^3 shall apply.~~

[67] ~~Except in the case of the 'Outermost Regions' where 850 to 200 mg/Nm^3 (linear decrease) shall apply.~~

⇩ new

In case of combined cycle gas turbines (CCGT) with supplementary firing, the standardized O_2 content may be defined by the competent authority, taking into account the specific characteristics of the installation concerned.

🡻 2001/80/EC (adapted)
⇨ new

⌦ 2. Emission limit values (mg/Nm^3) for SO_2 for boilers using solid or liquid fuels ⌫

Rated thermal input (MWth)	Coal and lignite	Biomass	Peat	Liquid fuels
⇨ 50-100 ⇦	⇨ 400 ⇦	200	⇨ 300 ⇦	⇨ 350 ⇦
⇨ 100-300 ⇦	⇨ 250 ⇦	200	⇨ 300 ⇦	⇨ 250 ⇦
⇨ > 300 ⇦	⇨ 200 ⇦	200	⇨ 200 ⇦	⇨ 200 ⇦

🡻 2001/80/EC Art. 5 (adapted)

~~By way of derogation from Annex III:~~

~~(1)~~ ⌦ Combustion ⌫ plants ~~of a rated thermal input equal to or greater than 400 MW~~, ⌦ using solid fuels which were granted a permit before 27 November 2002, and ⌫ which do not operate more than ~~the following numbers of~~ ⌦ 1500 ⌫ hours per year ⌦ as a ⌫ ~~(~~rolling average over a period of five years~~)~~, shall be subject to ~~a~~ ⌦ an emission ⌫ limit value for SO_2 ~~emissions~~ of 800 mg/Nm^3.

🡻 2001/80/EC (adapted)
⇨ new

~~**ANNEX V**~~

3. Emission limit values ⌦ (mg/Nm^3) ⌫ for SO_2 ⌦ for boilers using gaseous fuels⌫

~~Gaseous fuels~~

~~A. SO_2 emission limit values expressed in mg/Nm^3 (O_2 content 3 %) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:~~

~~Type of fuel~~	~~Limit values (mg/Nm3)~~
~~Gaseous fuels~~ In~~in~~ general	35
Liquefied gas	5
Low calorific gases from ~~gasification of refinery residues,~~ coke oven ~~gas, blast furnace gas~~	~~800~~400
⇨ Low calorific gases from blast furnace ⇦	⇨ 200 ⇦

~~Gas from gasification of coal~~	~~68~~

~~B. SO_2 emission limit values expressed in mg/Nm^3 (O_2 content 3 %) to be applied by new plants pursuant to Article 4(2):~~

~~Gaseous fuels in general~~	~~35~~
~~Liquefied gas~~	~~5~~
~~Low calorific gases from coke oven~~	~~400~~
~~Low calorie gases from blast furnace~~	~~200~~

⇩ new

4. Emission limit values (mg/Nm^3) for NO_x for boilers using solid or liquid fuels

Rated thermal input (MWth)	Coal and lignite	Biomass and peat	Liquid fuels
50-100	300 450 in case of pulverised lignite combustion	300	450
100-300	200	250	200
> 300	200	200	150

🡻 2001/80/EC Annex VI (adapted)

(2) ~~Until 31 December 2015 plants of a rated thermal input greater than 500 MW, which from 2008 onwards do not operate more than 2000 hours a year (rolling average over a period of five years), shall:~~

~~- in the case of plant licensed in accordance with Article 4(3)(a), be subject to a limit value for nitrogen oxide emissions (measured as NO2) of 600 mg/Nm3;~~

~~- in the case of plant subject to a national plan under Article 4(6), have their contribution to the national plan assessed on the basis of a limit value of 600 mg/Nm3.~~

~~From 1 January 2016 such plants~~, ⌦ Combustion plants using solid fuels with a rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 and ⌫ which do not operate more than 1500 hours ⌦ per ⌫ ~~a~~ year ~~(~~ ⌦ as a ⌫ rolling average over a period of five years~~)~~, shall be subject to ~~a~~ ⌦ an emission ⌫ limit value for ⌦ NO_x ⌫ ~~nitrogen oxide emissions (measured as NO2)~~ of 450 mg/Nm^3.

⌦ Combustion plants using solid fuels with a rated thermal input of 500 MW or more, which were granted a permit before 1 July 1987 and which do not operate more than 1500 hours per

68 ~~The Council will fix the emission limit values applicable to such gas at a later stage on the basis of proposals from the Commission to be made in the light of further technical experience.~~

year as a rolling average over a period of five years, shall be subject to an emission limit value for NO_x of 450 mg/Nm^3. ⌫

↓ 2001/80/EC (adapted)
⇨ new

~~ANNEX VI~~

⌦ 5. Emission limit values (mg/Nm^3) for NO_x ⌫ ~~**(MEASURED AS NO_2)**~~ ⇨and CO for gas fired combustion plants⇦

~~A. NO_x emission limit values expressed in mg/Nm^3 (O_2 content 6 % for solid fuels, 3 % for liquid and gaseous fuels) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:~~

~~Type of fuel:~~	~~Limit values[69] (mg/Nm^3)~~
~~Solid[70] [71]:~~	
~~50 to 500 MWth:~~	~~600~~
~~>500 MWth:~~	~~500~~
~~From 1 January 2016~~	
~~50 to 500 MWth:~~	~~600~~
~~>500 MWth:~~	~~200~~
~~Liquid:~~	
~~50 to 500 MWth:~~	~~450~~
~~>500 MWth:~~	~~400~~
~~Gaseous:~~	

~~69 Except in the case of the 'Outermost Regions' where the following values shall apply:Solid in general: 650Solid with < 10 % vol comps: 1300Liquid: 450Gaseous: 350~~

~~70 Until 31 December 2015 plants of a rated thermal input greater than 500 MW, which from 2008 onwards do not operate more than 2000 hours a year (rolling average over a period of five years), shall:~~
~~— in the case of plant licensed in accordance with Article 4(3)(a), be subject to a limit value for nitrogen oxide emissions (measured as NO_2) of 600 mg/Nm^3;~~
~~— In the case of plant subject to a national plan under Article 4(6), have their contribution to the national plan assessed on the basis of a limit value of 600 mg/Nm^3.~~
~~From 1 January 2016 such plants, which do not operate more than 1500 hours a year (rolling average over a period of five years), shall be subject to a limit value for nitrogen oxide emissions (measured as NO_2) of 450 mg/Nm^3.~~

~~71 Until 1 January 2018 in the case of plants that in the 12 month period ending on 1 January 2001 operated on, and continue to operate on, solid fuels whose volatile content is less than 10 %, 1200 mg/Nm^3 shall apply.~~

50 to 500 MWth:	300
>500 MWth:	200

B. NO_x emission limit values expressed in mg/Nm^3 to be applied by new plants pursuant to Article 4(2) with the exception of gas turbines

Solid fuels (O_2 content 6 %)

Type of fuel	50 to 100 MWth	100 to 300 MWth	≥ 300 MWth
Biomass	400	300	200
General case	400	200[72]	200

Liquid fuels (O_2 content 3 %)

50 to 100 MWth	100 to 300 MWth	≥ 300 MWth
400	200[73]	200

In the case of two installations with a rated thermal input of 250 MWth on Crete and Rhodos to be licensed before 31 December 2007 the emission limit value of 400 mg/Nm^3 shall apply.

Gaseous fuels (O_2 content 3 %)

	50 to 300 MWth	≥ 300 MWth
Natural gas (note 1)	150	100
Other gases	200	200

Gas Turbines

NO_x emission limit values expressed in mg/Nm^3 (O_2 content 15 %) to be applied by a single gas turbine unit pursuant to Article 4(2) (the limit values apply only above 70 % load):

	≥ 50 MWth (thermal input at ISO conditions)
Natural gas (Note 1)	50(Note 2)
Liquid fuels (Note 3)	120
Gaseous fuels (other than natural gas)	120

72 Except in the case of the 'Outermost Regions' where 300 mg/Nm^3 shall apply.

73 Except in the case of the 'Outermost Regions' where 300 mg/Nm^3 shall apply.

	⇨ NO_x ⇦	⇨ CO ⇦
⇨ Gas fired boilers ⇦	⇨ 100 ⇦	⇨ 100 ⇦
⇨ Gas turbines (including CCGT), using natural gas(1) as fuel ⇦	⌦ 50(2)(3) ⌫	⇨ 100 ⇦
⇨ Gas turbines (including CCGT), using other than natural gas as fuel(4) ⇦	⇨ 90 ⇦	⇨ 100 ⇦
⇨ Gas engines ⇦	⇨ 100 ⇦	⇨ 100 ⇦

Notes ~~1~~:

(1) Natural gas is naturally occurring methane with not more than 20 % (by volume) of inerts and other constituents.

~~**Note 2:**~~

(2) 75 mg/Nm^3 in the following cases, where the efficiency of the gas turbine is determined at ISO base load conditions:

(i) gas turbines, used in combined heat and power systems having an overall efficiency greater than 75 %;

(ii) gas turbines used in combined cycle plants having an annual average overall electrical efficiency greater than 55 %;

(iii) gas turbines for mechanical drives.

(3) For single cycle gas turbines not falling into any of the ~~above~~ categories ⌦ mentioned under note (2) ⌫ , but having an efficiency greater than 35 % - determined at ISO base load conditions - the emission limit value ⌦ for NO_x ⌫ shall be 50x~~*~~η/35 where η is the gas turbine efficiency ⌦ at ISO base load conditions ⌫ expressed as a percentage ~~(and at ISO base load conditions)~~.

~~**Note 3:**~~

(4) ⌦ These ⌫ ~~This~~ emission limit ~~value only applies~~ ⌦ values also apply ⌫ to gas turbines ⌦ using ⌫ ~~firing~~ light and middle distillates ⌦ as liquid fuels ⌫ .

⌦ For gas turbines ⌫ ⇨ (including CCGT) ⇦ , ⌦ the NO_x and CO emission limit values set out in the table contained in this point apply only above 70 % load. ⌫

Gas turbines for emergency use that operate less than 500 hours per year are ⌦ not covered by ⌫ ~~excluded from~~ the~~se~~ ⌦ emission ⌫ limit values ⌦ set out in this point ⌫ . The operator of such plants ⌦ shall ⌫ ~~is required to submit each year to the competent authority a~~ record ⌦ the used operating ⌫ ~~of such used~~ time.

⇩ new

6. Emission limit values (mg/Nm^3) for dust for boilers using solid or liquid fuels

Rated thermal input (MWth)	Coal and lignite	Biomass and peat	Liquid fuels

50-100	30	30	30
100-300	25	20	25
> 300	20	20	20

↓ 2001/80/EC (adapted)

~~ANNEX VII~~

~~EMISSION LIMIT VALUES FOR DUST~~

~~A. Dust emission limit values expressed in mg/Nm^3 (O_2 content 6 % for solid fuels, 3 % for liquid and gaseous fuels) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:~~

~~Type of fuel~~	~~Rated thermal input (MW)~~	~~Emission limit values (mg/Nm^3)~~
~~Solid~~	~~≥ 500~~ ~~< 500~~	~~50~~[74] ~~100~~
~~Liquid~~[75]	~~all plants~~	~~50~~
~~Gaseous~~	~~all plants~~	~~5 as a rule~~ ~~10 for blast furnace gas~~ ~~50 for gases produced by the steel industry which can be used elsewhere~~

~~B. Dust emission limit values expressed in mg/Nm^3 to be applied by new plants, pursuant to Article 4(2) with the exception of gas turbines:~~

~~**Solid fuels (O_2 content 6 %)**~~

~~50 to 100 MWth~~	~~≥ 100 MWth~~
~~50~~	~~30~~

[74] ~~A limit value of 100 mg/Nm^3 may be applied to plants licensed pursuant to Article 4(3) with a rated thermal input greater than or equal to 500 MWth burning solid fuel with a heat content of less than 5800 kJ/kg (net calorific value), a moisture content greater than 45 % by weight, a combined moisture and ash content greater than 60 % by weight and a calcium oxide content greater than 10 %.~~

[75] ~~A limit value of 100 mg/Nm^3 may be applied to plants with a rated thermal input of less than 500 MWth burning liquid fuel with an ash content of more than 0,06 %.~~

~~**Liquid fuels (O_2 content 3 %)**~~

~~50 to 100 MWth~~	~~≥ 100 MWth~~
~~50~~	~~30~~

~~In the case of two installations with a rated thermal input of 250 MWth on Crete and Rhodos to be licensed before 31 December 2007 the emission limit value of 50 mg/Nm^3 shall apply.~~

⌦ 7. Emission limit values (mg/Nm^3) for dust for boilers using ⌫ gaseous fuels ~~(O_2 content 3 %)~~

~~As a rule~~ ⌦ In general ⌫	5
~~For~~ Bblast furnace gas	10
~~For~~ Ggases produced by the steel industry which can be used elsewhere	30

⌦ **Part 2** ⌫

⌦ Emission limit values for combustion plants referred to in Article 33(3) ⌫

🡻 2001/80/EC Art. 2 (adapted)

⌦ 1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardized O_2 content of 6% for solid fuels, 3% for boilers using liquid and gaseous fuels and 15% for gas turbines and gas engines ⌫.

⇩ new

In case of combined cycle gas turbines with supplementary firing, the standardized O_2 content may be defined by the competent authority, taking into account the specific characteristics of the installation concerned.

🡻 2001/80/EC Annex III&IV (adapted)
⇨ new

⌦ 2. Emission limit values (mg/Nm^3) for SO_2 for boilers using solid or liquid fuels ⌫

Rated thermal input (MWth)	Coal and lignite	Biomass	Peat	Liquid fuels
⇨ 50-100 ⇦	⇨ 400⇦	200	⇨ 300 ⇦	⇨ 350 ⇦
⇨ 100-300 ⇦	⇨ 200 ⇦	200	⇨ 300 250 in case of fluidized bed combustion ⇦	⇨ 200 ⇦
⇨ > 300 ⇦	⇨ 150 200 in case of circulating or pressurized fluidized bed combustion ⇦	⇨ 150 ⇦	⇨ 150 200 in case of fluidized bed combustion ⇦	⇨ 150 ⇦

🡻 2001/80/EC Annex V (adapted)

⌦ 3. Emission limit values (mg/Nm^3) for SO_2 for boilers using gaseous fuels ⌫ ~~B. SO_2 emission limit values expressed in mg/Nm^3 (O_2 content 3 %) to be applied by new plants pursuant to Article 4(2):~~

~~Gaseous fuels~~ ⌦ In general ⌫	35
Liquefied gas	5
Low calorific gases from coke oven	400

	Low calorific gases from blast furnace	200

↓ 2001/80/EC Annex VI (B) (adapted)
⇨ new

⇨ 4. Emission limit values (mg/Nm^3) for NO_x for boilers using solid or liquid fuels ⇦

⇨ Rated thermal input (MWth) ⇦	⇨ Coal and lignite ⇦	⇨ Biomass and peat ⇦	⇨ Liquid fuels ⇦
⇨ 50-100 ⇦	⇨ 300 ⇦ ⌦ 400 in case of pulverised lignite combustion ⌫	⇨ 250 ⇦	⇨ 300 ⇦
⇨ 100-300 ⇦	⇨ 200 ⇦	⇨ 200 ⇦	⇨ 150 ⇦
⇨ > 300 ⇦	⇨ 150 200 in case of pulverised lignite combustion ⇦	⇨ 150 ⇦	⇨ 100 ⇦

⇨ 5. Emission limit values (mg/Nm^3) for NO_x and CO for gas fired combustion plants ⇦

	⇨ NO_x ⇦	⇨ CO ⇦
⇨ Gas fired boilers ⇦	⇨ 100 ⇦	⇨ 100 ⇦
⇨ Gas turbines (including CCGT)(1) ⇦	⇨ 50(2) ⇦	⇨ 100 ⇦
⇨ Gas engines ⇦	⇨ 75 ⇦	⇨ 100 ⇦

↓ 2001/80/EC Annex VI (adapted)
⇨ new

Notes

⌦ (1) For gas turbines using light and middle distillates as liquid fuels, the emission limit values for NO_x and for CO set out in this point also apply. ⌫

⌦ (2) For single cycle gas turbines having an efficiency greater than 35% - determined at ISO base load conditions - the emission limit value for NO_x shall be $50 \times \eta/35$ where η is the gas turbine efficiency at ISO base load conditions expressed as a percentage. ⌫

⌦ For gas turbines ⌫ ⇨ (including CCGT) ⇦, ⌦ the NO_x and CO emission limit values set out in this point apply only above 70 % load. ⌫

Gas turbines for emergency use that operate less than 500 hours per year are excluded from ~~the~~se ⌦ emission ⌫ limit values ⌦ set out in this point ⌫ . The operator of such plants ⌦ shall ⌫ ~~is required to submit each year to the competent authority a~~ record ⌦ the used operating ⌫ ~~of such used~~ time.

↓ 2001/80/EC Annex VII (adapted)

⌦ 6. Emission limit values (mg/Nm^3) for dust for boilers using solid or liquid fuels ⌫

⇩ new

Rated thermal input (MWth)	
50- 300	20
> 300	10 20 for biomass and peat

↓ 2001/80/EC Annex VII (adapted)

⌦ 7. Emission limit values (mg/Nm^3) for dust for boilers using gaseous fuels ⌫

~~As a rule~~ ⌦In general ⌫	5
~~For~~ Bblast furnace gas	10
~~For~~ Ggases produced by the steel industry which can be used elsewhere	30

↓ 2001/80/EC (adapted)

~~ANNEX VIII~~

Part 3

⌦ Emission monitoring ⌫ ~~METHODS OF MEASUREMENT OF EMISSIONS~~

~~A. PROCEDURES FOR MEASURING AND EVALUATING EMISSIONS FROM COMBUSTION PLANTS.~~

~~1. Until 27 November 2004~~

~~Concentrations of SO_2, dust, NO_x shall be measured continuously in the case of new plants for which a licence is granted pursuant to Article 4(1) with a rated thermal input of more than 300 MW. However, monitoring of SO_2 and dust may be confined to discontinuous measurements or other appropriate determination procedures in cases where such measurements or procedures, which must be verified and approved by the competent authorities, may be used to obtain concentration.~~

~~In the case of new plants for which a licence is granted pursuant to Article 4(1) not covered by the first subparagraph, the competent authorities may require continuous measurements of those three pollutants to be carried out where considered necessary. Where continuous measurements are not required, discontinuous measurements or appropriate determination procedures as approved by the competent authorities shall be used regularly to evaluate the quantity of the above-mentioned substances present in the emissions.~~

~~2. From 27 November 2002 and without prejudice to Article 18(2)~~

1. ~~Competent authorities shall require continuous measurements of~~ ⌦ The ⌫ concentrations of SO_2, NO_x and dust ~~from~~ ⌦ in ⌫ waste gases from each combustion plant with a rated thermal input of 100 MW or more ⌦ shall be measured continuously ⌫ .

⇩ new

The concentration of CO in waste gases from combustion plants firing gaseous fuels with a rated thermal input of 100 MW or more shall be measured continuously.

↓ 2001/80/EC (adapted)
⇨ new

2. ~~By way of derogation from the first subparagraph,~~ ⌦ The competent authority ⌫ ~~continuous measurements~~ may ⌦ decide not to require the continuous measurements referred to in point 1 ⌫ ~~not be required~~ in the following cases:

(a) for combustion plants with a life span of less than 10 000 operational hours;

(b) for SO_2 and dust from ~~natural gas burning boilers or from gas turbines~~ ⌦ combustion plants ⌫ firing natural gas;

(c) for SO_2 from ~~gas turbines or boilers~~ ⌦ combustion plants ⌫ firing oil with known sulphur content in cases where there is no ⌦ waste gas ⌫ desulphurisation equipment;

(d) for SO_2 from ~~biomass~~ ⌦ combustion plants ⌫ firing ⌦ biomass ⌫ ~~boilers~~ if the operator can prove that the SO_2 emissions can under no circumstances be higher than the prescribed emission limit values.

3. Where continuous measurements are not required, ~~discontinuous~~ measurements ⇨ of SO_2, NO_x, dust and, for gas fired plants, also for CO ⇦ shall be required at least ~~every~~ ⌦ once ⌫ per six months.

⇩ new

4. For combustion plants firing coal or lignite, the emissions of total mercury shall be measured at least once per year.

🡻 2001/80/EC (adapted)
⇨ new

5. As an alternative ⌦ to the measurements of SO_2 and NO_x referred to in point 3 ⌫ , ~~appropriate determination~~ ⌦ other ⌫procedures, ~~which must be~~ verified and approved by the competent ⌦ authority ⌫ ~~authorities~~, may be used to ~~evaluate~~ ⌦ determine ⌫ the ~~quantity of the~~ ⌦ SO_2 and NO_x ⌫ ~~above-mentioned pollutants present in the~~ emissions. Such procedures shall use relevant CEN standards or, ~~as soon as they are available.~~ if~~I~~f CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality ~~shall apply~~.

~~3. In the case of plants which must comply with the desulphurisation rates fixed by Article 5(2) and and Annex III, the requirements concerning SO_2 emission measurements established under paragraph 2 of this point shall apply. Moreover, the sulphur content of the fuel which is introduced into the combustion plant facilities must be regularly monitored.~~

6~~4~~. The competent ⌦ authority ⌫ ~~authorities~~ shall be informed of ~~substantial~~ ⌦ significant ⌫ changes in the type of fuel used or in the mode of operation of the plant. ~~They~~ ⌦ The competent authority ⌫ shall decide whether the monitoring requirements laid down in points 1 to 4 ~~paragraph 2~~ are still adequate or require adaptation.

7~~5~~. The continuous measurements carried out in ⌦ accordance ⌫ ~~compliance~~ with point 1 ~~paragraph 2~~ shall include the ⌦ measurement ⌫ ~~relevant process operation parameters~~ of ⌦the ⌫ oxygen content, temperature, pressure and water vapour content ⌦ of the waste gases ⌫ . The continuous measurement of the water vapour content of the ~~exhaust~~ ⌦ waste ⌫ gases shall not be necessary, provided that the sampled ~~exhaust~~ ⌦ waste ⌫ gas is dried before the emissions are analysed.

8. ~~Representative measurements, i.e.~~ S~~s~~ampling and analysis~~,~~ of relevant ~~pollutants~~ ⌦ polluting substances ⌫ and ⌦ measurements of ⌫ process parameters as well as ⌦ the quality assurance of automated measuring systems and the ⌫ reference measurement methods to calibrate ⌦ those ⌫ ~~automated measurement~~ systems shall be carried out in accordance with CEN standards ~~as soon as they are available~~. If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.

~~Continuous~~ ⌦ The automated ⌫ measuring systems shall be subject to control by means of parallel measurements with the reference methods at least ~~every~~ ⌦ once per ⌫ year.

↓ 2001/80/EC Art. 13 (adapted)

~~*Article 13*~~

~~Member States shall take appropriate measures to ensure that~~ The~~the~~ operator ⌦ shall inform ⌫ ~~informs~~ the competent ⌦ authority ⌫ ~~authorities within reasonable time limits~~ about the results of the ~~continuous measurements, the~~ checking of the ⌦ automated ⌫ measuring ⌦ systems ⌫ ~~equipment, the individual measurements and all other measurements carried out in order to assess compliance with this Directive~~.

↓ 2001/80/EC (adapted)
⇨ new

9~~6~~. ⌦ At the emission limit value level, ⌫ the values of the 95 % confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values:

⇨ Carbon monoxide ⇦	⇨ 10% ⇦
Sulphur dioxide	20%
Nitrogen oxides	20%
Dust	30%

10. The validated hourly and daily average values shall be determined from the measured valid hourly average values after having subtracted the value of the confidence interval specified in point 9 ~~above~~.

~~11~~. Any day in which more than three hourly average values are invalid due to malfunction or maintenance of the ~~continuous~~ ⌦ automated measuring ⌫ ~~measurement~~ system shall be invalidated. If more than ten days over a year are invalidated for such situations the competent authority shall require the operator to take adequate measures to improve the reliability of the ~~continuous monitoring~~ ⌦ automated measuring ⌫ system.

~~**B. DETERMINATION OF TOTAL ANNUAL EMISSIONS OF COMBUSTION PLANTS**~~

~~Until and including 2003 the competent authorities shall obtain determination of the total annual emissions of SO_2 and NO_x from new combustion plants. When continuous monitoring is used, the operator of the combustion plant shall add up separately for each pollutant the mass of pollutant emitted each day, on the basis of the volumetric flow rates of waste gases. Where continuous monitoring is not in use, estimates of the total annual emissions shall be determined by the operator on the basis of paragraph A.1 to the satisfaction of the competent authorities.~~

~~Member States shall communicate to the Commission the total annual SO_2 and NO_x emissions of new combustion plants at the same time as the communication required under paragraph C.3 concerning the total annual emissions of existing plants.~~

~~Member States shall establish, starting in 2004 and for each subsequent year, an inventory of SO_2, NO_x and dust emissions from all combustion plants with a rated thermal input of 50 MW~~

~~or more. The competent authority shall obtain for each plant operated under the control of one operator at a given location the following data:~~

~~the total annual emissions of SO_2, NO_x and dust (as total suspended particles).~~

~~the total annual amount of energy input, related to the net calorific value, broken down in terms of the five categories of fuel: biomass, other solid fuels, liquid fuels, natural gas, other gases.~~

~~A summary of the results of this inventory that shows the emissions from refineries separately shall be communicated to the Commission every three years within twelve months from the end of the three-year period considered . The yearly plant-by-plant data shall be made available to the Commission upon request. The Commission shall make available to the Member States a summary of the comparison and evaluation of the national inventories within twelve months of receipt of the national inventories.~~

~~Commencing on 1 January 2008 Member States shall report annually to the Commission on those existing plants declared for eligibility under Article 4(4) along with the record of the used and unused time allowed for the plants' remaining operational life.~~

~~**C. DETERMINATION OF THE TOTAL ANNUAL EMISSIONS OF EXISTING PLANTS UNTIL AND INCLUDING 2003.**~~

~~1. Member States shall establish, starting in 1990 and for each subsequent year until and including 2003, a complete emission inventory for existing plants covering SO_2 and NO_x:~~

~~on a plant by plant basis for plants above 300 MWth and for refineries;~~

~~on an overall basis for other combustion plants to which this Directive applies.~~

~~2. The methodology used for these inventories shall be consistent with that used to determine SO_2 and NO_x emissions from combustion plants in 1980.~~

~~3. The results of this inventory shall be communicated to the Commission in a conveniently aggregated form within nine months from the end of the year considered. The methodology used for establishing such emission inventories and the detailed base information shall be made available to the Commission at its request.~~

~~4. The Commission shall organise a systematic comparison of such national inventories and, if appropriate, shall submit proposals to the Council aiming at harmonising emission inventory methodologies, for the needs of an effective implementation of this Directive.~~

↓ 2001/80/EC Art. 14 (adapted)
→1 Corrigendum, OJ L 319, 23.11.2002, p. 30
⇨ new

Part 4

⌦ Assessment of compliance with the emission limit values ⌫

~~Article 14~~

~~1. In the event of continuous measurements, the emission limit values set out in part A of Annexes III to VII shall be regarded as having been complied with if the evaluation of the results indicates, for operating hours within a calendar year, that:~~

~~(a) none of the calendar monthly mean values exceeds the emission limit values; and~~

~~(b) in the case of:~~

~~(i) sulphur dioxide and dust: 97 % of all the 48 hourly mean values do not exceed 110 % of the emission limit values,~~

~~(ii) nitrogen oxides: 95 % of all the 48 hourly mean values do not exceed 110 % of the emission limit values.~~

~~The periods referred to in Article 7 as well as start-up and shut-down periods shall be disregarded.~~

~~2. In cases where only discontinuous measurements or other appropriate procedures are required, the emission limit values set out in Annexes III to VII shall be regarded as having been complied with if the results of each of the series of measurements or of the other procedures defined and determined according to the rules laid down by the competent authorities do not exceed the emission limit values.~~

→1 3. ~~In the cases referred to in Article 5(2), the rates~~ ← ~~of desulphurisation shall be regarded as having been complied with if the evaluation of measurements carried out pursuant to Annex VIII, point A.3, indicates that all of the calendar monthly mean values or all of the rolling monthly mean values achieve the required desulphurisation rates.~~

~~The periods referred to in Article 7 as well as start-up and shut-down periods shall be disregarded.~~

~~4. For new plants for which the licence is granted pursuant to Article 4(2), the emission limit values shall be regarded, for operating hours within a calendar year, as complied with if:~~

~~(a) no validated daily average value exceeds the relevant figures set out in part B of Annexes III to VII, and~~

~~(b) 95 % of all the validated hourly average values over the year do not exceed 200 % of the relevant figures set out in part B of Annexes III to VII.~~

~~The 'validated average values' are determined as set out in point A.6 of Annex VIII.~~

~~The periods referred to in Article 7 as well as start up and shut down periods shall be disregarded.~~

⇩ new

1. In the case of continuous measurements, the emission limit values set out in Parts 1 and 2 shall be regarded as having been complied with if the evaluation of the measurement results indicates, for operating hours within a calendar year, that all of the following conditions have been met :

(a) no validated monthly average value exceeds the relevant emission limit values set out in Parts 1 and 2;

(b) no validated daily average value exceeds 110 % of the relevant emission limit values set out in Parts 1 and 2;

(c) in cases of combustion plants composed only of boilers using coal with a rated thermal input below 50 MW, no validated daily average value exceeds 150 % of the relevant emission limit values set out in Parts 1 and 2,

(d) 95 % of all the validated hourly average values over the year do not exceed 200 % of the relevant emission limit values set out in Parts 1 and 2.

The validated average values are determined as set out in point 10 of Part 3.

For the purpose of the calculation of the average emission values, the values measured during the periods referred to in Article 33(4) and (5) and Article 34 as well as during the start-up and shut-down periods shall be disregarded.

2. Where continuous measurements are not required, the emission limit values set out in Parts 1 and 2 shall be regarded as having been complied with if the results of each of the series of measurements or of the other procedures defined and determined according to the rules laid down by the competent authorities do not exceed the emission limit values.

↓ 2000/76/EC Art. 3 (adapted)
→1 Corrigendum, OJ L 145, 31.5.2001, p. 52

ANNEX VI

⊠ Technical provisions relating to waste incineration plants and waste co-incineration plants ⊠

Part 1

Definitions

For the purpose of this ⊠ Annex the following definitions shall apply: ⊠ ~~Directive:~~

~~6.~~ →1

(a) '~~«~~existing ⊠ waste ⊠ incineration ⊠ plant' ⊠ ~~or co-incineration plant~~» means ← ⊠ one of the following waste ⊠ ~~an~~ incineration ~~or co-incineration~~ plants:

(i~~a~~) which ⊠ was ⊠ ~~is~~ in operation and ~~has~~ ⊠ had ⊠ a permit in accordance with ⊠ applicable ⊠ ~~existing~~ Community legislation before 28 December 2002, ~~or;~~

(ii~~b~~) which ⊠ was ⊠ ~~is~~ authorised or registered for ⊠ waste ⊠ incineration ~~or co-incineration~~ and ⊠ had ⊠ ~~has~~ a permit issued before 28 December 2002 in accordance with ⊠ applicable ⊠ ~~existing~~ Community legislation, provided that the plant ⊠ was ⊠ ~~is~~ put into operation not later than 28 December 2003, ~~or~~

(iii~~c~~) which, in the view of the competent authority, ⊠ was ⊠ ~~is~~ the subject of a full request for ⊠ authorisation ⊠ ~~a permit~~, before 28 December 2002, provided that the plant ⊠ was ⊠ ~~is~~ put into operation not later than 28 December 2004;

⇩ new

(b) 'new waste incineration plant' means any waste incineration plant not covered by point (a).

↓ 2000/76/EC (adapted)

~~ANNEX I~~ Part 2

Equivalence factors for dibenzo-p-dioxins and dibenzofurans

For the determination of the total concentration ~~(TE)~~ of dioxins and furans, the mass concentrations of the following dibenzo-p-dioxins and dibenzofurans shall be multiplied by the following equivalence factors before summing:

	Toxic equivalence factor
2,3,7,8 — Tetrachlorodibenzodioxin (TCDD)	1
1,2,3,7,8 — Pentachlorodibenzodioxin (PeCDD)	0,5
1,2,3,4,7,8 — Hexachlorodibenzodioxin (HxCDD)	0,1
1,2,3,6,7,8 — Hexachlorodibenzodioxin (HxCDD)	0,1
1,2,3,7,8,9 — Hexachlorodibenzodioxin (HxCDD)	0,1
1,2,3,4,6,7,8 — Heptachlorodibenzodioxin (HpCDD)	0,01
Octachlorodibenzodioxin (OCDD)	0,001
2,3,7,8 — Tetrachlorodibenzofuran (TCDF)	0,1
2,3,4,7,8 — Pentachlorodibenzofuran (PeCDF)	0,5
1,2,3,7,8 — Pentachlorodibenzofuran (PeCDF)	0,05
1,2,3,4,7,8 — Hexachlorodibenzofuran (HxCDF)	0,1
1,2,3,6,7,8 — Hexachlorodibenzofuran (HxCDF)	0,1
1,2,3,7,8,9 — Hexachlorodibenzofuran (HxCDF)	0,1
2,3,4,6,7,8 — Hexachlorodibenzofuran (HxCDF)	0,1
1,2,3,4,6,7,8 — Heptachlorodibenzofuran (HpCDF)	0,01
1,2,3,4,7,8,9 — Heptachlorodibenzofuran (HpCDF)	0,01
Octachlorodibenzofuran (OCDF)	0,001

Part 3 ~~ANNEX V~~

⌦ Air emission limit values for waste incineration plants ⌫

↓ 2000/76/EC Art. 11 (adapted)

1~~8~~. ~~The results of the measurements made to verify compliance with the emission limit values shall be standardised at the following conditions and for oxygen according to the formula as referred to in Annex VI:~~⌦ All emission limit values shall be calculated at a ⌫

~~(a)~~ t~~T~~emperature ⌦ of 273,15 K ⌫ ~~273 K~~, ⌦ a ⌫ pressure ⌦ of ⌫ 101,3 kPa ⌦ and after correcting for the water vapour content of the waste gases. ⌫ ~~11 % oxygen, dry gas, in exhaust gas of incineration plants;~~.

~~(b) Temperature 273 K, pressure 101,3 kPa, 3 % oxygen, dry gas, in exhaust gas of incineration of waste oil as defined in Directive 75/439/EEC;~~

⌦ They are standardised at 11 % oxygen in waste gas except in case of incineration of mineral waste oil as defined in Article 3(h) of Directive 20../../EC, when they are standardised at 3 % oxygen, and in the cases referred to in Point 2.7 of Part 5. ⌫

↓ 2000/76/EC (adapted)

1.1~~(a)~~ Daily average ⌦ emission limit ⌫ values ⌦ for the following polluting substances (mg/Nm³) ⌫

Total dust	10 ~~mg/m³~~
Gaseous and vaporous organic substances, expressed as total organic carbon ⌦ (TOC) ⌫	10 ~~mg/m³~~
Hydrogen chloride (HCl)	10 ~~mg/m³~~
Hydrogen fluoride (HF)	1 ~~mg/m³~~
Sulphur dioxide (SO_2)	50 ~~mg/m³~~
Nitrogen monoxide (NO) and nitrogen dioxide (NO_2), expressed as ⌦ NO_2 ⌫ ~~nitrogen dioxide~~ for existing ⌦ waste ⌫ incineration plants with a nominal capacity exceeding 6 tonnes per hour or new ⌦ waste ⌫ incineration plants	200 ~~mg/m³~~ ~~[76]~~
Nitrogen monoxide (NO) and nitrogen dioxide (NO_2), expressed as ⌦ NO_2 ⌫ ~~nitrogen dioxide~~ for existing ⌦ waste ⌫ incineration plants with a nominal capacity of 6 tonnes per hour or less	400 ~~mg/m³~~ ~~[77]~~

[76] ~~Until 1 January 2007 and without prejudice to relevant (Community) legislation the emission limit value for NO_x does not apply to plants only incinerating hazardous waste.~~

[77] ~~Until 1 January 2007 and without prejudice to relevant (Community) legislation the emission limit value for NO_x does not apply to plants only incinerating hazardous waste.~~

~~Exemptions for NO_x may be authorised by the competent authority for existing incineration plants:~~

– ~~with a nominal capacity of 6 tonnes per hour, provided that the permit foresees the daily average values do not exceed 500 mg/m³ and this until 1 January 2008,~~

– ~~with a nominal capacity of >6 tonnes per hour but equal or less than 16 tonnes per hour, provided the permit foresees the daily average values do not exceed 400 mg/m³ and this until 1 January 2010,~~

– ~~with a nominal capacity of >16 tonnes per hour but <25 tonnes per hour and which do not produce water discharges, provided that the permit foresees the daily average values do not exceed 400 mg/m³ and this until 1 January 2008.~~

~~Until 1 January 2008, exemptions for dust may be authorised by the competent authority for existing incinerating plants, provided that the permit foresees the daily average values do not exceed 20 mg/m³.~~

1.2~~(b)~~ Half-hourly average ⌦ emission limit ⌫ values ⌦ for the following polluting substances (mg/Nm³) ⌫

	(100 %) A	(97 %) B
Total dust	30 ~~mg/m³~~	10 ~~mg/m³~~
Gaseous and vaporous organic substances, expressed as total organic carbon ⌦ (TOC) ⌫	20 ~~mg/m³~~	10 ~~mg/m³~~
Hydrogen chloride (HCl)	60 ~~mg/m³~~	10 ~~mg/m³~~
Hydrogen fluoride (HF)	4 ~~mg/m³~~	2 ~~mg/m³~~
Sulphur dioxide (SO_2)	200 ~~mg/m³~~	50 ~~mg/m³~~
Nitrogen monoxide (NO) and nitrogen dioxide (NO_2), expressed as ⌦ NO_2 ⌫ ~~nitrogen dioxide~~ for existing ⌦ waste ⌫ incineration plants with a nominal capacity exceeding 6 tonnes per hour or new ⌦ waste ⌫ incineration plants	400 ~~mg/m³~~[78]	200 ~~mg/m³~~[79]

~~Until 1 January 2010, exemptions for NO_x may be authorised by the competent authority for existing incineration plants with a nominal capacity between 6 and 16 tonnes per hour, provided the half-hourly average value does not exceed 600 mg/m³ for column A or 400 mg/m³ for column B.~~

1.3~~(c)~~ ~~All~~ A~~a~~verage ⌦ emission limit ⌫ values ⌦ (mg/Nm³) for the following heavy metals ⌫ over ~~the sample~~ ⌦ a sampling ⌫ period of a minimum of 30 minutes and a maximum of 8 hours

[78] ~~Until 1 January 2007 and without prejudice to relevant Community legislation the emission limit value for NO_x does not apply to plants only incinerating hazardous waste.~~

[79] ~~Until 1 January 2007 and without prejudice to relevant Community legislation the emission limit value for NO_x does not apply to plants only incinerating hazardous waste.~~

Cadmium and its compounds, expressed as cadmium (Cd)	Total: 0,05 ~~mg/m³~~	~~total~~ ~~0,1 mg/m³~~ [80]
Thallium and its compounds, expressed as thallium (Tl)		
Mercury and its compounds, expressed as mercury (Hg)	0,05 ~~mg/m³~~	~~0,1 mg/m³~~ [81]
Antimony and its compounds, expressed as antimony (Sb)	Total: 0,5 ~~mg/m³~~	~~total 1 mg/m³~~ [82]
Arsenic and its compounds, expressed as arsenic (As)		
Lead and its compounds, expressed as lead (Pb)		
Chromium and its compounds, expressed as chromium (Cr)		
Cobalt and its compounds, expressed as cobalt (Co)		
Copper and its compounds, expressed as copper (Cu)		
Manganese and its compounds, expressed as manganese (Mn)		
Nickel and its compounds, expressed as nickel (Ni)		
Vanadium and its compounds, expressed as vanadium (V)		

These average values cover also ⌦ the ⌫ gaseous and the vapour forms of the relevant heavy metal emissions as well as their compounds.

1.4~~(d)~~ Average ⌦ emission limit ⌫ value ⌦ (ng/Nm³) for dioxins and furans ⌫ ~~shall be measured~~ over a ⌦ sampling ⌫ ~~sample~~ period of a minimum of 6 hours and a maximum of 8 hours. The emission limit value refers to the total concentration of dioxins and furans calculated ~~using the concept of toxic equivalence~~ in accordance with Part 2 ~~Annex I~~.

Dioxins and furans	0,1 ~~ng/m³~~

1.5~~(e) The following~~ Eemission limit values ⌦ (mg/Nm³) for ⌫ ~~of~~ carbon monoxide (CO) ~~concentrations shall not be exceeded~~ in the ⌦ waste ⌫ ~~combustion~~ gases ~~(excluding the start-up and shut-down phase)~~:

(a) 50 ~~milligrams/m³ of combustion gas determined~~ as daily average value;

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80 ~~Until 1 January 2007 average values for existing plants for which the permit to operate has been granted before 31 December 1996, and which incinerate hazardous waste only.~~

81 ~~Until 1 January 2007 average values for existing plants for which the permit to operate has been granted before 31 December 1996, and which incinerate hazardous waste only.~~

82 ~~Until 1 January 2007 average values for existing plants for which the permit to operate has been granted before 31 December 1996, and which incinerate hazardous waste only.~~

(b) 100 ~~mg/m³ of combustion gas of all measurements determined~~ as half-hourly average value~~s taken in any 24-hour period~~.

(c) 150 ~~milligrams/m³ of combustion gas of at least 95 % of all measurements determined~~ as 10-minute average value~~s or 100 mg/m³ of combustion gas of all measurements determined as half-hourly average values taken in any 24-hour period~~.

⌦ The competent authority may authorise ⌫ e~~E~~Exemptions ⌦ from the emission limit values set out in this point ⌫ ~~may be authorised by the competent authority~~ for ⌦ waste ⌫ incineration plants using fluidised bed technology, provided that the permit ⌦ sets ⌫ ~~foresees~~ an emission limit value for carbon monoxide (CO) of not more than 100 ~~mg/m³~~ ⌦ mg/Nm^3 ⌫ as an hourly average value.

↓ 2000/76/EC Art. 13 (adapted)

⌦ 2. Emission limit values applicable in the circumstances described in Articles 41 (5) and 42. ⌫

~~4.~~ The total dust ⌦ concentration in ⌫ ~~content of~~ the emissions into the air of ~~an~~ ⌦ a waste ⌫ incineration plant shall under no circumstances exceed 150 ~~mg/m³~~ ⌦ mg/Nm^3 ⌫ expressed as a half-hourly average.~~;~~ ~~moreover~~ The~~the~~ air emission limit values for ⌦ TOC and ⌫ CO ~~and TOC~~ ⌦ set out in points 1.2 and 1.5(b) ⌫ shall not be exceeded. ~~All other conditions referred to in Article 6 shall be complied with~~.

↓ 2000/76/EC (adapted)
⇨ new

~~(3)~~ 3. Member States may lay down rules governing the exemptions provided for in this Annex.

~~ANNEX II~~ Part 4

Determination of air emission limit values for the co-incineration of waste

1. The following formula (mixing rule) ⌦ shall ⌫ ~~is to~~ be applied whenever a specific total emission limit value «C» has not been set out in a table in this Part ~~Annex~~.

The ⌦ emission ⌫ limit value for each relevant ~~pollutant~~ ⌦ polluting substance ⌫ and ⌦ CO ⌫ ~~carbon monoxide~~ in the ⌦ waste ⌫ ~~exhaust~~ gas resulting from the co-incineration of waste shall be calculated as follows:

⌦ $$\frac{V_{waste} \times C_{waste} + V_{proc} \times C_{proc}}{V_{waste} + V_{proc}} = C$$ ⌫

V_{waste}	:	~~exhaust~~ ⌦ waste ⌫ gas volume resulting from the incineration of waste only determined from the waste with the lowest calorific value specified in the permit and standardised at the conditions given by this Directive. If the resulting heat release from the incineration of hazardous waste amounts to less than 10 % of the total heat released in the plant, V_{waste} must be calculated from a (notional) quantity of waste that, being incinerated, would equal 10 % heat release, the total heat release being fixed.
C_{waste}	:	emission limit values ~~set~~ for ⌦ waste ⌫ incineration plants ⌦ set out ⌫ in Part 3 ~~Annex V for the relevant pollutants and carbon monoxide.~~
V_{proc}	:	~~exhaust~~ ⌦ waste ⌫ gas volume resulting from the plant process including the combustion of the authorised fuels normally used in the plant (wastes excluded) determined on the basis of oxygen contents at which the emissions must be standardised as ⌦ set out ⌫ ~~laid down~~ in Community or national ⌦ legislation ⌫ ~~regulations~~. In the absence of ⌦ legislation ⌫ ~~regulations~~ for this kind of plant, the real oxygen content in the ⌦ waste ⌫ ~~exhaust~~ gas without being thinned by addition of air unnecessary for the process must be used. ~~The standardisation at the other conditions is given in this Directive.~~
C_{proc}	:	emission limit values as ⌦ set out in ⌫ ~~laid down in the tables of~~ this ⌦ Part ⌫ ~~annex~~ for certain industrial ⌦ activities ⌫ ~~sectors~~ or in case of the absence of such ~~a table or such~~ values, emission limit values ~~of the relevant pollutants and carbon monoxide in the flue gas~~ of plants which comply with the national laws, regulations and administrative provisions for such plants while burning the normally authorised fuels (wastes excluded). In the absence of these measures the emission limit values ⌦ set out ⌫ ~~laid down~~ in the permit are used. In the absence of such permit values the real mass concentrations are used.
C	:	total emission limit values ⌦ at an ⌫ ~~and~~ oxygen content as ⌦ set out ⌫ ~~laid down~~ in ~~the tables of~~ this ⌦ Part ⌫ ~~annex~~ for certain industrial ⌦ activities ⌫ ~~sectors~~ and certain ⌦ polluting substances ⌫ ~~pollutants~~ or, in case of the absence of ~~such a table or~~ such values, total emission limit values ~~for CO and the relevant pollutants~~ replacing the emission limit values as ⌦ set out ⌫ ~~laid down~~ in specific Annexes of this Directive. The total

		oxygen content to replace the oxygen content for the standardisation is calculated on the basis of the content above respecting the partial volumes. ⌦ All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correcting for the water vapour content of the waste gases. ⌫

Member States may lay down rules governing the exemptions provided for in this Part ~~Annex~~.

2.~~II.1.~~ Special provisions for cement kilns co-incinerating waste

~~Daily average values (for continuous measurements) Sample periods and other measurement requirements as in Article 7. All values in mg/m³ (Dioxins and furans ng/m³).~~

2.1 ⌦ The emission limit values set out in points 2.2 and 2.3 apply as daily average values for total dust, HCl, HF, NO_x, SO_2 and TOC (for continuous measurements), as average values over the sampling period of a minimum of 30 minutes and a maximum of 8 hours for heavy metals and as average values over the sampling period of a minimum of 6 hours and a maximum of 8 hours for dioxins and furans. ⌫

~~The results of the measurements made to verify compliance with the emission limit~~ ⌦ All ⌫ values ⌦ are ⌫ ~~shall be~~ standardised at ~~the following conditions: Temperature 273 K, pressure 101,3 kPa,~~ 10 % oxygen~~, dry gas~~.

Half-hourly average values shall only be needed in view of calculating the daily average values.

2.2~~II.1.1~~ C - total emission limit values ⌦ (mg/Nm^3 except for dioxins and furans) for the following polluting substances ⌫

~~Pollutant~~ ⌦ Polluting substance ⌫	C
Total dust	30
HCl	10
HF	1
~~NO_x for existing plants~~	~~800~~
NO_x ~~for new plants~~	⇨ 500 ⇦ [83]
Cd + Tl	0,05
Hg	0,05
Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V	0,5
Dioxins and furans ⌦ (ng/Nm³) ⌫	0,1

83 ~~For the implementation of the NO_x emission limit values, cement kilns which are in operation and have a permit in accordance with existing Community legislation and which start co-incinerating waste after the date mentioned in Article 20(3) are not to be regarded as new plants.~~

~~Until 1 January 2008, exemptions for NO_x may be authorised by the competent authorities for existing wet process cement kilns or cement kilns which burn less than three tonnes of waste per hour, provided that the permit foresees a total emission limit value for NO_x of not more than 1200 mg/m³.~~

~~Until 1 January 2008, exemptions for dust may be authorised by the competent authority for cement kilns which burn less than three tonnes of waste per hour, provided that the permit foresees a total emission limit value of not more than 50 mg/m³.~~

2.3~~II.1.2.~~ C - total emission limit values ⌦ (mg/Nm³) ⌫ for SO_2 and TOC

Pollutant	C
SO_2	50
TOC	10

~~Exemptions may be authorised by~~ The~~the~~ competent authority ⌦ may grant derogations for emission limit values set out in this point ⌫ in cases where TOC and SO_2 do not result from the incineration of waste.

~~II.1.3. Emission limit value for CO~~

~~Emission limit values for CO can be set by the competent authority.~~

3.~~II.2.~~ Special provisions for combustion plants co-incinerating waste

3.1~~II.2.1~~. ⌦ C_{proc} expressed as ⌫ daily average values ⌦ (mg/Nm³) ⌫ ⇨ valid until 31 December 2015 ⇦

~~Without prejudice to Directive 88/609/EEC and in the case where, for large combustion plants, more stringent emission limit values are set according to future Community legislation, the latter shall replace, for the plants and pollutants concerned, the emission limit values as laid down in the following tables (C_{proc}). In that case, the following tables shall be adapted to these more stringent emission limit values in accordance with the procedure laid down in Article 17 without delay.~~ ⌦ For determining the rated thermal input of the combustion plants, the aggregation rules as defined in Article 32 shall apply. ⌫

Half-hourly average values shall only be needed in view of calculating the daily average values.

~~C_{proc}:~~

C_{proc} for solid fuels ⌦ with the exception of biomass ⌫ ~~expressed in mg/Nm³~~ (O_2 content 6 %):

~~Pollutant~~ ⌦ Polluting substances ⌫	< 50 MWth	50-100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	⌦ 850 ⌫	⌦ 200 ⌫	⌦ 200 ⌫
~~general case~~		~~850~~	~~850 to 200 (linear decrease from 100 to 300 MWth)~~	~~200~~

~~indigenous fuels~~		~~or rate of desulphurisation ≥90 %~~	~~or rate of desulphurisation ≥92 %~~	~~or rate of desulphurisation ≥95 %~~
NO_x	-	400	⌦ 200 ⌫ ~~300~~	200
Dust	50	50	30	30

~~Until 1 January 2007 and without prejudice to relevant Community legislation, the emission limit value for NO_x does not apply to plants only co-incinerating hazardous waste.~~

~~Until 1 January 2008, exemptions for NO_x and SO_2 may be authorised by the competent authorities for existing co-incineration plants between 100 and 300 MWth using fluidised bed technology and burning solid fuels provided that the permit foresees a C_{proc} value of not more than 350 mg/Nm^3 for NO_x and not more than 850 to 400 mg/Nm^3 (linear decrease from 100 to 300 MWth) for SO_2.~~

C_{proc} for biomass ~~expressed in mg/Nm^3~~ (O_2 content 6 %):

~~«Biomass» means: products consisting of any whole or part of a vegetable matter from agriculture or forestry, which can be used for the purpose of recovering its energy content as well as wastes listed in Article 2(2)(a)(i) to (v).~~

~~Pollutant~~ ⌦ Polluting substances ⌫	< 50 MWth	50 to 100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	200	200	200
NO_x	-	350	300	⌦ 200 ⌫ ~~300~~
Dust	50	50	30	30

~~Until 1 January 2008, exemptions for NO_x may be authorised by the competent authorities for existing co-incineration plants between 100 and 300 MWth using fluidised bed technology and burning biomass provided that the permit foresees a C_{proc} value of not more than 350 mg/Nm^3.~~

C_{proc} for liquid fuels ~~expressed in mg/Nm^3~~ (O_2 content 3 %):

~~Pollutant~~ ⌦ Polluting substances ⌫	< 50 MWth	50 to 100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	850	⌦ 400 ⌫ ~~850~~ to 200 (linear decrease from 100 to 300 MWth)	200

NO_x	-	400	⌦ 200 ⌫ ~~300~~	200
Dust	50	50	30	30

⇩ new

3.2 C_{proc} expressed as daily average values (mg/Nm³) valid from 1 January 2016 on

For determining the rated thermal input of the combustion plants, the aggregation rules as defined in Article 32 shall apply. Half-hourly average values shall only be needed in view of calculating the daily average values.

3.2.1 C_{proc} for combustion plants referred to in Article 33(2)

C_{proc} for solid fuels with the exception of biomass (O_2 content 6 %):

Polluting substance	< 50 MWth	50-100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	400 for peat: 300	200	200
NO_x	-	300 for pulverized lignite: 400	200	200
Dust	50	30	25 for peat: 20	20

C_{proc} for biomass (O_2 content 6 %):

Polluting substance	< 50 MWth	50 to 100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	200	200	200
NO_x	-	300	250	200
Dust	50	30	20	20

C_{proc} for liquid fuels (O_2 content 3 %):

Polluting substance	< 50 MWth	50 to 100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	350	250	200
NO_x	-	400	200	150
Dust	50	30	25	20

3.2.2 C_{proc} for combustion plants referred to in Article 33(3)

C_{proc} for solid fuels with the exception of biomass (O_2 content 6 %):

Polluting substance	< 50 MWth	50-100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	400 for peat: 300	200 for peat: 300, except in the case of fluidized bed combustion: 250	150 for circulating or pressurized fluidized bed combustion or, in case of peat firing, for all fluidized bed combustion: 200
NO_x	-	300 for peat: 250	200	150 for pulverized lignite combustion: 200
Dust	50	20	20	10 for peat: 20

C_{proc} for biomass (O_2 content 6 %):

Polluting substance	< 50 MWth	50 to 100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	200	200	150 for fluidized bed combustion: 200
NO_x	-	250	200	150
Dust	50	20	20	20

C_{proc} for liquid fuels (O_2 content 3 %):

Polluting substance	< 50 MWth	50 to 100 MWth	100 to 300 MWth	> 300 MWth
SO_2	-	350	200	150
NO_x	-	300	150	100
Dust	50	30	25	20

↓ 2000/76/EC (adapted)
→1 Corrigendum, OJ L 145, 31.5.2001, p. 52

3.3~~II.2.2~~. C — total emission limit values ⌦ for heavy metals (mg/Nm^3) ⌫

~~C~~ expressed ⌦ as ⌫ ~~in mg/Nm³ (O₂ content 6 %). All~~ average values over the ⌦ sampling ⌫ ~~sample~~ period of a minimum of 30 minutes and a maximum of 8 hours ⌦ (O_2 content 6% for solid fuels and 3% for liquid fuels) ⌫ .

~~Pollutant~~ ⌦ Polluting substances ⌫	C
Cd + Tl	0,05
Hg	0,05
Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V	0,5

⌦ 3.4 C - total emission limit value (ng/Nm^3) for dioxins and furans ⌫

~~C~~ expressed ⌦ as ⌫ ~~in ng/Nm³ (O₂ content 6 %). All~~ average value~~s~~ measured over the ⌦ sampling ⌫ ~~sample~~ period of a minimum of 6 hours and a maximum of 8 hours ⌦ (O_2 content 6% for solid fuels and 3% for liquid fuels). ⌫

~~Pollutant~~ ⌦ Polluting substance ⌫	C
Dioxins and furans	0,1

~~II.3~~. Special provisions for ⌦ co-incineration plants in ⌫ industrial sectors not covered under Points 2 and 3 of this Part ~~II.1 or II.2 co-incinerating waste~~

~~II.3~~.1. C — total emission limit value~~s~~ ⌦ (ng/Nm^3) ⌫

~~C~~ ⌦ for dioxins and furans ⌫ expressed ⌦ as ⌫ ~~in ng/Nm³. All~~ average value~~s~~ measured over the ⌦ sampling ⌫ ~~sample~~ period of a minimum of 6 hours and a maximum of 8 hours:

~~Pollutant~~ ⌦ Polluting substance ⌫	C
Dioxins and furans	0,1

⌦ 4.2 C – total emission limit values (mg/Nm^3) for heavy metals ⌫

~~C~~ expressed ⌦ as ⌫ ~~in mg/Nm³. All~~ average values over the ⌦ sampling ⌫ ~~sample~~ period of a minimum of 30 minutes and a maximum of 8 hours:

~~Pollutant~~ ⌦ Polluting substances ⌫	C
Cd + Tl	0,05
Hg	0,05

Part 5 ~~ANNEX IV~~

Emission limit values for discharges of waste water from the cleaning of ⌦ waste ⌫ ~~exhaust~~ gases

Polluting substances	Emission limit values ~~expressed in mass concentrations~~ for unfiltered samples ⌦ (mg/l except for dioxins and furans) ⌫	
1. Total suspended solids as defined ~~by~~ in Annex I of Directive 91/271/EEC	(95 %) ~~(~~30 ~~mg/l)~~	(100 %) ~~(~~45 ~~mg/l)~~
2. Mercury and its compounds, expressed as mercury (Hg)	0,03 ~~mg/l~~	
3. Cadmium and its compounds, expressed as cadmium (Cd)	0,05 ~~mg/l~~	
4. Thallium and its compounds, expressed as thallium (Tl)	0,05 ~~mg/l~~	
5. Arsenic and its compounds, expressed as arsenic (As)	0,15 ~~mg/l~~	
6. Lead and its compounds, expressed as lead (Pb)	0,2 ~~mg/l~~	
7. Chromium and its compounds, expressed as chromium (Cr)	0,5 ~~mg/l~~	
8. Copper and its compounds, expressed as copper (Cu)	0,5 ~~mg/l~~	
9. Nickel and its compounds, expressed as nickel (Ni)	0,5 ~~mg/l~~	
10. Zinc and its compounds, expressed as zinc (Zn)	1,5 ~~mg/l~~	
11. Dioxins and furans~~, defined as the sum of the individual dioxins and furans evaluated in accordance with Annex I~~	➔1 0,3 ng/l ←	

~~Until 1 January 2008, exemptions for total suspended solids may be authorised by the competent authority for existing incineration plants provided the permit foresees that 80 % of the measured values do not exceed 30 mg/l and none of them exceed 45 mg/l.~~

Part 6 ~~ANNEX III~~

⌦ Monitoring of emissions ⌫

1. Measurement techniques

1.1 Measurements for the determination of concentrations of air and water polluting substances ⌦ shall ⌫ ~~have to~~ be carried out representatively.

1.2 Sampling and analysis of all ⌦ polluting substances ⌫ ~~pollutants~~ including dioxins and furans as well as ⌦ the quality assurance of automated measuring systems and the ⌫ reference measurement methods to calibrate ⌦ them ⌫ ~~automated measurement systems~~ shall be carried out ⌦ according to ⌫ ~~as given by~~ CEN-standards. If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply. ⌦ Automated measuring systems shall be subject to control by means of parallel measurements with the reference methods at least once per year. ⌫

1.3 At the daily emission limit value level, the values of the 95 % confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values:

Carbon monoxide:	10 %
Sulphur dioxide:	20 %
Nitrogen dioxide:	20 %
Total dust:	30 %
Total organic carbon:	30 %
Hydrogen chloride:	40 %
Hydrogen fluoride:	40 %.

↓ 2000/76/EC Art. 10

~~5.~~ Periodic measurements of the emissions into the air and water shall be carried out in accordance with ~~Annex III,~~ points 1.1 and 1.2 ~~2~~.

↓ 2000/76/EC Art. 11 (adapted)
⇨ new

~~*Article 11*~~

~~**Measurement requirements**~~

⌦ 2. Measurements relating to air polluting substances ⌫

2.1 The following measurements ~~of~~ ⌦ relating to ⌫ air ⌦ polluting substances ⌫ ~~pollutants~~ shall be carried out ~~in accordance with Annex III at the incineration and co-incineration plant~~:

(a) continuous measurements of the following substances: NO_x, provided that emission limit values are set, CO, total dust, TOC, HCl, HF, SO_2;

(b) continuous measurements of the following process operation parameters: temperature near the inner wall or at another representative point of the combustion chamber as authorised by the competent authority, concentration of oxygen, pressure, temperature and water vapour content of the ⌦ waste ⌫ ~~exhaust~~ gas;

(c) at least two measurements per year of heavy metals, dioxins and furans; one measurement at least every three months shall however be carried out for the first 12 months of operation. ~~Member States may fix measurement periods where they have set emission limit values for polycyclic aromatic hydrocarbons or other pollutants~~.

2.2~~3~~. The residence time as well as the minimum temperature and the oxygen content of the ⌦ waste ⌫ ~~exhaust~~ gases shall be subject to appropriate verification, at least once when the ⌦ waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant is brought into service and under the most unfavourable operating conditions anticipated.

2.3~~4~~. The continuous measurement of HF may be omitted if treatment stages for HCl are used which ensure that the emission limit value for HCl is not being exceeded. In ~~this~~ ⌦ that ⌫ case the emissions of HF shall be subject to periodic measurements as laid down in ~~paragraph 2~~ ⌦ point 2.1 ⌫ (c).

2.4~~5~~. The continuous measurement of the water vapour content shall not be required if the sampled ⌦ waste ⌫ ~~exhaust~~ gas is dried before the emissions are analysed.

2.5~~6~~. ~~Periodic measurements as laid down in paragraph 2(c) of HCl, HF and SO_2 instead of continuous measuring may be authorised in the permit by~~ The competent authority ⌦ may decide not to require continuous measurements for HCI, HF and SO_2 in waste ⌫ ~~in~~ incineration ⌦ plants ⌫ or ⌦ waste ⌫ co-incineration plants, ⌦ and require periodic measurements as set out in point 2.1(c) or ⌫ ⇨ no measurements ⇦ if the operator can prove that the emissions of those pollutants can under no circumstances be higher than the prescribed emission limit values.

⇨ The competent authority may decide not to require continuous measurements for NO_x and require periodic measurements as set out in point 2.1(c) in existing waste incineration plants with a nominal capacity of less than 6 tonnes per hour or in existing waste co-incineration plants with a nominal capacity of less than 6 tonnes per hour if the operator can prove on the basis of information on the quality of the waste concerned, the technologies used and the results of the monitoring of emissions that the emissions of NO_x can under no circumstances be higher than the prescribed emission limit value. ⇦

2.6~~7~~. The ⇨ competent authority may decide to require less than two measurements per year or no measurements for heavy metals and for dioxins and furans ⇦ ~~reduction of the frequency of the periodic measurements for heavy metals from twice a year to once every two years and for dioxins and furans from twice a year to once every year~~ ⌦ in the following cases: ⌫ ~~may be authorised in the permit by the competent authority provided that~~

(a) the emissions resulting from co-incineration or incineration ⌦ of waste ⌫ are ⌦ under all circumstances ⌫ below 50 % of the emission limit values; ~~determined according to Annex II or Annex V respectively and provided that criteria for the requirements to be met, developed in accordance with the procedure laid down in~~

~~Article 17, are available. These criteria shall at least be based on the provisions of the second subparagraph, points (a) and (d).~~

~~Until 1 January 2005 the reduction of the frequency may be authorised even if no such criteria are available provided that:~~

(b~~a~~) the waste to be co-incinerated or incinerated consists only of certain sorted combustible fractions of non-hazardous waste not suitable for recycling and presenting certain characteristics, and which is further specified on the basis of the assessment referred to in point ~~subparagraph~~ (c~~d~~);

~~(b) national quality criteria, which have been reported to the Commission, are available for these wastes;~~

~~(c) co-incineration and incineration of these wastes is in line with the relevant waste management plans referred to in Article 7 of Directive 75/442/EEC;~~

(c~~d~~) the operator can prove ~~to the competent authority that the emissions are under all circumstances significantly below the emission limit values set out in Annex II or Annex V for heavy metals, dioxins and furans; this assessment shall be based~~ on ⌦ the basis of ⌫ information on the quality of the waste concerned and ⌦ the monitoring ⌫ ~~measurements~~ of the emissions ~~of the said pollutants;~~ ⌦ that the emissions are under all circumstances significantly below the emission limit values for heavy metals, dioxins and furans; ⌫

~~(e) the quality criteria and the new period for the periodic measurements are specified in the permit; and~~

~~(f) all decisions on the frequency of measurements referred to in this paragraph, supplemented with information on the amount and quality of the waste concerned, shall be communicated on a yearly basis to the Commission.~~

2.7~~8~~. The results of the measurements ~~made to verify compliance with the emission limit values~~ shall be standardised ⌦ using the standard oxygen concentrations mentioned in Part 3 or calculated according to Part 4 and by applying the formula given in Part 7. ⌫ ~~at the following conditions and for oxygen according to the formula as referred to in Annex VI:~~

~~(a) Temperature 273 K, pressure 101,3 kPa, 11 % oxygen, dry gas, in exhaust gas of incineration plants;~~

~~(b) Temperature 273 K, pressure 101,3 kPa, 3 % oxygen, dry gas, in exhaust gas of incineration of waste oil as defined in Directive 75/439/EEC;~~

~~(c)~~ W~~w~~hen ~~the wastes are~~ ⌦ waste is ⌫ incinerated or co-incinerated in an oxygen-enriched atmosphere, the results of the measurements can be standardised at an oxygen content laid down by the competent authority reflecting the special circumstances of the individual case.~~;~~

~~(d) in the case of co-incineration, the results of the measurements shall be standardised at a total oxygen content as calculated in Annex II.~~

When the emissions of ⌦ polluting substances ⌫ ~~pollutants~~ are reduced by ⌦ waste ⌫ ~~exhaust~~ gas treatment in ~~an~~ ⌦ a waste ⌫ incineration ⌦ plant ⌫ or ⌦ waste ⌫ co-incineration plant treating hazardous waste, the standardisation with respect to the oxygen contents provided for in the first subparagraph shall be done only if the oxygen content measured over the same period as for the ⌦ polluting substance ⌫ ~~pollutant~~ concerned exceeds the relevant standard oxygen content.

⌦ 3. Measurements relating to water polluting substances ⌫

~~14.~~ 3.1 The following measurements shall be carried out at the point of waste water discharge:

(a) continuous measurements of ⌦ pH, temperature and flow ⌫ ~~the parameters referred to in Article 8(6)(b)~~ ;

(b) spot sample daily measurements of total suspended solids ⌦ or measurements of a flow proportional representative sample over a period of 24 hours; ⌫ ~~; Member States may alternatively provide for measurements of a flow proportional representative sample over a period of 24 hours;~~

(c) at least monthly measurements of a flow proportional representative sample of the discharge over a period of 24 hours of ~~the polluting substances referred to in Article 8(3) with respect to items 2 to 10 in Annex IV~~ ⌦ Hg, Cd, TI, As, Pb, Cr, Ni and Zn; ⌫

(d) at least every six months measurements of dioxins and furans; however one measurement at least every three months shall be carried out for the first 12 months of operation. ~~Member States may fix measurement periods where they have set emission limit values for polycyclic aromatic hydrocarbons or other pollutants.~~

↓ 2000/76/EC Art. 8 (adapted)

3.2 Where the waste water from the cleaning of ~~exhaust~~ ⌦ waste ⌫ gases is treated on site collectively with other on-site sources of waste water, the operator shall take the measurements ~~referred to in Article 11~~:

(a) on the waste water stream from the ⌦ waste ⌫ ~~exhaust~~ gas cleaning processes prior to its input into the collective waste water treatment plant;

(b) on the other waste water stream or streams prior to its or their input into the collective waste water treatment plant;

(c) at the point of final waste water discharge, after the treatment, from the ⌦ waste ⌫ incineration plant or ⌦ waste ⌫ co-incineration plant.

↓ 2000/76/EC (adapted)

Part 7 ~~ANNEX VI~~

Formula to calculate the emission concentration at the standard percentage oxygen concentration

$$E_S = \frac{21 - O_S}{21 - O_M} \times E_M$$

E_S	=	calculated emission concentration at the standard percentage oxygen concentration
E_M	=	measured emission concentration
O_S	=	standard oxygen concentration
O_M	=	measured oxygen concentration

Part 8

⌦ Assessment of compliance with emission limit values ⌫

↓ 2000/76/EC Art. 11 (adapted)

⌦ 1. Air emission limit values ⌫

~~1~~0 1.1. The emission limit values for air shall be regarded as being complied with if:

(a) none of the daily average values exceeds any of the emission limit values set out in point 1.1 of Part 3 or in Part 4 ~~Annex V(a) or Annex II~~ ⌦ or calculated in accordance with Part 4 ⌫ ;

~~— 97 % of the daily average value over the year does not exceed the emission limit value set out in Annex V(c) first indent;~~

(b) either none of the half-hourly average values exceeds any of the emission limit values set out in ~~Annex V(b)~~, column A of the table under point 1.2 of Part 3 or, where relevant, 97 % of the half-hourly average values over the year do not exceed any of the emission limit values set out in ~~Annex V(b)~~, column B of the table under point 1.2 of Part 3;

(c) none of the average values over the ~~sample~~ ⌦ sampling ⌫ period set out for heavy metals and dioxins and furans exceeds the emission limit values set out in points 1.3 and 1.4 of Part 3 or in Part 4 ~~Annex V(c) and (d) or Annex II~~ ⌦ or calculated in accordance with Part 4 ⌫ ;

~~(d) — the provisions of Annex V(c), second indent or Annex II, are met.~~

⌦ (d) for carbon monoxide (CO): ⌫

⌦ (i) in case of waste incineration plants: ⌫

⌦ - at least 97 % of the daily average values over the year do not exceed the emission limit value set out in point 1.5(a) of Part 3; ⌫

⌦ and ⌫

⌦ - at least 95 % of all 10-minute average values taken in any 24-hour period or all of the half-hourly average values taken in the same period do not exceed the emission limit values set out in points 1.5(b) and (c) of Part 3 ⌫

⌦ (ii) in case of waste co-incineration plants: the provisions of Part 4 are met. ⌫

1.2~~11~~. The half-hourly average values and the 10-minute averages shall be determined within the effective operating time (excluding the start-up and shut-~~off~~ ⌦ down ⌫ periods if no waste is being incinerated) from the measured values after having subtracted the value of the confidence interval specified in point 1.3 of Part 6 ~~point 3 of Annex III~~. The daily average values shall be determined from those validated average values.

To obtain a valid daily average value no more than five half-hourly average values in any day shall be discarded due to malfunction or maintenance of the continuous measurement system. No more than ten daily average values per year shall be discarded due to malfunction or maintenance of the continuous measurement system.

1.3~~12~~. The average values over the ~~sample~~ ⌦ sampling ⌫ period and the average values in the case of periodical measurements of HF, HCl and SO_2 shall be determined in accordance

with the requirements of Articles 40(1)(e) and 43(3) ~~Article 10(2) and (4)~~ and ~~Annex III~~ point 1 of Part 6.

~~15. The monitoring of the mass of pollutants in the treated waste water shall be done in conformity with Community legislation and laid down in the permit as well as the frequency of the measurements.~~

2.~~16~~. ⌦ Water emission limit values. ⌫

The emission limit values for water shall be regarded as being complied with if:

(a) for total suspended solids ~~(polluting substance number 1),~~ 95 % and 100 % of the measured values do not exceed the respective emission limit values as set out in Part 5 ~~Annex IV~~;

(b) for heavy metals ⌦ (Hg, Cd, TI, As, Pb, Cr, Cu, Ni and Zn) ⌫ ~~(polluting substances number 2 to 10)~~ no more than one measurement per year exceeds the emission limit values set out in Part 5 ~~Annex IV~~; or, if the Member State provides for more than 20 samples per year, no more than 5 % of these samples exceed the emission limit values set out in Part 5 ~~Annex IV~~;

(c) for dioxins and furans ~~(polluting substance 11)~~, the ~~twice-yearly~~ measurement~~s~~ ⌦ results ⌫ do not exceed the emission limit value set out in Part 5 ~~Annex IV~~.

~~17. Should the measurements taken show that the emission limit values for air or water laid down in this Directive have been exceeded, the competent authorities shall be informed without delay.~~

↓ 1999/13/EC (adapted)
→1 Corrigendum, OJ L 240, 10.9.1999, p. 24

ANNEX VIII

Part 1

⌦ Activities ⌫ ~~SCOPE~~

~~This Annex contains the categories of activity referred to in Article 1. When operated above the thresholds listed in Annex IIA, the activities mentioned in this Annex fall within the scope of the Directive. In each case the~~ ⌦ 1. In each of the following points, the ⌫ activity includes the cleaning of the equipment but not the cleaning of products unless specified otherwise.

2. Adhesive coating

Any activity in which an adhesive is applied to a surface, with the exception of adhesive coating and laminating associated with printing activities.

3. Coating activity

Any activity in which a single or multiple application of a continuous film of a coating is applied to:

(a) ⌦ either of the following ⌫ vehicles ~~as listed below~~:

- (i) new cars, defined as vehicles of category M1 in Council Directive 70/156/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers and of category N1 in so far as they are coated at the same installation as M1 vehicles[84];
- (ii) truck cabins, defined as the housing for the driver, and all integrated housing for the technical equipment, of vehicles of categories N2 and N3 in Directive 70/156/EEC;
- (iii) vans and trucks, defined as vehicles of categories N1, N2 and N3 in Directive 70/156/EEC, but not including truck cabins;
- (iv) buses, defined as vehicles of categories M2 and M3 in Directive 70/156/EEC;
- (v) trailers, defined in categories O1, O2, O3 and O4 in Directive 70/156/EEC;

(b) metallic and plastic surfaces including surfaces of airplanes, ships, trains, etc.;

(c) wooden surfaces;

(d) textile, fabric, film and paper surfaces;

(e) leather.

⌦ Coating activities do ⌫ ~~It does~~ not include the coating of substrate with metals by electrophoretic and chemical spraying techniques. If the coating activity includes a step in which the same article is printed by whatever technique used, that printing step is considered part of the coating activity. However, printing activities operated as a separate activity are not

[84] OJ L 42, 23.2.1970, p. 1-15.

included, but may be covered by Chapter V of this ~~the~~ Directive if the printing activity falls within the scope thereof.

4. Coil coating

Any activity where coiled steel, stainless steel, coated steel, copper alloys or aluminium strip is coated with either a film forming or laminate coating in a continuous process.

5. Dry cleaning

Any industrial or commercial activity using volatile organic compounds ~~VOCs~~ in an installation to clean garments, furnishing and similar consumer goods with the exception of the manual removal of stains and spots in the textile and clothing industry.

6. Footwear manufacture

Any activity of producing complete footwear or parts thereof.

7. Manufacturing of coating ⌦ mixtures ⌫ ~~preparations~~, varnishes, inks and adhesives

The manufacture of the above final products, and of intermediates where carried out at the same site, by mixing of pigments, resins and adhesive materials with organic solvent or other carrier, including dispersion and predispersion activities, viscosity and tint adjustments and operations for filling the final product into its container.

8. Manufacturing of pharmaceutical products

The chemical synthesis, fermentation, extraction, formulation and finishing of pharmaceutical products and, where carried out at the same site, the manufacture of intermediate products.

9. Printing

Any reproduction activity of text and/or images in which, with the use of an image carrier, ink is transferred onto whatever type of surface. It includes associated varnishing, coating and laminating techniques. However, only the following sub-processes are subject to Chapter V~~the Directive~~:

(a) flexography - a printing activity using an image carrier of rubber or elastic photopolymers on which the printing areas are above the non-printing areas, using liquid inks which dry through evaporation;

(b) heatset web offset - a web-fed printing activity using an image carrier in which the printing and non-printing area are in the same plane, where web-fed means that the material to be printed is fed to the machine from a reel as distinct from separate sheets. The non-printing area is treated to attract water and thus reject ink. The printing area is treated to receive and transmit ink to the surface to be printed. Evaporation takes place in an oven where hot air is used to heat the printed material;

(c) laminating associated to a printing activity - the adhering together of two or more flexible materials to produce laminates;

(d) publication rotogravure - a rotogravure printing activity used for printing paper for magazines, brochures, catalogues or similar products, using toluene-based inks;

(e) rotogravure - a printing activity using a cylindrical image carrier in which the printing area is below the non-printing area, using liquid inks which dry through evaporation. The recesses are filled with ink and the surplus is cleaned off the non-printing area before the surface to be printed contacts the cylinder and lifts the ink from the recesses;

(f) rotary screen printing - a web-fed printing activity in which the ink is passed onto the surface to be printed by forcing it through a porous image carrier, in which the printing area is open and the non-printing area is sealed off, using liquid inks which dry only through evaporation. Web-fed means that the material to be printed is fed to the machine from a reel as distinct from separate sheets;

(g) varnishing - an activity by which a varnish or an adhesive coating for the purpose of later sealing the packaging material is applied to a flexible material.

10. Rubber conversion

Any activity of mixing, milling, blending, calendering, extrusion and vulcanisation of natural or synthetic rubber and any ancillary operations for converting natural or synthetic rubber into a finished product.

11. Surface cleaning

Any activity except dry cleaning using organic solvents to remove contamination from the surface of material including degreasing. A cleaning activity consisting of more than one step before or after any other activity shall be considered as one surface cleaning activity. This activity does not refer to the cleaning of the equipment but to the cleaning of the surface of products.

12. Vegetable oil and animal fat extraction and vegetable oil refining activities

Any activity to extract vegetable oil from seeds and other vegetable matter, the processing of dry residues to produce animal feed, the purification of fats and vegetable oils derived from seeds, vegetable matter and/or animal matter.

13. Vehicle refinishing

Any industrial or commercial coating activity and associated degreasing activities performing ⌦ either of the following ⌫ :

(a) the original coating of road vehicles as defined in Directive 70/156/EEC or part of them with refinishing-type materials, where this is carried out away from the original manufacturing line; ~~or~~

(b) the coating of trailers (including semi-trailers) (category O ⌦ in Directive 70/156/EEC ⌫).

14. Winding wire coating

Any coating activity of metallic conductors used for winding the coils in transformers and motors, etc.

15. Wood impregnation

Any activity giving a loading of preservative in timber.

16. Wood and plastic lamination

Any activity to adhere together wood and/or plastic to produce laminated products.

Part 2 ~~ANNEX IIA~~

~~I.~~ Thresholds and emission ⌦ limit values ⌫ ~~controls~~

~~31. Standard conditions shall mean~~ ⌦ The emission limit values in waste gases shall be calculated at ⌫ a temperature of 273,15 K ~~and~~ ⌦ , ⌫ a pressure of 101,3 kPa ⌦ and after correction for the water vapour content of the waste gases ⌫ .

	Activity (solvent consumption threshold in tonnes/year)	Threshold (solvent consumption threshold in tonnes/year)	Emission limit values in waste gases (mg C/Nm^3)	Fugitive emission ⌦ limit ⌫ values (percentage of solvent input)		Total emission limit values		Special provisions
				New ⌦ installations ⌫	Existing ⌦ installations ⌫	New ⌦ installations ⌫	Existing ⌦ installations ⌫	
1	Heatset web offset printing (> 15)	15—25 > 25	100 20	30 ([1]) 30 ([1])				([1]) Solvent residue in finished product is not to be considered as part of fugitive emissions.
2	Publication rotogravure (> 25)		75	10	15			
3	Other rotogravure, flexography, rotary screen printing, laminating or varnishing units (> 15) rotary screen printing on textile/cardboard (> 30)	15—25 > 25 > 30 ([1])	100 100 100	25 20 20				([1]) Threshold for rotary screen printing on textile and on cardboard.

4	Surface cleaning ⌦ using compounds specified in Article 54(5) ⌫ ~~Article 5(6) and (8)~~. ~~(1)~~ (> 1)	1—5 > 5	20 (~~12~~) 20 (~~12~~)	15 10			(~~12~~) Limit ⌦ value ⌫ refers to mass of compounds in mg/Nm^3, and not to total carbon.
5	Other surface cleaning (> 2)	2—10 > 10	75 (1) 75 (1)	20 (1) 15 (1)			(1) Installations which demonstrate to the competent authority that the average organic solvent content of all cleaning material used does not exceed 30 % by weight are exempt from application of these values.
6	Vehicle coating (< 15) and vehicle refinishing	> 0,5	50 (1)	25			(1) Compliance in accordance with ~~Article 9(3)~~ point 2 of Part 8 ⌦ shall ⌫ ~~should~~ be demonstrated based on 15 minute average measurements.
7	Coil coating (> 25)		50 (1)	5	10		(1) For installations which use techniques which allow reuse of recovered solvents, the emission limit ⌦ value ⌫ shall be 150.

8	Other coating, including metal, plastic, textile ([5]), fabric, film and paper coating (> 5)	5—15 > 15	100 ([1]) ([4]) 50/75 ([2]) ([3]) ([4])	➔1 25 ([4]) ← 20 ([4])		([1]) Emission limit value applies to coating application and drying processes operated under contained conditions. ([2]) The first emission limit value applies to drying processes, the second to coating application processes. ([3]) For textile coating installations which use techniques which allow reuse of recovered solvents, the emission limit ⌦ value ⌫ applied to coating application and drying processes taken together shall be 150. ([4]) Coating activities which cannot be ~~applied~~ ⌦ carried out ⌫ under contained conditions (such as shipbuilding, aircraft painting) may be exempted from these values, in accordance with Article ~~5(3)(b)~~ 54(3). ([5]) Rotary screen printing on textile is covered by activity No 3.
9	Winding wire coating (> 5)				10 g/kg ([1]) 5 g/kg ([2])	([1]) Applies for installations where average diameter of wire ≤ 0,1 mm. ([2]) Applies for all other installations.
10	Coating of wooden surfaces (> 15)	15—25 > 25	100 ([1]) 50/75 ([2])	25 20		([1]) Emission limit ⌦ value ⌫ applies to coating application and drying processes operated under contained conditions. ([2]) The first value applies to drying processes, the second to coating application processes.

11	Dry cleaning				20 g/kg ([1]) ([2]) ~~([3])~~	([1]) Expressed in mass of solvent emitted per kilogram of product cleaned and dried. ([2]) The emission limit ⌦ value ⌫ in ~~Article 5(8)~~ point 2 of Part 4 does not apply for this ~~sector~~ ⌦ activity ⌫ . ~~([3]) The following exemption refers only to Greece: the total emission limit value does not apply, for a period of 12 years after the date on which this Directive is brought into effect, to existing installations located in remote areas and/or islands, with a population of no more than 2 000 permanent inhabitants where the use of advanced technology equipment is not economically feasible.~~
12	Wood impregnation (> 25)		100 ([1])	45	11 kg/m^3	([1]) ⌦ Emission limit value ⌫ dDoes not apply for impregnation with creosote.
13	Coating of leather (> 10)	10—25 > 25 > 10 ([1])			85 g/m^2 75 g/m^2 150 g/m^2	Emission ~~limits~~ ⌦ limit values ⌫ are expressed in grams of solvent emitted per m^2 of product produced. ([1]) For leather coating activities in furnishing and particular leather goods used as small consumer goods like bags, belts, wallets, etc.
14	Footwear manufacture (> 5)				25 g per pair	Total emission limit ~~values are~~ ⌦ value is ⌫ expressed in grams of solvent emitted per pair of complete footwear produced.

15	Wood and plastic lamination (> 5)				30 g/m^2	
16	Adhesive coating (> 5)	5—15 > 15	50 ([1]) 50 ([1])	25 20		([1]) If techniques are used which allow reuse of recovered solvent, the emission limit value in waste gases shall be 150.
17	Manufacture of coating ⌦ mixtures ⌫ ~~preparations~~, varnishes, inks and adhesives (> 100)	100—1 000 > 1 000	150 150	5 3	5 % of solvent input 3 % of solvent input	The fugitive emission ⌦ limit ⌫ value does not include solvent sold as part of a coatings ⌦ mixture ⌫ ~~preparation~~ in a sealed container.
18	Rubber conversion (> 15)		20 ([1])	25 ([2])	25 % of solvent input	([1]) If techniques are used which allow reuse of recovered solvent, the emission limit value in waste gases shall be 150. ([2]) The fugitive emission ⌦ limit ⌫ value does not include solvent sold as part of products or ~~preparations~~ ⌦ mixtures ⌫ in a sealed container.
19	Vegetable oil and animal fat extraction and vegetable oil refining activities (> 10)				Animal fat: 1,5 kg/tonne Castor: 3 kg/tonne Rape seed: 1 kg/tonne Sunflower seed: 1 kg/tonne Soya beans (normal crush): 0,8 kg/tonne	([1]) Total emission limit values for installations processing individual batches of seeds and other vegetable matter should be set by the competent authority on a case-by-case basis, applying the best available techniques. ([2]) Applies to all fractionation processes excluding de-gumming (the removal of gums from the oil). ([3]) Applies to de-gumming.

						Soya beans (white flakes): 1,2 kg/tonne Other seeds and other vegetable matter: 3 kg/tonne ([1]) 1,5 kg/tonne ([2]) 4 kg/tonne ([3])		
20	Manufacturing of pharmaceutical products (> 50)		20 ([1])	5 ([2])	15 ([2])	5 % of solvent input	15 % of solvent input	([1]) If techniques are used which allow reuse of recovered solvent, the emission limit value in waste gases shall be 150. ([2]) The fugitive emission limit value does not include solvent sold as part of products or ⌦ mixtures ⌫ ~~preparations~~ in a sealed container.

Part 3

~~II.~~ ⌦ Emission limit values for installations of ⌫ the vehicle coating industry

1. The total emission limit values are expressed in terms of grams of ⌦ organic ⌫ solvent emitted in relation to the surface area of product in square metres and in kilograms of ⌦ organic ⌫ solvent emitted in relation to the car body.

2. The surface area of any product dealt with in the table ⌦ under point 3 ⌫ below is defined as follows:

- the surface area calculated from the total electrophoretic coating area, and the surface area of any parts that might be added in successive phases of the coating process which are coated with the same coatings as those used for the product in question, or the total surface area of the product coated in the installation.

The surface of the electrophoretic coating area is calculated using the ⌦ following ⌫ formula:

$$\frac{2 \times \text{total weight of product shell}}{\text{average thickness of metal sheet} \times \text{density of metal sheet}}$$

This method shall also be applied for other coated parts made out of sheets.

Computer aided design or other equivalent methods shall be used to calculate the surface area of the other parts added, or the total surface area coated in the installation.

3. The total emission limit values in the table below refers to all process stages carried out at the same installation from electrophoretic coating, or any other kind of coating process, through to the final wax and polish of topcoating inclusive, as well as solvent used in cleaning of process equipment, including spray booths and other fixed equipment, both during and outside of production time. ~~The total emission limit value is expressed as the mass sum of organic compounds per m^2 of the total surface area of coated product and as the mass sum of organic compounds per car body.~~

Activity (solvent consumption threshold in tonnes/year)	Production threshold (refers to annual production of coated item)	Total emission limit value	
		New ⌦ installations ⌫	Existing ⌦ installations ⌫
Coating of new cars (> 15)	> 5 000	45 g/m^2 or 1,3 kg/body + 33 g/m^2	60 g/m^2 or 1,9 kg/body + 41 g/m^2
	≤ 5 000 monocoque or > 3 500 chassis-built	90 g/m^2 or 1,5 kg/body + 70 g/m^2	90 g/m^2 or 1,5 kg/body + 70 g/m^2
		Total emission limit ⌦ value ⌫ (g/m^2)	
Coating of new truck	≤ 5 000	65	85

cabins (> 15)	> 5 000	55	75
Coating of new vans and trucks (> 15)	≤ 2 500	90	120
	> 2 500	70	90
Coating of new buses (> 15)	≤ 2 000	210	290
	> 2 000	150	225

4. Vehicle coating installations below the solvent consumption thresholds ⌦ mentioned ⌫ in the table under point 3~~above~~ shall meet the requirements for the vehicle refinishing sector ⌦ set out ⌫ in Part 2 ~~Annex IIA~~.

↓ 1999/13/EC Art. 5 (adapted)

Part 4

⌦ Emission limit values relating to volatile organic compounds with specific risk phrases ⌫

1.~~7.~~ For ~~discharges~~ ⌦ emissions ⌫ of the ~~VOCs~~ volatile organic compounds referred to in ~~paragraph 6,~~ Article 53 where the mass flow of the sum of the compounds causing the labelling referred to in that Article~~paragraph~~ is greater than, or equal to, 10 g/h, an emission limit value of 2 mg/Nm^3 shall be complied with. The emission limit value refers to the mass sum of the individual compounds.

2.~~8.~~ For ~~discharges~~ ⌦ emissions ⌫ of halogenated ~~VOCs~~ volatile organic compounds which are assigned the risk phrase R40 ⌦ or R68 ⌫ , where the mass flow of the sum of the compounds causing the labelling R40 ⌦ or R68 ⌫ is greater than, or equal to, 100 g/h, an emission limit value of 20 mg/Nm^3 shall be complied with. The emission limit value refers to the mass sum of the individual compounds.

↓ 1999/13/EC (adapted)

Part 5 ~~ANNEX IIB~~

Reduction scheme

~~1. PRINCIPLES~~

~~The purpose of the reduction scheme is to allow the operator the possibility to achieve by other means emission reductions, equivalent to those achieved if the emission limit values were to be applied. To that end~~ ~~The operator may use any reduction scheme, specially designed for his installation, provided that in the end an equivalent emission reduction is achieved. Member States shall report according to Article 11 of the Directive to the Commission about the progress in achieving the same emission reduction, including the experience from the application of the reduction scheme.~~

~~2. PRACTICE~~

1. In the case of applying coatings, varnishes, adhesives or inks, the following scheme can be used. Where the following method is inappropriate, the competent authority may allow an operator to apply any alternative ~~exemption~~ scheme ~~which it is satisfied fulfils the principles outlined here~~ ⌦ achieving equivalent emission reductions to those achieved if the emission limit values of Parts 2 and 3 were to be applied ⌫ . The design of the scheme ~~takes~~ ⌦ shall take ⌫ into account the following facts:

(a~~i~~) where substitutes containing little or no solvent are still under development, a time extension ~~must~~ ⌦ shall ⌫ be given to the operator to implement his emission reduction plans;

(b~~ii~~) the reference point for emission reductions should correspond as closely as possible to the emissions which would have resulted had no reduction action been taken.

2. The following scheme shall operate for installations for which a constant solid content of product can be assumed ~~and used to define the reference point for emission reductions~~:

~~(i) the operator shall forward an emission reduction plan which includes in particular decreases in the average solvent content of the total input and/or increased efficiency in the use of solids to achieve a reduction of the total emissions from the installation to a given percentage of the annual reference emissions, termed the target emission. This must be done on the following time frame:~~

~~Time period~~		~~Maximum allowed total annual emissions~~
~~New installations~~	~~Existing installations~~	
~~By 31.10.2001~~	~~By 31.10.2005~~	~~Target emission × 1,5~~
~~By 31.10.2004~~	~~By 31.10.2007~~	~~Target emission~~

(a~~ii~~) The annual reference emission is calculated as follows:

(i~~a~~) The total mass of solids in the quantity of coating and/or ink, varnish or adhesive consumed in a year is determined. Solids are all materials in coatings,

inks, varnishes and adhesives that become solid once the water or the volatile organic compounds are evaporated.

(ii) The annual reference emissions are calculated by multiplying the mass determined in (i) ~~(a)~~ by the appropriate factor listed in the table below. Competent authorities may adjust these factors for individual installations to reflect documented increased efficiency in the use of solids.

Activity	Multiplication factor for use in item (a)(ii)~~(ii)(b)~~
Rotogravure printing; flexography printing; laminating as part of a printing activity; varnishing as part of a printing activity; wood coating; coating of textiles, fabric film or paper; adhesive coating	4
Coil coating, vehicle refinishing	3
Food contact coating, aerospace coatings	2,33
Other coatings and rotary screen printing	1,5

(b~~c~~) The target emission is equal to the annual reference emission multiplied by a percentage equal to:

(1) (the fugitive emission ⌦ limit ⌫ value + 15), for installations falling within item 6 and the lower threshold band of items 8 and 10 of Part 2 ~~Annex IIA~~,

(2) (the fugitive emission ⌦ limit ⌫ value + 5) for all other installations.

(c~~d~~) Compliance is achieved if the actual solvent emission determined from the solvent management plan is less than or equal to the target emission.

↓ 1999/13/EC Art. 8 (adapted)

Part 6

⌦ Emission ⌫ ~~M~~monitoring

1.~~2.~~ ~~Member States shall ensure that~~ ~~c~~Channels to which abatement equipment is connected, and which at the final point of discharge emit more than an average of 10 kg/h of total organic carbon, ⌦ shall be ⌫ ~~are~~ monitored continuously for compliance.

2~~3~~. In the other cases, Member States shall ensure that either continuous or periodic measurements are carried out. For periodic measurements at least three ⌦ measurement values ⌫ ~~readings~~ shall be obtained during each measurement exercise.

3~~4~~. Measurements are not required in the case where end-of-pipe abatement equipment is not needed to comply with this Directive.

↓ 1999/13/EC (adapted)
⇨ new

Part 7 ~~ANNEX III~~

Solvent management plan

~~1. INTRODUCTION~~

~~This Annex provides guidance on carrying out a solvent management plan. It identifies the principles to be applied (item 2) and provides a framework for the mass balance (item 3) and an indication of the requirements for verification of compliance (item 4).~~

1~~2~~. Principles

The solvent management plan ⌦ shall be used to ⌫ ~~serves the following purposes~~:

(a~~i~~) ⌦ verify ⌫ ~~verification of~~ compliance as specified in Article 57 ~~9(1)~~;

(b~~ii~~) ⌦ identify ⌫ ~~identification of~~ future reduction options;

(c~~iii~~) ⌦ enable ⌫ ~~enabling~~ provision of information on solvent consumption, solvent emissions and compliance with ⌦ the requirements of ⌫ Chapter V~~the Directive~~ to the public.

2~~3~~. Definitions

The following definitions provide a framework for the mass balance exercise.

Inputs of organic solvents (I):

I1 The quantity of organic solvents or their quantity in ⌦ mixtures ⌫ ~~preparations~~ purchased which are used as input into the process in the time frame over which the mass balance is being calculated.

I2 The quantity of organic solvents or their quantity in ⌦ mixtures ⌫ ~~preparations~~ recovered and reused as solvent input into the process. ~~(~~The recycled solvent is counted every time it is used to carry out the activity.~~)~~

Outputs of organic solvents (O):

O1 Emissions in waste gases.

O2 Organic solvents lost in water, ~~if appropriate~~ taking into account waste water treatment when calculating O5.

O3 The quantity of organic solvents which remains as contamination or residue in products output from the process.

O4 Uncaptured emissions of organic solvents to air. This includes the general ventilation of rooms, where air is released to the outside environment via windows, doors, vents and similar openings.

O5 Organic solvents and/or organic compounds lost due to chemical or physical reactions (including ~~for example~~ those which are destroyed, ~~e.g.~~ by incineration or other waste gas or waste water treatments, or captured, ~~e.g. by adsorption~~, as long as they are not counted under O6, O7 or O8).

O6 Organic solvents contained in collected waste.

O7 Organic solvents, or organic solvents contained in ⊠ mixtures ⊠ ~~preparations~~, which are sold or are intended to be sold as a commercially valuable product.

O8 Organic solvents contained in ⊠ mixtures ⊠ ~~preparations~~ recovered for reuse but not as input into the process, as long as not counted under O7.

O9 Organic solvents released in other ways.

~~4~~3. ⇨ Use of ⇦ ~~Guidance on~~ the solvent management plan for verification of compliance.

The use made of the solvent management plan ⊠ shall ⊠ ~~will~~ be determined by the particular requirement which is to be verified, as follows:

(a~~i~~) v~~V~~erification of compliance with the reduction ~~option~~ ⊠ scheme as set out ⊠ in Part 5 ~~Annex IIB~~, with a total emission limit value expressed in solvent emissions per unit product, or otherwise stated in Parts 2 and 3 ~~Annex IIA~~.

(i~~a~~) ~~For~~ for all activities ⊠ using the reduction scheme as set out in ⊠ ~~using~~ Part 5, ~~Annex IIB~~ the solvent management plan ⊠ shall ⊠ ~~should~~ be done annually to determine ⊠ the ⊠ consumption (C). ⊠ The ⊠ c~~C~~onsumption ~~can~~⇨ shall ⇦ be calculated according to the following equation:

C = I1 − O8

A parallel exercise ⊠ shall ⊠ ~~should~~ also be undertaken to determine solids used in coating in order to derive the annual reference emission and the target emission each year.

(ii~~b~~) ~~For~~ for assessing compliance with a total emission limit value expressed in solvent emissions per unit product or otherwise stated in Parts 2 and 3 ~~Annex IIA~~, the solvent management plan ⊠ shall ⊠ ~~should~~ be done annually to determine ⊠ the ⊠ emissions (E). ⊠ The ⊠ c~~E~~missions ⇨ shall ⇦ ~~can~~ be calculated according to the following equation:

E = F + O1

Where~~where~~ F is the fugitive emission as defined in point (b)(i)~~section (ii)(a)~~. The emission figure ⊠ shall ⊠ ~~should~~ then be divided by the relevant product parameter.

(iii~~c~~) ~~For~~ for assessing compliance with the requirements of point (b)(ii) of paragraph 6 of Article 54 ~~5(5)(b)(ii)~~, the solvent management plan ⊠ shall ⊠ ~~should~~ be done annually to determine total emissions from all activities concerned, and that figure ⊠ shall ⊠ ~~should~~ then be compared with the total emissions that would have resulted had the requirements of Parts 2, 3 and 5 ~~Annex II~~ been met for each activity separately.

(b~~ii~~) Determination of fugitive emissions for comparison with ⊠ the ⊠ fugitive emission ⊠ limit ⊠ values in Part 2 ~~Annex IIA~~:

(i~~a~~) ~~*Methodology*~~

The fugitive emission ⇨ shall ⇦ ~~can~~ be calculated according to ⊠ one of ⊠ the following equations~~:~~:

F = I1 − O1 − O5 − O6 − O7 − O8

or

F = O2 + O3 + O4 + O9

⌦ F ⌫ ~~This quantity~~ ~~can~~ ⇨ shall ⇦ be determined ⌦ either ⌫ by direct measurement of the quantities, ⌦ or by ⌫ ~~Alternatively,~~ an equivalent ⌦ method or ⌫ calculation ~~can be made by other means~~, for instance by using the capture efficiency of the process.

The fugitive emission ⌦ limit ⌫ value is expressed as a proportion of the input, which ⇨ shall ⇦ ~~can~~ be calculated according to the following equation:

I = I1 + I2

(ii~~b~~) ~~*Frequency*~~

Determination of fugitive emissions ⇨ shall ⇦ ~~can~~ be done by a short but comprehensive set of measurements, ~~It need~~ ⌦ and needs ⌫ not be done again until the equipment is modified.

↓ 1999/13/EC Art. 9 (adapted)

Part 8

⌦ Assessment of ⌫ cCompliance with emission limit values ⌦ in waste gases ⌫

1~~3~~. In the case of continuous measurements the emission limit values shall be considered to be complied with if:

(a) none of ⌦ the arithmetic ⌫ ~~the~~ averages ⌦ of all valid readings taken during any 24-hour period of operation of an installation or activity except start-up and shut-down operations and maintenance of equipment ⌫ ~~over 24 hours of normal operation~~ exceeds the emission limit values, ~~and~~

(b) none of the hourly averages exceeds the emission limit values by more than a factor of 1,5.

2~~4~~. In the case of periodic measurements the emission limit values shall be considered to be complied with if, in one monitoring exercise:

(a) the average of all the ⌦ measurement values ⌫ ~~readings~~ does not exceed the emission limit values, ~~and~~

(b) none of the hourly averages exceeds the emission limit value by more than a factor of 1,5.

3~~5~~. Compliance with the provisions of Part 4 ~~Article 5(7) and (8)~~ shall be verified on the basis of the sum of the mass concentrations of the individual volatile organic compounds concerned. For all other cases, compliance shall be verified on the basis of the total mass of organic carbon emitted unless otherwise specified in Part 2 ~~Annex IIA~~.

4.~~1.~~ Gas volumes may be added to the waste gas for cooling or dilution purposes where technically justified but shall not be considered when determining the mass concentration of the pollutant in the waste gas.

↓ 92/112/EEC (adapted)
⇨ new

ANNEX VIII

⌦ Technical provisions relating to installations producing titanium dioxide ⌫

Part 1

⌦ Emission limit values for emissions into water ⌫

~~*Article 6*~~

~~Member States shall take the necessary measures to ensure that discharges of waste are reduced in accordance with the following provisions:~~

1.~~(a)~~ ~~from existing industrial establishments~~ ⌦ In case of installations ⌫ using the sulphate process ⌦ (as a yearly average) ⌫ :

~~- weak acid waste and neutralized waste shall be reduced by 31 December 1993 in all waters to a value of not more than~~ ⇨ 550 ⇦ ~~800~~ kg of ~~total~~ sulphate per tonne of titanium dioxide produced ~~(i. e. corresponding to the SO4 ions contained in the free sulphuric acid and in the metallic sulphates)~~;

2.~~(b)~~ ~~from existing industrial establishments~~ ⌦ In case of installations ⌫ using the ⌦ chloride ⌫ ~~chlorine~~ process ⌦ (as a yearly average) ⌫:

~~- weak acid waste, treatment waste and neutralized waste shall be reduced by 15 June 1993 in all waters to the following values of total chloride per tonne of titanium dioxide produced (i. e. corresponding to the Cl ions contained in the free hydrochloric acid and in the metallic chlorides):~~

(a)~~-~~ 130 kg ⌦ chloride per tonne of titanium dioxide produced ⌫ using neutral rutile,

(b)~~-~~ 228 kg ⌦ chloride per tonne of titanium dioxide produced ⌫ using synthetic rutile,

(c)~~-~~ ~~450~~ ⇨ 330 ⇦ kg ⌦ chloride per tonne of titanium dioxide produced ⌫ using slag.

3. ~~In the case of an establishment~~ ⌦ For installations using the chloride process and ⌫ using more than one type or ore, the ⌦ emission limit ⌫ values ⌦ in point 2 ⌫ shall apply in proportion to the quantity of ~~these~~ ⌦ the ⌫ ores used.

↓ 78/176/EEC (adapted)

Part 2 ~~ANNEX II~~

⌦ Acute toxicity tests ⌫ ~~Surveillance and monitoring of disposal~~

~~A. Monitoring of waste~~

~~Disposal operations shall be accompanied by: 1. checks on the quantity, composition and toxicity of the waste to ensure that the conditions for prior authorization referred to in Articles 4, 5 and 6 are fulfilled;~~

1~~2~~. Tests for acute toxicity ⌦ shall be carried out ⌫ on certain species of molluscs, crustaceans, fish and plankton, ~~preferably species~~ commonly found in the discharge areas. In addition, tests shall be ⌦ done ⌫ ~~carried out~~ on samples of the brine shrimp species (Artemia salina).

⌦ 2. Maximum mortality revealed by the tests in point 1, ⌫ o~~O~~ver a period of 36 hours and at an effluent dilution of 1/5 000: ~~, these tests must not reveal:~~

~~- more than 20 % mortality~~ (a) for adult forms of the species tested ⌦ : 20% mortality ⌫ ,

~~-~~(b) ~~and~~ for larval forms ⌦ of the species tested: ⌫ ~~,~~ mortality exceeding that of a control group.

~~B. Surveillance and monitoring of the environment concerned~~

~~I. In The case of discharge into fresh water or into the sea or in the case of dumping, such checks shall relate to the three following items : water column, living matter and sediments. Periodic checks on the state of the area affected by the discharges will make it possible to follow the development of the environments concerned.~~

~~Monitoring shall include the determination of: 1. pH;~~

~~2. dissolved oxygen;~~

~~3. turbidity;~~

~~4. hydrated iron oxides and hydroxides in suspension;~~

~~5. toxic metals in water, suspended solids, sediments and in accumulation in selected benthic and pelagic organisms;~~

~~6. the diversity and the relative and absolute abundance of flora and fauna.~~

~~II. In the case of storage, tipping or injection the monitoring shall include: 1. tests to ensure that surface waters and ground waters are not contaminated. These tests shall include the measurement of: - acidity,~~

~~- iron content (soluble and particulate),~~

~~- calcium content,~~

~~- toxic metal content (soluble and particulate) if any;~~

~~2. where necessary, tests to determine any adverse effects on the structure of the subsoils;~~

~~3. a general assessment of the ecology of the area in the vicinity of the tipping, storage or injection point.~~

↓ 1999/13/EC Art. 2 (adapted)

Part 3

⌦ Emission limit values to air ⌫

1~~31~~. ⌦ The emission limit values which are expressed as concentrations in mass per cubic meter (Nm^3) shall be calculated at ⌫ ~~standard conditions shall mean~~ a temperature of 273,15 K, ~~and~~ a pressure of 101,3 kPa ⌦ and after correction for the water vapour content of the waste gases. ⌫

↓ 92/112/EEC (adapted)
⇨ new

~~*Article 9*~~

~~1. Member States shall take the necessary measures to ensure that discharges into the atmosphere are reduced in accordance with the following provisions:~~

~~(a) in the case of existing industrial establishments using the sulphate process:~~

2.~~(i)~~ ~~as regards~~ ⌦ For ⌫ dust:~~,~~ ~~discharges shall be reduced by 31 December 1993 to a value of not more than~~ 50 mg/~~N~~m^3 ⇨ as an hourly average ⇦ ~~(2) from major sources and not more than 150 mg/nm3 (2) from any other source (3)~~;

3.~~(ii)~~ ~~as regards SO_x~~ ⌦ For ⌫ ⇨ gaseous sulphur dioxide and trioxide, including acid droplets ⇦ ⌦ calculated as SO_2 equivalent ⌫ ~~, discharges arising from digestion and calcination steps in the manufacture of titanium dioxide shall be reduced by 1 January 1995 to a value of not more than~~

(a) ~~10~~ ⇨ 6 ⇦ kg ~~of SO2 equivalent~~ per tonne of titanium dioxide produced ⇨ as a yearly average ⇦ ;

~~(iii) Member States shall require means to be installed for preventing the emission of acid droplets;~~

(b)~~(iv)~~ ~~plants for the concentration of waste acid shall not discharge more than~~ 500 mg/~~N~~m^3 ⇨ as an hourly average ⇦ ⌦ forplants for the concentration of waste acid ⌫ ~~SO_x calculated as SO2 equivalent (1)~~ ;

~~(v) plants for the roasting of salts generated by the treatment of waste shall be equipped with the best available technology not entailing excessive costs in order to reduce SO_x emissions;~~

4.~~(b)~~ ⌦ For chlorine ⌫ in the case of ⌦ installations ⌫ ~~existing industrial establishments~~ using the ⌦ chloride ⌫ ~~chlorine~~ process:

~~(i) as regards dust, discharges shall be reduced by 15 June 1993 to a value of not more than 50 mg/nm3 (2) for major sources and not more than 150 mg/nm3 (2) from any other source (3);~~

~~(ii) as regards chlorine, discharges shall be reduced by 15 June 1993 to~~

(a) ⌦ 5 mg/Nm^3 as ⌫ a daily average ~~concentration of not more than 5 mg/nm3 (4) and~~

(b) ~~not more than~~ 40 ⌦ mg/Nm^3 ⌫ ~~mg/ng~~^{3} at any time.

~~2. This Directive shall not prejudice Directive 80/779/EEC.~~

~~3. The procedure for monitoring the reference measurements for discharges of SOx into the atmosphere is set out in the Annex.~~

↓ 82/883/EEC (adapted)

Part 4 ~~ANNEX II~~

⌦ Monitoring of the environment affected by discharges of waste from installations producing titanium dioxide into water ⌫

~~METHOD OF WASTE DISPOSAL: DISCHARGE INTO OR IMMERSION IN SALT WATER~~

~~(estuarine, coastal, open sea)~~

~~Components~~	~~Parameters to be determined~~		~~Minimum annual sampling and analysis frequency~~	~~Reference method of measurement~~
	~~mandatorily~~	~~optionally~~		
~~*Water column*~~ ~~Non-filtered sea water[85]~~	~~Temperature~~ ~~(°C)~~		~~3~~	~~Thermometry. Measurement is to be carried out on the spot at the time of sampling~~
	~~Salinity~~ ~~(‰)~~		~~3~~	~~Conductimetry~~
	~~pH~~ ~~(pH unit)~~		~~3~~	~~Electrometry. Measurement is to be carried out on the spot at the time of sampling~~
	~~Dissolved O_2~~ ~~(mg/O_2 dissolved/l)~~		~~3~~	~~– Winkler method~~ ~~– Electrochemical method~~
	~~Turbidity~~ ~~(mg solids/l)~~ ~~or~~ ~~suspended matter~~ ~~(mg/l)~~		~~3~~	~~For turbidity: turbidimetry~~ ~~For suspended matter: gravimetry~~ ~~– Weighing after filtration through 0·45 µm pore size membrane filter and~~

[85] ~~Member States may choose whether to analyse non-filtered or filtered water for substances under «Parameters».~~

				drying at 105 °C – Weighing after centrifugation (minimum time five minutes, average acceleration 2 800 to 3 200 g) and drying at 105° C
	Fe (dissolved and in suspension) (mg/l)		3	After the sample has been appropriately prepared, determination by atomic absorption spectrophotometry or by molecular absorption spectrophotometry
		Cr, total Cd, total Hg (mg/l)	3	– Atomic absorption spectrophotometry – Molecular absorption spectrophotometry
	Ti (mg/l)	V, Mn, Ni, Zn (mg/l)	3	Atomic absorption spectrophotometry
		Cu, Pb (mg/l)	3	– Atomic absorption spectrophotometry – Polarography
Sea water filtered through 0·45 µm pore size membrane filter[86]	Dissolved Fe (mg/l)		3	Determination by atomic absorption spectrophotometry or by molecular absorption spectrophotometry

86 Member States may choose whether to analyse non-filtered or filtered water for substances under «Parameters».

		~~Cr, Cd, Hg~~ ~~(mg/l)~~	~~3~~	~~– Atomic absorption spectrophotometry~~ ~~– Molecular absorption spectrophotometry~~
		~~Ti, V, Mn, Ni, Zn~~ ~~(mg/l)~~	~~3~~	~~Atomic absorption spectrophotometry~~
		~~Cu, Pb~~ ~~(mg/l)~~	~~3~~	~~– Atomic absorption spectrophotometry~~ ~~– Polarography~~
~~Suspended solids remaining in 0·45 µm pore size membrane filter~~	~~Total Fe~~ ~~(mg/l)~~	~~Cr, Cd, Hg~~ ~~(mg/l)~~	~~3~~	~~– Atomic absorption spectrophotometry~~ ~~– Molecular absorption spectrophotometry~~
		~~Ti, V, Mn, Ni, Zn~~ ~~(mg/l)~~	~~3~~	~~Atomic absorption spectrophotometry~~
		~~Cu, Pb~~ ~~(mg/l)~~	~~3~~	~~– Atomic absorption spectrophotometry~~ ~~– Polarography~~
	~~Hydrated oxides and hydroxides of iron~~ ~~(mg Fe/l)~~		~~3~~	~~Extraction of the sample under appropriate acid conditions; measurement by atomic absorption spectrophotometry or by molecular absorption spectrophotometry.~~ ~~The same method of~~

				acid extraction must be used for all samples coming from the same site
Sediments In the top layer of sediment as near the surface as possible	Total Ti, Fe (mg/kg dry matter)	V, Cr, Mn, Ni, Cu, Zn, Cd, Hg, Pb (mg/kg dry matter)	1	Identical methods to those for measurements in the water column. After appropriate preparation of the sample (wet or dry mineralization and purification). The quantities of metals must be measured for a specific range of particle sizes
	Hydrated oxides and hydroxides of iron (mg Fe/kg)		1	Identical methods to those for measurements in the water column
Living organisms Species representative of the site: benthic fish and invertebrates or other appropriate species[87]	Ti, Cr, Fe, Ni, Zn, Pb (mg/kg wet and dry weight)	V, Mn, Cu, Cd, Hg (mg/kg wet and dry weight)	1	Atomic absorption spectrophotometry after appropriate preparation of the composite sample of ground flesh (wet or dry mineralization and purification) – For fish, the metals must be measured in muscle or other appropriate tissue; the sample must consist of at least 10 specimens – For molluses and crustaceans, the metals must be

[87] Species representative of the site of discharge in particular in terms of their sensitivity to bioaccumulation, e.g. Mytilus edulis, crangon crangon, flounder, plaice, cod, mackerel, red mullet, herring, sole (or other appropriate benthic species).

				~~measured in the flesh. The sample must consist of at least 50 specimens~~
~~Benthic fauna~~	~~Diversity and relative abundance~~		~~1~~	~~Qualitative and quantitative classification of representative species, indicating the specimen count per species, density, dominance~~
~~Planktonic fauna~~		~~Diversity and relative abundance~~	~~1~~	~~Qualitative and quantitative classification of representative species, indicating the specimen count per species, density, dominance~~
~~Flora~~		~~Diversity and relative abundance~~	~~1~~	~~Qualitative and quantitative classification of representative species, indicating the specimen count per species, density, dominance~~
~~Fish in particular~~	~~Presence of morbid anatomical lesions in fish~~		~~1~~	~~Visual inspection of samples of the representative species taken for chemical analysis~~

ANNEX III

METHOD OF WASTE DISPOSAL: DISCHARGE INTO FRESH SURFACE WATER

Components	Parameters to be determined		Minimum annual sampling and analysis frequency	Reference method of measurement
	mandatorily	optionally		
Water column[88] Non-filtered fresh water	Temperature (°C)		3	Thermometry. Measurement is to be carried out on the spot at the time of sampling
	Conductivity at 20 °C ($\mu S\ cm^{-1}$)		3	Electrometric measurement
	pH (pH unit)		3	Electrometry. Measurement is to be carried out on the spot at the time of sampling
	Dissolved O_2 (dissolved mg O_2/l)		3	– Winkler method – Electrochemical method
	Turbidity (mg solids/l or suspended matter (mg/l)		3	For turbidity: turbidimetry For suspended matter: gravimetry – Weighing after filtration through 0·45 µm membrane filter and drying at 105 °C – Weighing after centrifugation (minimum time

88 Samples must be taken at the same time of the year and if possible at a depth of 50 cm below the surface.

				five minutes, and average acceleration 2 800 to 3 200 g) and drying at 105 °C
Non-filtered fresh water[89]	Fe (dissolved and in suspension) (mg/l)		3	After the sample has been appropriatelyprepared, determination by atomic absorption spectrophotometry or by molecular absorption spectrophotometry
		Cr, total Cd, total Hg (mg/l)	3	– Atomic absorption spectrophotometry – Molecular absorption spectrophotometry
	Ti (mg/l)	V, Mn, Ni, Zn (mg/l)	3	Atomic absorption spectrophotometry
		Cu, Pb (mg/l)	3	– Atomic absorption spectrophotometry – Polarography
Fresh water filtered through 0·45 µm pore size membrane filter[90]	dissolved Fe (mg/l)		3	Measurement by atomic absorption spectrophotometry or by molecular absorption spectrophotometry
		Cr, Cd, Hg	3	– Atomic absorption

89 Member States may choose whether to analyse non-filtered or filtered water for substances under «Parameters».

90 Member States may choose whether to analyse non-filtered or filtered water for substances under «Parameters».

		~~(mg/l)~~		– ~~Molecular absorption spectrophotometry~~
		~~Ti, V, Mn, Ni, Sn~~ ~~(mg/l)~~	~~3~~	~~Atomic absorption spectrophotometry~~
		~~Cu, Pb~~ ~~(mg/l)~~	~~3~~	~~– Atomic absorption spectrophotometry~~ – ~~Polarography~~
~~Suspended solids remaining in 0·45 µm pore size membrane filter~~	~~Fe~~ ~~(mg/l)~~	~~Cr, Cd, Hg~~ ~~(mg/l)~~	~~3~~	~~– Atomic absorption spectrophotometry~~ – ~~Molecular absorption spectrophotometry~~
		~~Ti, V, Mn, Ni, Zn~~ ~~(mg/l)~~	~~3~~	~~Atomic absorption spectrophotometry~~
		~~Cu, Pb~~ ~~(mg/l)~~	~~3~~	~~– Atomic absorption spectrophotometry~~ – ~~Polarography~~
	~~Hydrated oxides and hydroxides of iron~~ ~~(mg Fe/l)~~		~~3~~	~~Extraction of the sample under appropriate acid conditions, measurement by atomic absorption spectrophotometry or by molecular absorption spectrophotometry.~~ ~~The same method of acid extraction must be used for all samples coming from the same site~~

~~*Sediments*~~ ~~In the top layer of sediment, as near the surface as possible~~	~~Ti, Fe~~ ~~(mg/kg dry matter)~~	~~V, Cr, Mn, Ni, Cu, Zn, Cd, Hg, Pb~~ ~~(mg/kg dry matter)~~	~~1~~	~~Identical methods to those for measurements in the water column.~~ ~~After appropriate preparation of the sample (wet or dry mineralization and purification). The quantities of metals must be measured for a specific range of particle sizes~~
	~~Hydrated oxides and hydroxides of iron~~ ~~(mg Fe/kg)~~		~~1~~	~~Identical methods to those for measurements in the water column~~
~~*Living organisms*~~ ~~Species representative of the site~~	~~Ti, Cr, Fe, Ni, Zn, Pb~~ ~~(mg/kg wet and dry weight)~~	~~V, Mn, Cu, Cd, Hg~~ ~~(mg/kg wet and dry weight)~~	~~1~~	~~Atomic absorption spectrophotometry after appropriate preparation of the composite sample of ground flesh (wet or dry mineralization and purification)~~ ~~– For fish, the metals must be measured in muscle or other appropriate tissue; the sample must consist of at least 10 specimens~~ ~~– For molluses and crustaceans, the metals must be measured in the flesh. The sample must consist of at least 50 specimens~~
~~Benthic fauna~~	~~Diversity and relative abundance~~		~~1~~	~~Qualitative and quantitative~~

				~~classification of representative species, indicating the specimen count per species, density, dominance~~
~~Planktonic fauna~~		~~Diversity and relative abundance~~	~~1~~	~~Qualitative and quantitative classification of representative species, indicating the specimen count per species, density, dominance~~
~~Flora~~		~~Diversity and relative abundance~~	~~1~~	~~Qualitative and quantitative classification of representative species, indicating the specimen count per species, density, dominance~~
~~Fish in particular~~		~~Presence of morbid anatomical lesions in fish~~	~~1~~	~~Visual inspection of samples of the representative species taken for chemical analysis~~

⌦ 1. The water column shall be monitored at least three times per year, either through monitoring non-filtered or filtered water, by determining the following parameters: ⌫

⌦ (a) in case of monitoring non-filtered water: temperature, salinity or conductivity at 20°C, pH, dissolved O_2, turbidity or suspended matter, Fe dissolved and in suspension, Ti; ⌫

⌦ (b) in case of monitoring filtered water: ⌫

⌦ (i) in the water filtered through a 0,45 μm pore size membrane filter: dissolved Fe; ⌫

⌦ (ii) in the suspended solids remaining in the 0,45 μm pore size membrane filter: Fe, hydrated oxides and hydroxides of iron. ⌫

⌦ 2. Sediments shall be monitored at least once per year by taking samples in the top layer of the sediment as near to the surface as possible and by determining the following parameters in these samples: Ti, Fe, hydrated oxides and hydroxides of iron. ⌫

⌦ 3. Living organisms shall be monitored at least once per year by determining the concentration of the following substances in species representative of the site: Ti, Cr, Fe, Ni, Zn, Pb, and by determining the diversity and relative abundance of the benthic fauna, and the presence of morbid and anatomical lesions in fish. ⌫

⌦ 4. In the course of successive sampling operations, the samples shall be taken at the same location and depth and under the same conditions. ⌫

⇩ new

Part 5

Emission monitoring

The monitoring of emissions to air shall include at least continuous monitoring of:

(a) SO_2 from plants for the concentration of waste acid in installations using the sulphate process

(b) chlorine from installations using the chloride process

(c) dust from major sources.

↓ 82/883/EEC

ANNEX I

METHOD OF WASTE DISPOSAL: DISCHARGE INTO AIR

Components	Parameters to be determined		Minimum annual sampling and analysis frequency	Comments
	mandatorily	optionally		
Air	Sulphur dioxide (SO_2)[91] Chlorine[92]	Dust	Continuously	1. Region with surveillance by an existing air pollution surveillance network with at least one station near the production site giving representative readings for pollution emanating from the site
			12[93]	2. Region with no surveillance network. Measurement of total amounts of gaseous discharges emitted by the production site. Where a site has a number of discharge sources, sequential measurements may be made. The reference method of measurement for sulphur dioxide is that given in Annex III to Council Directive 80/779/EEC of 15 July 1980 on air quality limit values and guide values for sulphur dioxide and suspended particulates (OJ No L 229, 30. 8. 1980, p. 30)

[91] If the production process used is the sulphate process.

[92] To be used once measuring technology allows continuous measurements to be carried out and where the chlorine process is used.

[93] The figures must be sufficiently representative and significant.

ANNEX IV

METHOD OF WASTE DISPOSAL: STORAGE AND DUMPING ON LAND

Components	Parameters to be determined		Minimum annual sampling and analysis frequency	Reference method of analysis
	mandatorily	optionally		
1. *Unfiltered surface water* around the site in the area affected by the storage and at a point outside this area[94][95][96] 2. *Unfiltered groundwater* around the site including, where necessary, outflow points[97][98]	pH (pH unit)		1	Electrometry. Measurement is to be carried out at the time of sampling
	SO_4[99] (mg/l)		1	– 1. Gravimetry – 2. Complexometric titration with EDTA – 3. Molecular absorption spectrophotometry
	Ti[100] (mg/l)	V, Mn, Ni, Zn (mg/l)	1	Atomic absorption spectrophotometry
	Fe[101] (mg/l)	Cr (mg/l)	1	– 4. Atomic absorption spectrophotometry – 5. Molecular absorption spectrophotometry
	Ca (mg/l)		1	– 6. Atomic absorption spectrophotometry – 7. Complexometric titration

94 Sampling must be carried out at the same time of year.

95 When monitoring surface water and groundwater, particular attention is to be paid to any matter carried by running water from the waste storage area.

96 Sampling must be carried out 50 cm beneath the surface of the water, if possible.

97 Sampling must be carried out at the same time of year.

98 When monitoring surface water and groundwater, particular attention is to be paid to any matter carried by running water from the waste storage area.

99 Mandatory determination where storage or dumping contains waste from the sulphate process.

100 Mandatory determination where storage or dumping contains waste from the chlorine process.

101 Also includes the measurement of Fe in the filtrate (suspended solids).

		Cu, Pb (mg/l)	1	– 8. Atomic absorption spectrophotometry – 9. Polarography
	Cl[102] (mg/l)		1	Titrimetry (Mohr method)
Environment of the storage and dumping site	Visual inspection of: – topography and site management – effect on subsoil – ecology of the site	–	1	Methods to be chosen by Member States

[102] Mandatory determination where storage or dumping contains waste from the chlorine process.

ANNEX V

METHOD OF WASTE DISPOSAL: INJECTION INTO SOIL

Components	Parameters to be determined		Minimum annual sampling frequency and analysis	Reference method of analysis
	mandatorily	optionally		
1. *Unfiltered surface water* around the site in the zone affected by the injection 2. *Unfiltered groundwater* around the site including out-flow points	pH (pH unit)		1	Electrometry. Measurement is to be carried out at the time of sampling
	SO_4[103] (mg/l)		1	– Gravimetry – Complexometric titration with EDTA – Molecular absorption spectrophotometry
	Ti[104] (mg/l)	V, Mn, Ni, Zn (mg/l)	1	Atomic absorption spectrophotometry
	Fe[105] (mg/l)	Cr (mg/l)	1	– Atomic absorption spectrophotometry – Molecular absorption spectrophotometry
	Ca (mg/l)		1	– Atomic absorption spectrophotometry – Complexometric titration
		Cu, Pb (mg/l)	1	– Atomic absorption spectrophotometry – Polarography
	Cl[106] (mg/l)		1	Titrimetry (Mohr method)
Environment	Ground		1	Photographic and

103 Mandatory determination where waste from the sulphate process is injected into soil.
104 Mandatory determination where waste from the chlorine process is injected into soil.
105 Also includes the measurement of Fe in the filtrate (suspended solids).
106 Mandatory determination where waste from the chlorine process is injected into soil.

~~Topography~~	~~stability~~			~~topographic survey~~
	~~Permeability~~ ~~Porosity~~		~~1~~	~~Pumping tests~~ ~~Well logging~~

↓ 78/176/EEC

ANNEX I

PARTICULARS WHICH MUST BE SUPPLIED IN ORDER TO OBTAIN THE PRIOR AUTHORIZATION REFERRED TO IN ARTICLES 4, 5 AND 6

A. CHARACTERISTICS AND COMPOSITION OF THE MATTER:

1. total amount and average compositions of matter dumped (e.g. per year);

2. form (e.g. solid, sludge, liquid or gaseous);

3. properties: physical (e.g. solubility and density), chemical and biochemical (e.g. oxygen demand) and biological;

4. toxicity;

5. persistence: physical, chemical and biological;

6. accumulation and biotransformation in biological materials or sediments;

7. susceptibility to physical, chemical and biochemical changes and interaction in the environment concerned with other organic and inorganic materials;

8. probability of production of taints or other changes reducing marketability of resources (fish, shellfish, etc.).

B. CHARACTERISTICS OF DUMPING OR DISCHARGE SITE AND METHODS OF DISPOSAL:

1. location (e.g. coordinates of the dumping or discharge area, depth and distance from the coast), location in relation to other areas (e.g. amenity areas, spawning, nursery and fishing areas and exploitable resources);

2. rate of disposal per specific period (e.g. quantity per day, per week, per month);

3. methods of packaging and containment, if any;

4. initial dilution achieved by proposed method of release, particularly the speed of the ship;

5. dispersal characteristics (e.g. effects of currents, tides, and wind on horizontal transport and vertical mixing);

6. water characteristics (e.g. temperature, pH, salinity, stratification, oxygen indices of pollution — dissolved oxygen (DO), chemical oxygen demand (COD), biochemical oxygen demand (BOD), nitrogen present in organic and inorganic form, including ammonia, suspended matter, other nutrients and productivity);

7. bottom characteristics (e.g. topography, geochemical and geological characteristics and biological productivity);

8. existence and effects of other dumpings or discharges which have been made in the area concerned (e.g. heavy metal background reading and organic carbon content).

C. CHARACTERISTICS OF THE TIPPING, STORAGE OR INJECTION AREA AND DISPOSAL METHODS:

1. geographical siuation;

~~2. characteristics of adjacent areas;~~

~~3. methods of packaging and containment, if any;~~

~~4. characteristics of the methods of tipping, storage and injection, including an assessment of precautions taken to avoid the pollution of waters, the soil and the atmosphere.~~

ANNEX II

SURVEILLANCE AND MONITORING OF DISPOSAL

A. MONITORING OF WASTE

Disposal operations shall be accompanied by:

1. checks on the quantity, composition and toxicity of the waste to ensure that the conditions for prior authorization referred to in Articles 4, 5 and 6 are fulfilled;

2. tests for acute toxicity on certain species of molluscs, crustaceans, fish and plankton, preferably species commonly found in the discharge areas. In addition, tests shall be carried out on samples of the brine shrimp species (Artemia salina).

Over a period of 36 hours and at an effluent dilution of 1/5 000, these tests must not reveal:

– more than 20 % mortality for adult forms of the species tested,

– and for larval forms, mortality exceeding that of a control group.

B. SURVEILLANCE AND MONITORING OF THE ENVIRONMENT CONCERNED

I. In the case of discharge into fresh water or into the sea or in the case of dumping, such checks shall relate to the three following items: water column, living matter and sediments. Periodic checks on the state of the area affected by the discharges will make it possible to follow the development of the environments concerned.

Monitoring shall include the determination of:

1. pH;

2. dissolved oxygen;

3. turbidity;

4. hydrated iron oxides and hydroxides in suspension;

5. toxic metals in water, suspended solids, sediments and in accumulation in selected benthic and pelagic organisms;

6. the diversity and the relative and absolute abundance of flora and fauna.

II. In the case of storage, tipping or injection the monitoring shall include:

1. tests to ensure that surface waters and ground waters are not contaminated. These tests shall include the measurement of:

– acidity,

– iron content (soluble and particulate),

– calcium content,

– toxic metal content (soluble and particulate) if any;

2. where necessary, tests to determine any adverse effects on the structure of the subsoils;

3. a general assessment of the ecology of the area in the vicinity of the tipping, storage or injection point.

↓ 92/112/EEC (adapted)

~~ANNEX~~

~~Procedure for monitoring the reference measurements for gaseous SO_x emissions~~

~~For the purposes of calculating the quantities of SO_2 and SO_3 and acid droplets expressed as SO_2 equivalent, discharged by specific installations, account must be taken of the volume of gas discharged over the duration of the specific operations in question and of the average SO_2/SO_3 content measured over the same period. The SO_2/SO_3 flow rate and content must be determined under the same temperature and humidity conditions.~~

⇧

ANNEX IX

Part A

Repealed Directives with their successive amendments
(referred to in Article 72)

Council Directive 78/176/EEC (OJ L 54, 25.2.1978, p. 19)	
Council Directive 83/29/EEC (OJ L 32, 3.2.1983, p. 28)	
Council Directive 91/692/EEC (OJ L 377, 31.12.1991, p. 48)	only Annex I point (b)
Council Directive 82/883/EEC (OJ L 378, 31.12.1982, p. 1)	
Council Regulation (EC) No 807/2003 (OJ L 122, 16.5.2003, p. 36)	only Annex III, point 34
Council Directive 92/112/EEC (OJ L 409, 31.12.1992, p. 11).	
Council Directive 96/61/EC (OJ L 257, 10.10.1996, p. 26)	
Directive 2003/35/EC of the European Parliament and of the Council (OJ L 156, 25.6.2003, p. 17)	only Article 4 and Annex II
Directive 2003/87/EC of the European Parliament and of the Council (OJ L 275, 25.10.2003, p. 32)	only Article 26
Regulation (EC) N° 1882/2003 of the European Parliament and of the Council (OJ L 284, 31.10.2003, p. 1)	only Annex III, point 61
Regulation (EC) N° 166/2006 of the European Parliament and of the Council (OJ L 33, 4.2.2006, p. 1)	only Article 21(2)
Council Directive 1999/13/EC (OJ L 85, 29.3.1999, p. 1)	

Regulation (EC) N° 1882/2003 of the European Parliament and of the Council (OJ L 284, 31.10.2003, p. 1)	only Annex I, point 17
Directive 2004/42/CE of the European Parliament and of the Council (OJ L 143, 30.4.2004, p. 87)	only Article 13(1)
Directive 2000/76/EC of the European Parliament and of the Council (OJ L 332, 28.12.2000, p. 91)	
Directive 2001/80/EC of the European Parliament and of the Council (OJ L 309, 27.11.2001, p. 1)	
Council Directive 2006/105/ EC (OJ L 363, 20.12.2006, p. 368)	Only Annex, part B, point 2

Part B

List of time-limits for transposition into national law (referred to in Article 72)

Directive	Time-limit for transposition	Time-limit for application
78/176/EC	25 February 1979	
82/883/EC	31 December 1984	
92/112/EC	15 June 1993	
96/61/EC	30 October 1999	
1999/13/EC	1 April 2001	
2000/76/EC	28 December 2000	28 December 2002 28 December 2005
2001/80/EC	27 November 2002	27 November 2004
2003/35/EC	25 June 2005	
2003/87/EC	31 December 2003	

ANNEX X

Correlation table

Directive 78/176/EEC	Directive 82/883/EEC	Directive 92/112/EEC	Directive 96/61/EC	Directive 1999/13/EC	Directive 2000/76/EC	Directive 2001/80/EC	This Directive
Article 1(1)	Article 1	Article 1	Article 1	Article 1	Article 1, first paragraph		Article 1
Article 1(2), point (a)			Article 2(2)				Article 3(2)
Article 1(2), point (b)					Article 3(1)		Article 3(23)
Article 1(2), points (c), (d) and (e)							---
Article 2							Article 62
Article 3							Article 12, points (4) and (5)
Article 4			Article 4	Article 3, introductory wording and (1)	Article 4(1)		Article 4(1), first subparagraph
---	---	---	---	---	---	---	Article 5
Article 5							Article 12, points (4) and (5)
Article 6							Article 12, points (4) and (5)
Article 7(1)							Article 65(1) and

							65(2), first subparagraph
Article 7(2) and (3)							---
---	---	---	---	---	---	---	Article 65(2), second subparagraph
Article 8(1)							Article 63(2)
Article 8(2)							Article 28(1), second subparagraph
Article 9							---
Article 10							---
Article 11							Article 13
Article 12							---
Article 13(1)							Article 67
Article 13(2), (3) and (4)							---
Article 14							---
Article 15	Article 14	Article 12	Article 21	Article 15	Article 21	Article 18(1) and (3)	Article 71
Article 16	Article 15	Article 13	Article 23	Article 17	Article 23	Article 20	Article 75
Annex I							---
Annex IIA introductory wording							---

and point 1							
Annex IIA point 2							Annex VIII, Part 2
Annex IIB							---
	Article 2						---
	Article 3						---
	Article 4(1) and 4(2), first subparagraph						Article 65(3)
	Article 4(2), second subparagraph						Annex VIII, Part 4
	Article 4(3) and (4)						
---	---	---	---	---	---	---	Article 65(4)
	Article 5						---
	Article 6						---
	Article 7						---
	Article 8						---
	Article 9						---
	Article 10						Article 69
	Article 11(1)		Article 19(1)	Article 13(1)	Article 17(1)		Article 69(1)
---	---	---	---	---	---	---	Article 69(2)

	Article 11(2) and (3)						---
	Article 12						---
	Article 13						---
	Annex I						---
	Annex II						Annex VIII, Part 4
	Annex III						Annex VIII, Part 4
	Annex IV						---
	Annex V						---
		Article 2(1), introductory wording					---
		Article 2(1)(a), introductory wording and first indent					---
		Article 2(1)(a), second indent					Article 62(2)
		Article 2(1)(a), third indent and 2(1)(b), third indent					Article 62(4)
		Article 2(1)(a), fourth, fifth, sixth and seventh indent					---
		Article 2(1)(b), introductory wording					---

		and first, fourth, fifth, sixth and seventh indent					
		Article 2(1)(b), second indent					Article 62(3)
		Article 2(1)(c)					---
		Article 2(2)					---
		Article 3					Article 62
		Article 4					Article 62
		Article 5					---
		Article 6, first paragraph, introductory wording					Article 63(1)
		Article 6, first paragraph, point (a)					Annex VIII, Part 1, point (1)
		Article 6, first paragraph, point (b)					Annex VIII, Part 1, point (2)
		Article 6, second paragraph					Annex VIII, Part 1, point (3)
		Article 7					---
		Article 8					---
		Article 9(1) introductory wording					Article 64(2)

		Article 9(1)(a), introductory wording					---
		Article 9(1)(a)(i)					Annex VIII, Part 3, point (2)
		Article 9(1)(a)(ii)					Annex VIII, Part 3, point (3), introductory wording, and point (3)(a)
		Article 9(1)(a)(iii)					Article 64(1)
		Article 9(1)(a)(iv)					Annex VIII, Part 3, point (3)(b)
		Article 9(1)(a)(v)					---
		Article 9(1) b)					Annex VIII, Part 3, point (4)
		Article 9(2) and (3)					---
		Article 10					Article 65
		Article 11					Article 12, points (4) and (5)
		Annex					---
			Article 2, introductory wording				Article 3, introductory wording
			Article 2(1)	Article 2(14)			Article 3(1)

			Article 2(3)	Article 2(1)			Article 3(3)
			Article 2(4)				---
			Article 2(5)	Article 2(9)	Article 3(8)	Article 2(1)	Article 3(4)
			Article 2(6)	Article 2(13)	Article 3(9)	Article 2(3), first part	Article 3(5)
			Article 2(7)				Article 3(6)
			Article 2(8)	Article 2(5)			Article 66
			Article 2(9), first sentence	Article 2(7)	Article 3(12)		Article 3(7)
			Article 2(9), second sentence				Article 4(2), first subparagraph
---	---	---	---	---	---	---	Article 4(2), second subparagraph
			Article 2(10)(a)				---
			Article 2(10)(b), first subparagraph				Article 3(8)
			Article 2(10)(b), second subparagraph				Article 21(3)
			Article 2(11), first subparagraph and first, second and third indents				Article 3(9)
			Article 2(11), second				Articles 14(2) and

			subparagraph				15(4)
			Article 2(12)	Article 2(6)	Article 3(11)	Article 2(5)	Article 3(10)
			Article 2(13)				Article 3(11)
			Article 2(14)				Article 3(12)
---	---	---	---	---	---	---	Article 3(13), (14), (15), (16) and (17)
			Article 3, first subparagraph, introductory wording				Article 12, introductory wording
			Article 3, first subparagraph, point (a)				Article 12(1) and (2)
			Article 3 first subparagraph, point (b)				Article 12(3)
			Article 3 first subparagraph, point (c)				Article 12(4) and (5)
			Article 3 first subparagraph, point (d)				Article 12(6)
			Article 3 first subparagraph, point (e)				Article 12(7)
			Article 3 first subparagraph, point				Article 12(8)

			(f)				
			Article 3, second subparagraph				---
			Article 5(1)				Article 73(1) and (2)
---	---	---	---	---	---	---	Article 73(3) and (4)
			Article 5(2)				Article 71(1), second subparagraph
			Article 6(1), introductory wording				Article 13(1), introductory wording
			Article 6(1), first subparagraph, first indent				Article 13(1) a)
			Article 6(1), first subparagraph, second indent				Article 13(1) b)
			Article 6(1), first subparagraph, third indent				Article 13(1) c)
			Article 6(1), first subparagraph, fourth indent				Article 13(1) d)
---	---	---	---	---	---	---	Article 13(1) e)
			Article 6(1), first subparagraph, fifth indent				Article 13(1) f)

			Article 6(1), first subparagraph, sixth indent				Article 13(1) g)
			Article 6(1), first subparagraph, seventh indent				Article 13(1) h)
			Article 6(1), first subparagraph, eighth indent				Article 13(1) i)
			Article 6(1), first subparagraph, ninth indent				Article 13(1) j)
			Article 6(1), first subparagraph, tenth indent				Article 13(1) k)
			Article 6(1), second subparagraph				Article 13(1), second subparagraph
			Article 6(2)				Article 13(2)
---	---	---	---	---	---	---	Article 14
			Article 7				Article 6(2)
			Article 8, first paragraph		Article 4(3)		Article 6(1)
			Article 8, second paragraph				---
			Article 9(1), first				Article 15(1), first

			part of sentence				subparagraph
			Article 9(1), second part of sentence				---
			Article 9(2)				Article 6(3)
			Article 9(3), first subparagraph, first and second sentence				Article 15(1), second subparagraph, introductory wording and points (a) and (b)
			Article 9(3), first subparagraph, third sentence				Article 15(2)
---	---	---	---	---	---	---	Article 15(3), (4) and (5)
			Article 9(3), second subparagraph				---
			Article 9(3), third subparagraph				Article 10(1)
			Article 9(3), fourth subparagraph				Article 10(2)
			Article 9(3), fifth subparagraph				Article 10(3)
			Article 9(3), sixth subparagraph				Article 10(4)
			Article 9(4), first				Article 16(2), first

			part of first sentence				subparagraph
			Article 9(4), second part of first sentence				Article 16 (3), first subparagraph
			Article 9(4), second sentence				Article 15(1), second subparagraph, point (f)
---	---	---	---	---	---	---	Article 16(2), second subparagraph
---	---	---	---	---	---	---	Article 16 (3), second subparagraph and (4) and (5)
---	---	---	---	---	---	---	Article 17
			Article 9(5), first subparagraph				Article 15(1), second subparagraph, point (c)
---	---	---	---	---	---	---	Article 15(1), second subparagraph, point (d)
			Article 9(5), second subparagraph				---
			Article 9(6), first subparagraph				Article 15(1), second subparagraph, point (e)
			Article 9(6), second subparagraph				---

			Article 9(7)				---
			Article 9(8)				Articles 7 and 18(1)
---	---	---	---	---	---	---	Article 18(2), (3) and (4)
			Article 10				Article 19
			Article 11				Article 20
			Article 12(1)				Article 21(1)
			Article 12(2), first sentence				Article 21(2), first subparagraph
			Article 12(2), second sentence				Article 21(2), second subparagraph
			Article 12(2), third sentence				---
			Article 13(1)				Article 22(1)
---	---	---	---	---	---	---	Article 22(2) and (3)
			Article 13(2), introductory wording				Article 22(4), introductory wording
			Article 13(2), first indent				Article 22(4)(a)
			Article 13(2), second indent				Article 22(4)(b)
			Article 13(2), third				Article 22(4)(c)

			indent				
			Article 13(2), fourth indent				---
---	---	---	---	---	---	---	Article 22(4)(d)
---	---	---	---	---	---	---	Article 23
---	---	---	---	---	---	---	Article 24
---	---	---	---	---	---	---	Article 25(1), first and second subparagraph
			Article 14, introductory wording				Article 9(1), first part of sentence and Article 25(1), third subparagraph, introductory wording
			Article 14, first indent				Article 9(1), second part of sentence
			Article 14, second indent				Article 8, point (2) and Article 15(1), point (c)
			Article 14, third indent				Article 25(1), third subparagraph
---	---	---	---	---	---	---	Article 25(2) to (7)
			Article 15(1), introductory wording and first and second	Article 12(1), first subparagraph			Article 26(1), first subparagraph and points (a) and (b)

			indents				
			Article 15(1), third indent				Article 26(1), first subparagraph, point (c)
---	---	---	---	---	---	---	Article 26(1)(d)
			Article 15(1), second subparagraph				Article 26(1), second subparagraph
---	---	---	---	---	---	---	Article 26(2)
			Article 15(2)				Article 26(3)(h)
			Article 15(4)				Article 26(4)
			Article 15(5)				Article 26(3), introductory wording and points (a) and (b)
---	---	---	---	---	---	---	Article 26(3), points (c) to (g)
			Article 15a, first paragraph				Article 27(1)
			Article 15a, second paragraph				Article 27(2)
			Article 15a, third paragraph				Article 27(3)
			Article 15a, fourth and fifth paragraph				Article 27(4)

			Article 15a, sixth paragraph				Article 27(5)
			Article 16(1)	Article 11(1), first sentence and 11(2)			Article 67(1), first subparagraph
---	---	---	---	---	---	---	Article 67(1), second subparagraph
			Article 16(2), first sentence				Article 29, introductory wording
			Article 16(2), second sentence				---
			Article 16(3), first sentence	Article 11(1), second sentence			Article 67(2)
			Article 16(3), second sentence				---
			Article 16(3), third sentence	Article 11(3)			Article 67(3)
			Article 16(4)				---
---	---	---	---	---	---	---	Article 68
---	---	---	---	---	---	---	Article 29, points (a) and (b)
---	---	---	---	---	---	---	Article 30
			Article 17			Article 11	Article 28
			Article 18(1)				---

			Article 18(2)				Article 16(3), second subparagraph
			Article 19(2) and (3)				---
			Article 20(1) and (2)				---
			Article 20(3)		Article 18	Article 17	Article 72
			Article 22	Article 16	Article 22	Article 19	Article 74
---	---	---	---	---	---	---	Article 2(1)
			Annex I, first paragraph of introductory wording				Article 2(2)
			Annex I, second paragraph of introductory wording				Annex I, first subparagraph of introductory wording
---	---	---	---	---	---	---	Annex I, second and third subparagraph of introductory wording
			Annex I, point 1				Annex I, point 1
			Annex I, points 2.1 – 2.5(b)				Annex I, points 2.1 – 2.5(b)
---	---	---	---	---	---	---	Annex I, point 2.5(c)
			Annex I, point 2.6				Annex I, point 2.6
			Annex I, point 3				Annex I, point 3

			Annex I, points 4.1 – 4.6				Annex I, points 4.1 – 4.6
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			Annex I, point 5, introductory wording				---
			Annex I, points 5.1 – 5.3(b)				Annex I, points 5.1 – 5.3(b)
---	---	---	---	---	---	---	Annex I, points 5.3 (c) to (e)
			Annex I, point 5.4				Annex I, point 5.4
			Annex I, points 6.1(a) and (b)				Annex I, points 6.1(a) and (b)
---	---	---	---	---	---	---	Annex I, point 6.1 (c)
			Annex I, points 6.2 – 6.4(b)				Annex I, points 6.2 – 6.4(b)(ii)
---	---	---	---	---	---	---	Annex I, point 6.4 (b)(iii)
			Annex I, points 6.4(c) – 6.6(c)				Annex I, points 6.4(c) – 6.6(c)
---	---	---	---	---	---	---	Annex I, point 6.6(c), final sentence
			Annex I, points 6.7 - 6.8				Annex I, points 6.7 - 6.8

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			Annex II				---
			Annex III				Annex II
---	---	---	---	---	---	---	Annex II, point 13
			Annex IV, introductory wording				Article 3(9)
			Annex IV, points 1 to 11				Annex III
			Annex IV, point 12				---
			Annex V 1(a)				Annex IV 1(a)
---	---	---	---	---	---	---	Annex IV, point 1(b)
			Annex V 1(b)-(g)				Annex IV, 1(c)-(h)
			Annex V, points 2 to 5				Annex IV, points 2 to 5
				Article 2(2)			Article 52(1)
				Article 2(3)			---
				Article 2(4)			Article 58(1)
				Article 2(8)			Article 4(1), third subparagraph
				Article 2(10)			Article 52(3)

				Article 2(11)			Article 52(2)
				Article 2(12)			Article 52(4)
				Article 2(15)			Article 52(5)
				Article 2(16)			Article 3(31)
				Article 2(17)			Article 3(32)
				Article 2(18)			Article 3(33)
				Article 2(19)			---
				Article 2(20)			Article 3(34)
				Article 2(21)			Article 52(6)
				Article 2(22)			Article 52(7)
				Article 2(23)			Article 52(8)
				Article 2(24)			Article 52(9)
				Article 2(25)			Article 52(10)
				Article 2(26)			Article 52(11)
				Article 2(27)			---
				Article 2(28)			Article 58(1)
				Article 2(29)			---
				Article 2(30)			Article 52(12)

				Article 2(31)			Annex VII, Part 2, first sentence Annex VIII, Part 3, point 1
				Article 2(32)			---
				Article 2(33)			Article 52(13)
				Article 3(2)			Article 4(1), second subparagraph
				Article 4(1) to (3)			Article 4(1), first and second subparagraph
				Article 4(4)			Article 58(2)
				Article 5(1)			Article 54(1), first subparagraph
				Article 5(2)			Article 54(1)(a) and (b)
				Article 5(3)(a)			Article 54(2)
				Article 5(3)(b)			Article 54(3)
				Article 5(3), third subparagraph			Article 54(4)
				Article 5(4)			---
				Article 5(5)			Article 54(6)
				Article 5(6)			Article 53

				Article 5(7)			Annex VII, Part 4, point 1
				Article 5(8) first subparagraph			Annex VII, Part 4, point 2
				Article 5(8) second subparagraph			Article 54(5)
				Article 5(9)			---
				Article 5(10)			Article 54(7)
				Article 5(11), (12) and (13)			---
				Article 6			---
				Article 7(1), introductory wording and first, second, third and fourth indent			Article 59
				Article 7(1), second part			---
				Article 7(2)			---
				Article 8(1)			Article 8, introductory wording and point (1)
				Article 8(2)			Annex VII, Part 6, point 1

				Article 8(3)			Annex VII, Part 6, point 2
				Article 8(4)			Annex VII Part 6, point 3
				Article 8(5)			---
				Article 9(1), introductory wording			Article 57(1), introductory wording
				Article 9(1), first subparagraph, first, second and third indent			Article 57, first subparagraph, points (a), (b) and (c)
				Article 9(1), second subparagraph			Article 57, second subparagraph
				Article 9(1), third subparagraph			Annex VII, Part 8, point 4
				Article 9(2)			Article 58(3)
				Article 9(3)			Annex VII, Part 8, point 1
				Article 9(4)			Annex VII, Part 8, point 2
				Article 9(5)			Annex VII, Part 8, point 3
				Article 10	Article 4(9)		Article 9(2)
				Article 11(1), third			---

				to sixth sentences			
				Article 12(1), second subparagraph			Article 60(1), first subparagraph
				Article 12(1), third subparagraph			Article 60(1), second subparagraph
				Article 12(2)			Article 60(2)
				Article 12(3)			Article 60(3)
				Article 13(2) and (3)			---
				Article 14	Article 19	Article 16	Article 70
				Annex I, first and second sentence of introductory wording			Article 51
				Annex I, third sentence of introductory wording and list of activities			Annex VII, Part 1
				Annex IIA, Part I			Annex VII, Part 2
				Annex IIA, Part 2			Annex VII, Part 3
				Annex IIA, Part II, last sentence of paragraph 6			---
				Annex IIB, point 1, first and second sentences			Article 54(1)(b)

				Annex IIB, point 1, third sentence			Article 54(1), second subparagraph
				Annex IIB, point 2			Annex VII, Part 5
				Annex IIB, point 2, second subparagraph (i) and table			---
				Annex III, point 1			---
				Annex III, point 2			Annex VII, Part 7, point 1
				Annex III, point 3			Annex VII, Part 7, point 2
				Annex III, point 4			Annex VII, Part 7, point 3
					Article 1, second paragraph		---
					Article 2(1)		Article 38(1), first subparagraph
					Article 2(2), introductory wording		Article 38(2), introductory wording
					Article 2(2)(a), introductory wording		Article 38(2)(a), introductory wording
					Article 2(2)(a), points (i) to (v)		Article 38(2)(a), point (i)
					Article 2(2)(a), point		Article 38(2)(a),

					(vi)		point (ii)
					Article 2(2)(a), point (vii)		Article 38(2)(a), point (iii)
					Article 2(2)(a), point (viii)		Article 38(2)(a), point (iv)
					Article 2(2)(b)		Article 38(2)(b)
					Article 3(2), first subparagraph		Article 3(24)
					Article 3(2), second subparagraph		---
					Article 3(3)		Article 3(25)
					Article 3(4), first subparagraph		Article 3(26)
					Article 3(4), second subparagraph		Article 38(1), second subparagraph
					Article 3(5), first subparagraph		Article 3(27)
					Article 3(5), second subparagraph		Article 38(1), third subparagraph
					Article 3(5), third subparagraph		Article 38(1), second subparagraph
					Article 3(6)		Annex VI, Part 1, point (a)

					Article 3(7)		Article 3(28)
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					Article 3(10)		Article 3(29)
					Article 3(13)		Article 3(30)
					Article 4(2)		Article 39
					Article 4(4), introductory wording and points (a) and (b)		Article 40(1), introductory wording and points (a) and (b)
					Article 4(4), point (c)		Article 40(1),point (e)
					Article 4(5)		Article 40(2)
					Article 4(6)		Article 40(3)
					Article 4(7)		Article 40(4)
					Article 4(8)		Article 49
					Article 5		Article 47
					Article 6(1), first subparagraph		Article 45(1)
					Article 6(1), second subparagraph and 6(2)		Article 45(2)

					Article 6(1), third subparagraph		Article 45(3), first subparagraph
					Article 6(1), fourth subparagraph		Article 45(3), second subparagraph
					Article 6(3)		Article 45(4)
					Article 6(4), first and second sentences of first subparagraph and Article 6(4), second subparagraph		Article 46(1)
					Article 6(4), third sentence of first subparagraph		Article 46(2)
					Article 6(4), third subparagraph		Article 46(3), second subparagraph
					Article 6(4), fourth subparagraph		Article 46(4)
					Article 6(5)		Article 41(1)
					Article 6(6)		Article 45(5)
					Article 6(7)		Article 45(6)
					Article 6(8)		Article 45(7)
					Article 7(1) and Article 7(2), first subparagraph		Article 41(2), first subparagraph

					Article 7(2), second subparagraph		Article 41(2), second subparagraph
					Article 7(3) and Article 11(8), first subparagraph, introductory wording		Annex VI, Part 6, first part of point 2.7
					Article 7(4)		Article 41(2), second subparagraph
					Article 7(5)		---
					Article 8(1)		Article 40(1), point (c)
					Article 8(2)		Article 41(3)
					Article 8(3)		---
					Article 8(4), first subparagraph		Article 41(4), first subparagraph
					Article 8(4), second subparagraph		Annex VI, Part 6, first part of point 3.2
					Article 8(4), third subparagraph		Annex VI, Part 6, second part of point 3.2
					Article 8(4), fourth subparagraph		---
					Article 8(5)		Article 41(4), second and third subparagraph

					Article 8(6)		Article 40(1), points (c) and (d)
					Article 8(7)		Article 41(4)
					Article 8(8)		---
					Article 9, first subparagraph		Article 48(1)
					Article 9, second subparagraph		Article 48(2)
					Article 9, third subparagraph		Article 48(3)
					Article 10(1) and (2)		---
					Article 10(3), first sentence		Article 43(2)
					Article 10(3), second sentence		---
					Article 10(4)		Article 43(3)
					Article 10(5)		Annex VI, Part 6, second part of point 1.3
					Article 11(1)		Article 43(1)
					Article 11(2)		Annex VI, Part 6, point 2.1
					Article 11(3)		Annex VI, Part 6,

							point 2.2
					Article 11(4)		Annex VI, Part 6, point 2.3
					Article 11(5)		Annex VI, Part 6, point 2.4
					Article 11(6)		Annex VI, Part 6, point 2.5
					Article 11(7), first part of first sentence of first subparagraph		Annex VI, Part 6, first part of point 2.6
					Article 11(7), second part of first sentence of first subparagraph		Annex VI, Part 6, point 2.6(a)
					Article 11(7), second sentence of first subparagraph		---
					Article 11(7), second subparagraph		---
					Article 11(7), point (a)		Annex VI, Part 6, point 2.6(b)
					Article 11(7), points (b) and (c)		---
					Article 11(7), point (d)		Annex VI, Part 6, point 2.6(c)
					Article 11(7), points		---

					(e) and (f)		
					Article 11(8), first subparagraph, points (a)and (b)		Annex VI, Part 3, point 1, first and second subparagraph
					Article 11(8)(c)		Annex VI, Part 6, second part of point 2.7
					Article 11(8)(d)		Annex VI, Part 4, point 2.1, second subparagraph
					Article 11(8), second subparagraph		Annex VI, Part 6, third part of point 2.7
					Article 11(9)		Article 43(4)
					Article 11(10), points (a), (b) and (c)		Annex VI, Part 8, points (a), (b) and (c) of point 1.1
					Article 11(10)(d)		Annex VI, Part 8, point (d) of point 1.1
					Article 11(11)		Annex VI, Part 8, point 1.2
					Article 11(12)		Annex VI, Part 8, point 1.3
					Article 11(13)		Article 43(5), first subparagraph
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							subparagraph
					Article 11(14)		Annex VI, Part 6, point 3.1
					Article 11(15)		Article 40(1), point (e)
					Article 11(16)		Annex VI, Part 8, point 2
					Article 11(17)		Article 9(2), point (a)
					Article 12(1)		Article 50(1)
					Article 12(2), first sentence		Article 50(2)
					Article 12(2), second sentence		---
					Article 12(2), third sentence		Article 50(3)
					Article 13(1)		Article 40(1), point (f)
					Article 13(2)		Article 42
					Article 13(3)		Article 41(5)
					Article 13(4)		Annex VI, Part 3, point 2
					Article 14		---

					Article 15		---
					Article 16		---
					Article 17(2) and (3)		---
					Article 20		---
					Annex I		Annex VI, Part 2
					Annex II, first part (without numbering)		Annex VI, Part 4, point 1
					Annex II, point 1, introductory wording		Annex VI, Part 4, point 2.1
					Annex II, points 1.1 – 1.2		Annex VI, Part 4, points 2.2 - 2.3
					Annex II, point 1.3		---
					Annex II, point 2.1		Annex VI, Part 4, point 3.1
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					Annex II, point 2.2		Annex VI, Part 4, point 3.3
					Annex II, point 3		Annex VI, Part 4, point 4
					Annex III		Annex VI, Part 6, point 1

					Annex IV, table		Annex VI, Part 5
					Annex IV, final sentence		---
					Annex V, point (a), table		Annex VI, Part 3, point 1.1
					Annex V, point (a), final sentences		---
					Annex V, point (b), table		Annex VI, Part 3, point 1.2
					Annex V, point (b), final sentence		---
					Annex V, point (c)		Annex VI, Part 3, point 1.3
					Annex V, point (d)		Annex VI, Part 3, point 1.4
					Annex V, point (e)		Annex VI, Part 3, point 1.5
					Annex V, point (f)		Annex VI, Part 3, point 3
					Annex VI		Annex VI, Part 7
						Article 1	Article 31
						Article 2(2)	Annex V, Part 1, point 1 and Part 2, point 1

						Article 2(3) second part	Annex V, Part 1, point 1 and Part 2, point 1
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						Article 2(4)	---
						Article 2(6)	Article 3(18)
						Article 2(7), first subparagraph	Article 3(19)
						Article 2(7), second subparagraph and points (a) to (i)	Article 31, second subparagraph
						Article 2(7), second subparagraph, point (j)	---
						Article 2(7), third subparagraph	---
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						Article 2(7), fourth subparagraph	Article 32(2)
						Article 2(8)	Article 3(21)
						Article 2(9)	Article 32(2)
						Article 2 (10)	---

						Article 2(11)	Article 3(20)
						Article 2(12)	Article 3(22)
						Article 2(13)	---
						Article 3	---
						Article 4(1)	---
						Article 4(2)	Article 33(2)
						Article 4(3) to (8)	---
						Article 5(1)	Annex V, Part 1, point 2, last sentence
						Article 5(2)	---
						Article 6	---
						Article 7(1)	Article 34
						Article 7(2)	Article 33(4)
						Article 7(3)	Article 33(5)
						Article 8(1)	Article 37(1)
						Article 8(2), first part of first subparagraph	Article 37(2), first part of first subparagraph
						Article 8(2), second part of first subparagraph	---

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						Article 8(2), second subparagraph	---
						Article 8(2), points (a) to (d)	---
						Article 8(3) and (4)	---
						Article 9	Article 33(1)
						Article 10(1), first sentence	Article 33(6)
						Article 10(1), second sentence	---
						Article 10(2)	---
						Article 12	Article 35(1)
---	---	---	---	---	---	---	Article 35(2), (3) and (4)
						Article 13	Annex V, Part 3, third part of point 8
						Article 14	Annex V, Part 4
						Article 15	---

						Article 18(2)	---
						Annex I	---
						Annex II	---
						Annex III and IV	Annex V, point 2 of Part 1 and Part 2
						Annex V A	Annex V, Part 1, point 3
						Annex V B	Annex V, Part 2, point 3
						Annex VI A	Annex V, Part 1, points 4 and 5
						Annex VI B	Annex V, Part 2, points 4 and 5
						Annex VII A	Annex V, Part 1, points 6 and 7
						Annex VII B	Annex V, Part 2, points 6 and 7
						Annex VIII A point 1	---
						Annex VIII A point 2	Annex V, Part 3, first part of point 1 and points 2, 3 and 5
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							1
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						Annex VIII A point 3	---
						Annex VIII A point 4	Annex V, Part 3, point 6
						Annex VIII A point 5	Annex V, Part 3, points 7 and 8
						Annex VIII A point 6	Annex V, Part 3, points 9 and 10
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						Annex VIII B	---
						Annex VIII C	---
						Annex IX	Annex IX
						Annex X	Annex X