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## II

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## COUNCIL

## COUNCIL DECISION

of 12 June 1986

on the conclusion of the Protocol to the 1979 Convention on long-range transboundary air pollution on long-term financing of the cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP)

(86/277/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission <sup>(1)</sup>,

Having regard to the opinion of the European Parliament <sup>(2)</sup>,

Whereas, by Decision 81/462/EEC <sup>(3)</sup>, the Community approved the Convention on long-range transboundary air pollution;

Whereas the cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP), which is to be implemented under the Convention, is the principal means of obtaining information about the quantities emitted and possibly transmitted across national frontiers;

Whereas, on 24 May 1984, the Commission was authorized to take part, on behalf of the Community, in the negotiations on the Protocol to the Convention on long-term financing of the EMEP;

Whereas the negotiations culminated in the adoption of the final text of the Protocol and in the fixing of the cost-sharing formula for the EMEP;

Whereas, as authorized by the Council on 25 September 1984, the Protocol was signed by the Community on 28 September 1984 at the second meeting of the Executive Body of the Convention,

HAS DECIDED AS FOLLOWS:

*Article 1*

The Protocol to the 1979 Convention on long-range transboundary air pollution on long-term financing of the cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP) is hereby approved on behalf of the European Economic Community.

The text of the Protocol is attached to this Decision.

*Article 2*

The President of the Council shall deposit the act of approval provided for in Article 9 of the Protocol.

Done at Luxembourg, 12 June 1986.

*For the Council*

*The President*

P. WINSEMIUS

<sup>(1)</sup> OJ No C 321, 13. 12. 1985, p. 5.

<sup>(2)</sup> OJ No C 88, 14. 4. 1986, p. 109.

<sup>(3)</sup> OJ No L 171, 27. 6. 1981, p. 11.

## PROTOCOL

### to the 1979 Convention on long-range transboundary air pollution on long-term financing of the cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP)

THE CONTRACTING PARTIES,

HAVE AGREED AS FOLLOWS:

Recalling that the Convention on long-range transboundary air pollution (hereinafter referred to as 'the Convention') entered into force on 16 March 1983,

#### *Article 1*

#### Definitions

For the purposes of the present Protocol:

Aware of the importance of the cooperative programme for the monitoring and evaluation of the long-range transmission of air pollutants in Europe (hereinafter referred to as EMEP), as provided for in Articles 9 and 10 of the Convention,

1. 'UN assessment rate' means a Contracting Party's rate for the financial year in question in the scale of assessments for the apportionment of the expenses of the United Nations.

Cognizant of the positive results achieved so far in the implementation of EMEP,

2. 'Financial year' means the financial year of the United Nations; and 'annual basis' and 'annual costs' shall be construed accordingly.

Recognizing that the implementation of EMEP has hitherto been made possible by financial means provided by the United Nations environment programme (UNEP) and by voluntary contributions from governments,

3. 'General Trust Fund' means the General Trust Fund for the financing of the implementation of the Convention on long-range transboundary air pollution, which has been established by the Secretary-General of the United Nations.

Bearing in mind that since the UNEP contribution will continue only until the end of 1984, and that since this contribution together with the voluntary contributions from governments have been inadequate to support fully the EMEP work plan, it will therefore be necessary to provide for long-term funding after 1984,

4. 'Geographical scope of EMEP' means the area within which, coordinated by the international centres of EMEP <sup>(1)</sup>, monitoring is carried out.

#### *Article 2*

#### Financing of EMEP

Considering the appeal of the Economic Commission for Europe to ECE member governments, contained in its decision B (XXXVIII), to make available, on a basis to be agreed at the first meeting of the Executive Body for the Convention (hereinafter referred to as the 'Executive Body'), the financial resources to enable the Executive Body to carry out its activities, in particular as regards the work of EMEP,

The financing of EMEP shall cover the annual costs of the international centres cooperating within EMEP for the activities appearing in the work programme of the Steering Body of EMEP.

#### *Article 3*

#### Contributions

Noting that the Convention does not contain any provisions for financing EMEP and that it is, therefore, necessary to make appropriate arrangements regarding this matter,

1. In accordance with the provisions of this Article the financing of EMEP shall consist of mandatory contributions, supplemented by voluntary contributions.

Considering the elements to guide the drafting of a formal instrument supplementing the Convention, as listed in recommendations adopted by the Executive Body at its first session (7 to 10 June 1983),

<sup>(1)</sup> The international centres are at present: the Chemical Coordinating Centre, the Meteorological Synthesizing Centre-East and the Meteorological Synthesizing Centre-West.

Contributions may be made in convertible currency, non-convertible currency, or in kind.

2. Mandatory contributions shall be made on an annual basis by all Contracting Parties to the present Protocol which are within the geographical scope of EMEP.

3. Voluntary contributions may be made by the Contracting Parties or Signatories to the present Protocol, even if their territory lies outside the geographical scope of EMEP, as well as, subject to approval by the Executive Body, on the recommendation of the Steering Body of EMEP, by any other country, organization or individual which wishes to contribute to the work programme.

4. The annual costs of the work programme shall be covered by the mandatory contributions. Contributions in cash and in kind, such as those provided by host countries for international centres, shall be specified in the work programme. Voluntary contributions may, subject to the approval by the executive Body, on the recommendation of the Steering Body, be utilized either for reducing the mandatory contributions or for financing specific activities within the scope of EMEP.

5. Mandatory and voluntary contributions in cash shall be deposited in the General Trust Fund.

#### Article 4

##### Sharing of costs

1. Mandatory contributions shall be made in accordance with the terms of the Annex to the present Protocol.

2. The Executive Body shall consider the need to amend the Annex:

- (a) if the annual budget of EMEP increases by a factor of two and a half times the level of the annual budget adopted for the year of entry into force of the present Protocol or for the year of last amendment of the Annex, whichever is later; or
- (b) if the Executive Body, on the recommendation of the Steering Body, designates a new international centre; or
- (c) six years after the entry into force of the present Protocol, or six years after the last amendment to the Annex, whichever is later.

3. Amendments to the Annex shall be adopted by consensus of the Executive Body.

#### Article 5

##### Annual budget

An annual budget for EMEP shall be drawn up by the Steering Body of EMEP, and shall be adopted by the Executive Body not later than one year in advance of the financial year to which it applies.

#### Article 6

##### Amendments to the Protocol

1. Any Contracting Party to the present Protocol may propose amendments to it.

2. The text of proposed amendments shall be submitted in writing to the Executive Secretary of the Economic Commission for Europe, who shall communicate them to all Contracting Parties to the Protocol. The Executive Body shall discuss the proposed amendments at its next annual meeting provided that such proposals have been circulated by the Executive Secretary of the Economic Commission for Europe to the Contracting Parties to the Protocol at least 90 days in advance.

3. An amendment to the present Protocol, other than an amendment to its Annex, shall be adopted by consensus of the representatives of the Contracting Parties to the Protocol, and shall enter into force for the Contracting Parties to the Protocol which have accepted it on the 90th day after the date on which two-thirds of those Contracting Parties have deposited with the depositary their instruments of acceptance of the amendment. The amendment shall enter into force for any other Contracting Party on the 90th day after the date on which that Contracting Party deposits its instrument of acceptance of the amendment.

#### Article 7

##### Settlement of disputes

If a dispute arises between two or more Contracting Parties to the present Protocol as to its interpretation or application, they shall seek a solution by negotiation or by any other method of dispute settlement acceptable to the parties to the dispute.

#### Article 8

##### Signature

1. The present Protocol shall be open for signature at the United Nations Office in Geneva from 28 September 1984 until 5 October 1984 inclusive, then at the Headquarters of the United Nations in New York until 4 April 1985, by the member States of the Economic Commission for Europe as well as States having consultative status with the Economic Commission for Europe, pursuant to paragraph 8 of Economic and Social Council resolution 36 (IV) of 28 March 1947, and by regional economic integration

organizations, constituted by sovereign States members of the Economic Commission for Europe, which have competence in respect of the negotiation, conclusion and application of international agreements in matters covered by the present Protocol, provided that the States and organizations concerned are parties to the Convention.

2. In matters within their competence, such regional economic integration organizations shall, on their own behalf, exercise the rights and fulfil the responsibilities which the present Protocol attributes to their member States. In such cases, the member States of these organizations shall not be entitled to exercise such rights individually.

#### *Article 9*

##### **Ratification, acceptance, approval and accession**

1. The present Protocol shall be subject to ratification, acceptance or approval by Signatories.
2. The present Protocol shall be open for accession as from 5 October 1984 by the States and organizations referred to in Article 8, paragraph 1.
3. The instruments of ratification, acceptance, approval or accession shall be deposited with the Secretary-General of the United Nations, who will perform the functions of the depositary.

#### *Article 10*

##### **Entry into force**

1. The present Protocol shall enter into force on the 90th day following the date on which:

(a) instruments of ratification, acceptance, approval or accession have been deposited by at least 19 States and organizations referred to in Article 8 (1) which are within the geographical scope of EMEP; and

(b) the aggregate of the UN assessment rates for such States and organizations exceeds 40 %.

2. For each State and organization referred to in Article 8 (1) which ratifies, accepts or approves the present Protocol or accedes thereto after the requirements for entry into force laid down in paragraph 1 above have been met, the Protocol shall enter into force on the 90th day after the date of deposit by such State or organization of its instrument of ratification, acceptance, approval or accession.

#### *Article 11*

##### **Withdrawal**

1. At any time after five years from the date on which the present Protocol has come into force with respect to a Contracting Party, that Contracting Party may withdraw from it by giving written notification to the depositary. Any such withdrawal shall take effect on the 90th day after the date of its receipt by the depositary.
2. Withdrawal shall not affect the financial obligations of the withdrawing Party until the date on which the withdrawal takes effect.

#### *Article 12*

##### **Authentic texts**

The original of the present Protocol, of which the English, French and Russian texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

In witness whereof the undersigned, being duly authorized thereto, have signed the present Protocol.

Done at Geneva, this twenty-eighth day of September one thousand nine hundred and eighty-four.

## ANNEX

referred to in Article 4 of the Protocol to the 1979 Convention on long-range transboundary air pollution on long-term financing of the cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP) =

Mandatory contributions for sharing of costs for financing the cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP), shall be calculated according to the following scale:

	%
Austria	1,59
Bulgaria	0,35
Belorussian SSR	0,71
Czechoslovakia	1,54
Finland	1,07
German Democratic Republic	2,74
Holy See	0,02
Hungary	0,45
Iceland	0,06
Liechtenstein	0,02
Norway	1,13
Poland	1,42
Portugal	0,30
Romania	0,37
San Marino	0,02
Spain	3,54
Sweden	2,66
Switzerland	2,26
Turkey	0,60
Ukrainian SSR	2,60
USSR	20,78
Yugoslavia	0,60
Member States the European Economic Community:	
Belgium	2,36
Denmark	1,38
France	11,99
Germany, Federal Republic of	15,73
Greece	1,00
Ireland	0,50
Italy	6,89
Luxembourg	0,10
Netherlands	3,28
United Kingdom	8,61
European Economic Community	3,33
Total	100,00

The order in which the Contracting Parties are listed in this Annex is specifically made in relation to the cost-sharing system agreed upon by the Executive Body for the Convention. Accordingly, the listing is a feature which is specific to the Protocol on the financing of EMEP.

## COUNCIL DIRECTIVE

of 12 June 1986

on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture

(86/278/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 100 and 235 thereof,

Having regard to the proposal from the Commission <sup>(1)</sup>,

Having regard to the opinion of the European Parliament <sup>(2)</sup>,

Having regard to the opinion of the Economic and Social Committee <sup>(3)</sup>,

Whereas the aim of this Directive is to regulate the use of sewage sludge in agriculture in such a way as to prevent harmful effects on soil, vegetation, animals and man, while encouraging its correct use;

Whereas the disparity between the Member States' provisions on the agricultural applications of sewage sludge might affect the functioning of the common market; whereas in this field the approximation of laws provided for under Article 100 of the Treaty should therefore be instigated;

Whereas sewage sludge used in agriculture is not covered by Council Directive 75/442/EEC of 15 July 1975 on waste <sup>(4)</sup>;

Whereas the measures for which provision is made in Council Directive 78/319/EEC of 20 March 1978 on toxic and dangerous waste <sup>(5)</sup> also apply to sewage sludge containing or contaminated by substances or materials listed in the Annex to that Directive which are of such a nature or are present in such quantities or concentrations that they represent a hazard to human health or to the environment;

Whereas special arrangements should be made to ensure that man, animals, plants and the environment are fully safeguarded against the harmful effects arising from the uncontrolled use of sludge;

Whereas this Directive also aims at establishing certain initial Community measures in connection with soil protection;

Whereas sludge can have valuable agronomic properties and it is therefore justified to encourage its application in agriculture provided it is used correctly; whereas the use of sewage sludge must not impair the quality of the soil and of agricultural products;

Whereas some heavy metals may be toxic to plants and also to man through their presence in crops and whereas it is necessary to lay down mandatory limit values for these elements in the soil;

Whereas the use of sludge should be prohibited when the concentration of these metals in the soil exceeds these limit values;

Whereas, moreover, it is necessary to prevent these limit values from being exceeded as a result of the use of sludge; whereas, to this end, it is necessary to limit the amount of heavy metals added to cultivated soil either by setting maximum quantities for the amounts of sludge used per annum and ensuring that the limit values for the concentration of heavy metals in the sludge used are not exceeded or by seeking to ensure that limit values for the quantities of heavy metals that can be added to the soil on the basis of a 10-year average are not exceeded;

Whereas sludge must be treated before being used in agriculture; whereas Member States may nevertheless authorize, on certain conditions, the use of untreated sludge, without risk to human or animal health, if it is injected or worked into the soil;

Whereas a certain period must elapse between using the sludge and putting stock out to pasture or harvesting fodder crops or certain crops which are normally in direct contact with the soil and normally consumed raw; whereas the use of sludge on fruit and vegetable crops during the

<sup>(1)</sup> OJ No C 264, 8. 10. 1982, p. 3 and OJ No C 154, 14. 6. 1984, p. 6.

<sup>(2)</sup> OJ No C 77, 19. 3. 1984, p. 136.

<sup>(3)</sup> OJ No C 90, 5. 4. 1983, p. 27.

<sup>(4)</sup> OJ No L 194, 25. 7. 1975, p. 39.

<sup>(5)</sup> OJ No L 84, 31. 3. 1978, p. 43.

growing season, except for fruit-tree crops, must be prohibited;

Whereas sludge should be used under conditions which ensure that the soil and the surface and ground water are protected, in accordance with Directives 75/440/EEC <sup>(1)</sup> and 80/68/EEC <sup>(2)</sup>;

Whereas to this end it is necessary to monitor the quality of sludges and of the soils on which they are used and hence to make analyses and to communicate certain results to the users;

Whereas a certain amount of essential information should be kept to ensure better awareness of the use of sludge in agriculture and whereas such information should be forwarded in the form of periodic reports to the Commission; whereas, in the light of these reports, the Commission will if necessary draw up proposals to ensure greater protection for the soil and the environment;

Whereas sludge from small sewage-treatment plants which treat primarily domestic waste water represents little danger to human, animal and plant health and to the environment and should therefore be exempt from some of the obligations laid down relating to information and analysis;

Whereas Member States should be able to draw up more stringent provisions than those laid down in this Directive; whereas such provisions should be communicated to the Commission;

Whereas technical and scientific progress may make necessary the rapid adaptation of certain of the requirements laid down in this Directive; whereas, in order to facilitate the introduction of the measures required for this purpose, a procedure should be laid down whereby close cooperation could be established between the Member States and the Commission; whereas such cooperation should take place within a Committee on Adaptation to Technical and Scientific Progress;

Whereas the Treaty has not provided the necessary powers, other than those of Article 235,

HAS ADOPTED THIS DIRECTIVE:

#### Article 1

The purpose of this Directive is to regulate the use of sewage sludge in agriculture in such a way as to prevent harmful effects on soil, vegetation, animals and man,

<sup>(1)</sup> OJ No L 194, 25. 7. 1975, p. 26.

<sup>(2)</sup> OJ No L 20, 26. 1. 1980, p. 43.

thereby encouraging the correct use of such sewage sludge.

#### Article 2

For the purposes of this Directive:

(a) 'sludge' means:

- (i) residual sludge from sewage plants treating domestic or urban waste waters and from other sewage plants treating waste waters of a composition similar to domestic and urban waste waters;
- (ii) residual sludge from septic tanks and other similar installations for the treatment of sewage;
- (iii) residual sludge from sewage plants other than those referred to in (i) and (ii);

(b) 'treated sludge' means:

sludge which has undergone biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use;

(c) 'agriculture' means:

the growing of all types of commercial food crops, including for stock-rearing purposes;

(d) 'use' means:

the spreading of sludge on the soil or any other application of sludge on and in the soil.

#### Article 3

1. The sludge referred to in Article 2 (a) (i) may only be used in agriculture in accordance with this Directive.

2. Without prejudice to Directives 75/442/EEC and 78/319/EEC:

- the sludge referred to in Article 2 (a) (ii) may be used in agriculture subject to any conditions that the Member State concerned may deem necessary for the protection of human health and the environment,
- the sludge referred to in Article 2 (a) (iii) may be used in agriculture only if its use is regulated by the Member State concerned.

#### Article 4

Values for concentrations of heavy metals in soil to which sludge is applied, concentrations of heavy metals in sludge



and the maximum annual quantities of such heavy metals which may be introduced into soil intended for agriculture are given in Annexes I A, I B and I C.

#### Article 5

Without prejudice to Article 12:

1. Member States shall prohibit the use of sludge where the concentration of one or more heavy metals in the soil exceeds the limit values which they lay down in accordance with Annex I A and shall take the necessary steps to ensure that those limit values are not exceeded as a result of the use of sludge.
2. Member States shall regulate the use of sludge in such a way that the accumulation of heavy metals in the soil does not lead to the limit values referred to in paragraph 1 being exceeded. To achieve this, they shall apply one or other of the procedures provided for in (a) and (b) below:
  - (a) Member States shall lay down the maximum quantities of sludge expressed in tonnes of dry matter which may be applied to the soil per unit of area per year while observing the limit values for heavy metal concentration in sludge which they lay down in accordance with Annex I B; or
  - (b) Member States shall ensure observance of the limit values for the quantities of metals introduced into the soil per unit of area and unit of time as set out in Annex I C.

#### Article 6

Without prejudice to Article 7:

- (a) sludge shall be treated before being used in agriculture. Member States may nevertheless authorize, under conditions to be laid down by them, the use of untreated sludge if it is injected or worked into the soil;
- (b) sewage-sludge producers shall regularly provide users with all the information referred to in Annex II A.

#### Article 7

Member States shall prohibit the use of sludge or the supply of sludge for use on:

- (a) grassland or forage crops if the grassland is to be grazed or the forage crops to be harvested before a certain period has elapsed. This period, which shall be set by the Member States taking particular account of their

geographical and climatic situation, shall under no circumstances be less than three weeks;

- (b) soil in which fruit and vegetable crops are growing, with the exception of fruit trees;
- (c) ground intended for the cultivation of fruit and vegetable crops which are normally in direct contact with the soil and normally eaten raw, for a period of 10 months preceding the harvest of the crops and during the harvest itself.

#### Article 8

The following rules shall be observed when using sludge:

- the sludge shall be used in such a way that account is taken of the nutrient needs of the plants and that the quality of the soil and of the surface and ground water is not impaired,
- where sludge is used on soils of which the pH is below 6, Member States shall take into account the increased mobility and availability to the crop of heavy metals and shall, if necessary, reduce the limit values they have laid down in accordance with Annex I A.

#### Article 9

Sludge and soil on which it is used shall be analyzed as outlined in Annexes II A and II B.

The reference methods for sampling and analysis are indicated in Annex II C.

#### Article 10

1. Member States shall ensure that up-to-date records are kept, which register:

- (a) the quantities of sludge produced and the quantities supplied for use in agriculture;
- (b) the composition and properties of the sludge in relation to the parameters referred to in Annex II A;
- (c) the type of treatment carried out, as defined in Article 2 (b);
- (d) the names and addresses of the recipients of the sludge and the place where the sludge is to be used.

2. The records shall be available to the competent authorities and shall provide a basis for the consolidated report referred to in Article 17.

3. Information on the methods of treatment and the results of the analyses shall be released upon request to the competent authorities.

*Article 11*

Member States may exempt from Article 6 (b) and Article 10 (1) (b), (c) and (d) and paragraph 2, sludge from sewage treatment plants with a treatment capacity below 300 kg BOD<sub>5</sub> per day, corresponding to 5 000 person equivalents, which are designed primarily for the treatment of domestic waste water.

*Article 12*

Where conditions so demand, Member States may take more stringent measures than those provided for in this Directive.

Any decision of this nature shall be communicated to the Commission in accordance with existing agreements.

*Article 13*

Adaptation to technical and scientific progress, in accordance with the procedure referred to in Article 15, shall cover the provisions of the Annexes to the Directive, except for the parameters and values listed in Annexes I A, I B and I C, any factors likely to affect the evaluation of the values, and the parameters for analysis referred to in Annexes II A and II B.

*Article 14*

1. A committee for adapting this Directive to technical and scientific progress (hereinafter called 'the Committee') is hereby set up. It shall consist of representatives of the Member States with a representative of the Commission as chairman.

2. The Committee shall draw up its own rules of procedure.

*Article 15*

1. Where the procedure laid down in this Article is to be followed, matters shall be referred to the Committee by the chairman, either on his own initiative or at the request of the representative of a Member State.

2. The representative of the Commission shall submit to the Committee a draft of the measures to be adopted. The Committee shall deliver its opinion on the draft within a period to be determined by the chairman according to the urgency of the matter. It shall decide by a majority of 54 votes, the votes of the Member States being weighted as provided for in Article 148 (2) of the Treaty. The chairman shall not vote.

3. (a) The Commission shall adopt the measures envisaged where these are in accordance with the opinion of the Committee.

(b) Where the measures envisaged are not in accordance with the opinion of the Committee or if no opinion has been given, the Commission shall forthwith propose to the Council the measures to be adopted. The Council shall act by a qualified majority.

(c) If, within three months of the proposal being submitted to it, the Council has not acted, the measures proposed shall be adopted by the Commission.

*Article 16*

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive within three years of its notification.

They shall forthwith inform the Commission thereof.

2. Member States shall communicate to the Commission the texts of the provisions of national law which they adopt in the field governed by this Directive.

*Article 17*

Five years after notification of this Directive, and every four years thereafter, Member States shall prepare a consolidated report on the use of sludge in agriculture setting out the quantities used, the criteria followed and any difficulties encountered; they shall forward this report to the Commission, which shall publish the information contained therein. In the light of that report, the Commission shall if necessary submit appropriate proposals for increased protection of the soil and the environment.

*Article 18*

This Directive is addressed to the Member States.

Done at Luxembourg, 12 June 1986.

*For the Council*

*The President*

P. WINSEMIUS

## ANNEX I A

## LIMIT VALUES FOR CONCENTRATIONS OF HEAVY METALS IN SOIL

(mg/kg of dry matter in a representative sample, as defined in Annex II C, of soil with a pH of 6 to 7)

Parameters	Limit values <sup>(1)</sup>
Cadmium	1 to 3
Copper <sup>(2)</sup>	50 to 140
Nickel <sup>(2)</sup>	30 to 75
Lead	50 to 300
Zinc <sup>(2)</sup>	150 to 300
Mercury	1 to 1,5
Chromium <sup>(3)</sup>	—

<sup>(1)</sup> Member States may permit the limit values they fix to be exceeded in the case of the use of sludge on land which at the time of notification of this Directive is dedicated to the disposal of sludge but on which commercial food crops are being grown exclusively for animal consumption. Member States must inform the Commission of the number and type of sites concerned. They must also seek to ensure that there is no resulting hazard to human health or the environment.

<sup>(2)</sup> Member States may permit the limit values they fix to be exceeded in respect of these parameters on soil with a pH consistently higher than 7. The maximum authorized concentrations of these heavy metals must in no case exceed those values by more than 50 %. Member States must also seek to ensure that there is no resulting hazard to human health or the environment and in particular to ground water.

<sup>(3)</sup> It is not possible at this stage to fix limit values for chromium. The Council will fix these limit values later on the basis of proposals to be submitted by the Commission, within one year following notification of this Directive.

## ANNEX I B

## LIMIT VALUES FOR HEAVY-METAL CONCENTRATIONS IN SLUDGE FOR USE IN AGRICULTURE

(mg/kg of dry matter)

Parameters	Limit values
Cadmium	20 to 40
Copper	1 000 to 1 750
Nickel	300 to 400
Lead	750 to 1 200
Zinc	2 500 to 4 000
Mercury	16 to 25
Chromium <sup>(1)</sup>	—

<sup>(1)</sup> It is not possible at this stage to fix limit values for chromium. The Council will fix these limit values later on the basis of proposals to be submitted by the Commission within one year following notification of this Directive.

## ANNEX I C

## LIMIT VALUES FOR AMOUNTS OF HEAVY METALS WHICH MAY BE ADDED ANNUALLY TO AGRICULTURAL LAND, BASED ON A 10-YEAR AVERAGE

(kg/ha/yr)

Parameters	Limit values <sup>(1)</sup>
Cadmium	0,15
Copper	12
Nickel	3
Lead	15
Zinc	30
Mercury	0,1
Chromium <sup>(2)</sup>	—

<sup>(1)</sup> Member States may permit these limit values to be exceeded in the case of the use of sludge on land which at the time of notification of this Directive is dedicated to the disposal of sludge but on which commercial food crops are being grown exclusively for animal consumption. Member States must inform the Commission of the number and type of sites concerned. They must also ensure that there is no resulting hazard to human health or the environment.

<sup>(2)</sup> It is not possible at this stage to fix limit values for chromium. The Council will fix these limit values later on the basis of proposals to be submitted by the Commission within one year following notification of this Directive.

## ANNEX II A

## SLUDGE ANALYSIS

1. As a rule, sludge must be analyzed at least every six months. Where changes occur in the characteristics of the waste water being treated, the frequency of the analyses must be increased. If the results of the analyses do not vary significantly over a full year, the sludge must be analyzed at least every 12 months.
2. In the case of sludge from the treatment plants referred to in Article 11, if a sludge analysis has not been carried out in the 12 months preceding the implementation, in each Member State, of this Directive, an analysis must be carried out within 12 months of such implementation, or, where appropriate, within six months of the decision authorizing the use in agriculture of sludge from such a plant. Member States shall decide on the frequency of further analyses on the basis of the results of the initial analysis, any changes in the nature of treated waste water and any other relevant factors.
3. Subject to the provisions of paragraph 4, analysis should cover the following parameters:
  - dry matter, organic matter,
  - pH,
  - nitrogen and phosphorus,
  - cadmium, copper, nickel, lead, zinc, mercury, chromium.
4. In the case of copper, zinc and chromium, where it has been shown, to the satisfaction of the competent authority of the Member State concerned that they are either not present at all or present only in negligible quantities in the waste water treated by the sewage plant, Member States shall decide on the frequency of the analyses to be carried out.

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*ANNEX II B***SOIL ANALYSIS**

1. Whenever sludge other than sludge from the treatment plants referred to in Article 11 is used, Member States must first ensure that the heavy metal content of the soil does not exceed the limit values laid down in accordance with Annex IA. For this purpose, Member States shall decide what analyses to carry out, taking account of available scientific data on soil characteristics and homogeneity.
2. Member States shall decide on the frequency of further analyses, taking account of the metal content of the soil prior to the use of sludge, the quantity and composition of the sludge used and any other relevant factors.
3. Analysis should cover the following parameters:
  - pH,
  - cadmium, copper, nickel, lead, zinc, mercury and chromium.

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*ANNEX II C***SAMPLING AND ANALYSIS METHODS****1. Soil sampling**

The representative soil samples for analysis should normally be made up by mixing together 25 core samples taken over an area not exceeding 5 hectares which is farmed for the same purpose.

The samples must be taken to a depth of 25 cm unless the depth of the surface soil is less than that value; however, the sampling depth in the latter case must not be less than 10 cm.

**2. Sludge sampling**

Sludge must be sampled after processing, but before delivery to the user, and should be representative of the sludge production.

**3. Methods of analysis**

Analysis for heavy metals must be carried out following strong acid digestion. The reference method of analysis must be that of atomic absorption spectrometry and the limit of detection for each metal should be no greater than 10 % of the appropriate limit value.

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## COUNCIL DIRECTIVE

of 12 June 1986

amending Directive 84/631/EEC on the supervision and control within the European Community of the transfrontier shipment of hazardous waste

(86/279/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 100 and 235 thereof,

Having regard to the proposal from the Commission <sup>(1)</sup>,

Having regard to the opinion of the European Parliament <sup>(2)</sup>,

Having regard to the opinion of the Economic and Social Committee <sup>(3)</sup>,

Whereas the programme of action of the European Communities on the environment, approved by the Council on 22 November 1973 <sup>(4)</sup>, the continuation and implementation of which are the subject of the resolutions of 17 May 1977 <sup>(5)</sup> and 7 February 1983 <sup>(6)</sup>, provides for Community action aimed at controlling the disposal of hazardous wastes;

Whereas, pursuant to Directive 78/319/EEC <sup>(7)</sup>, Member States are required to take the necessary measures to ensure that toxic and dangerous waste is disposed of without endangering human health and without harming the environment;

Whereas for this purpose Directive 84/631/EEC <sup>(8)</sup> organizes the supervision and control within the Community of the transfrontier shipment of hazardous waste;

Whereas, in connection with protecting the environment against dangers arising out of such waste, account must be taken of the risk of pollution occurring outside the Community;

Whereas, therefore, in the case of waste being transferred outside the Community the holder must, when notifying the transfer, furnish satisfactory information in respect of the agreement of the non-member State of destination and

whereas the consignee of the waste must possess adequate technical capacity for the disposal of the waste;

Whereas, moreover, experience has shown that, in the case of waste being transferred outside the Community, it would be more fitting for the right to issue the acknowledgement of receipt of the notification or to raise objections to the transfer to be given to the dispatching Member State; whereas, however, in certain circumstances, the Member State of final transit of the waste should be able to exercise that right;

Whereas, in order to take account of these various requirements, Directive 84/631/EEC should be amended,

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

Articles 3, 4, 5, 7 and 17 of Directive 84/631/EEC are replaced by the following:

*Article 3*

1. Where the holder of the waste intends to ship it or to have it shipped from one Member State to another, to have it routed through one or more Member States, or to ship it to a Member State from a third State or from a Member State to a third State, he shall notify the competent authority of the Member State responsible for issuing the acknowledgement of receipt, with a copy to the competent authorities of the other Member States concerned and, where applicable, to the third State of destination and/or the third State(s) of transit.

2. Notification shall be effected by means of a uniform consignment note, hereinafter referred to as the 'consignment note', to be drawn up in accordance with Article 15 and the contents of which are set out in Annex I.

3. When so notifying the competent authority of the Member State responsible for issuing the acknowledgement of receipt, the holder of the waste shall provide it with satisfactory information on the following in particular:

<sup>(1)</sup> OJ No C 284, 7. 11. 1985, p. 5.

<sup>(2)</sup> OJ No C 36, 17. 2. 1986, p. 197.

<sup>(3)</sup> OJ No C 354, 31. 12. 1985, p. 4.

<sup>(4)</sup> OJ No C 112, 20. 12. 1973, p. 3.

<sup>(5)</sup> OJ No C 139, 13. 6. 1977, p. 3.

<sup>(6)</sup> OJ No C 46, 17. 2. 1983, p. 1.

<sup>(7)</sup> OJ No L 84, 31. 3. 1978, p. 43.

<sup>(8)</sup> OJ No L 326, 13. 12. 1984, p. 31.

- the source and composition of the waste, including the producer's identity, and in the case of waste from various sources, a detailed inventory of the waste and, where such information exists, the identity of the original producers,
- the provision made for routes and insurance against damage to third parties,
- the measures to be taken to ensure safe transport and, in particular, compliance by the carrier with the conditions laid down by the Member States concerned for the exercise of such transport operations,
- the existence of a contractual agreement with the consignee of the waste, who should possess adequate technical capacity for the disposal of the waste in question under conditions presenting no danger to human health or the environment. Where the waste is stored, treated or dumped in a Member State, the consignee must also possess a permit in accordance with Article 9 of Directive 78/319/EEC or Article 6 of Directive 76/403/EEC.

4. In the case of a shipment from a Member State to a third State, the holder of the waste shall obtain the agreement of the third State of destination before embarking upon the notification procedure provided for in paragraph 3. The notification must include satisfactory information on such agreement.

#### Article 4

1. Transfrontier shipment may not be effected before the competent authorities of the Member States referred to in paragraph 2 (a), (b) or (c) have acknowledged receipt of the notification. The acknowledgement shall be entered on the consignment note.

2. Not later than one month after receipt of the notification, the acknowledgement of receipt or any objection raised in accordance with paragraph 3 shall be forwarded to the holder of the waste:

- (a) either by the competent authorities of the Member State of destination; or
- (b) in the case of shipments of waste from a third State in transit through the Community for disposal outside the Community, by the competent authorities of the last Member State through which the shipment is due to pass; or
- (c) in the case of shipments of waste from a Member State for disposal outside the Community in a third

State, by the competent authorities of the Member State of dispatch, except in the case provided for in the last subparagraph of this paragraph

with a copy to the consignee of the waste and to the competent authorities of the other Member States concerned, and where applicable, to the third State of destination and the third State(s) of transit.

Where the waste is disposed of in a third State bordering on the last Member State of transit, the latter shall be entitled to issue the acknowledgement of receipt or to raise any objection in place of the Member State referred to in (c). A Member State of transit intending to exercise the right conferred upon it in this subparagraph shall communicate it to the Commission and other Member States. It may not exercise this right earlier than three months following such communication.

3. Objections must be substantiated on the basis of laws and regulations relating to environmental protection, public policy and public security or health protection which are in conformity with this Directive, with other Community instruments or with international conventions on this subject concluded by the Member State concerned prior to notification of this Directive.

4. Once the competent authorities of the Member State referred to in paragraph 2 are satisfied that the problems giving rise to their objections have been resolved, they shall immediately send an acknowledgement to the holder of the waste with a copy to the consignee of the waste and to the competent authorities of the other Member States concerned, and, where applicable, to the third State of destination and the third State(s) of transit.

5. The acknowledgement forwarded by the competent authorities of the Member State referred to in paragraph 2 to the holder of the waste pursuant to this Article shall not release the producer of such waste or any other person from his obligations under existing national and Community provisions.

6. Without prejudice to paragraphs 1 and 2, the competent authorities of the Member State of dispatch, and those of the Member State or States of transit, if any, shall have 15 days following the notification in which to lay down, if appropriate, conditions in respect of the shipment of waste in their national territory. These conditions, which shall be forwarded to the holder of the waste, with a copy to the competent authorities of the Member States concerned, may not be more stringent than those laid down in respect of similar shipments effected wholly within the Member

State in question and shall take due account of existing agreements. The holder of the waste must comply with these conditions to be able to carry out shipment.

Not later than 20 days after receipt of the notification, the competent authorities of the Member State of dispatch may raise objections on the grounds that the shipment of waste adversely affects the implementation of plans drawn up pursuant to Article 12 of Directive 78/319/EEC or Article 6 of Directive 76/403/EEC or that it conflicts with obligations resulting from international agreements on this subject concluded by it prior to notification of this Directive. Such objections shall be forwarded to the holder of the waste with a copy to the competent authorities of the Member States concerned.

#### Article 5

1. The holder of the waste may use a general notification procedure where waste having the same physical and chemical characteristics is shipped regularly to the same consignee via the same customs office of exit of the Member State of dispatch, via the same customs office of entry of the Member State of destination and, in the case of transit, via the same customs offices of entry and exit of the Member State or States of transit.

2. The competent authorities of the Member State referred to in Article 4 (2) and, where applicable, those of the Member State or States of transit, may make their agreement to the use of this general notification procedure subject to the supply of certain information, such as the exact quantities or periodical lists of waste to be shipped.

3. Under a general notification procedure, a single acknowledgement within the meaning of Article 4 (1) may cover several shipments of waste during a maximum period of one year.

4. General notification shall be by means of the consignment note.

#### Article 7

1. By way of derogation from Article 6 (4), when waste leaves the Community for disposal outside the Community, the customs service in the last Member State through which the shipment passes shall forward a copy of the consignment note to the competent authorities in that Member State, which, in the case referred to in Article 4 (2) (c), shall also forward a copy to the competent authorities in the Member State of

dispatch. These copies shall be kept for at least two years.

2. The holder of the waste shall also declare or certify to the competent authorities of the Member State referred to in Article 4 (2) (b) or (c), not later than six weeks after the waste has left the Community, that the waste has reached its proper destination and shall indicate the last customs post in the Community through which the shipment passed.

#### Article 17

Waste (including in particular waste, scrap, sludge, ash and dust) from non-ferrous metals which is intended for re-use, regeneration or recycling on the basis of a contractual agreement relating to such operations shall be exempt from the provisions of this Directive provided that the following conditions are fulfilled:

- (a) the holder must make a declaration on a uniform document, the contents of which are set out in Annex III and which must accompany the shipment, to the effect that the materials concerned are intended for the operations in question and must forward a copy of this document to the competent authorities of the Member State referred to in Article 4 (2);
- (b) the consignee must declare in that same document, which he shall forward to the competent authorities of the Member State referred to in (a) not more than 15 days after receipt of the materials, that these operations will actually be carried out.

#### Article 2

1. Member States shall bring into force, not later than 1 January 1987, the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith inform the Commission thereof.

2. Member States shall communicate to the Commission the text of the provisions of national law which they adopt in the field governed by this Directive.

#### Article 3

This Directive is addressed to the Member States.

Done at Luxembourg, 12 June 1986.

*For the Council*

*The President*

P. WINSEMIUS



## COUNCIL DIRECTIVE

of 12 June 1986

on limit values and quality objectives for discharges of certain dangerous substances included in List I of the Annex to Directive 76/464/EEC

(86/280/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 100 and 235 thereof,

Having regard to Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community <sup>(1)</sup>, and in particular Article 6 thereof,

Having regard to the proposal from the Commission <sup>(2)</sup>,

Having regard to the opinion of the European Parliament <sup>(3)</sup>,

Having regard to the opinion of the Economic and Social Committee <sup>(4)</sup>,

Whereas, in order to protect the aquatic environment of the Community against pollution by certain dangerous substances, Article 3 of Directive 76/464/EEC introduces a system of prior authorization laying down emission standards for discharges of the substances in List I in the Annex thereto; whereas Article 6 of the said Directive provides that limit values shall be laid down for such emission standards and also quality objectives for the aquatic environment affected by discharges of these substances;

Whereas Member States are required to apply the limit values except in cases where they may employ quality objectives;

Whereas the dangerous substances covered by this Directive have been chosen mainly on the basis of the criteria adopted in Directive 76/464/EEC;

Whereas, since pollution due to the discharge of these substances into the aquatic environment is caused by a large number of industries, it is necessary to lay down specific limit values for discharges according to the type of industry concerned and to lay down quality objectives for the aquatic environment into which these substances are discharged;

Whereas the purpose of the limit values and quality objectives is to eliminate pollution of the various parts of the aquatic environment which might be affected by discharges of these substances;

Whereas such limit values and quality objectives must be laid down for this purpose and not with the intention of establishing rules pertaining to consumer protection or to the marketing of products from the aquatic environment;

Whereas, to enable Member States to demonstrate that the quality objectives are being met, provision should be made for reports to the Commission for each quality objective chosen and applied;

Whereas Member States should seek to ensure that the measures taken pursuant to this Directive do not have the effect of increasing soil or air pollution;

Whereas, moreover, for the purposes of effective implementation of this Directive, provision should be made for the monitoring by the Member States of the aquatic environment affected by discharges of the substances in question; whereas the powers to introduce such monitoring are not provided by Directive 76/464/EEC; whereas, since the specific powers have not been provided for in the Treaty, recourse should be had to Article 235 thereof;

Whereas, in the case of certain significant sources of pollution by these substances other than sources subject to Community limit values or national emission standards, specific programmes should be devised to eliminate the pollution; whereas the necessary powers to that effect have not been provided by Directive 76/464/EEC; whereas, since the specific powers have not been provided for in the EEC Treaty, recourse should be had to Article 235 thereof;

Whereas ground water can be excluded from the scope of this Directive since it is the subject of Directive 80/68/EEC <sup>(5)</sup>;

Whereas, for the purposes of effective implementation of this Directive, it is important that the Commission should forward to the Council, every five years, a comparative assessment of its implementation by the Member States;

(1) OJ No L 129, 18. 5. 1976, p. 23.

(2) OJ No C 70, 18. 3. 1985, p. 15.

(3) OJ No C 120, 20. 5. 1986.

(4) OJ No C 188, 29. 7. 1985, p. 19.

(5) OJ No L 20, 26. 1. 1980, p. 43.

Whereas this Directive will have to be amended and supplemented, on proposals from the Commission, in line with developments in scientific knowledge relating principally to the toxicity, persistence and accumulation of the substances referred to in living organisms and sediments, or in the event of an improvement in the best technical means available; whereas it is necessary, for that purpose, to provide for additions to this Directive, relating to measures in respect of other dangerous substances, and for amendments to the content of the Annexes,

HAS ADOPTED THIS DIRECTIVE:

#### Article 1

##### 1. This Directive:

- lays down, pursuant to Article 6 (1) of Directive 76/464/EEC, limit values for emission standards for the substances referred to in Article 2 (a) in discharges from industrial plants as defined in Article 2 (e) of this Directive,
- lays down, pursuant to Article 6 (2) of Directive 76/464/EEC, quality objectives for the substances referred to in Article 2 (a) of this Directive in the aquatic environment,
- lays down, pursuant to Article 6 (4) of Directive 76/464/EEC, the time limits for compliance with the conditions specified in the authorizations granted by the competent authorities of Member States in respect of existing discharges,
- lays down, pursuant to Article 12 (1) of Directive 76/464/EEC, the reference methods of measurement enabling the content of the substances referred to in Article 2 (a) of this Directive in discharges and in the aquatic environment to be determined,
- establishes, pursuant to Article 6 (3) of Directive 76/464/EEC, a monitoring procedure,
- requires Member States to cooperate with one another in the case of discharges affecting the waters of more than one Member State,
- requires Member States to draw up programmes to avoid or eliminate pollution arising from the sources referred to in Article 5,
- lays down in Annex I a set of general provisions applicable to all the substances referred to in Article 2 (a) and relating, in particular, to limit values for emission standards (heading A), quality objectives (heading B) and reference methods of measurement (heading C),
- lays down in Annex II a set of specific provisions which amplify and supplement those headings in respect of individual substances.

2. This Directive applies to the waters referred to in Article 1 of Directive 76/464/EEC, with the exception of ground water.

#### Article 2

For the purposes of this Directive:

- (a) 'substances' means:
  - those dangerous substances, belonging to the families and groups of substances appearing in List I in the Annex to Directive 76/464/EEC, which are specified in Annex II to this Directive;
- (b) 'limit values' means:
  - the values specified in Annex II, under heading A, in respect of the substances referred to in (a);
- (c) 'quality objectives' means:
  - the requirements specified in Annex II, under heading B, in respect of the substances referred to in (a);
- (d) 'handling of substances' means:
  - any industrial process involving the production, the processing or use of the substances referred to in (a), or any other industrial process in which the presence of such substances is inherent;
- (e) 'industrial plant' means:
  - a plant at which the substances referred to in (a), or any other substances containing them, are handled;
- (f) 'existing plant' means:
  - an industrial plant which is operational at a date 12 months after the date of notification of this Directive or, where applicable, at a date 12 months after the date of notification of any Directive amending it that relates to such plant;
- (g) 'new plant' means:
  - an industrial plant which becomes operational later than 12 months after the date of notification of this Directive or, where applicable, later than 12 months after the date of notification of any Directive amending it that relates to such plant,
  - an existing industrial plant whose capacity for handling the substances is substantially increased later than 12 months after the date of notification of this Directive or, where applicable, later than 12 months after the date of notification of any Directive amending it that relates to such plant.

*Article 3*

1. The limit values, the time limits for compliance therewith and the procedures for monitoring discharges are laid down in the Annexes, under heading A.

2. The limit values shall normally apply at the point where waste waters containing the substances referred to in Article 2 (a) leave the industrial plant.

Should it be considered necessary in the case of certain substances to lay down other points where the limit values shall apply, these points shall be listed in Annex II.

When waste waters containing these substances are treated outside the industrial plant at a treatment plant intended for their removal, the Member State may permit the limit values to be applied at the point where the waste waters leave the treatment plant.

3. The authorizations referred to in Article 3 of Directive 76/464/EEC must contain provisions as stringent as those set out under heading A in the Annexes to this Directive, except where a Member State is complying with Article 6 (3) of Directive 76/464/EEC on the basis of heading B in the Annexes to this Directive.

Authorizations shall be reviewed at least every four years.

4. Without prejudice to their obligations arising from paragraphs 1, 2 and 3 and to Directive 76/464/EEC, Member States may grant authorizations for new plants only if those plants apply the standards corresponding to the best technical means available when that is necessary for the elimination of pollution in accordance with Article 2 of the said Directive or for the prevention of distortions of competition.

Whatever method it adopts, the Member State concerned shall, where for technical reasons the measures envisaged do not correspond to the best technical means available, provide the Commission, before any authorization, with evidence in support of those reasons.

The Commission shall immediately forward such evidence to the other Member States and shall send all Member States a report, at the earliest opportunity, giving its opinion on the derogation referred to in the second subparagraph. If necessary, it shall at the same time submit appropriate proposals to the Council.

5. The reference method of analysis to be used in determining the presence of the substances referred to in Article 2 (a) is given under heading C in Annex II. Other methods may be used provided that the limits of detection,

precision and accuracy of such methods are at least as good as those laid down under heading C in Annex II.

6. Member States shall seek to ensure that the measures taken pursuant to this Directive do not result in an increase in the pollution of other media, notably soil and air, by these substances.

*Article 4*

The Member States concerned shall be responsible for monitoring the aquatic environment affected by discharges from industrial establishments and by other sources of significant discharges.

In the case of discharges affecting the waters of more than one Member State, the Member States concerned shall cooperate with a view to harmonizing monitoring procedures.

*Article 5*

1. As regards substances to which specific reference is made in Annex II, the Member States shall draw up specific programmes to avoid or eliminate pollution from significant sources of these substances (including multiple and diffuse sources) other than sources of discharges subject to Community limit value rules or national emission standards.

2. The programmes shall include the most appropriate measures and techniques for the replacement, retention and/or recycling of the substances referred to in paragraph 1.

3. The specific programmes must be implemented not later than five years after the date of notification of the Directive which relates specifically to the substance concerned.

*Article 6*

1. The Commission shall make a comparative assessment of the implementation of this Directive by Member States on the basis of information supplied to it by them pursuant to Article 13 of Directive 76/464/EEC at its request, which it must submit case by case. The information concerned shall, in particular, comprise:

- details of authorizations laying down emission standards for discharges of the substances,
- the inventory of the substances discharged into the waters referred to in Article 1 (2),
- compliance with either the limit values or the quality objectives set out under headings A and B of Annex II,

- the results of the monitoring referred to in Article 4 of the area of the aquatic environment which is affected by discharges,
- the specific elimination programmes referred to in Article 5.

2. The Commission shall forward the comparative assessment referred to in paragraph 1 to the Council every five years, and for the first time four years after notification of this Directive.

3. Should there be a change in scientific knowledge relating principally to the toxicity, persistence and accumulation of the substances referred to in Article 2 (a) in living organisms and sediments, or in the event of an improvement in the best technical means available, the Commission shall submit appropriate proposals to the Council with the aim of making the limit values and the quality objectives more stringent, if appropriate, or of establishing new limit values and additional quality objectives.

#### *Article 7*

1. Member States shall bring into force the measures necessary to comply with this Directive by 1 January 1988. They shall forthwith inform the Commission thereof.

2. Member States shall communicate to the Commission, immediately after adoption, the texts of the provisions of national law which they adopt in the field governed by this Directive.

#### *Article 8*

This Directive is addressed to the Member States.

Done at Luxembourg, 12 June 1986.

*For the Council*

*The President*

P. WINSEMIUS

## ANNEX I

## GENERAL PROVISIONS

This Annex is divided into three headings which set out the general provisions applicable to all the substances concerned:

- A: limit values for emission standards,
- B: quality objectives,
- C: reference methods of measurement.

The general provisions are amplified and supplemented in Annex II by a series of specific provisions applicable to individual substances.

## HEADING A

**Limit values, dates set for compliance therewith and procedures for monitoring discharges**

1. The limit values and the dates set for compliance therewith are set out in Annex II, under heading A, in respect of the different types of industrial plant concerned.
2. The quantities of substances discharged are expressed in terms of the quantity of substances produced, processed or used by the industrial plant during the same period or, in accordance with Article 6 (1) of Directive 76/464/EEC, of another parameter characteristic of that activity.
3. Limit values for industrial plants which discharge substances referred to in Article 2 (a) and which are not mentioned under heading A in Annex II will, where necessary, be determined by the Council at a later stage. Meanwhile, the Member States will independently set, in accordance with Directive 76/464/EEC, emission standards for discharges of such substances. Such standards must take into account the best technical means available and must not be less stringent than the most nearly comparable limit value set out under heading A in Annex II.

This paragraph will also apply where an industrial plant has activities other than those for which limit values have been set under heading A in Annex II and which are likely to be a source of discharges of the substances referred to in Article 2 (a).

4. Limit values expressed as concentrations which, in principle, must not be exceeded are given in Annex II under heading A, in respect of the industrial plants concerned. In no instance may limit values expressed as maximum concentrations, when they are not the only values applicable, be greater than limit values expressed by weight divided by water requirements per element characteristic of the polluting activity. However, because the concentration of these substances in effluents depends on the volume of water involved, which varies for different processes and plants, the limit values expressed in terms of the weight of the substances discharged in relation to the parameters characteristic of the activity given under heading A in Annex II, must be complied with in all cases.
5. A monitoring procedure must be instituted to check whether the discharges of the substances referred to in Article 2 (a) comply with the emission standards.

This procedure must provide for the taking and analysis of samples and for measurement of the flow of the discharge and the quantity of substances handled or, where appropriate, measurement of the parameters characteristic of the activity causing pollution as listed in Annex II, heading A.

In particular, should the quantity of substances handled be impossible to determine, the monitoring procedure may be based on the quantity of substances that may be used as a function of the production capacity on which the authorization was based.

6. A sample representative of the discharge over a period of 24 hours must be taken. The quantity of substances discharged over one month must be calculated on the basis of the daily quantities of substances discharged.

Annex II may, however, lay down for discharges of certain substances quantitative thresholds below which the Member States may apply a simplified monitoring procedure.

7. The sampling and flow measurement provided for in paragraph 5 shall normally be effected at the points of application of the limit values provided for in Article 3 (2).

However, where necessary to ensure that the measurements comply with the requirements of heading C of the Annexes, a Member State may allow the sampling and flow measurement to be effected at another point before that at which the limit values apply, provided that:

- all waters discharged from the plant that may have been polluted by the substance in question are taken into account by those measurements,
- regular checks show that the measurements are fully representative of the quantities discharged at the points of application of the limit values or are always higher.

#### HEADING B

##### Quality objectives, dates set for compliance therewith and procedure for monitoring compliance with them

1. For those Member States which opt for the exception provided for in Article 6 (3) of Directive 76/464/EEC, the emission standards which they must establish and apply, pursuant to Article 5 of that Directive, will be fixed so that the appropriate quality objective or objectives from those fixed pursuant to paragraphs 2 and 3 below is or are complied with in the area affected by discharges of the substances referred to in Article 2 (a). The competent authority will determine the area affected in each case and will select from the quality objectives fixed pursuant to paragraphs 2 and 3 below the objective or objectives that it deems appropriate having regard to the intended use of the area affected, while taking account of the fact that the purpose of this Directive is to eliminate all pollution.
2. With a view to eliminating pollution, as defined in Directive 76/464/EEC, and pursuant to Article 2 of that Directive, the quality objectives and dates set for compliance therewith are set out under heading B in Annex II.
3. Unless otherwise specified under heading B in Annex II, all the concentrations mentioned as quality objectives refer to the arithmetic mean of the results obtained over a year.
4. Where more than one quality objective is applied to waters within one area, the quality of the water must be sufficient to comply with each of those objectives.
5. For each authorization granted pursuant to this Directive, the competent authority will specify the detailed rules, monitoring procedures and dates for ensuring compliance with the quality objective or objectives concerned.
6. In accordance with Article 6 (3) of Directive 76/464/EEC, the Member States will, for each quality objective chosen and applied, report to the Commission on:
  - the points of discharge and the means of dispersal,
  - the area in which the quality objective is applied,
  - the location of sampling points,
  - the frequency of sampling,
  - the methods of sampling and measurement,
  - the results obtained.
7. Samples must be taken at a point sufficiently close to the discharge point to be representative of the quality of the aquatic environment in the area affected by the discharges, and the frequency of sampling must be sufficient to show any changes in the aquatic environment, having regard in particular to natural variations in hydrological conditions.

## HEADING C

## Reference methods of measurement and limit of detection

1. The definitions given in Council Directive 79/869/EEC of 9 October 1979 concerning the methods of measurement and frequencies of sampling and analysis of surface water intended for the abstraction of drinking water in the Member States <sup>(1)</sup> will apply in the context of this Directive.
2. The reference methods of measurement to be used for determining the concentration of the substances in question and the limit of detection for the environment concerned are set out under heading C in Annex II.
3. The limit of detection, the accuracy and the precision of the method are specified for each substance under heading C in Annex II.
4. Effluent flow measurements must be carried out to an accuracy of  $\pm 20\%$ .

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<sup>(1)</sup> OJ No L 271, 29. 10. 1979, p. 44.

ANNEX II  
SPECIFIC PROVISIONS

1. Relating to carbon tetrachloride
2. Relating to DDT
3. Relating to pentachlorophenol

The numbering of the substances listed in this Annex corresponds to the list of 129 substances contained in the communication from the Commission to the Council of 22 June 1982 <sup>(1)</sup>.

Should substances be included in future in this Annex which are not set out in the abovementioned list, they shall be numbered in chronological order of inclusion beginning with No 130.

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<sup>(1)</sup> OJ No C 176, 14. 7. 1982, p. 3.

I. Specific provisions relating to carbon tetrachloride (No 13) <sup>(1)</sup>

CAS No 56-23-5 <sup>(2)</sup>

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<sup>(1)</sup> Article 5 applies in particular to use of carbon tetrachloride in industrial laundries.

<sup>(2)</sup> CAS (Chemical Abstract Service) number.



## Heading A (13): Limit values for emission standards

Type of industrial plant ( <sup>1</sup> ) ( <sup>2</sup> )	Type of average value	Limit values expressed as ( <sup>3</sup> )		To be complied with as from
		weight	concentration	
1. Carbon tetrachloride production by perchlorination	Monthly	a) process involving washing: 40 g CC1 <sub>4</sub> per tonne of total production capacity of CC1 <sub>4</sub> and perchloroethylene	1,5 mg/l	1. 1. 1988
	Daily	b) process not involving washing: 2,5 g/tonne	1,5 mg/l	
		a) process involving washing: 80 g/tonne	3 mg/l	
	b) process not involving washing: 5 g/tonne	3 mg/l		
2. Production of chloromethanes by methane chlorination (including high-pressure electrolytic chlorine generation) and from methanol	Monthly	10 g CC1 <sub>4</sub> per tonne of total production capacity of chloromethanes	1,5 mg/l	1. 1. 1988
	Daily	20 g/tonne	3 mg/l	
3. Production of chlorofluorocarbons ( <sup>4</sup> )	Monthly	—	—	—
	Daily	—	—	—

(<sup>1</sup>) Among the industrial establishments referred to under heading A, point 3, of Annex I, reference is made in particular to plants using carbon tetrachloride as a solvent.

(<sup>2</sup>) A simplified monitoring procedure may be introduced if annual discharges do not exceed 30 kg a year.

(<sup>3</sup>) In view of the volatility of carbon tetrachloride and in order to ensure compliance with Article 3 (6), where a process involving agitation in the open air of effluent containing carbon tetrachloride is used, the Member States shall require compliance with the limit values upstream of the plant concerned; they shall ensure that all water likely to be polluted is taken fully into account.

(<sup>4</sup>) It is not possible at present to adopt limit values for this sector. The Council is to adopt such limit values at a later date, acting on a Commission proposal.

Heading B (13): Quality objectives (<sup>1</sup>)

Environment	Quality objective	Unit of measurement	To be complied with as from
Inland surface waters	12	µg/l CC1 <sub>4</sub>	1. 1. 1988
Estuary waters			
Internal coastal waters other than estuary waters			
Territorial waters			

(<sup>1</sup>) Without prejudice to Article 6 (3) of Directive 76/464/EEC, where there is no evidence of any problem in meeting and continuously maintaining the quality objective set out above, a simplified monitoring procedure may be introduced.

*Heading C (13): Reference method of measurement*

1. The reference method of measurement to be used for determining the presence of carbon tetrachloride in effluents and water is gas chromatography.

A sensitive detector must be used when concentration levels are below 0,5 mg/l and in this case the determination limit <sup>(1)</sup> is 0,1 µg/l. For concentration levels higher than 0,5 mg/l a determination limit <sup>(1)</sup> of 0,1 mg/l is acceptable.

2. The accuracy and precision of the method must be  $\pm 50\%$  at a concentration which represents twice the value of the determination limit <sup>(1)</sup>.

<sup>(1)</sup> The 'determination limit' <sup>x</sup>g of a given substance is the smallest quantity, quantitatively determinable in a sample on the basis of a given working method, which can still be distinguished from zero.

**II. Specific provisions relating to DDT (No 46) <sup>(1)</sup> <sup>(2)</sup>**

CAS No 50-29-3 <sup>(3)</sup>

**STANDSTILL:** The concentration of DDT in the aquatic environment, sediments and/or molluscs and/or shellfish and/or fish must not increase significantly with time.

<sup>(1)</sup> The sum of the isomers 1,1,1-trichloro-2,2 bis (*p*-chlorophenyl) ethane; 1,1,1-trichloro-2 (*o*-chlorophenyl) -2- (*p*-chlorophenyl) ethane; 1,1,1-dichloro-2,2 bis (*p*-chlorophenyl) ethylene; and 1,1,1-dichloro-2,2 bis (*p*-chlorophenyl) ethane.

<sup>(2)</sup> Article 5 applies to DDT if sources other than those mentioned in this Annex are identified.

<sup>(3)</sup> CAS (Chemical Abstract Service) number.

*Heading A (46): Limit values for emission standards <sup>(1)</sup> <sup>(2)</sup>*

Type of industrial plant <sup>(3)</sup> <sup>(4)</sup>	Type of average value	Limit value expressed as ...		To be complied with as from
		g/tonne of substances produced, handled or used	mg/l of water discharged	
Production of DDT including formulation of DDT on the same site	Monthly	8	0,7	1. 1. 1988
	Daily	16	1,3	1. 1. 1988
	Monthly	4	0,2	1. 1. 1991
	Daily	8	0,4	1. 1. 1991

<sup>(1)</sup> With regard to new plants, the best technical means available must already make it possible to lay down, for DDT, emission standards lower than 1 g/tonne substances produced.

<sup>(2)</sup> On the basis of experience gained in implementing this Directive, the Commission will submit to the Council, pursuant to Article 6 (3) of this Directive, in good time, proposals aimed at fixing more stringent limit values to enter into force by 1994.

<sup>(3)</sup> Among the industrial plants referred to under heading A, point 3, of Annex I, reference is made in particular to plants formulating DDT away from the production site and to the dicofol production industry.

<sup>(4)</sup> A simplified monitoring procedure may be introduced if annual discharges do not exceed 1 kg a year.

*Heading B (46): Quality objectives*

Environment	Quality objective	Unit of measurement	To be complied with as from
Inland surface waters	10 for the isomer para-para-DDT	μg/l	1. 1. 1988
Estuary waters			
Internal coastal waters other than estuary waters	25 for total DDT		
Territorial sea waters			

*Heading C (46): Reference method of measurement*

1. The reference method of measurement to be used for determining DDT in effluents and the aquatic environment is gas chromatography with electron capture detection after extraction by means of an appropriate solvent. The limit of determination <sup>(1)</sup> for total DDT is approximately 4 μg/l for the aquatic environment and 1 μg/l for effluents, depending on the number of extraneous substances present in the sample.
2. The reference method to be used for determining DDT in sediments and organisms is gas chromatography with electron capture detection after appropriate preparation of samples. The limit of determination <sup>(1)</sup> is 1 μg/kg.
3. The accuracy and precision of the method must be ± 50 % at a concentration which represents twice the value of the limit of determination <sup>(1)</sup>.

<sup>(1)</sup> The 'limit of determination' <sup>x</sup>g of a given substance is the smallest quantity, quantitatively determinable in a sample on the basis of a given working method, which can still be distinguished from zero.

III. Specific provisions relating to pentachlorophenol (No 102) <sup>(1)</sup> <sup>(2)</sup>CAS No 87-86-5 <sup>(3)</sup>

STANDSTILL: The concentration of PCP in sediments and/or molluscs and/or shellfish and/or fish must not increase significantly with time.

<sup>(1)</sup> The chemical compound 2,3,4,5,6-Pentachloro-1-hydroxybenzene and its salts.

<sup>(2)</sup> Article 5 applies to pentachlorophenol, and particularly to its use for treating wood.

<sup>(3)</sup> CAS (Chemical Abstract Service) number.

*Heading A (102): Limit values for emission standards*

Type of industrial plant <sup>(1)</sup> <sup>(2)</sup> ...	Type of average value	Limit values expressed as		To be complied with as from
		g/tonne production/utilization capacity ...	mg/l of water discharged	
Production of sodium pentachlorophenate by hydrolysis of hexachlorobenzene	Monthly	25	1	1. 1. 1988
	Daily	50	2	1. 1. 1988

<sup>(1)</sup> Among the industrial plants referred to under heading A, point 3, of Annex I, reference is made in particular to plants producing sodium pentachlorophenate by saponification and to those producing pentachlorophenol by chlorination.

<sup>(2)</sup> A simplified monitoring procedure may be introduced if annual discharges do not exceed 3 kg a year.

*Heading B (102): Quality objectives*

Environment	Quality objective	Unit of measurement	To be complied with as from
Inland surface waters	2	µg/l	1. 1. 1988
Estuary waters			
Internal coastal waters other than estuary waters			
Territorial waters			

*Heading C (102): Reference method of measurement*

1. The reference method of measurement to be used for determining pentachlorophenol in effluents and the aquatic environment is high-pressure liquid chromatography or gas chromatography with electron-capture detection after extraction by means of an appropriate solvent. The limit of determination <sup>(1)</sup> is 2 µg/l for effluents and 0,1 µg/l for the aquatic environment.
2. The reference method to be used for determining pentachlorophenol in sediments and organisms is high-pressure liquid chromatography or gas chromatography with electroncapture detection after appropriate preparation of samples. The limit of determination <sup>(1)</sup> is 1 µg/kg.
3. The accuracy and precision of the method must be ± 50 % at a concentration which represents twice the value of the limit of determination <sup>(1)</sup>.

<sup>(1)</sup> The 'limit of determination' <sup>x</sup>g of a given substance is the smallest quantity, quantitatively determinable in a sample on the basis of a given working method, which can still be distinguished from zero.