

## II

*(Acts whose publication is not obligatory)*

## COUNCIL

## COUNCIL DIRECTIVE

of 21 June 1989

on the reduction of air pollution from existing municipal waste-incineration plants

(89/429/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 130s 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 1973 <sup>(4)</sup>, 1977 <sup>(5)</sup>, 1983 <sup>(6)</sup> and 1987 <sup>(7)</sup> European Community action programmes on the environment stress the importance of the prevention and reduction of air pollution;

Whereas the Council resolution of 19 October 1987 on the action programme on the environment for 1987 to 1992 <sup>(7)</sup> states that it is important for Community action to concentrate, *inter alia*, on implementation of appropriate standards in order to ensure a high level of public health and environmental protection;

Whereas Council Directive 75/442/EEC of 15 July 1975 on waste <sup>(8)</sup> provides that waste must be disposed of without endangering human health and without harming the environment; whereas, to this end, the same Directive stipulates that any installation or undertaking treating waste must obtain a permit from the competent authority relating, *inter alia*, to the precautions to be taken;

Whereas Council Directive 84/360/EEC of 28 June 1984 on the combating of air pollution from industrial plants <sup>(9)</sup> provides that Member States shall apply policies and strategies, including appropriate measures, for the gradual adaptation of existing plants to the best available technology not entailing excessive costs; whereas these provisions apply, *inter alia*, with regard to existing municipal waste-incineration plants;

Whereas Directive 84/360/EEC stipulates that the Council, acting unanimously on a proposal from the Commission, shall, if necessary, fix emission limit values based on the best available technology not entailing excessive costs and suitable measurement techniques and methods;

Whereas incineration of municipal waste gives rise to emissions of substances which can cause air pollution and thereby harm public health and the environment; whereas in some cases this pollution may have transboundary features;

Whereas the techniques for reducing emissions of certain pollutants from municipal waste-incineration plants are well established; whereas they can be implemented in existing incineration plants on a gradual basis bearing in mind the technical features of the plants and the advisability of not entailing excessive costs; whereas they provide a means of attaining concentrations of pollutants in the combustion gases not exceeding certain limit values;

<sup>(1)</sup> OJ No C 75, 23. 3. 1988, p. 8.

<sup>(2)</sup> OJ No C 69, 20. 3. 1989, p. 223.

<sup>(3)</sup> OJ No C 318, 12. 12. 1988, p. 3.

<sup>(4)</sup> OJ No C 112, 20. 12. 1973, p. 1.

<sup>(5)</sup> OJ No C 139, 13. 6. 1977, p. 1.

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

<sup>(7)</sup> OJ No C 328, 7. 12. 1987, p. 1.

<sup>(8)</sup> OJ No L 194, 25. 7. 1975, p. 47.

<sup>(9)</sup> OJ No L 188, 16. 7. 1984, p. 20.

Whereas all the Member States have laws, regulations and administrative provisions concerning the combating of air pollution from stationary plants and whereas several Member States have specific provisions on municipal waste-incineration plants;

Whereas the Community, by fixing emission limit values and other pollution prevention requirements, helps to increase the effectiveness of the action taken by the Member States to combat air pollution from municipal waste-incineration plants;

Whereas, in order rapidly to ensure an effective protection of the environment, appropriate time limits should be laid down for adapting existing incineration plants to the best available technology not entailing excessive costs; whereas it is appropriate that in the end all existing municipal waste-incineration plants should comply with the same conditions as those which apply, according to their respective category, to new plants;

Whereas the requirements to be imposed on existing plants must include the obligation to comply with both the limit values for the emission of the most significant pollutants and appropriate combustion conditions; whereas, in fixing these combustion conditions, account must be taken of any major technical difficulties which might arise; whereas provision must be made for appropriate measurements and verifications at the incineration plants and whereas the public must be informed of the results obtained;

Whereas account should be taken of the problem posed by the emission of dioxins and furans;

Whereas, as well as establishing emission limit values, it is important to encourage the development and dissemination of knowledge and use of clean technology as part of the preventive efforts to combat environmental pollution in the Community especially regarding waste disposal;

Whereas, in accordance with Article 130t of the Treaty, the adoption of such Community provisions does not prevent any Member State from maintaining or introducing more stringent measures for the protection of the environment compatible with the Treaty,

HAS ADOPTED THIS DIRECTIVE:

#### *Article 1*

For the purposes of this Directive:

1. 'Air pollution' shall mean the introduction by man, directly or indirectly, of substances or energy into the air resulting in deleterious effects of such a nature as to endanger human health, harm living resources and

ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment.

2. 'Emission limit value' shall mean the concentration and/or mass of polluting substances which is not to be exceeded in emissions from plants during a specified period.

3. 'Municipal waste' shall mean domestic refuse, as well as commercial or trade refuse and other waste which, because of its nature or composition, is similar to domestic refuse.

4. 'Municipal waste-incineration plant' shall mean any technical equipment used for the treatment of municipal waste by incineration, with or without recovery of the combustion heat generated, but excluding plants used specifically for the incineration of sewage sludge, chemical, toxic and dangerous waste, medical waste from hospitals or other types of special waste, on land or at sea, even if these plants may burn municipal waste as well.

This definition covers the site and the entire installation comprising the incinerator, its waste, fuel and air-supply systems and the devices and systems for checking incineration operations and continuously recording and monitoring incineration conditions.

5. 'Existing municipal waste-incineration plant' shall mean a municipal waste-incineration plant for which the first authorization to operate is granted before 1 December 1990.

6. 'Nominal capacity of the incineration plant' shall mean the sum of the incineration capacities of the furnaces of which the 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.

#### *Article 2*

In accordance with Article 13 of Directive 84/360/EEC, Member States shall take appropriate measures to ensure that the operation of existing municipal waste-incineration plants are subject:

(a) in the case of plants with a nominal capacity equal to or more than 6 tonnes of waste per hour: by 1 December 1996, to the same conditions as those imposed on new incineration plants of the same capacity under the terms of Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste-incineration plants<sup>(1)</sup>, except with regard to the provisions of Article 4, which shall be replaced by those of Article 4 of this Directive;

<sup>(1)</sup> OJ No L 163, 14. 6. 1989, p. 32.

(b) in the case of other plants :

- (i) by 1 December 1995, to the conditions laid down by Articles 3 to 7 of this Directive ;
- (ii) by 1 December 2000, to the same conditions as those imposed on new incineration plants of the same capacity under the terms of Directive 89/369/EEC, except with regard to the provisions of Article 4, which shall be replaced by those of Article 4 of this Directive.

The competent authorities shall see to it that any adaptation of existing plants, as decided upon on the basis of their remaining life span and of the time limits and conditions laid down by this Directive, is carried out as soon as possible.

### Article 3

1. By 1 December 1995, the following emission limit values, standardized at the following conditions: temperature 273 K, pressure 101,3 kPa, 11 % oxygen or 9 % CO<sub>2</sub> and dry gas, shall apply to existing municipal waste incineration plants :

(a) plants whose nominal capacity is less than 6 tonnes of waste per hour but at least one tonne per hour :

— total dust 100 mg/nm<sup>3</sup>;

(b) plants whose nominal capacity is less than one tonne of waste per hour :

— total dust 600 mg/nm<sup>3</sup>.

2. In regard to plants with a capacity of less than one tonne per hour, the emission limit values may refer to an oxygen level of 17 %. In this case, the concentration values may not exceed those laid down in paragraph 1, divided by 2,5.

3. The competent authorities shall lay down emission limit values for pollutants other than those mentioned in paragraph 1 when they consider this to be appropriate because of the composition of the waste to be incinerated and of the characteristics of the incineration plant. For the purposes of laying down these emission limit values, the authorities shall take account of the potential harmful effects of the pollutants in question on human health and the environment and of the best available technology not entailing excessive costs. In particular, the competent authorities may fix emission limit values for dioxins and furans.

### Article 4

1. (a) By 1 December 1996, existing municipal waste-incineration plants with a capacity of a least 6 tonnes per hour must comply with the following combustion conditions: the gases resulting from the combustion of the waste must be raised, after the last injection of combustion air and even under

the most unfavourable conditions, to a temperature of at least 850 °C for at least two seconds in the presence of at least 6 % oxygen. However, in the event of major technical difficulties, the provisions concerning the two-second period shall be implemented at the latest when the furnaces are replaced.

(b) By 1 December 1995, other existing municipal waste-incineration plants must comply with the following combustion conditions: the gases resulting from the combustion of the waste must be raised, after the last injection of combustion air and even under the most unfavourable conditions, to a temperature of at least 850 °C, in the presence of at least 6 % oxygen, for a sufficient period of time to be determined by the competent authorities.

2. Within the time limits laid down in paragraph 1 for each category of plant respectively, all existing municipal waste-incineration plants shall observe a limit value of 100 mg/nm<sup>3</sup> for the carbon monoxide (CO) concentration in the combustion gases while in operation.

This limit value shall be standardized at the following conditions: temperature 273 K, pressure 101,3kPa, 11 % oxygen or 9 % CO<sub>2</sub> and dry gas.

3. Conditions different from those laid down in paragraph 1 may be authorized if appropriate techniques are used in the incineration furnaces or combustion-gas treatment equipment, provided that the levels of polychlorinated dibenzodioxins (PCDDs) and of polychlorinated dibenzofurans (PCDFs) emitted are equivalent to, or lower than, those obtained with the technical conditions laid down in paragraph 1.

Decisions taken under this paragraph shall be communicated to the Commission by the competent authorities designated for this purpose by the Member States.

### Article 5

1. The temperature and oxygen content laid down in Article 4 (1) are minimum values to be observed at all times when the plant is in operation.

2. The carbon monoxide (CO) concentration laid down in Article 4 (2) is :

(a) in the case of plants of a nominal capacity of 6 tonnes per hour or more, the limit value for the hourly average. In addition, at least 90 % of all measurements taken in any 24-hour period must be below 150 mg/nm<sup>3</sup>;

(b) in the case of plants of a nominal capacity of less than 6 tonnes per hour at least 1 tonne per hour, the limit value for the hourly average ;

(c) in the case of plants of a nominal capacity of less than 1 tonne per hour the limit value for the daily average.

The above averages shall be calculated by taking into account only the hours in which the plant is actually in operation, including the start-up and shut-off periods.

3. In the case of dust to be continuously monitored under Article 6:

- (a) none of the moving seven-day averages of the concentration values measured for these substances may exceed the corresponding limit values;
- (b) none of the daily averages of the concentration values measured for these substances may exceed the corresponding limit value by more than 30 %.

For the purposes of calculating the abovementioned average values, only the periods in which the plant is actually in operation shall be taken into account, including the start-up and shut-off periods.

4. In the case of total dust, wherever periodic measurements are required under Article 6, the concentration values measured in accordance with the rules laid down by the competent authorities under Article 6 (3), (4) and (5) must not exceed the limit value.

#### Article 6

1. By 1 December 1995, the following measurements shall be required for the existing plants referred to in Article 2 (b):

- (a) concentrations of certain substances in the combustion gases:
  - (i) concentrations of total dust, CO and oxygen shall be continuously measured and recorded in the case of plants of a nominal capacity of 1 tonne per hour or more;
  - (ii) the following shall be measured periodically:
    - at existing plants with a nominal capacity of less than 1 tonne of waste per hour, the concentration of total dust, oxygen and CO;
- (b) operating parameters:
  - (i) the temperature of the gases in the area where the conditions imposed by Article 4 (1) are satisfied shall be continuously measured and recorded;
  - (ii) the reference time of the combustion gases at the minimum temperature of 850 °C specified in Article 4 (1), under the most unfavourable operating conditions envisaged for the plant, must be the subject of appropriate verifications at least once after any adaptation of the plant and, in any event, before 1 December 1995.

2. The results of the measurements referred to in paragraph 1 shall be standardized at the following conditions:

- temperature 273 K, pressure 101,3 kPa, 11 % oxygen or 9 % CO<sub>2</sub>, dry gas.

Where Article 3 (2) is applied, however, they may be standardized at the following conditions:

- temperature 273 K, pressure 101,3 kPa, 17 % oxygen, dry gas.

3. All the measurement results shall be recorded, processed and presented in an appropriate fashion so that the competent authorities can verify compliance with the conditions laid down, in accordance with procedures to be decided upon by those authorities.

4. The sampling and measurement procedures, methods and equipment used to satisfy the obligations imposed by paragraph 1 and the location of the sampling or measurement points shall require the prior approval of the competent authorities.

5. For the periodic measurements, the competent authorities shall lay down appropriate measurement programmes to ensure that the results are representative of the normal level of emissions of the substances concerned.

The results obtained must be suitable for verifying that the limit values applicable have been observed.

#### Article 7

1. Should the measurements taken show that the limit values laid down in this Directive have been exceeded, the competent authority shall be informed as soon as possible. It shall ensure that the plant concerned does not continue to operate while failing to comply with emission standards and shall take the necessary measures to ensure it is modified or no longer operated.

2. The competent authorities shall lay down the maximum permissible period of any technically unavoidable stoppages of the purification devices during which the concentrations in the discharges into the air of the substances which these devices are intended to reduce exceed the limit values laid down. In case of a breakdown the operator shall reduce or close down operations as soon as practicable and until normal operations can be restored. Under no circumstances may the plant continue to operate more than 16 hours uninterrupted; moreover the cumulative duration over a year of operation in such conditions shall be less than 200 hours.

The dust content of the discharges shall under no circumstances exceed 600 mg/nm<sup>3</sup> during the periods referred to in the preceding subparagraph and all the other conditions, in particular the combustion conditions, shall be complied with.

*Article 8*

In accordance with appropriate procedures and in the form decided upon by the competent authorities, information on the obligations imposed in respect of existing incineration plants pursuant to this Directive and on the results of the controls provided for in Articles 5 and 6 shall be made available to the public, subject to respect of provisions applicable in respect of commercial secrecy.

*Article 9*

Member States shall take the necessary measures to ensure that compliance with the conditions imposed on existing incineration plants pursuant to this Directive is verified by the competent authorities.

*Article 10*

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to

comply with this Directive by 1 December 1990. 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 11*

This Directive is addressed to the Member States.

Done at Luxembourg, 21 June 1989.

*For the Council*

*The President*

C. ARANZADI

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