

**Proposal for a Council Directive on procedure for harmonizing the programmes for the reduction and eventual elimination of pollution caused by waste from the titanium dioxide industry**

*(Submitted by the Commission to the Council on 18 April 1983)*

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,

Having regard to the opinion of the European Parliament,

Having regard to the opinion of the Economic and Social Committee,

Whereas Article 9 of Council Directive 78/176/EEC of 20 February 1978 on waste from the titanium dioxide industry<sup>(1)</sup>, as last amended by Directive 83/29/EEC<sup>(2)</sup>, requires the Member States to draw up programmes for the progressive reduction and eventual elimination of pollution caused by waste from industrial establishments in existence on 20 February 1978;

Whereas these programmes, duly submitted to the Commission, set general interim targets for the reduction of pollution from liquid, solid and gaseous wastes to be achieved by 1 July 1987; whereas the Commission is required to submit proposals for the harmonization of these programmes with regard to the reduction and eventual elimination of this pollution and the improvement of the conditions of competition in the titanium dioxide industry; whereas the Council is required to act on these proposals within six months of the publication of the opinion of the European Parliament and that of the Economic and Social Committee in the *Official Journal of the European Communities*;

Whereas, in order to protect the aquatic environment, dumping of copperas and of insoluble matter should be prohibited and discharges of liquid wastes from the manufacturing processes, and in particular of strong acids, should be reduced in view of their harmful effects;

Whereas, in order to protect the aquatic environment, liquid wastes should be discharged into surface waters only under specified conditions of temperature and neutrality;

Whereas it is necessary to fix, in respect of gaseous discharges from the manufacturing processes,

reference values designed to have a long-term preventive effect with regard to health and environmental protection;

Whereas existing industrial establishments must employ the appropriate systems for treating the wastes in order to attain the requisite levels by the set dates;

Whereas, since installation of the appropriate systems can give rise to delays in the application of the measures to harmonize the programmes, provision must be made for derogation from this Directive in certain cases, subject to the prior agreement of the Commission;

Whereas the provisions of this Directive do not prejudice the obligations placed on Member States by Council Directives 80/68/EEC of 17 December 1979 on the protection of ground water against pollution caused by certain dangerous substances<sup>(3)</sup> and 80/779/EEC of 15 July 1980 on air-quality limit values and guide values for sulphur dioxide and suspended particulates<sup>(4)</sup>;

Whereas, since all the requisite powers have not been provided for by the Treaty, Article 235 of the Treaty should be invoked,

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

This Directive lays down, as required by Article 9 (3) of Directive 78/176/EEC, procedures for harmonizing the programme for the reduction and eventual elimination of pollution from existing industrial establishments and is intended to improve the conditions of competition in the titanium dioxide industry.

*Article 2*

1. For the purposes of this Directive, 'liquid wastes' means:

- in the case of the sulphate process:
  - strong acid arising from the separation phase which follows on from the hydrolysis of the titanium oxide solutions and containing between 20 and 23 % free sulphuric acid and various metallic salts, and

<sup>(1)</sup> OJ No L 54, 25. 2. 1978, p. 19.

<sup>(2)</sup> OJ No L 32, 3. 2. 1983, p. 28.

<sup>(3)</sup> OJ No L 20, 26. 1. 1980, p. 43.

<sup>(4)</sup> OJ No L 229, 30. 8. 1980, p. 30.

- weak acid, at a concentration of between 5 and 7 %, arising from the washing phase which follows on from the separation stage and also the other wash waters, and in particular those associated with the gaseous discharges from the manufacturing processes, including both the sulphate and chloride processes;
  - in the case of the chloride process: free hydrochloric acid.
- 'Reference value' means:
- for liquid wastes:
    - in the case of the sulphate process: the quantity of free acid, in the form of sulphuric acid, arising from the strong acids and/or weak acids containing, whether dissolved or in suspension, salts of metals such as Ti, Fe, Cr, Ni, Zn, Pb, Mn, V, arising from the manufacturing process, with the exception of copperas;
    - in the case of the chloride process: the quantity of free acid in the liquid wastes in the form of hydrochloric acid containing metal chlorides;
  - for SO<sub>x</sub>:
    - in the case of the sulphate process: the quantity of sulphur dioxide, and of sulphur trioxide expressed as SO<sub>2</sub> equivalent, arising from the digestion towers and calcination kilns plus the acid droplets;
  - for chlorine:
    - in the case of the chloride process: the quantity of chlorine arising from the various stages of the manufacturing process.

'Copperas' means:  
crystallized ferrous sulphate (FeSO<sub>4</sub> — 7H<sub>2</sub>O) separated out in solid form from the titanil sulphate solution.

'Insoluble matter' means:  
products which are not broken down by the sulphuric acid during the manufacturing process.

2. Terms defined in Directive 78/176/EEC have the same meaning for the purposes of this Directive.

#### Article 3

1. This Article shall apply to existing industrial establishments employing the sulphate process.
2. Member States shall take the necessary measures, including those relating to the installation

of appropriate waste-treatment systems, to ensure that:

- in respect of estuary waters, coastal waters and the open sea:
    - by 1 July 1987 they prohibit discharges of all forms of copperas and of insoluble matter,
    - by 1 July 1988 they reduce discharges of liquid wastes to the reference value of 1 000 kilograms of free acid per tonne of titanium dioxide produced,
    - by 1 July 1993 they further reduce discharges of liquid wastes by 60 % of the abovementioned reference value;
  - in respect of coastal waters and estuary waters:
    - by 1 July 1988 they prohibit discharges of liquid wastes at above 30 °C.
3. In respect of surface waters, by 1 July 1988, the Member States shall prohibit discharges of liquid wastes at above 30 °C and with a pH value lower than 6,5.
  4. (a) In respect of the atmosphere, Member States shall take the measures necessary to ensure that by 1 July 1988 SO<sub>x</sub> discharges are reduced to the reference value of 30 kilograms per tonne of titanium dioxide produced, as the annual average.
    - (b) The provisions of this Directive shall not prejudice Directive 80/779/EEC.
    - (c) The reference method of measurement for SO<sub>x</sub> emissions is set out in the Annex.

#### Article 4

1. This Article shall apply to existing industrial establishments employing the chloride process.
  2. Member States shall take the necessary measures, including those relating to the installation of appropriate waste treatment systems, to ensure that:
    - in respect of estuary waters, coastal waters and the open sea, by 1 July 1988 discharges of liquid wastes are reduced to the reference value of 200 kilograms of acid per tonne of titanium dioxide produced,
    - in respect of surface waters, by 1 July 1988 they prohibit discharges of liquid wastes with a pH value lower than 6,5.
- They shall prohibit discharges of all solid wastes such as filtrates and metal chlorides into these same waters.

3. In respect of the atmosphere, Member States shall take the measures necessary to ensure that by 1 July 1988 chlorine emissions are reduced to the reference value of six grams per tonne of titanium dioxide produced.

*Article 5*

Member States shall monitor the reference values, reductions and prohibitions specified in Articles 3 and 4, in relation to the actual production of each establishment.

*Article 6*

1. Member States shall take the measures necessary to ensure that:

- wastes subject to a discharge prohibition are stored on land with a view to re-use wherever possible,
- products arising from the treatment of copperas, strong acids, weak acids and any other wastes not subsequently re-used can be stored on land without prejudice to Directive 60/68/EEC.

2. The remaining quantities of the discharges defined in Articles 3 and 4 may be disposed of without pretreatment.

*Article 7*

1. Subject to prior agreement by the Commission, a Member State may depart from the set timetable

should technical problems arise during the application of the appropriate technologies.

2. The Member State concerned shall send to the Commission all the detailed supporting documents which the Commission needs to decide whether the conditions for applying paragraph 1 have been satisfied.

3. Extensions of the period for each category of waste may not exceed 12 months.

*Article 8*

1. Member States shall take the measures necessary to comply with this Directive not later than 1 January 1986. They shall forthwith inform the Commission thereof.

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

*Article 9*

This Directive is addressed to the Member States.

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*ANNEX***Principle of the reference method of measurement for gaseous SO<sub>x</sub> emissions**

For the purposes of calculating the quantities of SO<sub>2</sub>, and of SO<sub>3</sub> and acid droplets expressed as SO<sub>2</sub> equivalent, discharged by specific installations, account must be taken of the volume of gas discharged over the duration of the specific operations in question and of the average SO<sub>2</sub>/SO<sub>3</sub> content measured over the same period. The SO<sub>2</sub>/SO<sub>3</sub> flow rate and content must be determined under the same temperature and humidity conditions.

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