

HELCOM RECOMMENDATION 11/6

Adopted 14 February 1990 having regard to Article 13, Paragraph b) of the Helsinki Convention

BASIC PRINCIPLES IN WASTEWATER MANAGEMENT IN CHEMICAL INDUSTRY

THE COMMISSION,

RECALLING Article 5 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974 (Helsinki Convention), in which the Contracting Parties undertake to counteract the introduction of certain hazardous substances, as specified in Annex I of the Convention, into the Baltic Sea Area,

RECALLING ALSO that according to Article 6 of the Helsinki Convention all appropriate measures to control and strictly limit pollution by noxious substances, listed in Annex II of the Convention, shall be taken, and that according to Annex III of the Convention the pollution load of industrial wastes shall be minimized,

RECALLING FURTHER that the Ministerial Declaration of the ninth Meeting of the Helsinki Commission calls for a considerable reduction of land-based pollution,

RECOGNIZING FURTHER that the chemical industry *) is responsible for an important part of the discharges of hazardous substances into the Baltic Sea,

DESIRING to limit the discharges from this industry with best available technology, **)

DESIRING ALSO to implement the HELCOM Recommendation 9/8 concerning measures aimed at the reduction of discharges from industry,

RECOMMENDS to the Governments of the Contracting Parties that they apply to chemical industries producing wastewater, which is discharged into waters or municipal sewerage systems, the following

general principles

- a) low waste technology should be applied wherever possible;
- b) the chemicals listed in the Appendix 2 which may reach the environment should be substituted by less harmful chemicals or subjected to requirements which will provide at least as good a result from an environmental standpoint;
- c) water management in chemical factories should aim at closed water systems or at high circulating rate in order to avoid wastewater production wherever possible,

principles for wastewater handling

d) wastewaters containing substances listed in the Appendix 2 should before 1995 be separately treated before mixing with diluting waters (cooling water and low polluted wastewater).

Furthermore, the treatment of the hazardous substances should be continuously improved by using best available technology for different streams with regard to the total result;

e) chemical factories producing wastewaters which contain hazardous substances should be equipped with a segregated sewerage system; one drainage system for polluted process water which must enter a suitable central treatment plant before it is mixed with non-polluted water for final discharge, and another drainage system which receives cooling water, non-polluted stormwater and possibly very low polluted wastewater. This should be applied to all plants the construction of which starts after 1990. In existing plants segregating of process water from cooling water should start before the year 2000,

RECOMMENDS ALSO that the Contracting Parties report to the Commission every three years starting in 1994 and that the list of substances (Appendix 2) should be revised by the Technological Committee, when appropriate.

Appendix 1

STANDARD CLASSIFICATION OF CHEMICAL INDUSTRY

MANUFACTURE OF CHEMICALS AND OF CHEMICAL, PETROLEUM, COAL, RUBBER AND PLASTIC PRODUCTS

1. MANUFACTURE OF INDUSTRIAL CHEMICALS

1.1 Manufacture of basic industrial chemicals except fertilizers

Manufacture of inorganic chemicals

Manufacture of ammonia

Manufacture of sulphuric acid

Manufacture of alkalis and chlorine

Manufacture of compressed gases

Manufacture of other inorganic chemicals

Manufacture of organic chemicals

Sulphite spirit distilling

Other manufacture of organic chemicals

1.2 Manufacture of fertilizers and pesticides

Manufacture of pesticides

1.3 Manufacture of synthetic resins, plastic materials and man-made fibres except glass

Manufacture of resins and plastics

Manufacture of man-made fibres Manufacture of rubber materials

2. MANUFACTURE OF OTHER CHEMICAL PRODUCTS

2.1 Manufacture of paints, varnishes and lacquers

2.2 Manufacture of drugs and medicines

2.3 Manufacture of soap and cleaning preparations, perfumes, cosmetics and toilet preparations

2.4 Manufacture of chemical products, not elsewhere classified Manufacture of technochemical products

Manufacture of explosives and pyrotechnics Manufacture of glue and casein Manufacture of candles

Manufacture of printing, writing and other inks Manufacture of matches

Manufacture of other chemical products

3. PETROLEUM REFINERIES

4. MISCELLANEOUS PRODUCTS OF PETROLEUM AND COAL

Manufacture of lubricating oils and greases

Manufacture of roofing felt

Other manufacture of miscellaneous products of petroleum and coal

5. MANUFACTURE OF RUBBER PRODUCTS

Tyre and tube industries

Manufacture of rubber products, not elsewhere classified

6. MANUFACTURE OF PLASTIC PRODUCTS, NOT ELSEWHERE CLASSIFIED

Appendix 2

LIST OF SUBSTANCES REFERRED TO IN ITEM b OF RECOMMENDATION ON BASIC PRINCIPLES IN WASTEWATER MANAGEMENT IN CHEMICAL INDUSTRY

1. organohalogen compounds and substances which may form such compounds in the aquatic environment,
2. organophosphorus compounds,
3. organotin compounds,
4. substances in respect of which it has been proved that they possess carcinogenic or mutagenic properties or effect on capacity for reproduction in or via the aquatic environment,
5. mercury and its compounds,
6. cadmium and its compounds,
7. biocides and their derivatives not appearing in 1 to 6,
8. the following metalloids and metals and their compounds:

zinc	tin
copper	beryllium
nickel	uranium
chromium	vanadium
lead	cobalt
selenium	thallium
arsenic	tellurium
antimony	silver
molybdenum	

*) cf. International Standard Industrial Classification of all Economic Activities, Stat. Papers, Series M, No. 4, Rev. 2. United Nations, New York 1968, (Appendix 1).

**) The term "best available technology" is understood to take into consideration technical and economic feasibility.