

HELCOM RECOMMENDATION 17/8 *)

Adopted 13 March 1996
having regard to Article 13, Paragraph b)
of the Helsinki Convention

REDUCTION OF DISCHARGES FROM THE KRAFT PULP INDUSTRY

THE COMMISSION,

RECALLING that according to Article 6 of the Convention on the Protection of the Marine Environment of the Baltic Sea, 1974 (Helsinki Convention) the Contracting Parties shall take all appropriate measures to control and strictly limit pollution by noxious substances and nutrients,

RECALLING ALSO that Annex II of the Helsinki Convention defines lignin substances contained in industrial waste water as noxious substances to be controlled to minimize land-based pollution of the marine environment,

HAVING REGARD to the Ministerial Declaration of 1988 and to the Baltic Sea Declaration of 1990, calling, *inter alia*, for a substantive reduction of the load of pollutants most harmful to the ecosystem of the Baltic Sea,

RECOGNIZING that the kraft pulp mills are responsible for an important part of the discharges from the pulp and paper industry into the Baltic Sea,

RECOGNIZING the importance of limiting discharges into the Baltic Sea from production of kraft pulp by application of best available technology as defined in HELCOM Recommendation 12/3,

BEING AWARE that "best available technology" for a particular process will change with time in the light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding,

DESIRING to limit discharges from the kraft pulp industry,

DESIRING ALSO more information about the discharges from the kraft pulp industry,

RECOGNIZING the importance of reducing discharges from kraft pulp mills by developing

*) This Recommendation supersedes Recommendation 11/4

- a) process water systems with a high degree of recirculation
- b) more efficient treatment techniques of waste water, including sludge minimization and treatment,

RECOMMENDS that the Governments of the Contracting Parties take measures according to BAT (see Attachment 1) to reduce discharges from the kraft pulp industry,

so that the following annual average discharge limit values^{**}) in kg per tonne of Air Dry Pulp (kg/t ADP) produced are not exceeded from 1 January 2000 for any mill which has started to operate before 1 January 1997,

	COD	AOX	Tot-P	Tot-N
Bleached Pulp	30	0.4	0.04	0.4
Unbleached Pulp	15	-	0.02	0.3

and so that in countries in transition the following annual average discharge limit values in kg per tonne of Air Dry Pulp (kg/t ADP) produced are not exceeded from 1 January 2005 for any mill which has started to operate before 1 January 1997,

from 1 January 2005:

	COD	AOX	Tot-P	Tot-N
Bleached Pulp	35	0.4	0.04	0.4
Unbleached Pulp	20	-	0.02	0.3

and also so that the following annual average discharge limit values in kg per tonne of Air Dry Pulp (kg/t ADP) produced are not exceeded by any mill starting to operate or considerably increasing its capacity (by more than 50%) after 1 January 1997,

	COD	AOX	Tot-P	Tot-N
Bleached Pulp	15	0.2	0.02	0.35
Unbleached Pulp	8	-	0.01	0.25

RECOMMENDS ALSO that molecular chlorine is not used in the bleaching of kraft pulp after 1 January 1997 (2000 for countries in transition),

RECOMMENDS FURTHER that, as a first step, limit values regarding nitrogen should apply to kraft pulp mills located at the coast,

RECOMMENDS FURTHER that the Contracting Parties should report every three years starting in 2000,

DECIDES that according to the development of BAT and especially the substitution of chelating agents, this Recommendation should be reconsidered in 1998.

^{**}) For methods of effluent analysis, see Attachment 2

Attachment 1

BEST AVAILABLE TECHNOLOGY FOR THE KRAFT PULP INDUSTRY, 1995

The Contracting Parties have stressed the importance of limiting discharges into the Baltic Sea from production of kraft pulp by application of Best Available Technology. Best Available Technology for the kraft pulp industry include the following or equally effective measures as important examples:

1. Dry debarking with minor waste water discharges;
2. Closed screening;
3. Stripping of most concentrated condensates and reuse of most condensates in the process;
4. Systems which enable the recovery of almost all spillages;
5. Extended delignification in the digester followed by oxygen delignification;
6. Efficient washing before the pulp leaves the closed part of the process;
7. At least secondary treatment for waste water discharges;
8. Partial closure of the bleach plant. The main part of the discharge from the bleach plant is piped to the recovery system;
9. Use of environmentally sound chemicals in the process, for example use of biodegradable chelating agents wherever possible.

Attachment 2

METHODS OF EFFLUENT ANALYSIS

For the analyses the following methods or methods giving equivalent results should be used:

AOX SCAN-W 9:89 or DIN 38 409, part 14

COD Potassium Dichromate Oxidation
(e.g. ISO 6060, second edition)

Tot-P Determination using sulphuric acid and potassium peroxy-disulphate
(e.g. SS 02 81 02 or SFS 3026)

Tot-N Determination using the Kjeldahl method after reduction with Devarda's alloy
(e.g. ISO/DIS 10048, SS 02 81 01).

All analyses should be made on unsettled, unfiltered samples.

**REPORTING FORMAT FOR HELCOM RECOMMENDATION 17/8 CONCERNING
REDUCTION OF DISCHARGES FROM KRAFT PULP INDUSTRY**

Country _____ **Year** _____

For each kraft pulp mill:

- 1) Name, location and type of production (for example bleached, unbleached) in tonnes/year;
- 2) Internal measures and waste water treatment system applied;
- 3) Annual mean discharges in kg/tonne of ADP for COD, AOX, tot-P and tot-N;
- 4) Annual use of chelating agents in tonnes per year.