

### **HELCOM RECOMMENDATION 17/4 \*)**

Adopted 12 March 1996 having regard to  
Article 13, Paragraph b) of the Helsinki Convention

### **RESTRICTION OF ATMOSPHERIC EMISSIONS AND WASTE WATER DISCHARGES FROM HARD COAL COKERIES**

#### **THE COMMISSION,**

**RECALLING** that according to Article 6 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974 (Helsinki Convention), the Contracting Parties shall take all appropriate measures to control and minimize land-based pollution of the marine environment of the Baltic Sea Area, and in particular to control and strictly limit pollution by noxious substances and materials in accordance with Annex II to the Helsinki Convention,

**RECALLING ALSO** that, *inter alia*, certain metals, cyanides and oil are listed in the said Annex for the purposes of Article 6 of the Convention,

**RECOGNIZING** that hard coal cokeries are notable sources of discharges of ammonia, phenols and cyanides to water and emission of dust to atmosphere,

**RECOGNIZING ALSO** that hard coal cokeries may be notable sources of discharges of polyaromatic hydrocarbons (PAH) to water,

**DESIRING** to limit atmospheric emissions and waste water discharges from hard coal cokeries with best available technology,

**DESIRING ALSO** to improve knowledge on these emissions and discharges,

**RECOMMENDS** that the Governments of the Contracting Parties to the Helsinki Convention as of 1 January 2002, or immediately upon adoption of a new production unit that has been granted a licence after 1 January 1998, take the following measures to reduce atmospheric emissions from hard coal cokeries:

1. dust emissions from hard coal cokeries should be avoided or collected and dedusted before being allowed to enter into the atmosphere;
2. fugitive emissions from hard coal cokeries should be avoided as far as technically feasible, e.g. by enclosing the coke pushing operation besides good operational and housekeeping practices;

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\*) This Recommendation supersedes sub-paragraphs 4.a, 4.b and 4.c of HELCOM Recommendation 11/7

- 3.A low emission coke cooling techniques, preferably dry quenching, should be used. Dust emissions in the waste gas from dry quenching should not exceed 20 mg/m<sup>3</sup> (ndg) for new plants and 50 mg/m<sup>3</sup> (ndg) for existing plants. The total dust emissions from wet quenching may not exceed 50 g per tonne of coke for new plants and 80 g per tonne of coke for existing plants;
- 3.B filling gases from hard coal cokeres are to be conveyed to the crude gas as far as possible. Filling gases which may not be passed on should be burned. The emission of particulate matter in the combustion waste gas should not exceed 25 mg/m<sup>3</sup>;
- 3.C before coke pushing the coke should be fully carbonized. Waste gases from coke oven pushing should be captured and passed through a dust collector. Dust emission after dust filters should not exceed 5 g per tonne of coke;
- 4. the total emissions (including e.g. fugitive emissions from pushing, leaking doors and charging holes and dedusted gas) from all process steps should be measured or estimated and reported,

**RECOMMENDS ALSO** that the Governments of the Contracting Parties to the Helsinki Convention take the following measures to reduce waste water discharges from hard coal cokeres:

- 5. production processes, recovery of by-products (ammonia, etc.), gas cleaning equipment, waste- and stormwater treatment technology and, in particular, recycling of waters should be developed in order to minimize discharges of nitrogen, phenols, cyanide, COD and PAH;
- 6. internal and external measures should be taken to minimize accidental discharges (e.g. installation of sufficient storage capacity for untreated waste water);
- 7. sludges out of biological waste water treatment should be disposed of in the manner causing minimal environmental hazard, e.g. be charged into coke ovens together with the coal;
- 8. specific discharges (g per tonne hard coal) and concentrations in effluent (mg/l) should not, as an annual average for each mill, as of 1 January 2002 or immediately upon adoption of a new production unit that has been granted a licence after 1 January 1998, exceed the following values:

tot-N <sup>(i)</sup>		
COD <sub>Cr</sub> (TOC)	100 (40) g/t	
PAH <sup>(ii)</sup>	0.03 g/t	(or 7 g/t suspendable solids)

as 24h or shorter period limit value (as annual mean value):

NH <sub>4</sub> -N <sub>30</sub>	mg/l	(25 mg/l)
Phenol	0.5 mg/l	(0.3 mg/l)
CN <sub>vol</sub>	0.2 mg/l	(0.1 mg/l)

<sup>(i)</sup> No limit value, but should be measured

<sup>(ii)</sup> Measurement at least six PAHs contained in DIN 38 409-H13-3

- 9. internationally accepted standardized sampling, analysing and quality assurance methods (e.g. CEN-Standards, ISO-Standards, OECD-Guidelines) should be used whenever available, **RECOMMENDS FURTHER** that the Contracting Parties report to the Commission the discharges, atmospheric emissions and the pollution control measures taken every three years starting in 2003,

**DECIDES** that this Recommendation should be reconsidered in 2000 regarding requirements and especially concerning a limit value for tot-N and limit values concerning total dust emission from wet quenching.

**REPORTING FORMAT FOR HELCOM RECOMMENDATION 17/4 CONCERNING RESTRICTION OF ATMOSPHERIC EMISSIONS AND WASTE WATER DISCHARGES FROM HARD COAL COKERIES**

**Country:** \_\_\_\_\_ **Year:** \_\_\_\_\_

**For each plant:**

- a) Name and location of hard coal cokery and its production in tonnes/year;
- b) Waste water treatment systems applied;
- c) Waste water flow in m<sup>3</sup> per tonne hard coal;
- d) Discharges in g per tonne hard coal or mg/l for the following parameters:  
tot-N, N-NH<sub>4</sub><sup>+</sup>, COD<sub>Cr</sub> or TOC, Phenol, CN<sub>vol</sub>, PAH or suspendable solids;
- e) Quenching technique applied;
- f) Status of the cokery as to the paragraphs 2 and 3.A-3.C;
- g) Total atmospheric emissions of dust in g per tonne coke;
- h) Description of disposal of sludge out of biological waste water treatment.