

## **HELCOM RECOMMENDATION 9/5**

Adopted 15 February 1988, having regard to Article 13, Paragraph b) of the Helsinki Convention

### **RECOMMENDATION CONCERNING EXPLORATION AND EXPLOITATION OF THE SEA-BED AND ITS SUBSOIL**

#### **THE COMMISSION,**

**RECALLING** that according to Article 10 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974, (Helsinki Convention) , each Contracting Party shall take all appropriate measures in order to prevent pollution of the marine environment of the Baltic Sea Area resulting from exploration or exploitation of its part of the sea-bed and its subsoil or from any associated activities thereon, and ensure that adequate equipment is at hand to start an immediate abatement of pollution in that area,

**RECALLING ALSO** that offshore exploration for mineral oil or natural gas, and offshore exploitation of fields of mineral oil or natural gas, are activities likely to result in the discharge of oil and noxious substances which cause pollution of the marine environment,

**RECALLING ALSO** that the regulations in Annex IV of the Helsinki Convention apply to fixed or floating platforms,

**RECOGNIZING** the increasing interest for offshore activities within the Baltic Sea Area,

**DESIRING** to prevent pollution from offshore activities by eliminating the associated discharges or reducing them by means of modern treatment technology,

**DESIRING ALSO** to have adequate information on the impact on the Baltic Sea Area of offshore activities,

**RECOMMENDS** to the Governments of the Contracting Parties to the Helsinki Convention that:

- a) The area in which any offshore exploration or exploitation activity is proposed to begin, should be environmentally assessed before the activity is permitted to start. While offshore exploration or exploitation activities are in progress, the sea-bed, water column, and benthos around the site should be monitored as appropriate in view of the environmental conditions of the area concerned (see paragraph a) in the Annex to this Recommendation);
- b) Oil-based drilling muds and cuttings arising from the use of oil-based drilling muds should not be discharged in the Baltic Sea Area but taken ashore for final treatment and/or disposal in an environmentally acceptable way;
- c) The discharge of drilling cuttings arising from the use of water-based drilling muds is not permitted in specifically sensitive parts \*) the Baltic Sea Area. Discharge of such cuttings in other parts of the Baltic Sea Area is permitted provided that:

\*) see definitions of terms in the Annex to this Recommendation

- (i) the mud has been shown to be of low toxicity in accordance with paragraph b) of the Annex to this Recommendation;
  - (ii) none of the substances listed in Annex II to the Convention are deliberately added as a constituent to the mud;
  - (iii) the concentration of Hg and Cd does not exceed 1 mg/kg in the whole mud; and
  - (iv) the mud residues on cuttings are reduced and recycled using the best available solids control technology;
- d) The use of diesel oil-based muds should be prohibited.

However, diesel oil may be added to drilling muds in the following exceptional circumstances and on condition that the mud used is disposed of ashore:

- (i) in work-over operations \*)
  - (ii) in well stimulation and completion techniques \*); and
  - (iii) in emergency drilling operations with water-based muds \*);
- e) The discharge of produced water and displacement water should be prohibited unless the oil content is less than 15 ppm \*).
- The BOD of the produced water should be monitored and the need for treatment to reduce BOD in specifically sensitive areas carefully assessed.
- f) Discharges of all other chemicals or materials should be kept to a minimum. A license should be required for each specific discharge. Licenses should only be issued after an evaluation of the discharge type, the environment around the discharge area, and after toxicity testing where appropriate.
- g) All ship and air traffic to offshore installations should be planned with due regard to animals sensitive to disturbance.

**RECOMMENDS FURTHER** that the Contracting Parties to the Convention should annually exchange information through the Secretariat of the Commission with regard to the location and nature of the offshore activities currently in progress, the nature and size of any discharge, and any toxicity testing that has been carried out and the results obtained.

\*) See definitions of terms in the Annex to this Recommendation.

## ANNEX

- a) The environmental sensitivity of the area around a proposed installation should be assessed with respect to the following:
- (i) the importance of the area for birds and marine mammals;
  - (ii) the importance of the area as fishing or spawning grounds for fish and shellfish, and for aquaculture;
  - (iii) the recreational importance of the area;
  - (iv) the composition of the sediment measured as:  
grain size distribution, dry matter, ignition loss, total hydrocarbon content, and Ba, Cr, Pb, Cu, Hg and Cd content;
  - (v) the abundance and diversity of benthic fauna and the content of selected aliphatic and aromatic hydrocarbons;

Existing data might be accepted, particularly for points i) - iii).

For points iv) and v) it is suggested that sampling is performed at distances of 100, 500 and 1000 m on both sides of the installation in the prevailing current direction and at right angles to this.

For exploration activities, point v) is not required, and point iv) should be carried out before and after the operation.

For exploitation activities, points iv) and v) should be carried out before the operation, at yearly intervals during operation, and after the operation.

These requirements should be regarded as a minimum, and may be enlarged if the nature of the area so requires.

- b) The toxicity of water-based muds should be assessed by testing the effect of the water-soluble fraction of the whole mud prepared by stirring for 20 hours in a closed system, followed by 2 hours rest to allow separation and then sampling from the middle layer, on:
- photosynthesis in a marine algae (e.g. *Skeletonema costatum*),
  - growth of the larvae of a marine bivalve (e.g. *Mytilus edulis*),
  - reproduction of a marine crustacean (e.g. *Acartia tonsa*),
  - egg-larvae test with a marine fish (e.g. *Clupea harengus*).

The EC<sub>50</sub> 96 h for any of these tests should, exceed 10 000 mg/kg.

The following supplementary tests are also recommended:

- Biodegradability test (according to OECD guidelines)
  - Bioaccumulation test (detection of lipophilic substances with a chromatographic method)
- c)
- (i) work-over operations:  
Producing wells sometimes require remedial measures, e.g. additional preparation of the casing or modifications to the lining or casing, for which oils are necessary. These operations do not involve drilling or the production of cuttings.
  - (ii) Well stimulation and completion techniques:  
when a well has been drilled it is necessary to perforate the casing into the reservoir and sometimes to open up fissures within the reservoir. These operations are carried out at pressure and solid-free fuel oils are often necessary.
  - (iii) Emergency drilling operations:  
If stuck pipe conditions occur with water-based muds then diesel oils may be used to free the drill string.
- d) The oil content in discharges should be measured using the IR-technique at the two absorption maxima at approx. 2925 and 2960  $\text{cm}^{-1}$ . Analyses should be made on the non-polar part of the extract.
- e) Below are examples of areas which should be regarded as specifically sensitive parts of the Baltic Sea Area:
- (i) Confined or shallow areas with limited water exchange;
  - (ii) Areas characterized by rare, valuable, or particularly fragile ecosystems.