



IMCO

INTERNATIONAL CONFERENCE ON
MARINE POLLUTION, 1973
Committee III
Agenda item 3

CONSIDERATION OF THE DRAFT TEXT OF ANNEX II OF THE
INTERNATIONAL CONVENTION FOR THE PREVENTION OF
POLLUTION FROM SHIPS, 1973

Report of the Working Group

The Working Group consisting of delegations of Canada, the Arab Republic of Egypt, Federal Republic of Germany, Norway, the United Kingdom, the United States and the Union of Soviet Socialist Republics, under the Chairmanship of Dr. M. Waldichuk (Canada), reviewed Appendix III of Annex II in the light of the discussion of the Committee to establish a Category D for Appendix II.

The Group agreed on the following text for a paragraph (1)(d) of Regulation 3 of Annex II:

"(d) Category D - Noxious liquid substances which if released into the sea from tank cleaning and deballasting operations would present a recognizable hazard to either marine resources or human health or cause minimal harm to amenities or other legitimate uses of the sea and therefore require some attention in operational conditions."

The Group further agreed on the Category D substances and revised a list of substances for Appendix III as attached.

The Group further agreed on the following text for Regulation 5(4):

(4) The discharge into the sea of substances in Category D, as defined in Regulation 3(1)(d) of this Annex, or those provisionally assessed as such, or ballast water, tank washings, or other residues or

mixtures containing such substances shall be prohibited. However, such mixtures may be discharged into the sea when all the following conditions are satisfied:

- (a) the ship is proceeding en route at a speed of at least 7 knots, 4 knots for ships which are not self-propelled;
- (b) such mixtures have been diluted by one part of the substance to at least ten parts washwater;
- (c) the maximum quantity of cargo discharged into the sea from each tank and its associated piping system does not exceed 3 cubic metres or 1/1,000 of the tank capacity in cubic metres, whichever is the greater;*
- (d) the discharge is made as far as practicable from land, but not less than 2 nautical miles.

The Group agreed on a revised new paragraph (1) of Regulation 2 as follows:

"2(1) Regulations 10 and 11 shall not apply for the carriage of Category D substances of Appendix II."

The Group agreed on the following guidelines for categorization of Category D substances for Appendix I:

"Category D

Substances - Practically non-toxic to aquatic life, (as expressed by a hazard rating 1, i.e. a TLm greater than 100 but not greater than 1000 ppm); causing deposits blanketing the seafloor with a high biochemical oxygen demand (BOD); highly hazardous to human health, with an LD₅₀ of less than 5 mg/kg; produce moderate reduction of amenities because of persistency, smell or poisonous or irritant characteristics, possibly interfering with use of beaches; moderately hazardous to human health, with an LD₅₀ of 5 mg/kg or more but not greater than 50 mg/kg and produce slight reduction of amenities;"

* The Working Group did not consider this Regulation really necessary but there was an opinion that this should be included for the sake of consistency.

APPENDIX II

LIST OF NOXIOUS LIQUID SUBSTANCES
CARRIED IN BULK

Substance	UN Number	Pollution Category for operational discharge (see Reg. 3 of Annex II) ✓		Residual concentration (percent by weight, see Regs. 5(1) and 5A(3))	
		I	II	III <u>Outside special areas</u>	IIIa <u>Within special areas</u>
Acetaldehyde	1089		C		
Acetic acid	1842		C		
Acetic anhydride	1715		C		
Acetone	-		D		
Acetone cyanohydrin	1541		A	0.1	0.01
Acetyl chloride	1717		C		
Acrolein	1092		A	0.1	0.01
Acrylic acid	-		(C)		
Acrylonitrile	1093		B		0.1
Adiponitrile	-		D		
Alkyl benzene sulfonate (straight chain)	-		C		
(branched chain)			B		0.1
Allyl alcohol	1098		B		0.1
Allyl chloride	1100		C		
Alum (15% solution)	-		D		
Aminoethylethanolamine (Hydroxyethyl-hylene- diamine)*	-		D		

✓ Brackets in Column II indicate that the Category shown has been provisionally assigned and that further data is needed in order to complete the evaluation of the hazard of the substance concerned.

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

Substance	I	II	III	IIIa
Ammonia (28% aqueous)	1005	B		0.1
iso-Amly acetate	1104	C		
n-Amly acetate	1104	C		
n-Amly alc. sol	-	D		
Anilino	1547	C		
Benzene	1114	C		
Benzyl alcohol	-	D		
Benzyl chloride	1758	B		0.1
n-Butyl acetate	-	D		
sec-Butyl acetate	-	D		
iso-Butyl acrylate	-	D		
n-Butyl acrylate	-	D		
iso-Butyl alcohol	-	D		
Butyl butyrate	-	(B)		(0.1)
Butylene glycol(s)	-	D		
Butyl methacrylate	-	D		
iso-Butyl methacrylate	-	D		
iso-Butyraldehyde	2045	C		
n-Butyraldehyde	1129	B		0.1
Butyric acid	-	B		0.1
Calcium hydroxide (solution)	-	D		
Camphor oil	1130	B		0.1
Carbon disulphide	1131	A	0.01	0.005
Carbon tetrachloride	1846	B		0.1
Caustic potash (Potassium hydroxide)	1814	C		
Chloroacetic acid	1750	C		

Substance	I	II	III	IIIa
Chloroform	1886	B		0.1
Chlorohydrins (crude)*	-	D		
Chloroprene	1991	(C)		
Chlorosulphonic acid	1754	C		
p-Chlorotoluene	-	B		0.1
Citric acid (10%-25%)	-	D		
Creosote	1334	A	0.1	0.01
Cresols	2076	A	0.1	0.01
Cresylic acid	2022	A	0.1	0.01
Crotonaldehyde	1143	B		0.1
Cumene	1918	C		
Cyclo-hexane	1145	C		
Cyclohexanol	-	D		
Cyclohexanone	-	D		
Cyclohexylamine*	-	D		
p-Cymene (iso-Propyltoluene)*	-	D		
Decahydronaphthalene (Decalin)*	-	D		
Decane*	-	D		
Diacetone alcohol*	-	D		
Dibenzyl ether	-	(C)		
Dichlorobenzenes	1591	A	0.1	0.01
Dichloroethyl ether	1916	B		0.1

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

Substance	I	II	III	IIIa
Dichloropropene - Dichloropropane mixture (D.D. Soil fumigant)	2047	B		0.1
Diethyl ether	-	D		
Diethylamine	1154	C		
Diethylbenzene (mixed isomers)	2049	C		
Diethylene triamine	2079	(C)		
Diethylene glycol monoethyl ether	-	C		
Diethylketone (3-Pentanone)	-	D		
Di-iso-butylene*	-	D		
Di-iso-butyl ketone	-	D		
Di-iso-propanolamine	-	C		
Di-iso-propylamine	1158	C		
Di-iso-propyl ether*	-	D		
Dimethylamine (40% aqueous)	1160	C		
Dimethyl formamide (Form-dimethylamido)	-	D		
Dimethyl ethanolamine (2-Dimethylaminoethanol)	2051	(C)		
1, 4-Dioxane	1165	(C)		
Diphenyl/Diphenyloxide mixtures*	-	D		
Dodecylbenzene	-	C		
Epichlorohydrin	2023	B		0.1
2-Ethoxyethyl acetate*	-	D		
Ethyl acetate	-	D		

Substance	I	II	III	IIIa
Ethyl acrylate	-	D		
Ethyl anil ketone	-	(C)		
Ethylbenzene	1175	C		
Ethyl cyclohexane	-	D		
Ethylene chlorohydrin (2-Chloro-ethanol)*	-	D		
Ethylene cyanohydrin*	-	D		
Ethylene diamine	1604	C		
Ethylene dibromide	1605	B		0.1
Ethylene dichloride	1184	B		0.1
Ethylene glycol monethyl ether (Methyl cellosolve)	-	D		
1-Ethylhexyl acrylate*	-	D		
2-Ethylhexyl alcohol	-	C		
Ethyl lactate*	-	D		
2-Ethyl 3-propyl- acrolein	-	(B)		(0.1)
	-	D		
Formaldehyde (37-50% solution)	1198	C		
Formic acid	-	D		
Furfuryl alcohol	-	C		
Heptanoic acid*	-	D		
Hexamethylene diamine	1783	(C)		
Hydrochloric acid	-	D		
Hydrofluoric acid (40% aqueous)	1790	B		0.1
Hydrogen peroxide (greater than 60%)	2015	C		

Substance	I	II	III	IIIa
Isopreno	-	D		
Lactic acid	-	D		
Mesityl oxide	1229	(C)		
Methyl acetate	-	D		
Methyl acrylate	1919	C		
Methylamyl alcohol	-	D		
Methylene chloride	1593	B		0.1
2-Methyl-5-Ethyl- pyridine	-	(B)		(0.1)
Methyl methacrylate	-	D		
2-Methylpentene*	-	D		
alpha-Methylstyrene*	-	D		
Monochlorobenzene	1134	B		0.1
Monoethanolamine	-	D		
Monoisopropanolamine	-	C		
Monomethyl ethanolamine	-	C		5
Mononitrobenzene	-	C		
Mono-iso-propylamine	-	C		
Morpholine*	-	C		
Naphthalene (molten)	1334	A	0.1	0.01
Naphthenic acids	-	(A)	(0.1)	(0.005)
Nitric acid (90%)	2031/2032	C		
2-Nitropropane	-	D		
o-Nitrotoluene	1664	C		

Substance	I	II	III	IIIa
Nonyl alcohol	-	(C)		
Nonyl phenol	-	C		
iso-Octane*	-	D		
n-Octanol	-	C		
Oleum	1831	C		
Oxalic acid (10-25%)	-	D		
Pentachloroethane	1669	B		0.1
iso-Pentane	-	D		
n-Pentane	1265	C		
Perchloroethylene (Tetrachloroethylene)	1897	B		0.1
Phenol	1671	B		
iso-Phorone	-	D		
Phosphoric acid	-	D		
Phosphorus (elemental)	1338	A	0.01	0.005
Phthalic Anhydride (molten)	-	C		
beta-Propiolactone	-	(B)		(0.1)
Propionaldehyde	-	D		
Propionic acid	-	D		
Propionic anhydride	-	D		
n-Propyl acetate	1276	(C)		
n-Propyl alcohol	-	D		
iso-Propylamine	1221	C		
n-Propylamine	1277	C		
iso-Propyl cyclohexane	-	D		

Substance	I	II	III	IIIa
Pyridine	1282	B		0.1
Silicon tetrachloride	-	D		
Sodium dichromate (solution)	-	C		
Sodium hydroxide	1824	C		
Sodium pentachloro- phenate (solution)	-	A	0.1	0.01
Styrene monomer	2055	C		
Sulphuric acid	1830/1831/ 1832	C		
Tallow	-	D		
Tetra ethyl lead	1649	A	0.1	0.01
Tetrahydrofuran	-	D		
Tetrahydro naphthalene	1540	C		
Tetramethylbenzene	-	D		
Tetramethyl lead	1649	A	0.1	0.01
Titanium tetrachloride	-	D		
Toluene	1294	C		
Toluene diisocyanate	2078	(B)		(0.1)
Trichloroethane	-	C		
Trichloroethylene	1710	B D		0.1
Triethanolamine	-			
Triethylamine	1296	C		
Trimethylbenzene	-	(C)		

Substance	I	II	III	IIIa
Tritolyl phosphate (Tricresyl phosphate)	-	(B)		(0.1)
Turpentine (wood)	1299	B		0.1
Vinyl acetate	1301	C		
Vinylidene chloride	1303	(B)		(0.1)
Water				
Xylenes (mixed isomers)	1307	C		

APPENDIX III

LIST OF OTHER LIQUID SUBSTANCES CARRIED IN BULK

Acetonitrile (Methyl cyanide)	Polypropylene glycol
tert-Amyl alcohol	iso-Propyl acetate
n-Butyl alcohol	iso-Propyl alcohol
Butyrolactone	Propylene glycol
Calcium chloride (solution)	Propylene oxide
Castor oil	Propylene tetramer
Citric juices	Propylene trimer
Coconut oil	Sorbitol
Cod liver oil	Sulphur (liquid)
iso-Decyl alcohol	Tridecanol
n-Decyl alcohol	Triethylene glycol
Decyl octyl alcohol	Triethylenetetramine
Dibutyl ether	Trippropylene glycol
Diethanolamine	Water
Diethylene glycol	Wine
Dipentene	
Dipropylene glycol	
Ethyl alcohol	
Ethylene glycol	
Fatty alcohols (C ₁₂ -C ₂₀)	
Glycerine	
n-Heptane	
Heptene (mixed isomers)	
n-Hexane	
Ligroin	
Methyl alcohol	
Methylaryl acetate	
Methyl ethyl ketone (2-butanone)	
Milk	
Molasses	
Olive Oil	