

## Inland Transport Committee

## Working Party on the Transport of Dangerous Goods

## Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)

## Thirty-second session

Geneva, 22-26 January 2018

Item 5 (b) of the provisional agenda

Proposals for amendments to the Regulations annexed to ADN:

Other proposals

**Dangerous goods accepted for carriage – Sludge (MARPOL)****Transmitted by the Government of Germany <sup>1</sup>**

<i>Summary</i>	
<b>Analytic Summary:</b>	There is a need in the seaports for the use of waste reception barges for the disposal of sludge from maritime vessels, in accordance with the MARPOL convention. Sludge indisputably is a dangerous good, for which there is no appropriate entry in Table C.
<b>Action to be taken:</b>	In order to enable legally compliant transports in waste reception barges, Table C of the ADN should be supplemented by a suitable entry. A proposal by the German delegation, which was jointly developed with the German waste management business, is to be referred to the informal working group on substances.
<b>Related documents:</b>	INF.34 to the 26th Session, ECE/TRANS/WP.15/AC.2/54, para. 22 CCNR-ZKR/ADN/WP.15/AC.2/27/INF.12, Section K CCNR-ZKR/ADN/WP.15/AC.2/56, para. 81

**Introduction:**

1. Oily, water containing residues generated from the treatment of fuel of seagoing vessels regularly incur at seaports as a consequence of the MARPOL convention. During the berthing times these residues are collected by special barges for disposal and are delivered to a proper disposal facility. The German fleet of waste collecting vehicles at the

<sup>1</sup> Entsprechend dem Arbeitsprogramm des Binnenverkehrsausschusses für 2016-2017 (ECE/TRANS/2016/28/Add.1 (9.3)).

seaports Hamburg and Bremen is affected with approx. 20 ships; waste reception barges are also deployed in other European seaports.

2. Sludge means the residual waste oil products generated during the normal operation of a ship such as those resulting from the purification of fuel or lubricating oil for main or auxiliary machinery, separated waste oil from oil filtering equipment, waste oil collected in drip trays, and waste hydraulic and lubricating oils.”

3. It has been ascertained, that in Table C there is no appropriate entry for the transport of this oily water containing waste (Sludge, see Annex I MARPOL 73/78, Art. 2 No. 31).

4. The 26th session of the ADN Safety Committee treated this problem as “Classification of wastes” INF. 34, brought forward by the Netherlands on 23.01.2015. Subsequently also the informal working group “substances” dealt with this topic.

5. As a result it has to be stated, that:

(a) Until 2008 ship fuels (heavy fuel oil) under the application of Carriage of Dangerous Substances on the Rhine (ADNR) were not classified as dangerous goods.

(b) As from 2009 oil containing sludge, mixtures of oil, water and sediments (sludge) whose disposal are subject to the European waste legislation were inconsistently transported as: UN 3256 (RESIDUAL OIL), UN 3257 ELEVATED TEMPERATURE LIQUID, N.O.S., UN 3082 ENVIRONMENTAL HAZARDOUS SUBSTANC, LIQUID, N.O.S., UN 3082 ENVIRONMENTAL HAZARDOUS SUBSTANCE; N.O.S. (bilge water), UN 3082 ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (heavy fuel oil), UN 9003 SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C AND NOT MORE THAN 100 °C, which do not belong to another Classes.

(c) The product (sludge) to be transported is clearly not the original product “heavy fuel oil” but a liquid sometimes pasty waste, which typically consists of physically pretreated mineral fuels generated by operating seagoing vessels and sediment fractions as well as a lower content of water

(d) The liquid, oil containing waste to be disposed from ships are instable oil-water-mixtures with very different compositions which are not known to the collector beforehand.

(e) Operational materials and fuel of seagoing ships is bunkered all over the world and in view of the regional characteristics it has different compositions which proportionately are recovered in the sludge.

(f) The quantity of oil determines the hazardous effect;

## I. Proposal

6. The ADN Safety Committee could refer the following amendments to the informal working group “substances” for further discussion. For this advice the Associations of Inland Navigation (EBU, ESO, ERSTU) should be asked to provide as much information as possible known to their members, such as sludge analysis (possibly from the waste disposal process), resources, ships currently in use, etc.

(a) To add a new definition to subsection 1.2.1. ADN:

“Sludge: Residual oil products that occur during normal ship operation, e.g. residues from the treatment of fuels and lubricating oils for the main or auxiliary drive system, separate oil residues from the oil filter systems, oil residues and hydraulic and lubricating oil residues from seagoing vessels collected in special trays, also mixed with water;”

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(b) To modify the definition for “ship borne waste, oily and fatty:” as follows:

To insert after “bilge water”, “sludge”.

(c) To insert in subsection 3.2.3.2 ADN, Table C, the entry quoted on the last page of this document.

(d) It is noted that the transitional provision in Section 1.6.7.4.1. ADN, 2nd sentence, is also applicable to the transport of oil residues sludge (carriage with oil separator vessels < 300 tons deadweight by 31/12/2038, if it has already been carried under an entry included at 31/12/2008 in the list of substances.

## II. Justification

7. The need of carrying oil residues (sludge) as defined by the MARPOL Convention, Annex I, Rule 1, paragraph 31, with special barges is given objectively. To date, however, Table C does not contain a N.O.S. entry for this good matching either by name, description or hazard.

8. In tank vessels, only substances listed in Table C may be carried. Because there is an objective transport requirement depending on the maritime regulations, it is necessary to supplement Table C.

9. The hazards to be expected by the oily aqueous mixture are determined by the share of 5-35 % of oil sludge from the physical treatment of standard ship fuel (heavy fuel oil, English heavy fuel oil, (HFO), or Marine (residual) fuel oil (MFO) US-term Bunker C)) contained therein. To check the mixture before or at the reception for its constituents according to 2.4.3 ADN in practice is not possible because of the short berthing times of seagoing vessels in ports, the missing of actual safety data sheets as well of the homogeneous appearance of the mixture. Due to the predominantly share of heavy oil in the sludge of less than 25 % it is to be expected that this waste consistently has a chronic toxicity 2 or chronic toxicity 3. The relative density of heavy fuel oil containing sediment is not uniformly below 1.0. The characteristics of floaters or sinkers are to be verified case-by-case; it can be assumed that the oil phase of the mixture predominantly will be smaller than 1.0.

9. The proposed entries in column (3a) to (2) of the table correspond to the entries for UN 3082 (heavy fuel oil).

10. The data and knowledge on "sludge" is still too thin to make a final decision. Therefore, further consultation in the informal working group “substances” seems necessary, but this is not possible without further contributions from the shipping industry and technical/environmental specialized authorities.

11. The proposal for a new entry in Table C is therefore very conservative.

12. Proposal for Table C:

(1)	(2)	(3a)	(3c)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sludge)	9	M6	III	9 + CMR (N1, N2, F oder S)	N	2	3		10	97		3	ja			nein	PP	0	

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