

Economic and Social Council

Inland Transport Committee

15 January 2024

Working Party on the Transport of Dangerous Goods

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

Forty-third session

Geneva, 22-26 January 2024

Item 6 of the provisional agenda

Reports of informal working groups

Correspondence group on fumigated cargo

Report on a face-to-face meeting

Submitted by the Government of Germany on behalf of the Chair of the correspondence group

Summary

Related documents: ECE/TRANS/WP.15/AC.2/2023/39
CCNR-ZKR/ADN/WP.15/AC.2/2023/39
ECE/TRANS/WP.15/AC.2/86, para. 73

Introduction

1. Based on the mandate given by the ADN Safety Committee at its forty-second session, the group continued its work, also taking into account the comments made at that session.
2. The group initially corresponded by email, based on proposals for amendments that had been considered immediately after the session of the ADN Safety Committee in informal discussions between the delegates present and supplemented by additional written comments from some delegates.
3. The outcome of these consultations was discussed at a face-to-face meeting of the working group held at the Federal Ministry for Digital and Transport in Bonn, Germany, on 5 and 6 December 2023. Individual participants joined the meeting by video. The meeting was attended by delegates from Belgium, Germany, the Netherlands, EBU/ESU and GAFTA/UNISTOCK/COCERAL.

I. Preliminary deliberations

4. The Chair began the meeting by summarizing the work of the working group to date and recalled the incidents known so far involving inland navigation vessels carrying grain products in a fumigated state. Another incident occurred at the end of November during transshipment of a freight train to two inland navigation vessels in a German Rhine port.
5. Experts from the relevant agricultural sector provided the working group with some additional information on the handling and carriage of grain.

6. Based on this information, the working group came to the conclusion that
- (a) the following scenarios should be considered in more detail:
 - (i) loading or unloading of a vessel at a shore-side silo;
 - (ii) loading of an inland navigation vessel directly from a seagoing vessel;
 - (iii) loading of an inland navigation vessel from a floating storage unit that was loaded from a seagoing vessel;
 - (iv) transshipment from one inland navigation vessel to another inland navigation vessel;
 - (v) loading of an inland navigation vessel from a freight train;
 - (vi) unloading of an inland navigation vessel to a road vehicle;

Serious incidents have so far been reported in transshipment operations according to (ii) and (v) as well as prior to the unloading of an inland navigation vessel in a Danube port;

(b) it should be assumed that fumigants are used at most stages of the supply chain for grain, whether for food production or feedstuffs, in order to deliver the goods to the consignee free of pest in accordance with the contract;

(c) the described cases can be considered the 'tip of the iceberg';

(d) due to the improper application of fumigants and, in particular on the Danube, loaded vessels being berthed for a long time, it is often to be expected that a fumigant is still active during the voyage;

(e) in comparison with carriage by rail or road, a basic difference in the risk situation consists in the fact that on inland navigation vessels several persons are in the immediate vicinity of a fumigated cargo for a longer period of time (24 hours a day) and that, unlike drivers of a train or a road vehicle, the crew of an inland navigation vessel is exposed to the spread of gas clouds during the voyage, as the cargo holds are located in front of the wheelhouse and the living quarters;

(f) there is currently no other international code that offers adequate protection of the vessel's crew or provides for obligations to provide information on the fumigated state of a cargo.

7. Experts of the German delegation informed the group on reliable protocols and modes of operation in land-based silos, in particular initial inspections of the delivered grain or measures to protect the stored products without the use of fumigants with which it can be ensured that only cargo cleared by ways of a clearance measurement is loaded onto inland navigation vessels. However, it was also noted that these high-quality modes of operation cannot be expected as standard in all Contracting Parties to ADN, so that international regulations seem sensible in this context.

8. The German delegation also pointed out that in Germany many smaller agricultural trade businesses would be affected by new provisions.

II. Discussion of proposed amendments for ADN 2027

9. The group could not conceive of another possibility outside of ADN to achieve the desired protection of the vessel's crew in an appropriate way. There was agreement that a new entry in Table A must be created, i.e. a new dangerous good has to be defined to allow for the formulation of conditions of carriage in the Regulations annexed to ADN. The allocation of responsibilities within the transport chain then has to be based on the existing distribution of roles among the parties involved in the carriage of dangerous goods.

10. The working group discussed the following proposed amendments in detail:

(a) Section 1.2.1 – Definitions

Current proposal

- In section 1.2.1, insert the following new definition:

"*Fumigated cargo* means a cargo carried in bulk (such as grain, feed, wood) which prior to carriage on inland waterways was treated specifically by the application of biocidal products and/or plant protection products to control target insect pests in the product and its enclosure."

Considerations

- The addition of "non-dangerous goods cargo" was confirmed to clarify that fumigated goods that are classified as dangerous goods themselves are fully subject to the provisions of ADN.
- It cannot be reliably stated that fumigated goods are completely free of fumigant residues after a defined period of time. In particular changing weather conditions (temperature, humidity) can have an impact on the activity of fumigant residues.
- The term "and/or plant protection products" should be deleted. It was pointed out that all products are summarised under the umbrella term "biocides". (f.e. MSC.1/Circ.1264 - RECOMMENDATIONS ON THE SAFE USE OF PESTICIDES IN SHIPS APPLICABLE TO THE FUMIGATION OF CARGO HOLDS)
- The GAFTA representative offered to submit a definition of "fumigant" common in the agricultural sector.

Revised proposal

- In section 1.2.1, insert the following new definition:

"*Fumigated cargo* means a non-dangerous goods cargo carried in bulk (such as grain, feed, wood) which prior to carriage on inland waterways was treated specifically by the application of fumigants to control target insect pests in the product and its enclosure. [A fumigant is]".

(b) Section 3.2.1 –Table A

Current proposal

- In Table A, insert a new entry after ID No. 9006 as included in the annex to this document.

Considerations

- The present proposal was examined and confirmed.

Revised proposal

- Unchanged.

(c) Section 3.2.2 –Table B

Current proposal

In 3.2.2 – Table B, insert the following entry in alphabetical order:

Name and description	ID No. UN No.	Class	Remarks
FUMIGATED CARGO	9007	9	Only accepted for carriage in accordance with SP 804

Considerations

- The present proposal was examined and confirmed.

Revised proposal

- Unchanged.

(d) Sub-section 2.2.9.2 Class 9 – Substances and articles not accepted for carriageCurrent proposal

- In 2.2.9.2, add the following indent:
"- Fumigated cargo, as defined in 1.2.1, assigned to Identification No. 9007 which does not meet the conditions of special provision 804."

Considerations

- The present proposal was examined and confirmed.

Revised proposal

- Unchanged.

(e) Chapter 3.3 – Special provisions applicable to certain articles or substancesCurrent proposal

- In Chapter 3.3, add the following new special provision at the end:
"804 FUMIGATED CARGO, as defined in 1.2.1, is not subject to other provisions of ADN than the following. The carriage of FUMIGATED CARGO is forbidden if the below mentioned provisions are not met."

Considerations

- The present proposal was examined and confirmed.
- The group agreed that the assignment of a cargo to the entry of the new identification number 9007 must be the responsibility of the consignor within the meaning of the definition in 1.2.1 of ADN. In future, partners named differently in commercial law contracts would also have to be identified as "consignors" within the meaning of ADN.

Revised proposal

- Unchanged.

Current proposal

- (a) The consignor according with 1.2.1 ADN must ensure that residues of [tablets or sachets], if used for fumigation, are removed from lots intended for loading and disposed of properly.

Considerations

- On the one hand, the group recognized that it might prove difficult to remove incompletely dissolved tablets and that the disposal of sachets as waste also posed a challenge.
- On the other hand, the group considered the removal of residues to be the first essential measure to prevent incidents on an inland navigation vessel. The requirement of removing residues might preclude the use of certain forms of application where removal is not possible.
- An editorial amendment of the list of forms of applications was supported.
- The group was of the opinion that the consignor did not necessarily have to fulfil this task with its own personnel but could commission a third party at the place

where the vessel is loaded with this task, for example the filler. In this case, the provision in paragraph 1.4.2.1.3 of ADN is to be applicable.

Revised proposal

- (i) The consignor according with 1.2.1 ADN must ensure that all residues of fumigants, i.e. tablets, sleeves or sachets, if used, are removed from lots intended for loading into the vessel and disposed of properly.

Current proposal

- (b) Immediately [before] [after] filling the fumigated cargo into the cargo holds of the vessel, the remaining concentration of the following toxic gases and vapours resulting from fumigants [in the surrounding air] shall be below the following values:

Phosphine	[0.1 ppm]
Sulfuryl Fluoride	[10.0 mg/m ³]
Methyl Bromide*	[1 ppm]

* banned by European Union (EU) law for use in those Contracting Parties that are Members of the European Union.

Considerations

- It was confirmed that the three agents mentioned are the only ones reasonably used for pest control in agricultural bulk cargoes.
- No agreement was found, if the fumigant Hydrogen Cyanide is allowed for fumigation of food and feed ore only for use in empty rooms, holds, silos for example.
- With regard to Phosphine it was explained that the TLV of 0.1ppm is thought for 8h/day, 40h/week. For 24h the value was calculated to 0.03ppm (0.1/3). Due the low LOD of 0.01ppm for phosphine the "TLV" for bystanders and unexpected areas (outside the danger zone) was set to 0.01ppm. This value is legitimized by EU biocide/plant protection law.
- Due EU law for Sulfuryl Fluoride value is set to 3ppm. The correspondence group considered to choose the lowest national value among ADN Contracting parties. A low value was brought forward by the representative of the Netherlands
- The carriage of goods treated with other fumigants not contained in the table is not to be permitted under any circumstances.
- The threshold values should be based on the maximum exposure over 24 hours, as the vessel's crew is in the vicinity of the cargo around the clock.
- For methyl bromide, which might still be used in Contracting Parties to ADN that are not members of the European Union, the threshold value last used before the ban in the Netherlands is to be adopted.
- The threshold values are to apply to the surrounding air and not to the bulk cargo itself, as the objective is to protect persons exposed to the surrounding air.

Revised proposal

- (ii) Immediately before or during filling as well as immediately after filling the fumigated cargo into the cargo holds of the vessel, the remaining concentration of the following toxic gases and vapours resulting from fumigants [in the surrounding air] shall be below the following values:

Phosphine	0.01 ppm
Sulfuryl fluoride	0.1 ppm
Methyl bromide*	0.25 ppm

* banned by European Union (EU) law for use in those Contracting Parties that are Members of the European Union.

Current proposal

- (c) The filler according 1.2.1 of ADN has to ensure that a clearance measurement has been done and that the abovementioned thresholds are complied. [The information shall be kept on board during the journey.]

Considerations

- The obligation to perform measurements is retained. It is assumed that transshipment or silo operations employ suitably qualified expert personnel simply for reasons of general occupational safety.
- It is regarded as a very important element that the master be informed of the measurement results. This information is to be carried on board in text form.
- Naming specific measurement standards is not considered necessary as there is an international state of the art for this.
- Where the measurements yield values above the aforementioned threshold values, the inland navigation vessel is not to commence its journey.

Revised proposal

- (iii) The filler according with 1.2.1 of ADN has to ensure that a clearance measurement has been performed and that the abovementioned thresholds are complied with. The information shall be kept on board in text form during the journey.

Current proposal

- [(x) For the carriage of previously "Fumigated cargo, "UN No 9007", a fumigation measuring device of the previously used fumigant is prescribed/recommended for the crew. This may also be provided in the form of a toximeter.]

Considerations

- The group did not want to lay down an explicit obligation to use such warning devices, as this can already be required based on occupational health and safety regulations for the crew members.
- The inclusion of a 'recommendation' in the Regulations annexed to ADN is unprecedented; the intention is not to set a precedent for this variant.

Revised proposal

- No provision on the use of personal warning devices is proposed.

11. Due to a lack of time, it was not possible to address the other elements.

III. Next steps

12. The working group considers the provisions above to be appropriate and necessary to prevent serious incidents in the future and achieve a good protection of vessels' crews, i.e. 'safe carriage'. In a second step, these proposals (if they are approved by the Safety Committee) are to be reviewed to determine whether they are proportionate to not excessively hinder international transport operations and maintain international trade in agricultural products. (cf. preamble to the ADN Agreement)

13. The working group asks the Safety Committee to examine the above interim results and confirm them or provide the group with guidance on revising them.
14. The work is to be continued in the form of an informal working group with face-to-face meetings or hybrid meetings. A further meeting has been agreed for Tuesday, 12, and Wednesday, 13 March 2024. It is to be held in Bonn, Germany, again.
15. The working group would like to invite further delegations to participate. In particular, the group asks all delegations of the Contracting Parties to communicate to it in good time before the next meeting the threshold values applicable in the territories of the Contracting Parties for a 24-hour-exposure of the three mentioned fumigants.
16. The Chair offered to try to arrange a visit to a transshipment site for agricultural products near Bonn.

Annex

Draft new entry in Table A:

UN No. or ID No.	Name and description	Class	Classi- fication Code	Packing group	Labels	Special provis- ions	Limited and excepted quantities		Carriage permitted	Equipment required	Vent- lation	Provisions concerning loading, unloading and carriage	Number of blue cones/ lights	Remarks
							3.4	3.5.1.2						
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)
9007	FUMIGATED CARGO	9	M11			804		E0	B					