



Facilitation of shipments of class 7 radioactive materials

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Abstract

This paper focuses on the reasons for the denials and delays of shipments of class 7 radioactive materials (RAM), the importance in facilitating the transport of such shipments and IMO's response to the issue.

A Member-State's concerns on difficulties encountered in the shipment of radioactive material led the Facilitation Committee and the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers to consider the issue as deserving in-depth consideration, establish its humanitarian dimension and work on initiatives to alleviate such difficulties in a manner acceptable to all parties involved in the process.

Reasons for the refusals/denials of shipments of radioactive materials include apprehensions/negative perceptions on the part of ports and public authorities on radiation and the lack of awareness about the need to use radioactive material. Experts have attributed these difficulties to carrier radiation protection programmes designed for the carriage of class 7 cargoes, the prohibitions on docking for ships when carrying such cargoes and the high insurance and commercial costs involved in the carriage of such materials. Nevertheless, relevant surveys conducted by the industry revealed that no policies are in place to refuse the transport of materials under discussion.

Following a series of proposals and meetings, the Organization aimed at the development of a joint communication strategy across the IMO, the IAEA and the WHO underlining the benefits of the use of Cobalt-60 and highlighting that its shipment can be carried out safely based on compliance with relevant provisions. Assembly Resolution A984(24) sets up an Ad hoc Mechanism on the establishment of a contact point at the Secretariat aiming towards facilitation of the carriage of class 7 RAM which involves submissions of reports by Member States and industry stating reasons of difficulties/refusals of class 7 RAM as a means to evaluate these and determine actions required towards resolution of the issue. In addition, a range of information campaigns, training and awareness programmes have been designed for the above purpose (i.e provision for additional information by means of an entry in the Dangerous Goods Transport Document and / or Dangerous Goods Manifest).

Significant developments have also occurred in the Small Island Development States which favour dialogue under the aegis of IAEA and IMO in order to improve understanding in relation to safe transport of RAM.

Facilitation of shipments of class 7 radioactive materials

This paper focuses on the reasons for the denials and delays of shipments of class 7 radioactive materials (RAM), the importance of facilitating the transport of such shipments and IMO's response to the issue.

The issue of the transport of class 7 radioactive materials was raised by several delegations during the 31st Session of the Facilitation Committee in 2004. During the session there was concern expressed that the number of commercial carriers, ports and handling facilities not accepting radioactive material was increasing and as a result, this trend had a negative effect on global health care. Of particular importance was considered the shipment of Cobalt-60 – a material that is used to sterilize about 40% of all disposable medical supplies used worldwide and a wide variety of other products. The Facilitation Committee and the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers recognized that the issue deserved in-depth consideration, established its humanitarian dimension and decided to work on initiatives to alleviate such difficulties in a manner acceptable to all parties involved in the process.

The Facilitation Committee at its thirty first session in August 2004, after detailed consideration of the subject, agreed that ultimately, the aim should be the development of communication by the Organization in the form of a FAL Circular (FAL.6/Circ.12) or a joint communication by the Organization, the IAEA and possibly the WHO, stressing the benefits resulting from the use of Cobalt-60 in its various applications, confirming that the shipment of consignments of Cobalt-60 in accordance with the relevant provisions of the SOLAS Chapter VII and of the IMDG Code provide the required level of safety and invited Member Governments and those concerned to facilitate its shipment in and through ports. Experts confirmed that all shipments of class 7 radioactive materials, when in compliance with the relevant provisions, should not be denied on the grounds of safety. Member States should work with the relevant national authorities and industry associations to raise awareness of these matters as a way to encourage alleviation of the difficulties of shipment of class 7 RAM.

During the ninth session of the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers in October 2004, further consideration was given on the issue of shipments of consignments of class 7 radioactive materials where it was agreed that, provided that all relevant provisions of IMO and IAEA are complied with, the shipment of such consignments is safe not only for Cobalt-60 but includes all class 7 radioactive materials. In addition, the Sub-Committee

was of the view that the reasons for such denials and delays included the involvement of numerous competent authorities, the need for carrier radiation protection programmes when carrying such cargoes, the need to travel through areas which have been declared as nuclear free zones, prohibitions on docking for ships carrying class 7 cargoes, high insurance and thus commercial costs and public apprehensions. In that context, the DSC Sub-Committee agreed that training and awareness programmes among relevant authorities, carriers and public would help in alleviating some of the apprehensions and requested the Organization to take steps towards conducting relevant activities through its technical co-operation programmes.

The Assembly, at its twenty fourth session in November-December 2005 adopted Resolution A.984(24) on the Facilitation of the Carriage of IMDG Code Class 7 Radioactive Materials including those in packaged form used in medical or public health applications. The Resolution noted the efforts of the Facilitation Committee at its thirty-first and thirty-second sessions as well as the progress made by IAEA to address and resolve the issue. In addition it recognized the benefits of radioactive material and in particular Cobalt-60 and invited governments to work with relevant authorities and industry associations to raise awareness and help alleviate difficulties encountered in the carriage of IMDG Code Class 7 radioactive materials. Finally, it requested the Secretary-General to explore the possibility of establishing an *ad hoc* mechanism for resolution of difficulties in the carriage of such materials.

The thirty third session of the Facilitation Committee held in July 2006 took note of the Assembly Resolution A.984(24) which requested the Secretary-General to explore the possibility of establishing an *ad hoc* mechanism within the Organization to co-ordinate efforts to speedily resolve difficulties in the carriage of class 7 radioactive materials. Through this mechanism, a) a focal point is established at the Secretariat which is responsible for the facilitation of carriage of class 7 ram and b) Member States which have encountered problems or have been refused carriage of class 7 radioactive material(s) aboard ship or in or through ports are encouraged to submit reports which will be recording reasons and causes of denials of such consignments. The success of this mechanism is largely determined by the number of reports received by Member-States as it will assist policy-makers to acquire a fuller picture of the issue. Following careful evaluation of these reports, the experts in the industry and everyone else involved in the process, will then be able to propose a way forward.

During the last meeting of Maritime Safety Committee (MSC 82) in December 2006, the concerns expressed over the entry in the transport document and/or dangerous goods manifest

confirming shipment of radioactive materials for medical and public health applications only, as well as the reasons provided for not depending the expeditious transport of radioactive material on their end use were issues pertinent to Facilitation and therefore agreed to be considered during the thirty fourth session of the Facilitation Committee. In addition, the DSC Sub-Committee was instructed to provide further details on training requirements for those involved with the shipment of Class 7 ram and prepare relevant amendments to the IMDG Code which should:

- a) avoid duplication of already existing information;
- b) develop correct guidance for all classes of dangerous goods in the form of amendments to the IMDG Code; and
- c) provide additional information to the transport/shipment document without suppressing safety-related information.

The 34th session of the Facilitation Committee in March 2007 further defined the process of the *ad hoc* Mechanism which incorporates 4 essential components:

a) **Notification:** Initial step where shipment of IMDG Code class 7 radioactive materials has been denied or delayed for/in transport by a carrier or via a certain route or through a certain geography/port, or by a country's regulatory restriction. It involves the preparation of a report by the manufacturer/producer/shipper which encountered the difficulty/denial in the carriage of IMDG Code dangerous goods including class 7 radioactive materials which will be reviewed by IMO.

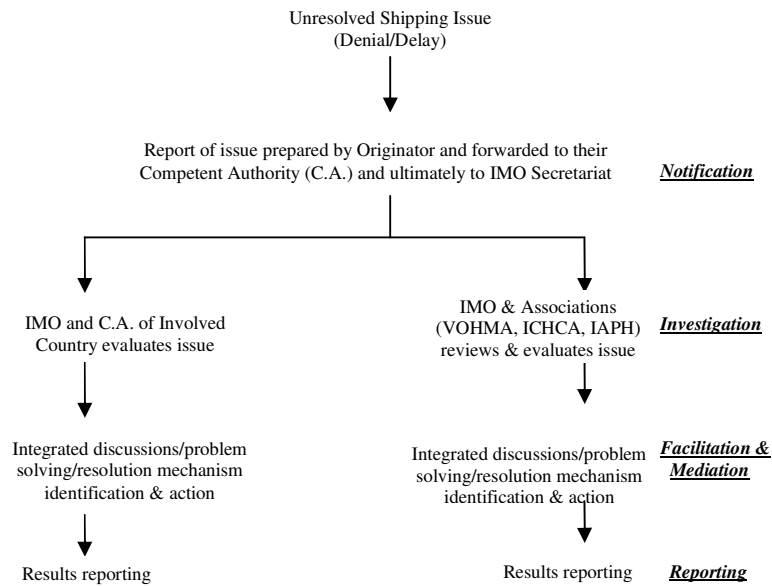
b) **Investigation:** Interim stage which involves the collation of accurate and consistent information regarding the shipping difficulty. Upon receipt of this, IMO should request feedback from the organization experiencing the delay/denial as to what corrective action it sees as possible in the particular situation and upon its receipt and review will follow coding and classification of the incident into an IMO database. The individual nature of each incident may require a specific investigation and action plan. This exercise is deemed critical to the effectiveness of the reporting mechanism. Where the denial is due to a regulatory restriction, the IAEA will assist in the evaluation, review, and subsequent facilitation and resolution of the problem with the involved Member State. The reciprocal nature of IMO and IAEA provides an opportunity for a combination of resources and efforts which will significantly improve the possibility for resolution of shipping difficulties.

c) **Facilitation/Mediation/Action:** One of the most time consuming steps of the process as it might involve extensive communication/interaction between the IMO Secretariat, the IMO Member State representative in whose country the restriction has occurred and the involved Association. Action taken will be specific to each incident and parties involved may vary from incident to incident and at various times throughout the investigation and facilitation/mediation. In addition, discussions will be thorough enough to ensure that all opportunities and options have been explored and evaluated. The intervention will involve different approaches; the IMO as initiator of the notification and review of the incident can cause the involved organization to contact and work with the affected manufacturer/producer/shipper towards mutual agreement on course of action taken, which will lead to resolution. Where this does not occur, the Secretariat will encourage the involved association and the involved organization to review the circumstances around the incident and discuss options on the way forward or it will contact directly the involved organization to explore steps towards resolution. A successful resolution will be tested with subsequent shipments and the incident can be closed while the database can be updated accordingly. However, where the intervention proves unsuccessful, another report will be produced and the notification process will start again.

It is also possible that the IMO Secretariat facilitation will result in industry associations meeting with involved associations to work towards a broader/global approach to denials. Overall, IMO and IAEA, in co-operation with other UN bodies where appropriate, should search for opportunities to standardize requirements in shipping, handling regulations, requiring processes, practices and procedures at ports and with Port Authorities around the world. This initiative would assist in facilitating the issue.

d) **Reporting:** In this final step of the process the outcome of the facilitation/mediation process will be recorded in the database as either resolved or not resolved as a means of ensuring that each incident is brought into closure. Reporting of denial/delay incidents, status, causes and key outcomes will be submitted to the Facilitation Committee and other relevant bodies which should focus on seeking long broad and long term solutions based on the underlying causes.

OVERVIEW OF IMO WORKING PROCESS



All parties involved – including manufacturers/producers/shippers, competent authorities, involved associations, organizations and UN Agencies – will co-operate to the facilitation and resolution of issues resulting in the denial and delays of shipments of radioactive materials.

The above four stages, as principal components of the facilitation process have been incorporated in the design process of the Dangerous Goods Carriage Difficulties (DGCD) database which has been set to function as the main tool which will allow the monitoring, assessment, evaluation and analysis of reports related to delays and denials of shipments of all classes of dangerous, including class 7 radioactive materials. The entries to the database correspond to the 'Report on Difficulties encountered in relation to the Carriage of the IMDG Code Dangerous Goods including class 7 radioactive materials' which was submitted pursuant to the provisions of resolution A.984(24) and decisions of FAL 34 and include report details, product details, consignment and conveyance details, location, transit details and details of difficulty.

In addition, on the basis of Assembly Resolution A.984(24) on the establishment of an *ad hoc* mechanism, the Secretary-General nominated, within the Secretariat, a focal point on the Resolution of difficulties in the carriage of IMDG Code dangerous goods including class 7 radioactive materials.

Even though the design and implementation of the database project was initiated by IMO, in co-operation with IAEA, the three specialized agencies (IMO, IAEA and ICAO will have full

administrative and contributor rights to it. Consideration is yet to be given as to whether there might be public access to the DGCD Database.

A significant development has taken place in that context in other countries and in particular the Small Island Development States (SIDS). In the International Meeting to Review the Implementation of the Barbados Programme of Action for the Sustainable Development of the SIDS, opened in Mauritius on 10 January 2005, SIDS, which comprises 52 States and a total population of 52 million, urged States involved in the transport of class 7 radioactive materials to maintain dialogue and consultation under the aegis of IAEA and IMO with the aim to improve understanding, confidence building and communications in relation to safe maritime transport of radioactive materials and strengthen international regulatory regimes to enhance safety, disclosure, liability, security and compensation in relation to such transport.

Facilitation of the carriage of class 7 radioactive materials can only be achieved through the combined and collective efforts of the international community which will share its experiences and of the experts in the field of the nuclear safety who will share their knowledge for an effective and expedient approach to the transport of class 7 radioactive materials.

References:

Report	Date
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DSC 9/15	11 October 2004
FAL.6/Circ.12	11 July 2005
FAL 32/22	25 July 2005
FAL 33/19	17 July 2006
A 24/Res.984	6 February 2006
DSC 11/19	22 September 2006
MSC 82/24	18 December 2006
FAL 34/19	15 May 2007
NGLS Roundup 118,	January 2005