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Working Party on the Transport
of Dangerous Goods

Joint Meeting of the RID Safety Committee
and the Working Party on the Transport
of Dangerous Goods
(Bern, 18-22 March 2002)

**PROCEDURE TO BE FOLLOWED IN THE EVENT OF THE
DETECTION OF RADIOACTIVE MATERIAL DURING
TRANSPORT, IN PARTICULAR OF STEEL SCRAP**

Transmitted by the Government of Germany*

The secretariat has received the proposal reproduced below from the Central Office for International Carriage by Rail (OCTI).

* Circulated by the Central Office for International Carriage by Rail (OCTI) under the symbol OCTI/RID/GT-III/2002/5.

Summary

Executive summary: During the transport of loads of scrap, on several occasions in recent years radioactivity has been noted on the outer surfaces of wagons. A standard procedure to be followed should be established.

Action to be taken: Establishment of a standard procedure in the event of the detection of radioactive material during transport, in particular of steel scrap.

If it is suspected that radioactive material has been detected, continuation of the transport operation (and similarly return to the consignor) are only possible if classification in accordance with RID/ADR has taken place.

If a substance of Class 7 is involved, the relevant conditions of carriage of RID/ADR must be complied with.

If classification is not possible at the point where the material is detected, the procedure to be followed subsequently must be determined by the competent authority.

Related documents: TRANS/WP.15/AC.1/2000/17 (Detection of radioactive material in loads of scrap) and TRANS/WP.15/AC.1/84, paras. 14 to 16.

Introduction

In recent years radioactive material has been detected in consignments of scrap. Scrap-processing companies have for this reason set up fixed measuring equipment for entry checks in order to detect high levels of radiation. Dose rates of up to 45 $\mu\text{Sv/h}$ have been observed on the external surfaces of wagons in some consignments of scrap, which means that the presence of dangerous substances of Class 7 of RID/ADR cannot be ruled out.

Artificial sources of radioactivity (for example, emitters eliminated clandestinely) have also been detected in loads of scrap. It can therefore be suspected as a matter of principle that radioactive material exists in each load of scrap in which a high dose rate has been observed on an external surface of the wagon.

The problem was earlier discussed at the last Joint Meeting but one (see also the report of the meeting (Bern, 28 May to 1 June 2001), paras.14 to 16). Germany had announced on that occasion that it would come back to the issue in order to settle the safety problem to which the situation gives rise.

Action to be taken

The Joint Meeting is asked to confirm the procedure to follow in the event of the detection of radioactive material during transport, in particular of steel scrap.

If it is suspected that radioactive material has been detected, classification should then take place in accordance with section 2.2.7 of RID/ADR, before the transport operation can continue.

Generally speaking, reliable classification is only possible once the dangerous substances have, where necessary, been separated out (e.g. pieces in which a high dose rate is detected).

Justification

In order to ensure that there are no harmful effects for the population and the environment, and also to protect the personnel involved in the transport operation, transport can only continue once it is known what radioactive substance has given rise to the high dose rate as compared with natural ambient radiation, whether the substance should be assigned to Class 7 of RID/ADR and under what conditions in accordance with RID/ADR it should then be carried.

It has been demonstrated on the basis of various factors such as unknown nuclide composition and activities or unknown conditions of shielding (density of the scrap and possible shielding by the package) that a reliable decision can only be taken as the result of a separation, i.e. a separation of the dangerous goods in order to ascertain whether or not a dangerous substance is involved. As a matter of principle, a classification in accordance with subsection 2.2.7.1 should always be undertaken.

If it is necessary to put the wagons in question in a secure place for the purposes of the separation and classification, the competent authority may take other palliative measures and the wagons must also be examined after the separation to ensure absence of contamination.
