



FINDINGS FROM NON-NUCLEAR SMALL USER INSPECTIONS IN 2009 / 2010

David Rowe

H.M. Principal Inspector,
Department for Transport
Zone 2/24, Great Minster House,
76 Marsham Street, London SW1P 4DR

ABSTRACT

Towards the end of 2009, the Dangerous Goods Division of the DfT began a programme of inspections at the premises of smaller organisations whose business involves the transport of radioactive material. These organisations included industrial radiographers, hospitals, road construction services and couriers.

The inspections were based on the requirements of the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009. The majority of the requirements of these regulations are referenced from the European ADR 2009 Agreement, which, in turn, is based on the requirements of the IAEA TS-R-1 with regard to radioactive material.

This paper presents a summary of the findings from approximately one hundred inspections carried out over the past twelve months. Across the inspected organisations, there were a number of common non-compliances against the above regulations. These non-compliances included:

- Emergency Arrangements not prepared or tested,
- Inadequate Instructions In Writing for drivers,
- Transport Documents with incorrect / incomplete requirements,
- Lack of training and awareness in transport security,
- Radiation Protection Programmes with inadequate structure and review,
- Package marking and labelling incomplete / incorrect,
- Package and Special Form Certificates out-of-date / missing,
- Insufficient Fire Extinguishers in the vehicle,
- References to out-of-date regulations,
- Driver training and certification incomplete,
- Instrument calibration out-of-date,
- Miscellaneous Equipment in the vehicle incomplete,
- No Dangerous Goods Safety Advisor appointed.

It is concluded that small organisations often do not have the capacity to implement complex regulations, and, where this is the case, there needs to be greater emphasis on appointing specialists to ensure that all transport-related activities are conducted in accordance with the applicable requirements.



INTRODUCTION

Within the United Kingdom, there are approximately 2500 ‘small’ organisations registered as holders of radioactive material, who are not directly associated with the nuclear power industry. Within that total number, there are several hundred whose work involves the transport of radioactive material by road: these include industrial radiographers, hospitals, road construction services and couriers.

The Dangerous Goods Division of the Department for Transport has responsibility for ensuring that these companies comply with the current regulations [1, 2, 3] for the transport of radioactive material. A risk-based strategy has been devised, within which the activities of these companies are inspected, with priority for inspection visits being primarily based on the amount of material transported and the frequency of transport. A detailed background to the strategy is given in Paper 091 [4].

PRELIMINARY (RISK) ASSESSMENT

A short questionnaire was sent to all organisations registered with the Environment Agency (EA) as holders of radioactive material. The primary objective of the questionnaire was to determine whether or not any radioactive material was transported, and if so, the amount and frequency of transport. Inspections were then prioritised towards those organisations with the highest amount of material transported, at the greatest frequency. A more measured and detailed risk model has now been developed, and this is covered in Paper 325 [5].

As the inspection process progressed, it became known that a number of courier companies were transporting material on behalf of some of the registered organisations. Couriers do not usually hold or store radioactive material, and as such they do not require an EA registration. A database of couriers was therefore created, and couriers were incorporated into the programme of inspections.

INSPECTION PROCEDURE

As the requirements of the above regulations are complex and extensive, the Dangerous Goods Division has condensed the major requirements of the regulations down into a checklist. The checklist is divided into sections, such as (i) Radiation Protection Programme and (ii) Training, with a total of about fifty questions. These are only basic questions, with the intention that the Inspector can explore the subject of each question in greater depth, depending upon the information and evidence which the organisation’s representative offers.

At the end of the inspection, the findings are discussed with the organisation’s representative(s), in terms of non-compliances and advisory items, and an action plan is agreed, to bring the organisation’s procedures and practices into line with the requirements of the regulations. A letter is then sent to the company, to confirm the findings and timescale for completion of the actions.

FINDINGS

Over the last twelve months, about a hundred inspections have been carried out. The number of findings per organisation has varied significantly, from one to over twenty. The most common non-compliances (the ‘Top Ten’) for the first fifty inspections are shown in Table 1.

It would be difficult to provide a detailed analysis of all of the findings, so the 'Main Reason' entered in the table is a generality.

Table 1. 'Top Ten' Findings – First Fifty Inspections

Finding	Number of Occurrences	Main Reason
Emergency response procedures not tested	33	Unaware of requirement
Inadequate security arrangements	26	Unaware of requirement
Lack of awareness of current regulations	22	Lack of specialist knowledge
Insufficient fire extinguishers in vehicle	21	Confusion over requirements in regulations
Safety Advisor not appointed	23	Confusion over requirements in regulations
Inadequate emergency response procedures	19	Unaware of requirement
No evidence of package compliance with regulations	17	Expired or lost certificates
Inadequate instructions in writing for drivers	16	Confusion over requirements in regulations
Incomplete miscellaneous equipment in vehicle	16	Unaware of requirement
Incorrect / inadequate marking and labelling of packages	14	Confusion over requirements in regulations

An analysis of the number of findings against each of the first fifty organisations was carried out, to compare those with the highest and lowest numbers of findings - See table 2. A clear relationship is seen between the number of findings and the adequacy of the radiation protection programme (i.e. Radiation Protection Advisor involvement) and more specifically the involvement of a Safety Advisor.

Table 2. Analysis of Findings

Number of Findings	RPP Unsatisfactory	RPP Satisfactory	Safety Advisor - NO	Safety Advisor - YES
More than 10 findings (20 organisations)	8	12	17	3
10 or less findings (30 organisations)	3	27	6	24



CONCLUSIONS

Each of the findings, when viewed in isolation, is not difficult to resolve, in a relatively short period of time. Indeed, with a comprehensive knowledge of the transport regulations, the findings should not have occurred at all. However, the regulations are complex, and therefore in a small organisation, where the transport of radioactive material may only be a small part of the business, the organisation needs to place more emphasis on agreements with specialists such as RPAs and Safety Advisors, in order to ensure the adequacy of the guidance which is provided. This will lead to better compliance with the regulations and hence will help to ensure the safety of all interested parties.

REFERENCES

- [1] The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009.
- [2] The European Agreement Concerning the International Carriage of Dangerous Goods by Road 2009.
- [3] The IAEA Regulations for the Safe Transport of Radioactive Material 2009.
- [4] Turner M, Paper 091, PATRAM 2010
- [5] Davidson I, Paper 325, PATRAM 2010