

Carriage of Radioactive Material by Small Users Guidance Note

Introduction

In recent years, we have carried out approximately 250 inspections of the transport operations of 'small users' of radioactive material, such as hospital radiopharmacies, industrial radiographers and couriers, against the requirements of the Carriage of Dangerous Goods Regulations and the European ADR Agreement⁽¹⁾.

Based on the findings from our inspections, we have produced this guidance document, to help small users to comply with the requirements.

Included alongside each section are references to the applicable paragraphs of the Regulations⁽¹⁾.

Quality Management System See ADR 1.7.3.

You must have an appropriate quality management system. There are no strict rules on its format: it may be structured as, and comply with, an internationally recognised standard such as ISO9001, or it may be far simpler, based on in-house documents and procedures. The system that you adopt must be appropriate for what you do.

Awareness of Regulations See CDG 5 and ADR 1.7.3.

We expect you to be aware of the relevant regulations and their content, but we don't expect you to be able to quote from them. You don't need to keep copies but, if you do, there should be a means of ensuring that they are current and controlled. Many small users rely on an external body such as a Radiation Protection Advisor (RPA), Dangerous Goods Safety Advisor (DGSA) or a professional association, to keep them informed about regulations.

Radiation Protection See ADR 1.7.2 and 1.7.6.

You should be able to show that you have carried out a risk assessment and that you have appropriate measures in place. These measures may include barriers, shielding, the wearing of TLDs (film badges), the appointment of Radiation Protection Supervisors (RPS) and warning notices. We expect to see evidence that the system is under control and is periodically reviewed and revised as necessary.

DGSA See ADR 1.8.3.

You will most likely need to appoint a DGSA, unless you only transport Excepted Packages or you transport less than about twice per month. Even if you do not think that you need a DGSA, there are many regulatory duties that must be carried out, and it may be better to discharge these duties via a DGSA who has a comprehensive understanding of the regulations, rather than place the work on a member of your own staff.

Emergency Arrangements See CDG 24 and CDG Schedule 2 part 4.

You must have emergency plans in place before you begin transport. The plans must be periodically reviewed and revised if necessary, and must be tested at suitable intervals. Testing may include, for example, involving staff in a simulation of an emergency and a demonstration of how to deal with it, or a video or powerpoint presentation and an assessment of staff capability afterwards.

Driver / Vehicle Crew Requirements See CDG Schedule 2 parts 4 and 5, ADR 5.4.3, 8.1.2 and 7.5.11 CV33.

The driver / crew must have emergency instructions and know how to use them. They must carry photographic identification, and have sufficient knowledge in the handling and transferring of radioactive material, including segregating it from other goods and from the public and safe overnight storage if appropriate.

Couriers must be aware of the amount of material they are carrying, and keep track of the total amount if they are collecting further packages along the route.

Training See ADR 1.3, 1.7.2.5 and 8.2.

You must ensure that all staff have received adequate training to do their job. This includes initial / general training, training specific to the job, safety training and, very importantly, radiation protection training.

Refresher training must be provided at suitable intervals to bring employees up-to-date with requirements.

Drivers may need an ADR driving certificate, depending on the amount of material they carry. However, for Excepted Packages, no specific training is required, and for up to ten Type A packages, with a total transport index of no more than three, in-house radiation awareness training together with a company certificate will be acceptable.

We expect to see evidence of training, such as training plans, test results, timetables, lists of attendees (with signatures alongside) and training certificates.

Consignment Documentation See ADR 5.4 and 5.4.1.2.5.

On each journey, as well as their photo I/D and emergency arrangements, the crew must take this transport document. It should be completed with all necessary information for that consignment. Depending on the route, you may need to include a tunnel code, as the carriage of radioactive material is not permitted through certain tunnels. The declaration, which was a requirement of previous regulations, is only required for road transport in Great Britain if the carriage is under a special agreement. Consignment documentation is required for all journeys.

Package and Material Integrity See ADR 4.1.9, 5.1.5.2 and 6.4.

You must be able to show that the packages and materials (e.g. Type A packages and Special Form material) meet the requirements of the regulations. Typically, this means holding copies of the manufacturer's certificates or evidence that you have tested the packages yourself against all of the requirements.

Package Inspection and Maintenance See ADR 1.7.3(b).

Depending on how often you use the package and the severity of the conditions in which it is used, you should have an appropriate inspection and maintenance programme. This may include a daily / weekly / monthly check sheet and periodic return to an established service centre. Repairs must be fully documented, to show that the package still meets the requirements afterwards.

Supplier Services See ADR 1.7.3.

You must ensure that you monitor the performance of any suppliers whose service could affect your transport operation, and take remedial action if shortcomings are found. Suppliers in the broadest sense may include your RPA and DGSA, couriers, vehicle and package maintenance companies, calibration service, training organisations and packaging suppliers.

Marking and Labelling of Packages and Overpacks See ADR 5.1.2, 5.2.1 and 5.2.2.

Marking and labelling are separate requirements: marking means the permanent description of the package and overpack, whereas the (diamond-shaped) labelling shows the maximum radioactive contents for that specific consignment.

You must make sure that all text is clearly legible, it will withstand its working environment and that no other markings or labels are visible, which could mislead the emergency services during an incident.

Vehicles

Placards: Apart from when only carrying Excepted Packages, vehicles must show placards on the sides and rear. These can be reduced in size if there isn't sufficient space for the full-size placards. See ADR 5.3.

Orange Plates: Apart from when only carrying Excepted Packages, vehicles must show orange plates on the front and rear (see ADR 5.3.2), or carry a 'fireproof notice' in the cab in accordance with GB Road Derogation 9.

Fire Extinguishers: There has been a lot of confusion over fire extinguishers. Within Great Britain, you do not need extinguishers if you are only carrying Excepted Packages (see current CDG Derogation 3 and Authorisation 216). For all other consignments, you need at least two extinguishers: for a small van or car of up to 3.5 tonnes, you need a total of 4kg, which usually means 2 x 2kg extinguishers fitted where they can easily be reached in an emergency. For larger vehicles, you will need a total of 8kg or 12 kg. See ADR 8.1.4.

Miscellaneous Equipment: There is a list of equipment in the regulations, for the vehicle and for each member of the crew. See ADR 8.1.5.

Stowage Facilities: There must be a means of adequately securing the packages in the vehicle, as far from the crew as possible. See ADR 7.5.7 and 7.5.11 CV33.

Contamination: you may need to check the vehicle periodically, to ensure that no radioactive material has leaked from a package. See ADR 7.5.7 and 7.5.11 CV33.

Security See ADR 1.10.

You must ensure that staff have been trained in recognising potential security incidents and dealing with them.

Final Note:

Remember: it is important that you retain evidence of how you are complying with the regulations, and that you can make that evidence available to us during inspections.

(1) *The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009, as amended (CDG), and The European Agreement Concerning the International Carriage of Dangerous Goods by Road 2011 (ADR).*

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