Multimedia Instructions for Carriers of Radioactive Material

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Abstract

For some operators the transport regulations for transporting radioactive material are considered to be complicated and not user friendly and as a result for some operators it is difficult to identify all the transport regulatory requirements they must comply with for each type of package or radioactive material. These difficulties can result in self-checking being ineffective and as a consequence the first and important step in the safety chain is lost. This paper describes a transport compliance guide for operators that is currently under development for the South American market. This paper describes the scope and structure of the guide and examples of the information provided is given, which will be available in English, Portuguese and Spanish. It is intended that when the guide is launched before the end of 2013 it will be accessed using a bespoke software program that can run on PC platform to provide a checklist for the operator before the shipment begins By identifying the regulatory requirements the guide is also intended to provide operators with an understanding of the structure of the transport regulations and an appreciation of the logic behind the regulatory requirements for each UN numbered package and material type listed in the transport regulations for radioactive material. It is foreseen that the interactive program can be used both operationally on a day-to-day basis and as a training tool, including refresher training, as the guide will be updated when the transport regulations are periodically changed.

1.   Overview

The transport regulations for radioactive material (class 7 dangerous goods) have a different structure than those for the other 8 classes of dangerous goods and it is therefore important that operators receive effective training in the various aspects of transporting radioactive material. Of key importance is that operators have consistent methods for marking and labelling packages, placarding vehicles, producing transport documentation and preparing effective emergency plans which meet the regulatory requirements. The awareness training programme and the transport compliance guide described in this paper is intended to illustrate a system that provides a consistent

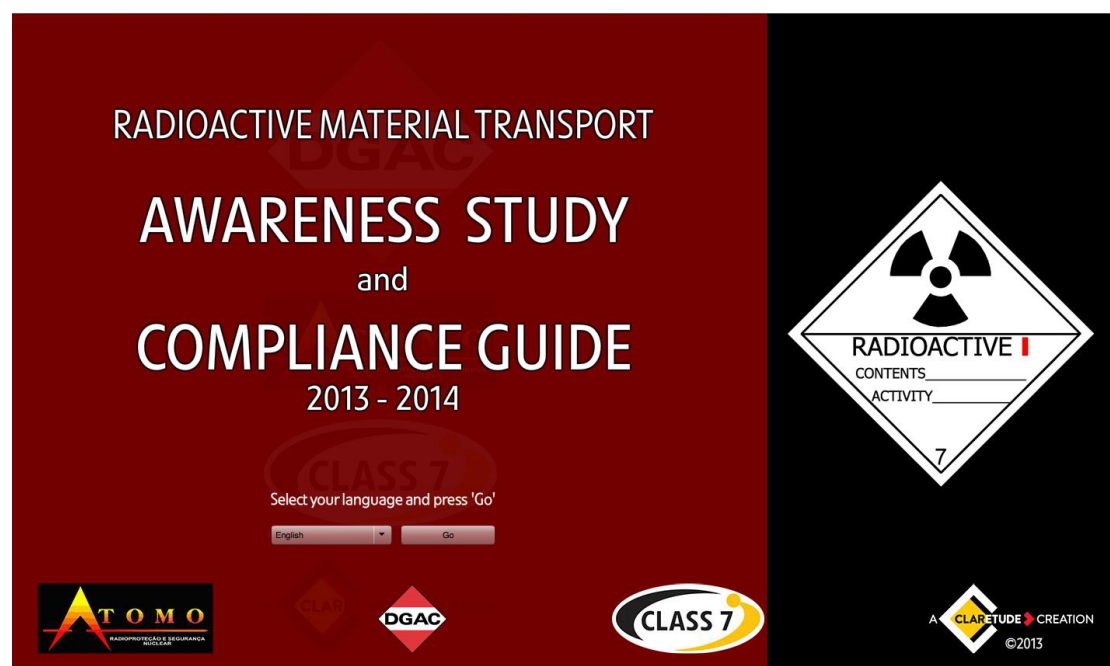*MULTIMEDIA TRAINING; GUIDANCE FOR THE CARRIAGE OF RADIOACTIVE MATERIAL*

approach which also provides the user with references to the regulatory text for the four modes of transport namely road, rail, sea and air.

The user of this multimedia programme will be able to choose English, Portuguese and Spanish languages and make reference to the transport regulations of:

- Europe, USA and Brazil for road,

- Europe and USA for rail,

- IMDG for sea, and,

- IATA regulations for air transport.

The addition of other languages and other national transport regulations can be incorporated as required to meet user requirements.

This Awareness Study and Compliance Guide is intended to supplement other specific training programmes for consignors and carriers that exist in may countries. This programme provides an effective overall awareness for operators whilst giving specific guidance in areas of transport documentation, package labelling and emergency arrangements.

2. Structure

The structure has been developed to be **clear** in its presentation, enabling the user to easily navigate through the multi-media program. **Simple** and clear text is used to make the information understandable to the user that is presented in a **concise** way by providing additional information such as regulatory text, and further explanatory text.

3. The Awareness Training Programme

The three elements of the programme are:

i. Select the Chapter

There are 14 Chapters that can be studied in sequence or accessed randomly to find information for specific topics. The freedom to navigate the Chapters is important for checking specific information during transport preparations.

ii. Select a Section

Within each Chapter there are a number of sections that provide information of the basic story / concept. This presents the information in a logical order that is easier to understand. This current version of the program is at an 'Awareness' level and is intended to provide the user with an understanding from which more detailed information regarding regulatory requirements can be sought.

Type B

There are six different grades of radioactive material packaging

Excepted, Industrial, Types A, B, C and Uranium hexafluoride packs

Fissile material is OK in all package types apart from Excepted

RAM TRANSPORT AWARENESS STUDY AND COMPLIANCE GUIDE 2013 - 2014

STUDY PROGRAMME CHAPTERS
Basic Awareness
Transport related risks
Intrinsic material risks and issues
The rule books
Organising the material
Packaging
Permitted transport
Identifying material
Warning of the dangers
The paperwork
Carrying the material
Security
Emergency protocols
Performance control

PACKAGING

Packaging Basics
Packaging Types
Package activity and content limits
Package performance standards
Package certification
Package type review

ADR/RID 1.2.1, 2.2.7.2.4, 4.1.9, 6.4
HMR 173.403-31/461-7
IMDG 1.2.1, 2.7.2.4, 4.1.9, 6.4
IATA App A, 10.3.11, 10.5.1-13, 10.6
CNEN5.01 5.2.1-7, 7.3.2-3, Tabela I, II

Simples. Sistema de operação em tres etapas básicas –
1. Selecione um capítulo, 2. Selecione uma seção, 3. Consulte o relato básico

Type B

Existem seis diferentes classificações de material radioativo

Exceptivo, Industrial, Tipos A, B, C e Hexafluoreto de uranio

Material físsil é permitido em qualquer tipo de embalado

TRANSPORTE DE MATERIAL RADIOATIVO CONSCIENTIZAÇÃO E GUIA DE CONFORMIDADE 2013 – 2014

PROGRAMA DE ESTUDO CAPÍTULOS
Conscientização Básica
Riscos relacionados ao transporte
Riscos e problemas intrínsicos
Livro de regras
Organização do material
Embalagem
Transporte permitido
Identificação do material
Avisos de perigo
Documentos
Carregamento do material
Segurança Física
Protocolos de emergência
Controle de desempenho

EMBALAGEM

Embalagens básicas
Tipos de embalagem
Atividade do embalado e limites de
Padrões de desempenho
Certificação do embalado
Revisão do tipo de embalado

ADR/RID 1.21, 2.2.7.2.4, 4.1.9, 6.4
HMR 173.403-431, 173.461-467
IMDG 1.2.1, 2.7.2.4, 4.1.9, 6.4
IATA App A, 10.3.11, 10.5.1-10.5.13, 10.6
CNEN5.015.2.1-7, 7.3.2-3, Tabela I-II

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iii. Additional information

By selecting the text in a Section, further explanatory text will be displayed together with the corresponding regulatory references for road, rail, sea and air transport.

3.1 Providing information in context

When it is appropriate, the programme provides information in the context of the transport regulations and thereby provides the user with the opportunity to make direct reference to the associated transport regulations for each of the areas displayed in the Chapters and Sections. This will enable the user to refer directly to the regulatory text for further study and improved understanding.

3.2 Access

The training programme will be accessed on-line and a record of the user and dates of access will be registered to provide training records for the operator.

4. Preparation of the Transport Document

Information and guidance will be available for the preparation of the transport document with the user specifying the UN number of the package to be transported, the data entries of the transport document being identified. This will not only provide training for the operator but also a consistency in the preparation of the transport document that will be compliant with the transport regulations.

5. Labelling of packages and placarding of road vehicles

Information and guidance will also be available for the labelling of packages and the placarding of road vehicles with the user specifying the UN number of the package to be transported and the program showing what package labels are required together with a reference to the transport regulations where the requirement(s) are specified.

6. Emergency arrangements

The elements of a transport emergency plan will be identified to provide the user with a template that will meet the transport regulations for road transport. It is important to stress that the emergency arrangements must be tested periodically both as a training exercise for operators involved and also that the communications remain effective throughout the journey.

7. Updates

The interactive programme will be updated to reflect all changes to the transport regulations as they are implemented. By providing the operator with records of the registered users and the date of their training the operator can provide the necessary evidence of training and refresher training for its staff. The use of the transport documentation guide, package labelling guide and emergency arrangements template will also ensure regulatory compliance in these three areas.

8. Availability

Further details are available from ATOMO Radioproteção e Segurança Nuclear and announcements will be via the ATOMO website and elsewhere.

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