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CLEARING MUDDY WATERS - REGULATORY COMPLIANCE MADE EASY

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ABSTRACT:

Topic: Stakeholder Engagement and Communication for Effective Transport.

The Premise: Using the Mississippi Delta as a simile, it will be contended that Denial of Shipments and transport operation non-compliances often result from the complexity of the message delivered by the transport Regulations. Water distillation helps create safe water, Regulatory distillation will help create safe transport.

The Basic Argument: Transport operators take pride and pleasure from operating trucking, railway, maritime and air transport systems in a professional and profitable manner. More so than in most trades, time really is of the essence. Regulations that are presented using unfamiliar and unfriendly language present a no-go barrier to transport enterprises. Operators competent to perform effectively and profitably in the field of radioactive material distribution would be attracted into the market if the safe working systems at the heart of the Regulations were presented to them in a less challenging, more attractive way.

The Presentation of the Case: An opening review of the problems that can arise in obtaining the one-metre dose rate readings required for determining a Transport Index for large packages, freight containers etc. will lead to a consideration of the elegant and effective system of radiation risk control that this task delivers to the transport operator. The initial, sometimes challenging, effort by the consignor is repaid by delivering to those unskilled in radioactive material performance – the staff of the transport function - a simple system requiring only modest training and practice to achieve a safe operational environment. Difficult concepts splendidly translated into a simple system. If material characteristics and legal constraints mitigate against simple Regulations then employ user-friendly techniques to explain the safety-critical operational requirements. The Class 7 image-driven on-line resource announced at PATRAM 2016 has been further developed to now provide clear and comprehensive guidance of the regulatory duties that face consignors and carriers. Using SSR-6 as the primary focus, account is also taken of the supplementary duties applied by the UN Model Regulations, the major international modal controls and the Hazardous Materials Regulations.

INTRODUCTION

Local control systems turn muddy Mississippi river water into potable, life giving material used daily by 350,000 people. If it is possible to bring unchallenged clarity to such a complex resource as the river Mississippi it should be possible to bring unchallenged clarity to the working practices that ensure safe and secure transport of radioactive material. Like the work of the Carrollton Water Purification Plant, it will require a significant effort but like the work of the Carrollton Water Purification Plant, it will produce a rich and economic reward.

THE LAZY RIVER

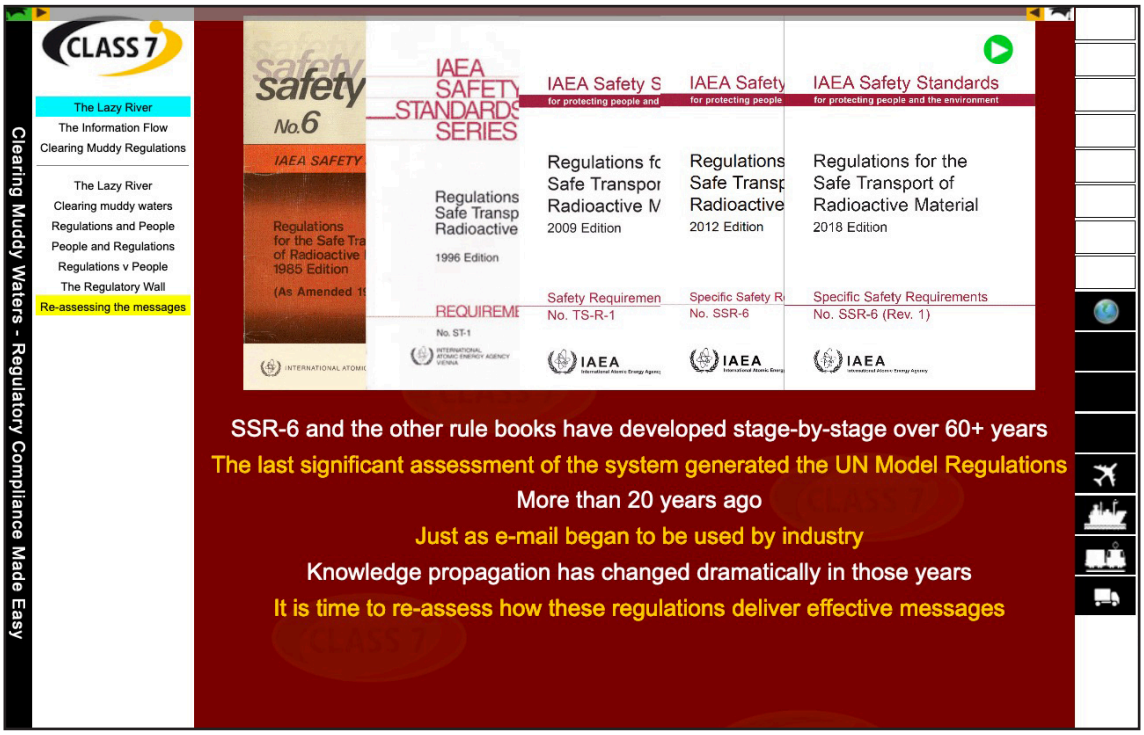
The river carries 145 million tons of detritus every year. A seven-stage purification process removes the rubbish and clarifies the water.

The content of the panoply of dangerous goods transport regulations contains little detritus, they are commendably robust, well proven, safe and secure, working systems. However, often there is a distinct lack of clarity concerning the why and how of the rules. Consequently, the intention of the wise regulators can

be mis-interpreted and poor operational performance can be the result. Alternatively, faced with seemingly unfathomable requirements, transport operators tend to turn their back on class 7 traffic and choose to carry more straightforward cargoes instead.

If Mississippi mud can be turned into drinking water, it must be possible to turn dangerous goods Regulations into clear, lucid and attractive instructions.

As shown below, the international regulations have been developed and improved over a long period of time. They provide splendid safe working systems but to many people in transport they possess an air of inscrutability.



It is more than twenty years since any substantial change was made to the presentation of the rules. In that time the internet has given us radical new ways to deliver messages. It is time for dangerous goods

legislation to exploit the electronic age.

THE INFORMATION FLOW

The Regulations rely on experienced practitioners and training providers to create regulatory understanding for those new to the industry. The availability of skilled practitioners does not meet the needs of an industry that is expanding in reach and scope.

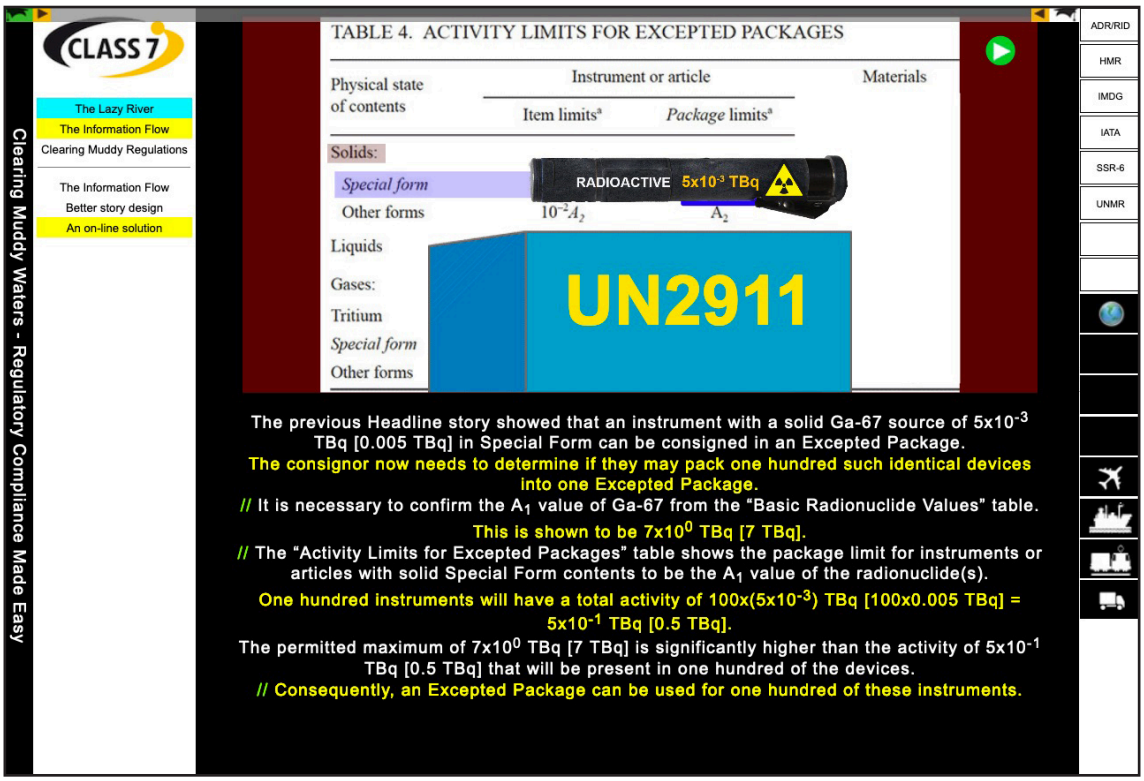
As shown below, engineering the rules with care can create safe working practices that do not rely on high levels of expertise from the practitioner. The Transport Index system effectively transfers the skills and understanding of the health physicists to the ship crews, aircraft loaders, truck drivers and train crews who organise radiation risk control in the transport environment by ensuring that they can add up to fifty. The technical work invested by the consignor allows those with skills in other areas to confidently handle radioactive material cargoes.

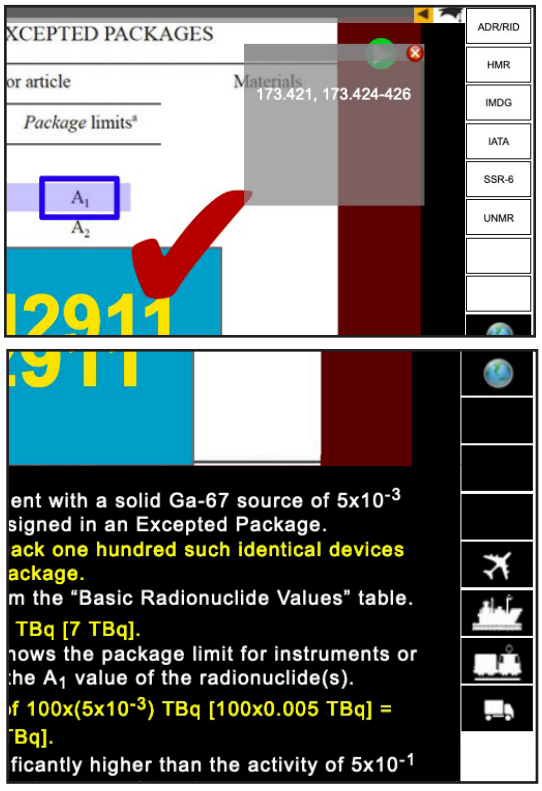
Investment in the presentation of regulatory information can in a similar fashion generate reward in the form of a clear understanding and ready acceptance of the transport operator rules concerned with radioactive material transport.

Class 7 Ltd uses a two-stage system of information presentation. The screen examples used up to this point in the story have all been drawn from our first level of information provision, what we call our story Headlines.

Each Headline in the on-line programme can be clicked to reveal a more detailed story if that is of help or interest to the programme user. The picture at the top of the next page is a still shot from a sequence demonstrating how to determine the maximum permitted activity in an Excepted Package. Each of the green “// “ marks on the left of the text is a prompt to the user to advance the picture story by clicking in the picture window. By this means words and moving images are co-ordinated to take the user through an action sequence.

The regulatory extracts used as illustrations in the Class 7 Ltd Core Study programme are all drawn from the IAEA Regulations for the Safe Transport of Radioactive Material, SSR-6 or, when appropriate, from the United Nations Recommendations on the Transport of Dangerous Goods - Model Regulations.





As shown to the right, the pop-out boxes at the top right of the screen identify the location of the on-screen story in the other major regulatory books. This allows the user to work in their relevant regulatory area, checking their own books when necessary but at the same time it keeps the creation and control of the programme within manageable limits.

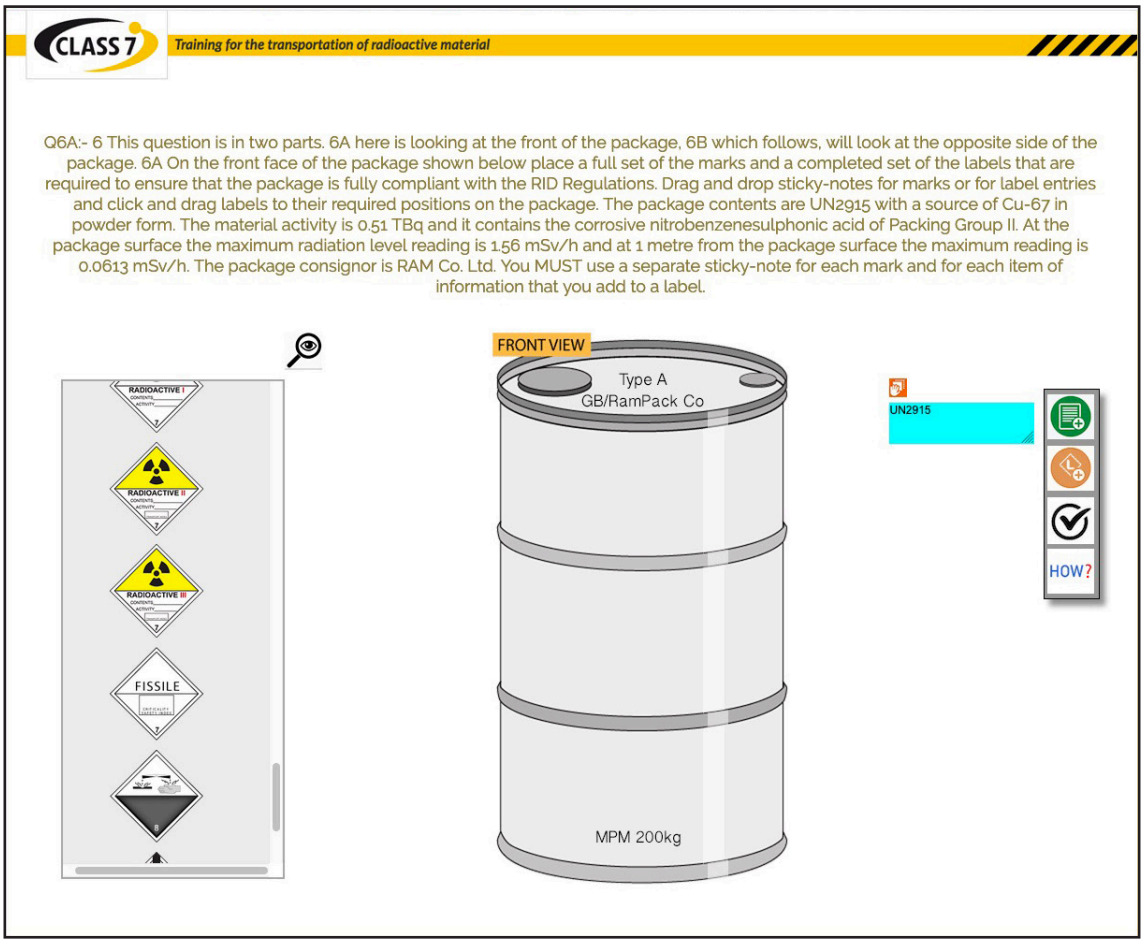
As shown to the right below, the relevance of the on-screen message to different parts of the world or to different modes of transport is indicated by the icons in the lower right part of the screen. If the story was modified for US operations a stars and stripe icon would feature in the black box area; if the story only applied to air transport then the ship, train and truck icons would not be visible.

In a very brief period of time the story content can be changed perhaps to improve understanding or perhaps to implement an updated message because of a newly introduced rule change. The revised story can then be distributed around the world in moments.

It is an old adage but it is very true: a picture can be worth more than a thousand words. The street scene featured in the image at the top of the next page captures the unique spirit of New Orleans; it would take many, many words to try to conjure up the scene in a minds eye. The picture conveys a myriad of messages in moments.

The pictures and flowing images allow us to quickly understand the broad principles of regulatory compliance. The associated Headlines and stories provide the fine detail needed to gain a comprehensive understanding. The use of alternate text colours helps to provide bite-sized pieces of information. In this age of Twitter it is no longer a common practice for people to read long uninterrupted text passages. The regulatory references that are always available at the right of the screen allow the user to study the regulations when there is a need to confirm the accuracy of the on-screen story.

The programme features a full range of practice questions and an on-line examination. The small arrow boxes at the top left and right of the main screen release drop-down panels such as the one shown below presenting questions related to the on-screen story. In this particular example the left-hand panel allows users to select and drag required labels onto the package and to the right are sticky note pads that can be dragged into position to record marks such as the UN number and Proper Shipping Name.



CLEARING MUDDY REGULATIONS

Regulations in all areas of life need to be detailed and need to close all perceivable loopholes. In meeting

these needs they risk obscuring the basic requirement associated with the original decision to create the compliance pathway.

In the case of IAEA Regulations the need for provision of background explanations related to the legal text is recognised and supported by the Specific Safety Guides. Light is cast onto the motives behind the SSR-6 Regulations by the explanations to be found in SSG-26, “Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material”. The light cast is mostly of a technical nature.

There is a need for a basic indication of how the requirements of SSR-6 should be put into everyday working practice. The more graphical the information the better. As summarised in the picture below, the system developed by Class 7 Ltd would support a structure which gave switchable on-screen access to SSR-6, to SSG-26 and to the kind of story telling programme that has been used to put this presentation together.

We recognise that in some ways this is a sort of Disney approach to weighty and significant transport safety issues. But...most people know the story of the Jungle Book. Most people have not actually read the Jungle Book as written by Rudyard Kipling. If someone wants or needs to gain a deeper understanding of the text, they can read the original and evaluate it for themselves. As long as people have got the story sorted does it matter where their understanding comes from?

Significantly, reluctant transport operations would feel a lot more comfortable about accepting radioactive material consignments if they had a basic understanding of what is required for safe transport, why it is required and how they can fulfil the requirement. Also, many occasional consignors would feel more comfortable about the compliance of their operations if the basic functionality of the various tasks was visually presented to them.

Importantly, society as a whole would benefit because a book of rules that is readily understood is a book of rules that can confidently protect society.

PATRAM have the skills, IAEA have the authority. Next move...?