The MODERATOR

ENERGY SOLUTIONS

Training Resources and Information for the Nuclear Industry

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Changes to RQ Placement on FedEx Shipper's Declaration

Many shippers have commented on FedEx's new policy on where to place RQ on the shipping documentation when your package contains a hazardous substance. US DOT requires that the letters "RQ" must be before or after the basic shipping description. When using the shipper's declaration with columns, please include RQ before the UN number in the first column or in the PG column after the hazard class. The shipper's declaration without columns is just like any other shipping document. Please see examples.

NATURE AND QUANTITY OF DANGEROUS GOODS					
Dangerous Goods Identification					
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Risk)	Pack- ing Group		
RQ UN 2915	Radioactive material, Type A package	7			
	or				
UN 2915	Radioactive material, Type A package	7	RQ		

Happy Thanksgiving
As we approach the busy
and hectic holidays, let us
remember to work safely —
both on-the-job as well as at
home. Take time to enjoy
the changing season.

Articles

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NATURE AND QUANTITY OF DANGEROUS GOODS

UN Number or Identification Number, proper shipping name, Class or Division (subsidiary risk), packing group (if required), and all other required information.

RQ UN2915, Radioactive material, Type A package, 7

or

UN2915, Radioactive material, Type A package, 7 RQ

International Air Transport Association (IATA) Dangerous Goods Regulations (DGR) 52nd Edition - Summary of Changes for 2011



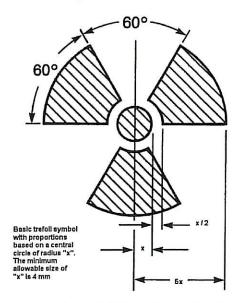
All significant changes in 52nd edition are outlined on pages xxi – xxv in the IATA DGR.

Some highlights for shipping radioactive material:

- Section 1.2.2.2 and 1.2.3 have been added to clarify the IATA DGR incorporates all the ICAO Technical Instructions plus additional requirements (page 1).
- Canada has changed their Nuclear Safety Commission contact address and added new telephone numbers (Section 2.8.2, page 37).
- The US DOT added a limitation in USG-10(a): "Regardless of its intended use, no person may carry a Type B(M) package aboard a passenger-carrying aircraft, a vented Type B(M) package aboard any aircraft, or a liquid pyrophoric Class 7 material aboard any aircraft" (section 2.8.2, page 53).
- Federal Express has clarified which services (FedEx International Priority Freight IPF, FedEx International Premium IP1, FedEx International Express Freight IXF or FedEx International Airport-to-Airport ATA) may require a pre-alert or pre-approval in FX-03 (Section 2.8.4, page 72).
- FX-12 has a new note stating the technical name, when required, may be handwritten on Shipper's Declarations (Section 2.8.4, page 72).
- Beginning January 10, 2011, Federal Express will no longer accept "template" format Shipper Declarations (PDF or MS Word). In the new operator variation FX-18, FedEx states all Shipper's Declarations originating in the U.S., excluding all 023 air waybill ATA shipments, must be prepared using either FedEx approved vendor software, preapproved shipper proprietary software, or FedEx Express Automated Shipping Solutions. Their goal is for all shippers to use software with dangerous goods error checking built into the application (Section 2.8.4, page 73).

Note: FedEx is providing shipping software free of charge, just download from their home page by entering "ship manager software" in the keyword search box and follow the instructions. They will also provide paper (blank middle with vertical red diagonal hatchings down the sides) for free if you request part number 157295 from FedEx customer service.

- IATA DGR states they are now based on the 2009 edition IAEA TS-R-1 and the prime responsibility for radiation safety rests on the shipper (Section 10.0.1.1, page 665).
- Fissile material and fissile excepted definitions have been clarified in Section 10.3.7. The first fissile exception using the fissile material weights in Section 10.3.7.2.1 has changed to include the restrictions on Beryllium and Deuterium for all the subsection fissile exception determinations. The Plutonium source fissile exception has changed to include all fissile nuclides are <20% by weight and has added they are shipped exclusive use (Section 10.3.7, page 683).
- Fissile packages have a new requirement to preserve their minimum overall outside dimensions to at least 10 cm (Section 10.6.2.8.1.5, page 698).
- A new trefoil symbol figure has been added to show the requirements for a Type B package marking (Figure 10.7.1.A, page 705).



- A new retention of Shipper's Declaration subsection has been added. IATA now requires a minimum retention of 3 months. This can be electronic, but would require you to print out for an auditor if requested (Section 10.8.0.1.2, page 711).
- The consignee's telephone is now recommended to be placed in addition to the consignee's name and address to help facilitate prompt release at the airport destination (Section 10.8.3.2, page 713).

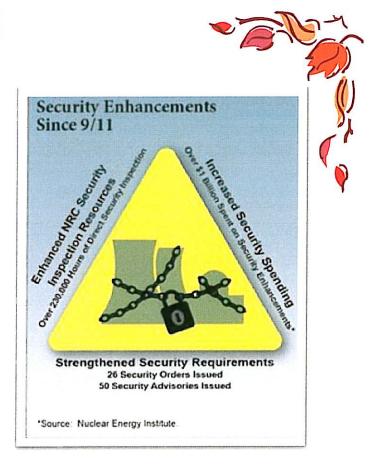
Continued on Page 3

Changes to Security

10 CFR Part 73 and NRC Regulatory Guide

The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its security regulations pertaining to the transport of irradiated reactor fuel (for purposes of this rulemaking, the terms "irradiated reactor fuel" and "spent nuclear fuel" (SNF) are used interchangeably). The NRC has prepared a revision to the current NUREG-0561 "Physical guidance Protection of Shipments of Irradiated Reactor Fuel" to address implementation of the proposed regulations. A notice published on November 3rd, 2010 (75 FR 67636) announced the availability of the draft guidance for public comment. Submit comments by February 11, 2011. Documents related to the changes can be found at http://www.regulations.gov by searching on Docket ID: NRC-2010-0340.

On the same note, the NRC published a proposed rule that would revise and amend the security regulations in 10 CFR Part 73 pertaining to the transport of spent nuclear fuel. The proposed rule was published on October 13, 2010 (75 FR 62695), and the public comment period runs through January 11, 2011. This proposed ruling would establish the acceptable performance standards and objectives for the protection of spent fuel shipments from nuclear theft. diversion, or radiological sabotage. The proposed amendments would apply to those licensees authorized to possess or transport spent nuclear fuel. Documents related to the proposed rule can be found http://www.regulations.gov searching on Docket ID: NRC-2009-0163.

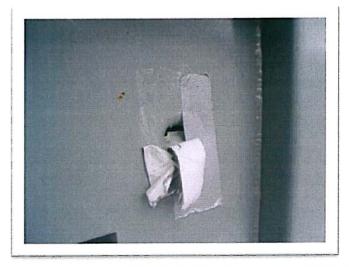


Continued from page 2

- Other dangerous goods contained in the same radioactive material package must be fully described on the same Shipper's Declaration (Section 10.8.3.8, page 713).
- The package dimensions on the Shipper's Declaration must be entered in the length, width and height order. You may include "L" x "W" x "H" preceding each dimension respectively (Section 10.8.3.9.3, Step 9, page 714).
- The preferred excepted package airway bill endorsement format is now with the UN number first, then the proper shipping name. If the operator allows, you can include the endorsement in an electronic form (Section 10.8.8.3.3, page 723).
- In the case of international shipments requiring competent authorities design or shipment approval, the UN number and proper shipping name will be accordance with the special permit or competent authority certificate (Section 10.10.2.0, page 725).







Recent Industry Issues

Proper load securement is essential for safe transportation ofvour hazardous materials. This pallet is broken and there is only one band around the drums in the foreground. Plus, is one web tiedown appropriate for the weight and forces that all the drums in the background will apply during normal conditions of transport? Please consider the Federal Motor Carrier Regulations (49 CFR Parts 380 to 397, especially part 393 concerning load securing) when loading your packages in or on a vehicle.

Is that an Empty Label? Are you ensuring that your drivers have extra labels to replace a damaged label during transportation? Do you instruct your drivers what to look for during routine vehicle inspections? I have had many folks recommend using drawings, pictures or written instructions to help drivers identify missing communications during and just before arriving at the consignee's facility.

I know we like to say that duct tape fixes everything, but can we use tape to fix holes in a general design 49 CFR 173.410 package? Is it leak proof in this picture? Yes, this is how the package arrived at a facility. I do not doctor or enhance the pictures for your enjoyment. Please take great care to inspect your packages before loading and instruct your carriers to notify you if anything like this should happen during transport.

Frequently Asked Questions

Load securement is our FAQ topic this quarter.

* Is loading and unloading a vehicle regulated by the Hazardous Material Regulations (HMR)?

**Reference # 05-0267

Yes. All pre-transportation and transportation functions are subject to the applicable HMR requirements concerning compatibility of lading with the packaging, outage and filling limits, securing of valves and closures, venting, segregation, cargo securement and similar provisions. (See 10 CFR 71.5 and 49 CFR 171.1, 173.30, 177.804, 177.842)

* If a shipper loads the vehicle, who is responsible for the load securement?

**Reference # 98-0260, 98-0242 and NRC Information Notice No. 87-31

Each person is responsible for the function that they perform. In the event a shipper conducts or participates in the loading process of a hazardous material onto a transport vehicle, they must comply, as does the carrier, with applicable requirements of the HMR (§ 173.30).

* Are tiedowns enough to prevent lateral movement of packages on a flatbed trailer?

**Reference # NRC Information Notice No. 87-31

No, many packages have moved due to inadequate blocking and bracing.

* What is expected of an NRC licensed shipper to ensure I meet all the load securement rules?

**Reference # NRC Information Notice No. 87-31

Licensees should included written loading procedures with detailed checklists and quality control oversight and release requirements to ensure that all shipments are properly loaded and braced.

To access any DOT letters of interpretation, go to: http://www.phmsa.dot.gov/hazmat Then, click on: "Interpretations" Next, you can search by entering the reference number in the search box or search by the applicable regulatory section number, or search by the published date. To access any NRC Informational Notices, go to: http://www.nrc.gov/reading-rm/doc-collections Then, click on Generic Communications, Informational Notices, and search by appropriate year. Do not forget that you have these internet addresses (and many more) in a Word document on our training class CD handout.





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New Rulings in the Federal Register

On July 14, 2010 (75 FR 40756), the U.S. Nuclear Regulatory Commission (NRC) published a notice for public comment on the implementation guidance for a proposed rule to establish security requirements for the use and transport of Category 1 and Category 2 quantities of radioactive material. The public comment period for this guidance was to have expired on November 12, 2010. The NRC received several requests to extend the comment period to January 15, 2011. Due to ofsize and complexity the implementation guidance and the associated proposed rule, the NRC has decided to extend the comment period until January 18, 2011 for both. The draft Part 37 implementation guidance is available electronically under ADAMS Accession Number ML101470684. Public comments and materials the supporting implementation guidance, including the draft implementation guidance, can be found at http://www.regulations.gov by searching on Docket ID NRC 2010-0194. Documents related to the proposed rule can be found by searching on Docket ID NRC 2008-0120.



On September 30, 2010 (75 FR 60333), the Pipeline and Hazardous Materials Safety Administration published a final rule amending the Hazardous Materials Regulations to revise several packaging related definitions. This final rule responds to one petition for reconsideration and four appeals submitted in response to the February 2, 2010 final rule Docket No. PHMSA-06-25736 (HM-231) (75 FR 5376) and also corrects several errors that occurred in that rulemaking. One major correction is to the bulk packaging definition. The September 1, 2006 NPRM (71 FR 52017) definition for bulk packaging did not include the phrase "with no intermediate form of containment" and was completely based on volume (>119 gallons) for class 7 packaging. The phrase has been added back and now reads in 49 CFR 171.8 as: "Bulk packaging means a packaging, other than a vessel or a barge, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment. A Large Packaging in which hazardous materials are loaded with an intermediate form of

containment, such as one or more articles or inner packagings, is also a bulk packaging. Additionally, a bulk packaging has: (1) A maximum capacity greater than 450 L (119 gallons) as a receptacle for a liquid; (2) A maximum net mass greater than 400 kg (882 pounds) and a maximum capacity greater than 450 L (119 gallons) as a receptacle for a solid; or (3) A water capacity greater than 454 kg (1000 pounds) as a receptacle for a gas as defined in § 173.115 of this subchapter." The effective date was October 1, 2010.

On September 29, 2010 (75 FR 60017), the Pipeline and Hazardous Materials Safety Administration published a notice to propose rulemaking (NPRM) amending the Hazardous Materials Regulations to update the incorporations by reference section and revise 49 CFR Part 174 to properly reflect the current rail intermodal load securement by replacing references to Bureau of Explosives (BOE) Pamphlet 6C in §§ 174.55(a); 174.101(o)(2)(3); 174.112(c)(3); and 174.115(b)(3) to Pamphlet 6 and the Association of American Railroads (AAR) Intermodal Loading Guide for Products in Closed Trailers and Containers; add a requirement for each applicant to a special permit under §§ 107.105, 107.107, and 107.109 to identify their role as a shipper (offeror), carrier, or both; revise the definition of "person" to include those who manufacture, test, repair, and recondition packages (see § 171.8); revise the Hazardous Materials Table (HMT) to harmonize certain entries with international standards; revise § 171.14 transitional provisions to remove expired transitional provisions and incorporate certain transitional provisions into the specific sections of the HMR; revise § 172.336 by adding new paragraph (d) to allow the use of smaller identification markings when a bulk packaging is labeled instead of placarded; and several other provisions.



New Rulings in the Federal Register – cont'd

On September 27, 2010 (75 FR 59118), the Federal Motor Carrier Safety Administration (FMCSA) published a final rule to prohibit texting by commercial motor vehicle (CMV) drivers while operating in interstate commerce and impose civil sanctions. including penalties disqualification from operating CMVs in interstate commerce, for drivers who fail to comply with this rule. Additionally, motor carriers are prohibited from requiring or allowing their drivers to engage in texting while driving. FMCSA amends its commercial driver's license (CDL) regulations to add to the list of disqualifying offenses a conviction under State or local traffic laws or ordinances that prohibit texting by CDL drivers while operating a CMV, including school bus drivers. Recent research commissioned by FMCSA shows that the odds of being involved in a safety-critical event (e.g., crash, near-crash, unintentional lane deviation) is 23.2 times greater for CMV drivers who engage in texting while driving than for those who do not. This rulemaking increases safety on the Nation's highways by reducing the prevalence of or preventing certain truck- and bus-related crashes, fatalities, and injuries associated with distracted driving. The final rule is effective October 27, 2010.

Also on September 27, 2010, the Pipeline and Hazardous Materials Safety Administration (PHMSA) published a NPRM (75 FR 59197) to prohibit texting on electronic devices by drivers during the operation of a motor vehicle containing a quantity of hazardous materials requiring placarding under 49 CFR Part 172 or any quantity of a select agent or toxin listed in 42 CFR part 73; and the Federal Railroad Administration (FRA) published a final rule (75 FR 59580) amending its railroad communications regulations by restricting use of mobile telephones and other distracting electronic devices by railroad operating employees with an effective date of March 28, 2011.





Advanced NRC/DOT Shipper Refresher Class in Seattle

Come join us for one of our comprehensive and intensive refresher training workshops designed for experienced radioactive material shippers. We are offering the 3-day advance refresher class for packaging, transportation and disposal of radioactive material/waste during the week of July 11th, 2011 in Downtown Seattle, Washington. This class will provide an opportunity to see all the updates in the regulations, review of the shipping fundamentals and interaction with peers in our industry.

Also available to meet your function specific training needs during the same week:

- · Load securement for shippers on Monday
- IATA for the air transport of radioactive materials on Friday



New Convenient Hazardous Material Employee E-learning Courses Offered

- Federal Motor Carriers Safety Regulations (FMCSR) for Drivers - \$350
 - For all commercial motor vehicle operators
- Hazardous Materials General Awareness Transportation Training - \$350
 - For all HazMat employees
- Hazardous Materials Driver's Training \$250
 - For non-CMV and non-CDL drivers
- Highway Route Controlled Quantity (HRCQ) Training for Drivers - \$250
 - Additional driver training to haul HRCQ

Registration for the above courses, please contact:

Jennifer Keszler

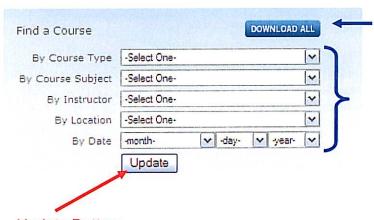
(509) 375-9507 jkeszler@energysolutions.com



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 - Select instructor by name
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 - Select prior to date

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