

New Rulings in the Federal Register

On December 1, 2009, the NRC published a final rule that will revise how guidance can be obtain for making electronic submissions and other needed miscellaneous corrections. Effective date for this final rule was December 31, 2009.

The Electronic Information Exchange (EIE) telephones will be removed and the contact information will be updated in the following sections: 10 CFR 20.1007, 20.2203, 30.6, 40.5, 50.4, 61.4, 70.5, 71.1, and 73.4. Below are the new addresses:

“Detailed guidance on making electronic submissions can be obtained by visiting the NRC’s Web site at www.nrc.gov/site-help/e-submittals; by email to mshd.resource@nrc.gov; or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.”

One of the miscellaneous corrections includes the name change of the “Office of Nuclear Security and Incident Response (NSIR)” to the “Division of Security Policy” and the Division of Security Operations.” Simply this rule will replace the “Division of Nuclear Security” with “Division of Security Policy” in sections: 10 CFR 40.23, 40.64, 40.66, 40.67, 70.5, 70.20b, 70.32, 71.97, 73.4, 73.26, 73.27, 73.67, 73.71, 73.72, 73.73, 73.74, 76.5, and 150.17.

The NRC also published another order to impose increased controls for Radioactive Material Quantities of Concern (RAMQC) on December 14, 2009. There were only a few notable changes from the original December 1, 2005 federal register order. This order includes an official list of licensees that must comply and Table 1 now includes Ra-226 with the quantity of concern set at 0.4 TBq (11 Ci). This order includes the actions for both exceeding the Table 1 threshold and 100xTable 1 threshold.

Update on Placarding Bulk Packages



There has been much debate on this sore subject. On one side of the debate, section 173.427 clearly states to placard the “vehicle” when shipping LSA/SCO material exclusive use. On the other side is the recent letter of interpretation that calls for placarding all bulk packagings. EnergySolutions submitted a letter to DOT on February 2, 2010. This letter includes four LSA/SCO exclusive use shipping scenarios. Each scenario asked about placarding the vehicle, whether by rail or highway. When DOT responds to this letter, we will immediately publish their response. In the meantime, it is our recommendation that you verify with the consignee on which side of the placard debate they are on before shipping.



DOT Final Rules

Packaging Size Definition and Closure Instructions Changes

DOT has published a long awaited final rule that will change the definition of a bulk packaging. They are removing the confusing phrase “*with no intermediate form of containment*” from the introductory paragraph to the bulk packaging definition in 49 CFR 171.8. The packaging capacities in the bulk packaging definition will remain the same. This is a change to the wording that was proposed in the September 1, 2006 federal register. DOT proposed to change this definition to one simple volumetric capacity of greater than 119 gallons. On another note, this definition change in the final rule may confuse those using the DOT letter of interpretation #01-0153. The letter states that any radioactive package with an intermediate form of containment (a liner or drums in a cask) may be considered non-bulk and marked with non-bulk package markings. The changes in this final rule may nullify this letter.

DOT is also very concerned with packaging closures failing during transportation. They are adding the requirement of packaging manufacturers in 49 CFR 178.2(c) to include closure instructions that are “*consistent and repeatable...to ensure the packaging is closed in the same manner as it was tested.*” Manufacturers and distributors were already required to provide instructions with procedures, but DOT wants more details included like torque and gap values, or types, locations and grades of replaceable parts. In addition, shippers are now responsible to maintain a copy of these instructions for at least 365 days after offering the package for transportation. This change will be added to the shipper’s responsibility text in 49 CFR 173.22(a)(4).

There are more packaging requirement changes in this final for those that manufacturer or ship packages for other hazard classes, than class 7 materials. Please take the time to read through a copy of this federal register for the other changes. The background information is always an interesting read on why the changes are finalized. Voluntary compliance starts on March 4, 2010 and the effective date for mandatory compliance is October 1, 2010.

Security Plan Requirements Modified

DOT published another final rule on March 9, 2010 that will adjust the security plan requirements to a risk-based method. Security plans will only apply to those materials that pose a significant security risk in transportation. These will apply to all modes of transportation: air, vessel, rail and highway. Rail will still have to comply with the additional security requirements that were changed on the November 26, 2008 by both the TSA and PHMSA. These changes are already incorporated in 49 CFR Parts 172, 174, 209, 1520, and 1580. For class 7, the levels of radioactive material that will require adherence to a security plan are IAEA Categories 1 & 2; Highway Route Controlled Quantities (HRCQ); NRC Radioactive Materials in Quantities of Concern (RAMQC); or uranium hexafluoride requiring placarding under 49 CFR 172.505(b). The IAEA Categories 1 & 2 radionuclides and thresholds are identical to the NRC’s RAMQC for common radionuclides. There is one exception. The IAEA has additional radionuclides that are not included in the RAMQC list and are considered to be not so common (please see table). You can download a free copy of the IAEA security code at the website listed below.

In-depth security plan training will only be required for those folks that have a need-to-know. These include those that handle or perform a function with a material that requires a security plan, and those that implement the security plan. Recurrent training is at least every 3 years, unless there is a change to the security plan. Training will be required within 90 days of implementation of the revised plan. A training plan must also be incorporated into the security plan.

Cont'd on next page

DOT Final Rules Cont'd**Security Plan Requirements Modified – cont'd**

The risk assessment must be included in and part of the written security plan. Site-specific or location-specific risks must be also included. You cannot have just one "corporate" security plan template without addressing each facility's unique security risks. There is a new annual review requirement. The latest revised copy must be readily available to all personnel that handle these higher risk materials or implement the security plan. If you have anything to do with security plans or handling material that requires a security plan, this federal register is a must read for all the specific changes and the discussions between the comments received and DOT. The effective date for this final rule is October 1, 2010 with voluntary compliance starting April 8, 2010.

<http://www-ns.iaea.org/tech-areas/radiation-safety/code-of-conduct.htm>

Values for Radionuclides Unlikely to be Used in Individual Radioactive Sources				
	Category 1		Category 2	
Radionuclide	(TBq)	(Ci)	(TBq)	(Ci)
Au-198	$2 \times 10^{+2}$	$5 \times 10^{+3}$	$2 \times 10^{+0}$	$5 \times 10^{+1}$
Cd-109	$2 \times 10^{+4}$	$5 \times 10^{+5}$	$2 \times 10^{+2}$	$5 \times 10^{+3}$
Co-57	$7 \times 10^{+2}$	$2 \times 10^{+4}$	$7 \times 10^{+0}$	$2 \times 10^{+2}$
Fe-55	$8 \times 10^{+5}$	$2 \times 10^{+7}$	$8 \times 10^{+3}$	$2 \times 10^{+5}$
Ge-68	$7 \times 10^{+2}$	$2 \times 10^{+4}$	$7 \times 10^{+0}$	$2 \times 10^{+2}$
Ni-63	$6 \times 10^{+4}$	$2 \times 10^{+6}$	$6 \times 10^{+2}$	$2 \times 10^{+4}$
Pd-103	$9 \times 10^{+4}$	$2 \times 10^{+6}$	$9 \times 10^{+2}$	$2 \times 10^{+4}$
Po-210	$6 \times 10^{+1}$	$2 \times 10^{+3}$	6×10^{-1}	$2 \times 10^{+1}$
Ru-106 (Rh-106)	$3 \times 10^{+2}$	$8 \times 10^{+3}$	$3 \times 10^{+0}$	$8 \times 10^{+1}$
Tl-204	$2 \times 10^{+4}$	$5 \times 10^{+5}$	$2 \times 10^{+2}$	$5 \times 10^{+3}$

New Type A Cask Handling Procedure

There is now just one procedure to follow for all our Type A casks: Technical 3002 Cask Handling Procedure for US DOT Specification 7A, Type A Transportation Cask. Current revision is "Rev. 5" with an effective date of January 20, 2010. This applies to all our 6-80-2 series, 8-120A, 10-142A series, 14D-2.0, 14-195, 14-170 series, 14-190 series, 14-210 series, 14-215, and 21-300 "USA DOT 7A TYPE A" certified casks. The procedure is included in each of the cask manuals and can be downloaded from our customer portal (top right-hand corner) at our home website (energysolutions.com) under cask information.



Recent Industry Events



How do you secure your loads inside an intermodal to prevent shifting during transport?



Will this placard meet the design specifications? I hope the explosives inside do!



Is a leaking package vent okay? What is protecting the general public from this hazard?

Welcome New Instructors

Tom Calihan - has been called back to resume DOT training duties after being contracted out on special assignments in the field for the last 14 years thru Waste Management, Duratek and Energy Solutions. During his 28 years onsite, he has held a variety of supervisory and management positions at Hanford including Reactor Operations, Safeguards and Security, Systems instructor and also served as Emergency Preparedness Coordinator for multiple operating nuclear process and storage facilities across the site. Prior to that, Tom served as one of two lead instructors for the DOE-HQ sponsored hazardous materials transportation and packaging program. As past site interpretive authority for Hanford's DOT HazMat program, training and regulatory compliance inspections were conducted at DOE sites across the country. These efforts resulted in two Westinghouse Corporate Circle of Excellence awards. While coming back on EnergySolutions staff, Tom will continue to work with the HAMMER/Hanford Training organization to develop hands-on training exercises for civilian and military First- responders in Homeland Security training for Weapons of Mass Destruction (WMD). Tom maintains his training as a staff member of the Hanford Emergency Operations Center and also as an on-call responder for DOE-HQ ESF#12 Energy Restoration Team in support of FEMA. Tom will be based out of the Richland, WA office.

David Jordan - David joined EnergySolutions Training Services in February 2010 as a Training Professional. He has more than 25 years of varied experience in the field of Radiation Safety serving in professional, supervisory and technical positions. From 1999 to 2008 Dave was responsible for the development and implementation of the plant Radiation Safety Program, Radioactive Waste Characterization, and Radioactive Materials Shipping. His duties also included managing regulatory compliance, procedure writing, training development and classroom presentation. He is responsible for the development and presentation of EnergySolutions' Broker Classroom Training Program. Dave will be based out of the Columbia, SC office.

Frequently Asked Questions

Our topic this quarter is on empty radioactive material packaging.

- * Do I have to remove all markings, including the orange panel for bulk packages, on an empty packaging of radioactive material? *Reference # 99-0143*

Yes. Section 173.428 mentions removing, covering or obliterating the hazard label. This would also include all applied markings that are required when the package was full. Only the Empty label is required from the Part 172 specification communication requirements.

- * Can I use the Empty label for non-radioactive material empty packagings? *Reference # 01-0169*

Yes, the Empty label required for radioactive material empty packagings in 173.428 can be used for empty, clean and purged non-radioactive hazardous material packagings. This is allowed for empty packagings that contained any hazard class.

Editor's Note: If you see a DOT specification Radioactive Empty Label on a package, please do NOT assume that it only contains the hazards of class 7 radioactive material. You may encounter any other hazard class residue inside the packaging, unless the empty packaging also has the identification number: UN2908. Please be careful!

- * Do I have to remove, cover or obliterate the manufacturer's markings on an empty packaging of radioactive material? *Reference # 04-0222*

No, the manufacturer's marking should remain visible on the packaging, unless the packaging can no longer meet the required packaging specifications. For example, "USA DOT 7A TYPE A" should not be covered on an UN2908 empty packaging when the packaging can still meet the Type A packaging specification. Covering this manufacturer marking is an indication that the packaging can no longer meet the Type A packaging requirements.

- * Does the Hazardous Material Regulations (HMRs) apply to purged and empty cylinders that previously contained a compressed mixture of noble gases? *Reference # 05-0047*

No, as long as it no longer meets the definition for class 7 radioactive material (less than one of the limits set in section 173.436) and no longer meets the definition for Division 2.2 non-flammable compressed gas (the pressure has been relieved).

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. Do not forget that you have this internet address (and many more) in a Word document on our training class CD handout.



These transportation training courses meet the requirements of 49 CFR 172 Subpart H and NRC IE Notice 79-19

Course	Date	Duration	Tuition	Location
DOT/NRC Basic Radioactive Waste Packaging, Transportation & Disposal	4/12 – 15	32 Hrs	\$1595	Charleston, SC
Air Transport of Radioactive Materials (IATA)	4/16	4 Hrs	\$595	Charleston, SC
Federal Motor Carrier Load Securing for Shippers	4/16	4 Hrs	\$395	Charleston, SC
DOT/NRC Basic Radioactive Waste Packaging, Transportation & Disposal	6/7 – 10	32 Hrs	\$1595	Monterey, CA
Air Transport of Radioactive Materials (IATA)	6/11	4 Hrs	\$595	Monterey, CA
Federal Motor Carrier Load Securing for Shippers	6/11	4 Hrs	\$395	Monterey, CA
All courses meet both DOE and DOT requirements.				
Hazardous Materials Drivers Training	4/7	4 Hrs	\$360	Richland, WA
Advanced Mixed Waste Shipper Certification Training	4/12 – 15	32 Hrs	\$1110	Richland, WA
Hazardous Materials General Awareness Transportation Training	4/26	8 Hrs	\$480	Las Vegas, NV
Federal Motor Carrier Safety Regulations for Managers & Supervisors	4/27 – 28	16 Hrs	\$745	Richland, WA
Advanced Hazardous Waste Shipper Certification Training	4/27 – 29	24 Hrs	\$990	Las Vegas, NV
Hazardous Materials Drivers Training	4/29	4 Hrs	\$360	Richland, WA
Hazardous Materials General Awareness Transportation Training	5/4	8 Hrs	\$480	Richland, WA
Federal Motor Carrier Safety Regulations for Drivers	5/5	8 Hrs	\$480	Richland, WA
Load Securement for Drivers & Traffic Personnel	5/6	8 Hrs	\$360	Richland, WA
Advanced Hazardous Waste Shipper Certification Training	5/11 – 12	16 Hrs	\$745	Las Vegas, NV
Federal Motor Carrier Safety Regulations for Drivers	5/11	8 Hrs	\$480	Las Vegas, NV
Hazardous Materials General Awareness Transportation Training	5/12	8 Hrs	\$480	Las Vegas, NV
Hazardous Materials Drivers Training	5/13	4 Hrs	\$360	Las Vegas, NV
Load Securement for Drivers & Traffic Personnel	5/13	4 Hrs	\$360	Las Vegas, NV
Advanced Hazardous Waste Shipper Certification Training	5/18 – 20	24 Hrs	\$990	Richland, WA
Highway Route Controlled Quantity	5/19	4 Hrs	\$360	Richland, WA
Hazardous Materials General Awareness Transportation Training	5/20	8 Hrs	\$480	Richland, WA
Advanced Radioactive Material Shipper Certification Training	6/8 – 10	24 Hrs	\$990	Richland, WA
Advanced Radioactive Material Shipper Certification Training	6/15 – 17	24 Hrs	\$990	Las Vegas, NV
Hazardous Materials Drivers Training	6/16	4 Hrs	\$360	Richland, WA
Hazardous Materials General Awareness Transportation Training	6/23	8 Hrs	\$480	Richland, WA
Radioactive Material Packaging Training	6/24	8 Hrs	\$480	Richland, WA

March 14th
Daylight Savings
Time Begins

March 20th
1st Day of Spring



May 9th
Mother's Day

June 20th
Father's Day

The MODERATOR is the official Training Services Newsletter for EnergySolutions.
This newsletter can also be viewed on our web site at www.energysolutions.com