

Vol. 14, No. 3, September 2015

Training Resources and Information for the Nuclear Industry

New Return To Service Policy

On 13 July 2015, EnergySolutions began implementing criteria to comply with new requirements that the U.S. Department of Transportation (DOT) has promulgated for the transportation of radioactive Class 7 materials shipped as exclusive use under the following conditions:



- 49 CFR 173.427(b)(4) LSA or SCO in excepted packaging
- 49 CFR 173.427(c) LSA or SCO unpackaged
- 49 CFR 173.443(b) allowance for contamination on external surface of the package up to 10 times Table 9 limits during transport

The new requirements address return of conveyances (e.g., truck trailers, vehicles, railcars and gondolas) and packages (e.g., sealands and intermodals) shipped as exclusive use after being emptied of radioactive materials. Previously, EnergySolutions has returned packages and conveyances to customers as "Return to Service" (RTS) in accordance with the limits set forth in 49 CFR 173.443(a), Table 9. DOT has revised the requirements to ensure packages and conveyances previously used to transport radioactive materials under the above listed configurations do not inadvertently end up in use for general commerce before being appropriately surveyed and/or decontaminated.

These changes do not impact packages or conveyances that are shipped as non-exclusive use or were previously released by EnergySolutions as "Sole Use" (49 CFR 173.443(d)), "DOT Empty" (49 CFR 173.428), or "Unrestricted Use" as authorized by a U.S. Nuclear Regulatory Commission (NRC) or Agreement State radioactive material license or appropriate regulatory agency. The primary change is that EnergySolutions will return the above listed equipment using the "Exclusive Use" provision in 49 CFR 173.443(c) accompanied by corresponding documentation which will include specific instructions for packages and conveyances that have previously transported radioactive Class 7 materials, but have not been decontaminated to Unrestricted Use criteria.

Energy Solutions will continue to coordinate the return of packages and conveyances to customers' sites to

minimize any potential impact as a result of having to comply with the new DOT regulations that went into effect on 13 July 2015. Please contact us if you have any questions, or would like a copy of our press release letter outlining the additional details on the specific regulatory changes and how EnergySolutions will implement these changes at its facilities.



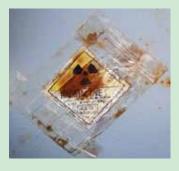
Recent Industry Issues

What are the visibility requirements for placards? In 49 CFR 172.516(a) it states that a placard must be "clearly" visible. We can achieve this by placing the placard at least three (3) inches (76 mm) away



from any markings [49 172.516 (c)(4)]. Also by placing the placard on a surface which does not take away any of the placard's required format, size or design [49 CFR 172.516(c)(6), 172.519(b) & (c), and 172.556].

The use of clear packing tape is a growing trend in an attempt to ensure labels/markings/placards stay affixed, but may not be your best option. Many times the tape yellows, or collects debris or



damaging moisture underneath the tape during normal transport conditions. Seems self-defeating! Better options are available, like spray adhesive, contact cement and/or providing extra copies to the driver. Be sure to comply with the labeling visibility [49 CFR 172.406(f)] and durability [49 CFR 172.407(a)] requirements.

(Continued on page 2)



Frequently Asked Questions

Our FAQ topic for this quarter looks at contamination control. Specific DOT Letters of Interpretation and regulatory citations are referenced.

* Does DOT require a specific instrument to measure contamination?

Reference # 02-0116, 04-0047, 06-0002R, 09-0206 & 10-0174

No, DOT allows shippers flexibility to use whatever equipment necessary to meet the contamination control requirements.

* What type of ionizing radiation should I measure for contamination?

Reference # 05-0094, 06-0002R, 09-0206 & 49 CFR 173.403

A shipper must ensure the levels of all types of ionizing radiation from contamination are below the regulatory limits, this includes alpha, beta and gamma emitters.

* Does the wipe efficiency include the instrument efficiency factor?

Reference # 06-0153 & 10-0174

No, the instrument efficiency factor may be provided on the instrument, obtained through the manufacturer or supplier of the instrument, or determined by using reference standards of known radioactivity. Therefore, both a wipe efficiency factor and an instrument efficiency factor are needed to calculate the level of contamination.

* Is there an alternate method to actual wipe samples?

Reference # 99-0119, 02-0116, 04-0047& 06-0153

Yes, an alternate method which gives the same or greater assurance that the package contamination does not exceed the regulatory limits, such as new packaging material protected from on-site contamination, is acceptable as long as it ensures compliance.

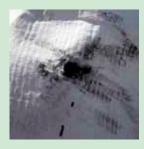
* How do I show compliance with the new threshold of contamination in 49 CFR 173.401(b)(5)?

Reference # 06-0002R & 49 CFR 173.401/173.403

The definition of contamination in 49 CFR 173.403 includes both fixed and non-fixed radioactive substances on a surface, including the surface of a package, empty packaging or conveyance. This would require a radiation survey instrument of appropriate sensitivity to show small enough readings to conclude that both the non-fixed contamination and the radiation level requirements for fixed contamination are met.

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 these letters and internet addresses listed on our training CD handout.

Recent Industry Issues (cont.)







Should the material placed in a packaging be compatible [49 CFR 173.24(e)] and the packaging compatible with the lading [49 CFR 173.24(b) (2) & 173.410(g)]? The three pictures here are the result when equipment is placed in a soft-sided package and does not survive normal conditions of transport. edges Sharp on the equipment were one factor leading to these holes in the packaging material. Ensure any sharp edges are properly covered and the protective material will stay in place during transport. Friction or rubbing was another factor to this packaging failure. Consider load securing to prevent the package from shifting and wind protection to minimize the movement

of any excess or "baggy" packaging material.

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Latest Happenings in the Federal Register

NRC Updates 10 CFR 71

On June 12, 2015 (80 FR 33988), the Nuclear Regulatory Commission (NRC) published a final rule in the federal register in consultation with the U.S. Department of Transportation (DOT) amending its regulations in 10 CFR Part 71 for the packaging and transportation of radioactive material. These amendments make conforming changes to the NRC's regulations based on the International Atomic Energy Agency's (IAEA) 2009 standards for the international transportation of radioactive material and maintain consistency with the DOT's regulations in 49 CFR. In addition, these amendments re-establish restrictions on materials that qualify for the fissile material exemption, clarify requirements, update administrative procedures, and make editorial changes. This final rule is effective July 13, 2015.

CFSI Regulatory Issue Summary

On July 13, 2015 (80 FR 40087), the NRC published a notice in the federal register announcing the issuance of Regulatory Issue Summary (RIS) 2015-08, "Oversight of Counterfeit, Fraudulent, and Suspect Items in the Nuclear Industry." This RIS is intended to heighten awareness of existing NRC regulations and how they apply to the nuclear industry stakeholders' oversight of counterfeit, fraudulent, and suspect items (CFSI) like the Manufacturer or Transfer of Items (e.g. sealed sources) Containing Byproduct Material and Transportation, Storage and Disposal of Radioactive Waste. This RIS is addressed to all NRC's licensees and certificate holders, Agreement State radiation control program directors, and state liaison officers, as well as addressees' contractors and vendors. The RIS is available as of July 13, 2015 on the NRC's website http://pbadupws.nrc.gov/docs/ML1500/ML15008A191. pdf or view all available RIS at http://www.nrc.gov/ reading-rm/doc-collections/gen-comm/reg-issues/

NRC Misc. Changes to 10 CFR

On August 3, 2015 (80 FR 45841), the NRC published a final rule in the federal register amending its regulations in 10 CFR Parts 1, 37, 40, 50, 55, 74 and 75 to make miscellaneous corrections. These changes include updating the name and the phone number of the U.S. Government Publishing Office (GPO), updating the

address for the National Technical Information Service, correcting typographical errors, correcting misspellings, and correcting references. This final rule is effective September 2, 2015.

Change to the Definition of Exclusive Use

On January 8, 2015 DOT published HM-215M with a delayed compliance date of January 1, 2016. In this final rule, the definition of Exclusive Use was changed to include the phrase, "...when required by this subchapter..." This means that a shipment can only be transported as exclusive use under the conditions that require exclusive use for radioactive material shipments. A shipper cannot "choose" to ship exclusive use when it isn't required.

Exclusive use shipments are required for the following conditions:

- 49 CFR 173.427(b)(1) and Table 6 LSA or SCO packaged in an Industrial Packaging Type IP-1, 2, or 3 under the "Exclusive Use Shipment" column
- 49 CFR 173.427(b)(4) LSA or SCO in excepted pack aging
- 49 CFR 173.427(c) LSA or SCO unpackaged
- 49 CFR 173.441(b) packages with a surface radiation reading greater than 200 mrem/hr or a Transport Index (TI) greater than 10
- 49 CFR 173.441(d) conveyances with a total TI greater than 50
- 49 CFR 173.442(b)(2) packages with temperatures on accessible external surfaces between 50°C (122°F) and 85°C (185°F)
- 49 CFR 173.443(b) allowance for contamination on external surface of the package up to 10 times Table 9 limits during transport
- 49 CFR 173.443(d) dedicated sole use vehicles
- 49 CFR 173.457(c) packages with a Criticality Safety Index (CSI) greater than 50
- 49 CFR 173.457(e) conveyances with a total CSI between 50 and 100



Rest Break Rule Exemptions



The 30-minute rest rule located in 49 CFR 395.3(a) (3)(ii) requires interstate commercial motor vehicle (CMV) drivers take a 30-minute rest break within 8 hours of on-duty time unless they qualify for the short-haul exception of §395.1(e)(1) or (2). The rest break must be off-duty

time or sleeper-berth period of 30 minutes before being allowed to drive.

Last June, the Federal Motor Carrier Safety Administration (FMCSA) granted an exemption of their minimum 30-minute rest break rule to certain motor carriers under contract to U. S. Department of Energy (DOE) who transport "security-sensitive radioactive materials" and also to all specialized carriers and drivers responsible for the transportation of loads exceeding standard legal weight and dimensional limits - oversize/ overweight (OS/OW) loads - that require a permit issued by a government authority. In DOE's case, those contractors with drivers who qualify for the exemption are allowed to use 30 minutes or more of on-duty "attendance time" to meet the requirement for the rest break, provided they perform no other work during that time. This "attendance time" period is also allowed for drivers of CMVs containing Division 1.1, 1.2, or 1.3 explosives (§395.1(q)). Following that decision, on behalf of all motor carriers that transport certain hazardous materials (HM) requiring security plans under regulations of the Pipeline and Hazardous Materials Safety Administration (PHMSA), American Trucking Associations, Inc., requested an exemption to the 8 hour rest break rule. FMCSA announced its decision to grant all motor carriers transporting security-sensitive hazardous materials requiring a security plan an exemption from the required 30 minute rest break. This exemption was granted effective August 21, 2015 and expires August 21, 2107 and allows the attendance time to meet the same requirements as those of DOE contractors. According to DOE, the term "security-sensitive radioactive materials" includes transuranic waste, spent nuclear fuel, radioactive sources classified as category 1 and 2 materials by the International Atomic Energy Agency, including highway route controlled quantities ("Hours of Service of Drivers: U.S. Department of Energy (DOE); Application for Exemption," 78 Federal Register 105, 31 May 2013, pp. 32700 – 32701). The "attendance time" was not addressed in the exemption for specialized carriers and OS/OW load carriers. Since such OS/OW loads on average range from 15-16 feet wide and high and up to 100 feet in length, finding a safe place to park can create a hazard that puts them, and other drivers, in an unsafe situation (lack of shoulder space, blocking of roadway, lane closures, etc.). Combined with abiding by the restricted travel time by States issuing permits for OS/OW loads, conflicts can arise with conforming to the 30-minute break rule. In both exemption cases DOT decided that allowing the drivers of such vehicles to exercise the exemptions would not affect the safety of the general public or CMV driver in a negative way.

Here's a fun DIY (do-it-yourself) project idea. Take a



_____(insert your favorite color) sticky note and grab your favorite writing device. Find a convenient and comfortable location to sit where you can write yourself a note. Take the writing device and apply it to the sticky note and begin writing the words, "Don't forget

to register for training today!" You can add additional graphics such as smiley faces, hearts, or even better,

our website: www.energysolutionstraining.com

If you're getting close (~90 days) to your three year expiration date for DOT training or if you're looking to begin your adventure into the DOT compliance training world, this is just a fun and friendly reminder to register early!! In order to avoid cancellation of a class due to low enrollment we would appreciate knowing in advance if you have interest in attending. There will be no penalties for cancellation if done ten business days in advance in the event that managerial permission and/or funding are not approved.

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Energy Solutions Training Newsletter





September - December 2015 Training Schedule

Course	Date	Location
Advanced Radioactive Material Shipper Certification Training	September 1-3, 2015	Aiken, SC
Load Securement for Drivers and Traffic Personnel	September 2, 2015	Richland, WA
Federal Motor Carrier Safety Regulations for Managers & Supervisors	September 8-9, 2015	Richland, WA
Hazardous Material General Awareness Transportation Training	September 9, 2015	Richland, WA
Reasonable Suspicion Training for Supervisors	September 10, 2015	Richland, WA
Basic Level Transportation Training – Module 1 – Basic Hazardous Material	Sept 14-15, 2015	Richland, WA
Basic Level Transportation Training – Module 2 – Basic Hazardous Waste	September 16, 2015	Richland, WA
Basic Level Transportation Training – Module 3 – Basic Radioactive Material	Sept 16-17, 2015	Richland, WA
*Attend all three modules consecutively for \$1,495.00 (savings of \$575.00)		
Federal Motor Carrier Safety Regulations for Drivers	September 15, 2015	Richland, WA
Advanced Radioactive Material Shipper Certification Training	Sept 22-24, 2015	Las Vegas, NV
Hazardous Materials Drivers Training	September 24, 2015	Richland, WA
Advanced Hazardous Waste Shipper Certification Training	Sept 29 – Oct 1, 2015	Richland, WA
Hazardous Material General Awareness Transportation Training	October 6, 2015	Richland, WA
Advanced Radioactive Material Shipper Certification Training	October 6-8, 2015	Albuquerque, NM
Hazardous Materials Drivers Training	Octobers 7, 2015	Richland, WA
Load Securement for Drivers and Traffic Personnel	October 13, 2015	Richland, WA
Hazardous Material General Awareness Transportation Training	October 14, 2015	Richland, WA
Federal Motor Carrier Safety Regulations for Drivers	October 15, 2015	Richland, WA
IATA: Transportation of Dangerous Goods by Air Shipper Certification Training	October 20-22, 2015	Richland, WA
Advanced Radioactive Material Shipper Certification Training	October 20-22, 2015	Richland, WA
Advanced Mixed Waste Shipper Certification Training	October 26-30, 2015	Richland, WA
DOT/NRC Radioactive Waste Packaging, Transportation and Disposal Training	October 27-30, 2015	Hilton Head, SC
Load Securement for Drivers and Traffic Personnel	November 3, 2015	Richland, WA
IATA: Transportation of Dangerous Goods by Air Shipper Certification Training	November 3-5, 2015	Las Vegas, NV
DOT/NRC/EPA Hazardous Waste/Mixed Waste Packaging, Transportation and	November 3-6, 2015	Oak Ridge, TN
Disposal		Oak Mage, 114
Hazardous Materials Drivers Training	November 4, 2015	Richland, WA
Hazardous Material General Awareness Transportation Training	November 5, 2015	Richland, WA
Basic Level Transportation Training – Module 1 – Basic Hazardous Material	November 9-10, 2015	Richland, WA
Basic Level Transportation Training – Module 2 – Basic Hazardous Waste	November 11, 2015	Richland, WA
Basic Level Transportation Training – Module 3 – Basic Radioactive Material	Nov 11-12, 2015	Richland, WA
*Attend all three modules consecutively for \$1,495.00 (savings of \$575.00)		
Federal Motor Carrier Safety Regulations for Drivers	November 10, 2015	Richland, WA
Advanced Mixed Waste Shipper Certification Training	Nov 16-19, 2015	Albuquerque, NM
Hazardous Material General Awareness Transportation Training	November 18, 2015	Richland, WA
Explosives Training for Shippers	November 19, 2015	Richland, WA
IATA: Transportation of Dangerous Goods by Air Shipper Certification Training	December 1-3, 2015	Albuquerque, NM
Federal Motor Carrier Safety Regulations for Drivers	December 1, 2015	Richland, WA
Hazardous Material General Awareness Transportation Training	December 2, 2015	Richland, WA
Advanced Mixed Waste Shipper Certification Training	December 7-10, 2015	Las Vegas, NV
Federal Motor Carrier Safety Regulations for Managers & Supervisors	December 8-9, 2015	Richland, WA
DOT/NRC Radioactive Waste Packaging, Transportation and Disposal Training	December 8-11, 2015	Las Vegas, NV
Reasonable Suspicion Training for Supervisors	December 10, 2015	Richland, WA
Advanced Mixed Waste Shipper Certification Training	Dec 14-17, 2015	Richland, WA
Hazardous Materials Drivers Training	December 15, 2015	Richland, WA
Load Securement for Drivers and Traffic Personnel	December 16, 2015	Richland, WA





Online Training

EnergySolutions offers many courses online. Online training is a cost effective alternative to classroom training. It is self-paced and flexible, allowing the user to complete the course at his or her convenience. Training materials and references are accessed from the website. Upon successful completion of your online training and receipt of payment, EnergySolutions will provide a certificate indicating that you have completed the training.

How to Get Started:

- · Call or e-mail a contact listed below.
- Provide payment (check or credit card).
- Receive an access code.

What you Will Need:

- · Access to a computer.
- Ability to print PDF files.

Contacts:

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Please visit our web site at www.energysolutionstraining.com for course descriptions, pricing, and registration forms.

Available Courses

Air Transport of Radioactive Materials - \$495

FMCSR for Drivers - \$400

FMCSR for Managers and Supervisors – \$625

Hazardous Material General Awareness Transportation Training – \$400

General Packaging - \$400

Hazardous Material Drivers Training – \$295

HRCO for Drivers - \$295

Load Securement for Drivers and Traffic Personnel – \$295

Multi-Modal Transport of Automotive Parts – \$425

Transportation of Radioactive Materials for Drivers and Carriers – \$425

Basic IATA: Transport of Dangerous Goods by Air

- \$925 (includes current IATA Dangerous Goods Regulations)
- \$575 (without regulations)

(Updated Version Coming Soon!)

NRC/DOT Radioactive Waste Packaging, Transportation and Disposal Training – \$1,095