



HEAT STRESS CAUSES BODY REACTIONS

Four environmental factors affect the amount of stress a worker faces in a hot work area: temperature, humidity, radiant heat (such as from the sun or a furnace) and air velocity. Perhaps most important to the level of stress an individual faces are personal characteristics such as age, weight, fitness, medical condition and acclimatization to the heat.

The body reacts to high external temperature by circulating blood to the skin which increases skin temperature and allows the body to give off its excess heat through the skin. However, if the muscles are being used for physical labor, less blood is available to flow to the skin and release the heat.

Sweating is another means the body uses to maintain a stable internal body temperature in the face of heat. However, sweating is effective only if the humidity level is low enough to permit evaporation and if the lost fluids and salts are adequately replaced.

Of course there are many steps a person might choose to take to reduce the risk of heat stress, such as moving to a cooler place, reducing the work pace or load, or removing or loosening some clothing.

But the body cannot dispose of excess heat, it will store it. When this happens, the body's core temperature rises and the heart rate increases. As the body continues to store heat, the individual begins to lose concentration and has difficulty focusing on a task, may become irritable or sick and often loses the desire to drink. The next stage is most often fainting and death is possible if the person is not removed from the heat stress.

Article from Safety Newsletter

Placarding Bulk Packages

Questions about placarding bulk packages have seem to be a highlight in my training classes lately. Let's take a look at the regulations. There are two sections in 49 CFR Part 172 Subpart F that state we must placard freight containers (172.512) and bulk packagings (172.514), when placarding is required. If we are shipping only class 7 radioactive material, then placards are required when a package bears a Radioactive Yellow-III label. Placing the placard on the actual package is the preferred method when these bulk packagings have a capacity of 640 cubic feet or more. Bulk packagings with a capacity less than 640 cubic feet can have the placard on the vehicle, instead of the actual package if labeled. For example, most of our fleet shipping casks are less than 640 cubic feet in capacity, so as long as we label the cask then we are not required to placard the actual package if the vehicle is placarded. On the other hand, a 20- or 40-foot long "SeaLand" freight container (not LSA/SCO) would require the actual "SeaLand" container to be placarded. One exception to this requirement is shipping LSA/SCO exclusive use. According to 49 CFR 173.427, the "vehicle" is placarded for all LSA/SCO exclusive use shipments. As usual, shipping LSA/SCO has its own set of rules.



Recent Industry Issues



Does the penetration test for a Type A Package represent normal conditions of transport? Loading and unloading operations during transportation are included in the general packaging requirements [49 CFR 173.24]. Will your Type A package survive?



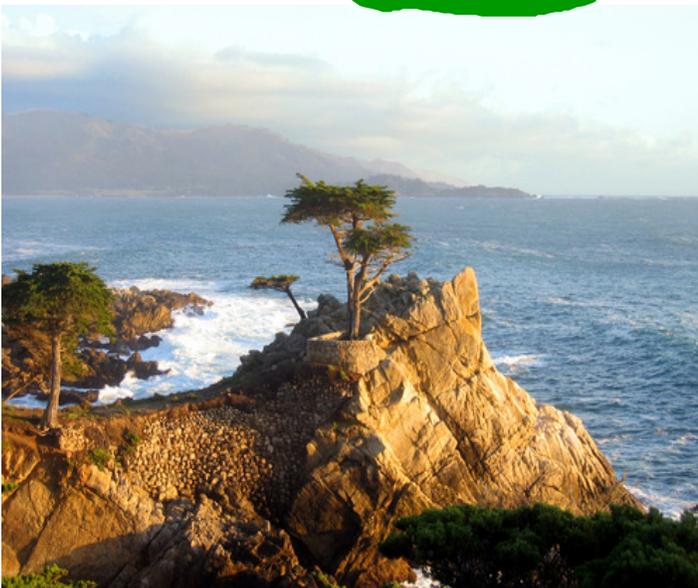
Careful when spacing your tiedowns! Can the orange panel be covered or obscured by anything [49 CFR 172.331(c)]? Specification communications are very important to law enforcement and emergency responders, especially during incidents when the right information must be conveyed.



This is a classic. It brings to life what can happen if we choose the lowest bidder, if we rush, or if we do not preplan for the “what ifs”. Luckily, we only have pictures like this to chuckle at. Please think about the quality of carriers you use and ensure their employees are hazmat trained.

New for 2010 Hotel Open-Enrollment Classes

After much evaluation and feedback from many of you, our NRC/DOT transportation workshop schedule is going to see a few changes in the calendar year of 2010. I have received many requests for another west coast location. So after much research for the perfect place, we are adding Monterey, CA to our bi-monthly open-enrollment locations (out of sheer luck, it is the week before the US Open). The 5-Day Basic and 3-Day Advance Workshops will no longer be available due to low attendance over the last several years. Our standard lineup for 2010 will include our most requested and attended training classes.



The 4-Day Basic Radioactive Material and Waste Packaging, Transportation and Disposal Workshop will now offer an optional half-day IATA Shipping Radioactive Materials by Air and Internationally on *Friday morning* and an optional half-day Load Securing for Shippers on *Friday afternoon*. We have added an additional 4-Day Hazardous Waste / Mixed Waste Packaging, Transportation and Disposal Workshop in the middle of the year at our Commerce Park office located in Oak Ridge, TN. Our hope and desire is a better balance in classes, locations and timing to meet your initial and refresher function-specific training needs.

This Month's Quote:
People who think before they speak will often never say a word.

Visit our web site at www.energysolutions.com

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Benefits:

- Provides quality cost-effective training
- Participants complete at their convenience
- Participants work at their own pace
- Meets DOT/NRC initial and refresher

How does it work? The program has been developed, tested and activated. Ready and waiting to meet your training needs. 3 easy steps to begin your course today:

1. Call our 800 number (1-800-925-1592, X 1882) or 803-758-1882 direct
2. Provide a credit card for payment, and
3. Receive an access code and time limit for completion

Welcome Our New Instructor

Chris Rosier joined the EnergySolutions Transportation Training team on June 6th and will be based out of our Richland, WA office. Chris has worked in Business Management and Sales for the last 6 years. He has his Class-A Commercial Driver's License and has transported lasers and laser equipment for 4 of the last 6 years. His training experience has been primarily focused on opening new offices and training staff on standards and protocol. He will be using his multi-talented background by instructing our FMCSR courses as well as the Hazardous Material Courses. He is married and has 4 kids. He is excited to join the team! Please welcome Chris when you see him at your next class.

Internet Courses Available

Basic Regulatory Awareness Training is designed for new personnel. The course incorporates the very basics on the packaging, transportation and disposal of radioactive material. Topics include: 10 and 49 CFR overview, using a scientific calculator, calculating for excepted quantities, Type A and Type B quantities, package communications and waste acceptance criteria.

Medical/University Licensees

- Meets DOT Part 172 Subpart H requirements
- Covers shipments with limited number of isotopes and activities

Dangerous Goods Regulations (IATA)

- Shipping radioactive material by air
- Initial or refresher training qualification

Radioactive Material Transportation for Drivers

Designed as a complete overview of carrier functions for transporting radioactive materials. Keep up to date on packaging design, communications, security awareness, load securing and paperwork requirements.

Measure service in five areas:

Integrity: Can they trust you? Do you keep your word? Far and away the most important. Everything else follows this.

Friendliness: Do you make them feel good? Are they comfortable around you?

Speed: How long is the wait? Are you faster than your competition?

Competence: Do you know what you're doing? Can you answer their questions or can you quickly get answers to their questions?

Flexibility: Can you adjust to their needs? How often can you say, "Yes, we can!" (the "Bob the Builder" response).

Training Courses Coming Up in the 3rd Quarter 2009



Date	Training Session	Location
These courses also meet the requirements of NRC IE Notice 79-19.		
July 13 - 16	4-Day Hazardous Waste/Mixed Waste	Oak Ridge, TN
Aug 3 - 7 NEW →	4-Day Basic Radioactive Waste Packaging, Transportation & Disposal ½-Day am – IATA & ½-Day pm – Load Securing for Shippers	Orlando, FL
Aug 31–Sept 4	1-Day FMC Load Securing and 3-Day Advanced Refresher for Experienced Shippers 1-Day – IATA Training	Columbia, SC
All courses meet both DOE and DOT requirements.		
July 7-8	Advanced Hazardous Materials Shipper Certification Training	Richland, WA
July 7	Hazardous Materials General Awareness Transportation Training	Richland, WA
July 9	Hazardous Materials Drivers training	Richland, WA
July 9	HRCQ	Richland, WA
July 13 – 16	Advanced Mixed Waste Shipper Certification Training	Las Vegas, NV
July 13 – 15	Basic Hazardous Materials Transportation Training (Mod 1)	Richland, WA
July 15	Basic Hazardous Waste Transportation Training (Mod 2)	Richland, WA
July 16 – 17	Basic Radioactive Material Transportation Training (Mod 3)	Richland, WA
July 20 – 21	Explosives Training for Shippers	Las Vegas, NV
July 22 – 24	IATA: Transportation of Dangerous Goods by Air Shipper Certification Training	Las Vegas, NV
July 27 – 30	Advanced Mixed Waste Shipper Certification Training	Richland, WA
Aug 4 – 6	Advanced Hazardous Waste Shipper Certification Training	Richland, WA
Aug 4	Hazardous Materials General Awareness Transportation Training	Richland, WA
Aug 27	General Packaging Requirements for the Transport of Hazardous Materials	Richland, WA
Sept 8	Hazardous Materials General Awareness Transportation Training	Richland, WA
Sept 9	HRCQ	Richland, WA
Sept 10	Load Securement for Drivers & Traffic Personnel	Richland, WA
Sept 15 – 17	Advanced Radioactive Material Shipper Certification Training	Richland, WA
Sept 15	Hazardous Materials Drivers training	Las Vegas, NV
Sept 16	Hazardous Materials General Awareness Transportation Training	Las Vegas, NV
Sept 22 - 23	Federal Motor Carrier Safety Regulations for Managers & Supervisors	Richland, WA
Sept 22 - 24	Advanced Radioactive Material Shipper Certification Training	Las Vegas, NV

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

Public Outreach Opportunities

How to get an Education in Energy and Nuclear Energy.

Free of Charge.



As part of its commitment to education, the EnergySolutions Foundation has developed a new tool for educating Junior High and High School students on nuclear energy.

The Alphas, Betas, Gammas, Oh My! CD set contains nuclear energy lesson plans, labs, games and activities developed by top science teachers as well as two presentations created by the EnergySolutions training department: The Environment and the Generation of Electricity and Safe and Reliable Nuclear Energy.

This new tool is available, free of charge, to schools and other parties interested in learning about energy and nuclear energy.

Also available, free of charge, are two books on CD, *Nuclear Energy and the Use of Nuclear Materials* and *Nuclear is Hot! Everything You Wanted to Know about Nuclear Science But Were Afraid to Ask*.

RISING FUEL COSTS
LOSE NEXT TURN

SUNNY ENVIRONMENT

GENERATOR

NUCLEAR ENERGY

4 alpha
2 particles

NUCLEAR ENERGY ANSWERS

NUCLEAR ENERGY (13)
Transuranic waste contains more than 100 nanources of alpha emitting isotopes per gram of waste with half lives
a. greater than 20 years
b. between 10 - 20 years
c. exactly 5260 years
d. between 10,000 and 20,000 years

Nuclear Energy and the Use of Nuclear Materials

Nuclear is Hot! Everything You Wanted to Know About Nuclear Science But Were Afraid to Ask

Alphas, Betas, Gammas, Oh My!

Energy Lesson Plans/Labs/Activities



For a complete set, to take a tour of our Clive, Utah facility, or to schedule a speaker, call Pearl Wright at the EnergySolutions Foundation 801-649-2286 or email pwright@energysolutionsfoundation.org.