



## NTSB Rail Safety Forum Rail Operations & Risk Management Strategies

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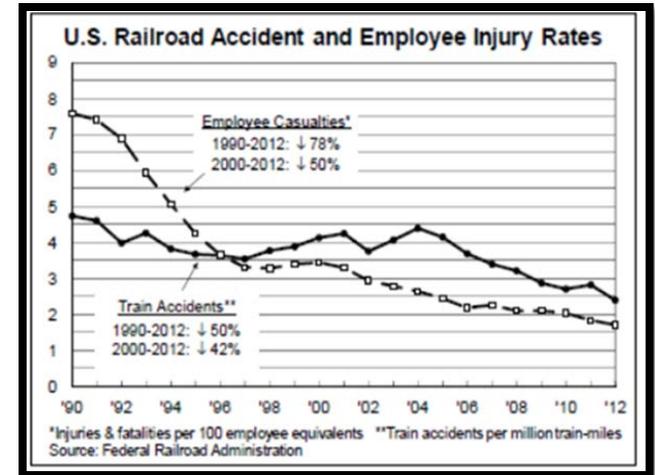
# Introduction

- Safety is a core value across the industry
- U.S. railroads have a long history of evaluating transportation risk and operating safely
- U.S. railroads have been transporting hazardous materials for almost 150 years
  - High-hazard products such as Chlorine and LPG for over 100 years



# Rail industry safety performance

- Since 1980
  - 80% reduction in train accidents
  - 85% reduction in employee injuries
  - 82% reduction in at grade collisions
- Voluntary safety actions beyond what is required by regulation
- Ongoing work with our customers, our employees, the community and the rail industry to enhance safety



# Rail industry risk evaluation

- Primary focus is safely moving every shipment to destination
  - Continued investment in our infrastructure
    - \$525B since 1980
  - Advancements in safety technology
- AAR Committees regularly evaluate hazmat risks
- Individual carrier evaluations of hazmat risks
  - CSX business risk management structure
  - Active process evaluates compliance, strategic, and external risks



# Risk management requires close coordination

- Shippers have the responsibility to properly classify the product, select the correct shipping container and follow rigorous loading and securement procedures
- Carriers invest in infrastructure, conduct comprehensive structure, track, and railcar inspections, develop new technology solutions, and focus on training and adherence to operating rules to ensure that shipments arrive safely
- Coordination with local emergency responders is a regular component of effective risk management



# Multi-faceted approach to managing risk

- Prevention
  - Operating practices and adherence to rules
  - Well-trained employees
  - Comprehensive inspections
  - Advanced engineering and technology
- Mitigation
  - Specialized resources and equipment
  - Network of specialized preparedness contractors
  - State of the art training facilities
- Response
  - Coordinated response preparation is critical



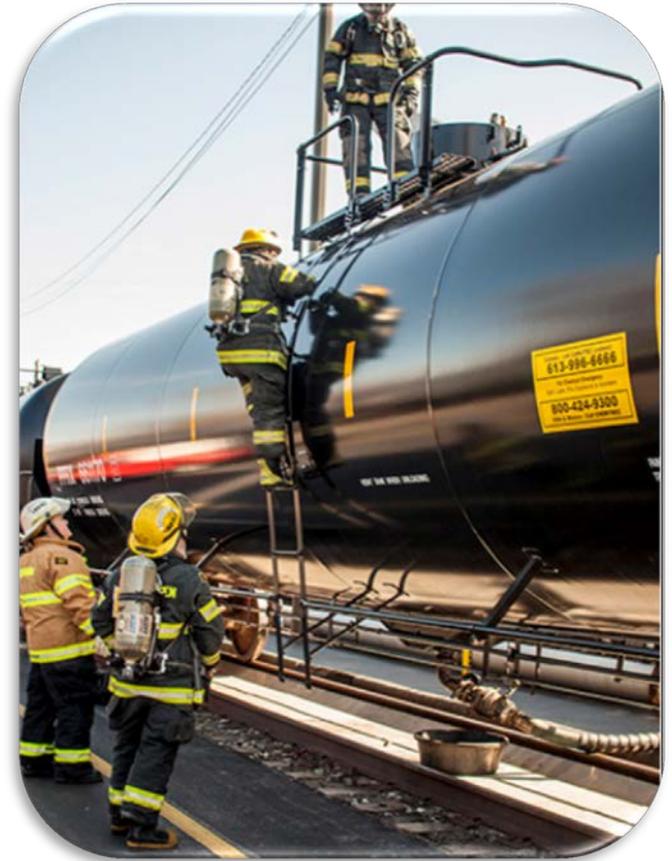
# AAR Circular No. OT-55

- Recommended Railroad Operating Practices for Transportation of Hazardous Materials (OT-55)
  - Originated 1991 - Inter-Industry Rail Safety Task Force
  - Early & effective collaboration on hazmat safety
    - Increase focus on non-accident release
    - Proper load securement of tank cars
    - Prevention of tank car overfilling
    - Separation distances between railroad track and storage facilities
    - Use of standard formats on shipping papers



# AAR Circular No. OT-55

- Contains a number of longstanding rail safety practices
  - Key HazMat Trains and Routes
  - Yard Operating Practices
  - TransCAER participation
  - Criteria for shipper notifications
  - Time sensitive materials
  - Provisions for SNF, HLRW
  - Storage



# AAR Circular No. OT-55-N

- OT-55-N added changes to crude oil unit trains
  - Flammable liquid unit trains such as crude oil and ethanol are now by definition hazmat Key Train
  - Changes made in Fall 2013
- Key Train restrictions include
  - Maximum speed of 50 mph
    - 40 mph maximum in HTUA as part of DOT agreement
  - Train must hold main track at meeting or passing point unless siding meets FRA Class 2 standards.



# AAR Circular No. OT-55-N

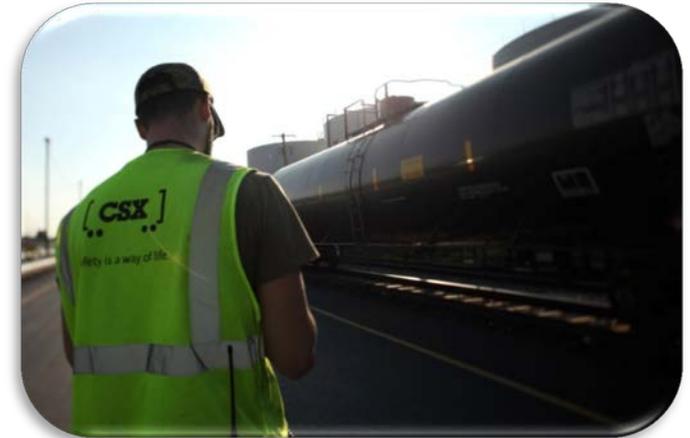
## Key Train restrictions (continued)

- Only cars with roller bearings allowed
- If a railcar defect is reported by a wayside detector but visual inspection fails to confirm evidence of the defect
  - Train must proceed at 30 mph maximum speed to next detector
  - If the same car again sets off next detector or found to be defective, it must be set out from the train



# Rail Corridor Risk Management System tool (RCRMS)

- Routing tool in place since 2009
- U.S. DOT requires annual route risk assessment of
  - TIH/PIH
  - SNF
  - Explosives 1.1, 1.2. 1.3
- Considers 27 risk factors
- Stakeholder perspective is solicited
- FRA conducts regular reviews of railroads' results
- Crude oil unit trains added per U.S. DOT agreement



# Conclusion

- The U.S. freight rail industry has made significant improvements in the safe transportation of hazardous materials
- Committed to continually work to identify steps to further enhance safe transportation of hazardous materials
- Meaningful collaboration among stakeholders is important to ensure future improvements

