



# U.S. Department of Transportation Federal Railroad Administration

## 2016 NRT Worker Safety and Health Technical Conference

**October 18 & 19, 2016  
Washington, DC**

**Jeffrey Moore**  
Railroad Safety Specialist, HM Division  
Washington, DC



## U.S. Department of Transportation Federal Railroad Administration

### Accidents:

We do respond to emergencies, local emergency responders, carriers along with their hazardous materials response and clean-up teams and the chemical shippers are the experts.

**Allow them to do their jobs!**



# U.S. Department of Transportation Federal Railroad Administration

---

FRA's Purpose:

To determine probably cause of  
accidents/incidents for future  
prevention



## U.S. Department of Transportation Federal Railroad Administration

### Coordination:

- National Transportation Safety Board,
- Transportation Security Administration
- ..and any other state, local agency or private entity (shippers and/or carriers) participating in either the clean-up investigation and /or fatality investigation.



# U.S. Department of Transportation Federal Railroad Administration

## Divisions of safety

- Track and bridges & structures
- Signal & train control systems
- Motive power and equipment
- Operating practices
- Trespasser and grade crossings
- Hazardous materials
- Passenger



## U.S. Department of Transportation Federal Railroad Administration

Accident Notifications are reported to:

NRC (National Response Center)

during business hours

FRA Accident Branch

after business hours – duty officer



## U.S. Department of Transportation Federal Railroad Administration

### Criteria for major accident investigations:

- Any collision (main or yard track), derailment, or passenger train incident resulting in at least one fatality or serious injury to railroad passengers or crewmembers,
- Any railroad –related incident resulting in the death to an on duty railroad employee, including an employee of a contractor to a railroad regardless of craft,
- Any non-casualty train accident resulting in a derailment of a locomotive, 15 cars or more, and extensive property damage



## U.S. Department of Transportation Federal Railroad Administration

Criteria for major accident investigations: Any highway-rail grade crossing accident resulting in any of the following:

Death to one or more persons being transported in a commercial vehicle or school bus.

Serious injury to several persons being transported in a commercial vehicle or school bus.

Death to three or more persons in a private highway vehicle.

Accidents involving grade crossing signal failure or allegations of grade crossing signal failure.





## U.S. Department of Transportation Federal Railroad Administration

### Criteria for major accident investigations:

Military shipments with munitions or nuclear materials

Runaways with or without locomotives

Accidents involving main transportation such as closure of an airport or highway

Criminal mischief, sabotage or terrorism

Accidents where bridges/tunnels damaged

Any collision involving maintenance-of-way or hi-rail equipment.



## U.S. Department of Transportation Federal Railroad Administration

### Inspectors:

Will arrive on scene and report to the incident commander

When cleared by the incident commander to enter site, inspectors will enter hot zone and document all aspects of the accident.

Serve as the SME as needed to the incident commander



## U.S. Department of Transportation Federal Railroad Administration

### Inspectors:

Vital that our inspectors arrive on scene before equipment is moved by the railroad or contractors or as soon as practical.



## U.S. Department of Transportation Federal Railroad Administration

### Inspectors:

Will determine probably cause of the  
Accident that could ultimately result in:

Emergency orders

Personal liability issues

Rulemaking

Follow-up inspections for compliance



# U.S. Department of Transportation Federal Railroad Administration

## Accident causes:

### Track

Broken rails

Defective switches

Wide gage

Internal defects not reported or  
properly followed up



# U.S. Department of Transportation Federal Railroad Administration

Accident causes:

Signal & Train Control

Circuit problems

Signal failures

Vandalism of signal boxes



# U.S. Department of Transportation Federal Railroad Administration

## Accident causes:

### Motive Power and Equipment

Defective wheels

Dragging equipment

Broken couplers

Braking issues



# U.S. Department of Transportation Federal Railroad Administration

Accident causes:

Operating Practices

Human failures

*Hours of service*

*Disregard of signals*

*Drugs & alcohol*

*Electronic distraction*





# U.S. Department of Transportation Federal Railroad Administration

Accident causes:

## Trespasser & Grade Crossing

Crossing signal failures—not common

Trespassers - disregarding warning signals and impairment from alcohol or drugs

Engineering, education, enforcement



## U.S. Department of Transportation Federal Railroad Administration

Accident causes:

### Hazardous Materials

*Usually* the result of one of the other failures and NOT THE CAUSE of the accidents (*we are all of the pretty lights, noises and colorful smoke*)



## U.S. Department of Transportation Federal Railroad Administration

Accident causes:

### Hazardous Materials

In your area you can be prepared for HM accidents by finding out what is passing through your jurisdiction

Better to know ahead of time rather than pre-notification of each shipment



## U.S. Department of Transportation Federal Railroad Administration

Accident causes:

### Hazardous Materials

NIMBY (not in my backyard) is sometimes used as a cause just because of media coverage over the hazardous materials reaction involved, but..

its 38 times safer than other modes of transportation.



# Questions?

Jeffrey Moore  
HM Specialist, W35-225  
202-493-0635 or  
215-327-6851 (cell)



Federal Railroad  
Administration  
RRS-12, Mail Stop 25  
1200 New Jersey Avenue, S.E.  
Washington, D.C. 20590