# Shipments of Hazardous Tank Cars

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# Outline

- HM-242 - combustible liquid ANPRM
- HM-246 – TIH tank car rulemaking
- Advanced Tank Car Collaborative Research Program
- U. S.  Hazmat Security Related Regulations
  - PHMSA Routing Rule (HM-232E)
  - TSA Freight Rail Security Rule
- Remote Monitoring Equipment

# HM-242 (PHMSA-2009–0241)

**Title:** Hazardous Materials Regulations: Combustible Liquids
**Subject:** Whether to harmonize the domestic regulations applicable to the transportation of combustible liquids with international transportation standards
**Status:** Advanced Notice of Proposed Rulemaking (ANPRM)
**Published:** April 5, 2010
**Dates:** Comments due July 6, 2010
**Issues:**

1. Harmonizing reduces placard issues at US & Mexican borders
2. Elimination of combustible liquid category throws some commodities that would have been combustible liquids into the flammable liquid category and hence subject to train placement restrictions

**Reference:** http://edocket.access.gpo.gov/2010/pdf/2010-7544.pdf

# HM-246

**Docket #'s:** FRA–2006–25169 (HM-246)

**Title:** Hazardous Materials: Improving the Safety of Railroad Tank Car Transportation

**Subject:** The re-design of pressurized tank cars used for the transportation of Toxic-by-inhalation gases and liquids

**Status:** Final Rule

**Published:** January 13, 2009

**Dates:** Effective March 16, 2009

**Reference:** http://edocket.access.gpo.gov/2009/pdf/E8-31056.pdf

# Advanced Tank Car Collaborative Research Program (ATCCRP)

- Collaborative effort between DOT/FRA, DHS/TSA and S&T, Transport Canada, AAR, ACC, CI, TFI, & RSI
- Purpose
  - The ATCCRP is a cooperative arrangement between the participants for collaboration on research which will inform the development of new, risk-based, designs, standards and regulations for tank cars carrying toxic inhalation hazard (TIH) materials
- MOC is almost final
  - Open exchange of information
- Funding: $3 -$5 million per year – 5 years ($100K 1st year)

# Rail Routing Rule - HM-232E - Context

- 2/2/05 DC City Council voted to ban transportation of ultra-hazardous materials within 2.2 miles of the U.S. Capitol
- Ultra-hazardous materials include explosives, PIH, and flammable compressed gas.
- A lawsuit was filed in US District Court - ruled on favor of DC
- The Department of Justice, Department of Transportation, and Surface Transportation Board all filed in favor of CSX.
- CSX appealed the decision to the US Court of Appeals
- The US Court of Appeals ruled in favor of CSX
- Many other jurisdictions drafted similar legislation
- If all jurisdictions banned hazmat transport, no hazmat would move
- The federal government needed to occupy the field

# Rule Requirements

- Collect data (Certain high hazard materials) by 1st quarter
- Use data to analyze route safety and security
- Analyze practicable alternate routes
- Choose safest/most secure route by year end
- Let DOT see your data
- Reduce storage/delays in transit
- Perform security inspections

# HM-232E Appendix D "Rail Risk Analysis Factors" for Route Analyses

1. Volume of hazmat
2. Rail traffic density
3. Trip length
4. Railroad facilities
5. Track type and class
6. Track grade and curvature
7. Signals and train control systems
8. Wayside detectors
9. Number and types of grade crossings
10. Single vs. double track
11. Frequency and locations of track turnouts
12. Proximity to iconic targets
13. Env sensitive areas
14. Population density
15. Venues along route
16. Emergency response capability along route
17. Areas of high consequence
18. Passenger traffic
19. Speed of train operations
20. Proximity to enroute storage or repair facilities
21. Known threats (from TSA)
22. Measures in place to address safety and security risks
23. Availability of alternative routes
24. Past incidents
25. Overall time in transit
26. Training and skill level of crews
27. Impact on rail network traffic and operations

# Routing Risk Assessment Tool

- Government and railroads have developed a tool under a grant to the Railroad Research Foundation (RRF) from FEMA to incorporate the 27 factors
- Tool is called the Rail Corridor Risk Management System (RCRMS)
- The tool is being used by railroads to comply with the rule

# Compliance

- 4 railroads met September 1, 2009 compliance date
- 4 railroads and all shortlines plan to meet March 31, 2010 date
- General consensus: very little re-routing required (e.g. 1% one RR)
- Re-routes seem to be more prevalent on short routes
- Longest re-route 264 miles
- 1,000 – 2,000 O-D pairs seems typical
- Some operating rules are being developed (1RR – 10 rules e.g. route around Atlanta)
- Issue with positive train control (PTC) routes
  - Should RSSM be limited to PTC routes (chicken and egg problem?)
  - What might substitute for PTC e.g. dedicated trains w/ high-rail in front?

# Freight Rail Security Rule
## Major Provisions

49 CFR Part 1520

1520 Protection of Sensitive Security Information
Adds definitions for rail centric terminology to the SSI rules

Part 1580 – Rail Transportation Security

**Subpart A- Scope, Definitions, Authority**
1580.5: Inspection Authority

**Applies to rail carriers, hazmat shippers, and hazmat receivers***

**Subpart B- Freight Rail Provisions**
1580.100: Applicability
1580.101: Requires Rail Security Coordinator
1580.103: Location and Shipping Information
1580.105: Reporting Significant Security Concerns
1580.107: Chain of Custody and Control
1580.109: Preemptive Effect

Applies to passenger and mass transit operators

**Subpart C-Passenger Rail Provisions**
1580.201: Rail Security Coordinator
1580.203: Reporting Significant Security Concerns

# Remote Monitoring Equipment (cont.)

- C- 10286 Issued March 27, 2006 (effective April 1, 2006) AAR Standard S-2045
  - Cabling should be enough to reach the device without excess
  - Cabling inside jacket or inside conduit
  - Approval required by Tank Car Committee
  - Requires registration in UMLER (fitting code RD)
  - Stencil or decal with contact information must be provided (2” x 3”)
  - Installed in a manner not to create a safety hazard

# Remote Monitoring Equipment (Cont.)

- Issues the railroads need to decide:
  - Do we want to receive the signals?
  - If so, which ones, to whom and how?
  - Do we want to establish a standard?
  - Do we want to require encryption of the signal?
  - Do we want to require all signals be sent to railroads?

# Challenges

1. Who is going to climb on the car when RRs have to investigate an alert? How long will it take to bring someone into location if external person is needed?

2. What happens if an alert happens in a HTUA? Does the train get moved out of HTUA before investigation or investigate while in HTUA?

3. Still need to involve Shortlines and better understand their concerns and capabilities to react to alerts.

4. Need a feedback system in place to evaluate reliability and accuracy of system.

# Thank You

## Questions:

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