Rail Safety Discussion

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What (I hope) You’ll Hear from Me Today

East Palestine Incident Information

Regulatory Responses

Next Steps
East Palestine OH Derailment
First Things First: Our Knowledge is Limited

- We will know much more about the full derailment at the conclusion of NTSB’s investigation
- Current facts < Hot takes and assertions
- Hard to overstate community impacts
- Will share what we do know and why it matters
What We Do Know

• About 9:00 pm, Feb. 3rd, eastbound NS train derailed just outside East Palestine OH, temp 10º F

• General merchandise train with 2 head-end locomotives, 149 cars and DP between cars 109 and 110, 20 total hazmat cars

• 38 cars derailed including 11 hazmat tank cars

• 23rd car was first to derail
More Derailment Details

- Train was slowing down at time of derailment
- Passed a wayside defect detector or hot box detector (HBD) that issued alarm to stop
  - MP 79.9 bearing measured 38°F above ambient
  - MP 69.01: 103°F above ambient
  - MP 49.81: 253°F above ambient
- Overheat failure caused GATX-owned hopper car to derail
Why the Bearing Failure Matters

- Railcars, no matter the kind, are supported by a pair of these general kinds of “trucks”
- Most freight railcars are between 286k and 315k lbs
- All weight is transferred from center plate to the bolster to the springs on the sideframe, which sits on the bearing adapter
- Overheated bearings lead to mechanical failure
Hazmat Issues

• 11 hazmat tank cars ignited with fires that damaged another 12 non-derailed cars, 1 mile evacuation zone initiated

• NTSB photo shows “energetic release” of a vinyl chloride tank car on Feb. 4

• By Feb. 5, fire mostly contained but 5 DOT-105 tank cars of vinyl chloride were problems—one car temps were rising leading to fear of polymerization reaction

• On Feb. 6, responders vented and controlled burn remaining vinyl chloride of five tank cars—2 mile evac zone initiated
Regulatory Responses
Railroad Responses

• Class I Railroads expressed interest in joining FRA Confidential Close Call Reporting System (C3RS) for rail safety issues (under certain conditions)

• Railroads added safety steps:
  • Adding more HBDs,
  • Adjusting HBD thresholds down to 170ºF,
  • Training more first responders,
  • Expanding AskRail app access (offers more hazmat info for first responders)
USDOT Rail Safety Ambitions (2/23)

**Railroads**
- Join C3RS
- Deploy Tech w/o less labor
- New tank cars faster
- More hazmat info to locals
- Paid sick leave

**USDOT**
- Two man crew rule
- Inspect HHFT routes
- Inspect older tank cars
- More rail infrastructure
- ECP brakes on HHFT trains

**Congress**
- Increase fines for violations
- HHFT laws
- ECP brake mandate
- Faster tank car replacement
- Fund first responder hazmat training
Other Rail Incidents

• Other prominent rail incidents since East Palestine:
  • NS 135 car train derailment in Michigan Feb 16
  • NS 210 car train derailment in Springfield OH March 4 (pictured right)
  • NS conductor killed in grade crossing incident in industrial facility in Cleveland March 7
FRA Safety Advisories

• Multiple Safety Advisories issued:
  • March 2\textsuperscript{nd}/2023-01: tank car covers, hot bearing detectors, and emergency response plans
  • April 6\textsuperscript{th}/2023-02: train makeup practices
  • April 27\textsuperscript{th}/2023-03: long train practices—air brake and train handling, train crew communication, train crew training and operational testing, impacts on blocked crossings, post-accident investigations
Next Steps
Congressional Responses

• S. 576 Rail Safety Act of 2023
  • OH and PA Senators sponsors
  • Reported from Commerce Committee May 10th
• Features:
  • Expands high hazard trains, notifications
  • Blocked crossings, long trains
  • More inspections, hot box detector rules
  • Two person crews mandated
• Limited Prospects:
  • Senate Floor
  • House T&I Committee
NTSB East Palestine Investigation

• Investigation ID: DCA23HR001
• Investigations typically take 12-18 months to complete
• Field hearing held in East Palestine on June 22-23
• Subjects included:
  • Hazard Communications and Emergency Responder Preparedness
  • Decision to Vent and Burn Five Vinyl Chloride Tank Cars
  • Freight Car Bearing Failure and Wayside Detection Systems
  • Tank Car Damage, Crashworthiness, and Hazmat Pkg. Information
• Hearing Docket Link: https://tinyurl.com/4fd3huna
Norfolk Southern Response/Impact

- East Palestine derailment and aftermath:
  - Likely caused by a mechanical failure on a car NS didn’t own
  - Hazmat incident involves chemicals NS has no choice about carrying
- Two successive quarterly reports indicate at least $800M in NS expenses or charges
- Plenty of litigation in the future:
  - EPA and DOJ suing NS
  - NS suing owners of hopper car that caused the derailment
Want to Hear or Read More?

• Big Al appears on TTI’s Thinking Transportation Podcast:
  • Episode 54. Off the Rails, On the QT: Train derailments happen daily, though few grab our attention.
  • Episode 47. All Aboard? When unions, management, and Congress dodged a nationwide rail strike.

• Follow me on LinkedIn: https://www.linkedin.com/in/allanrutter/
Questions/Discussion