



**NTSB** National Transportation Safety Board

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# **Dangerous Goods Advisory Council**

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# NTSB Basics

- Independent agency, investigate transportation accidents
- Determine probable cause(s) and make recommendations to prevent recurrences
- Single focus is safety
- Primary product: Safety recommendations

# Topics of Discussion

- *November 2009:*
  - Proposed recommended safe practices for loading and unloading operations
  - Lithium battery incident reporting & analysis
  - Loading/unloading line (wetline) accidents
  - Mobile acetylene trailers
- *New Topic:*
  - Highway cargo tank vehicles



# Proposed Recommended Safety Practices for Loading and Unloading Operations



# Loading and Unloading Incidents

- Past 10 years (2001 - 2010):
  - Accounted for 75% of all transportation incidents
  - Accounted for 42% of all injuries
  - Number of incidents has remained constant
- Last year (July 15, 2009):
  - Unloading accident occurred in Swansea, SC
  - 1 fatality; 7 injuries

# Accidents and Incidents



# Safety Issues Addressed

- January 4, 2008 – PHMSA published NPRM: “*Proposed Recommended Practices for Bulk Loading and Unloading of Hazardous Materials*”
- PHMSA has yet to publish final rule on this safety issue



# Transportation of Lithium Batteries



# Lithium Battery Incidents

- Lithium battery incidents reported to FAA
  - 1996 - 2005: 12 incidents (1.2 incidents/year)
  - 2006 - 2010: 34 incidents (7.2 incidents/year)
- April 20, 2010 –spare battery went into thermal runaway as a result of nearby curling iron turning on in bag post-flight; lithium-ion batteries
- May 6, 2010 –flames/smoke erupted from checked bag while being placed on cart; CR123A lithium batteries
- August 28, 2010 – flames/smoke erupted from crewmember's backpack prior to takeoff; CR123A lithium batteries

# Philadelphia, PA – February 2006



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# Safety Recommendations Addressed

- January 14, 2009 – PHMSA requires that all lithium batteries incidents be reported; does not specify that failed items be retained for evaluation purposes
- January 11, 2010: PHMSA publishes NPRM that addresses some NTSB recommendations
- PHMSA has yet to publish final rule on this safety issue



# Highway Cargo Tank Vehicle Safety

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# Indianapolis Accident



# NTSB Public Hearing

- Electronic stability control systems
- Driver training
- Roadway factors contributing to instability
- Strategic vehicle design changes for improving the dynamic stability & rollover threshold
- Crashworthiness standards for cargo tanks



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