Canada’s Rail Safety Agenda

Canadian Institute of Logistics and Transportation North America

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President & CEO, Railway Association of Canada
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Ottawa, ON
A Large Network from an Outreach standpoint!

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Why do we need outreach?

Canadian Class 1s - Crude Petroleum Originated Carloads
North America

Source: CN, CP Annual Reports 2013 and Investor Fact Books 2013
### Challenges: DGs moved by rail

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Agriculture</th>
<th>Consumer products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhydrous ammonia (NH₃)</td>
<td>Roughly 80% of ammonia produced is used as fertilizer</td>
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<td></td>
<td>Ammonia is also used as a refrigerant gas, for purification of water supplies, and in the manufacture of plastics, explosives, textiles, pesticides, dyes and other chemicals. It is found in many household and industrial-strength cleaning solutions.</td>
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<thead>
<tr>
<th>Chemical</th>
<th>Pharmaceutical</th>
<th>Petroleum</th>
<th>Consumer products</th>
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<tbody>
<tr>
<td>Benzene</td>
<td>Used in motor fuels</td>
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<td></td>
<td>Solvent for fats, waxes, resins, oils, inks, paints, plastics, and rubber</td>
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<td></td>
<td>Extraction of oil from seeds and nuts</td>
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<td>Photogravure print-making</td>
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<td></td>
<td>Chemical intermediate</td>
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<td></td>
<td>Manufacture of detergents, explosives, pharmaceuticals, and dyestuffs</td>
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<table>
<thead>
<tr>
<th>Chemical</th>
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<tbody>
<tr>
<td>Chlorine (Cl)</td>
<td>Used in over 86% of crop protection chemicals</td>
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<tr>
<td></td>
<td>Used in over 90% of pharmaceuticals</td>
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<td></td>
<td>The greatest volume of chlorine is used in the production of polyvinyl chloride (PVC), used in medical equipment, building materials, appliance parts and water pipes</td>
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<thead>
<tr>
<th>Chemical</th>
<th>Mining</th>
<th>Manufacturing</th>
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<tbody>
<tr>
<td>Sulfuric Acid</td>
<td>Used to extract phosphates for fertilizers</td>
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<td></td>
<td>Used to bleach paper</td>
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<td></td>
<td>Used as an industrial catalyst</td>
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<tr>
<td></td>
<td>Vulcanization of black rubber...</td>
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</tbody>
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Nothing is more important to Canada’s railways than operating safely. Since the tragic accident in Lac-Mégantic, Canada’s railways have launched new initiatives to improve safety, transparency and emergency preparedness, while accelerating their existing safety efforts.

What we have done:

• **Collaborated with Transport Canada to get safety improvements in place**
  - Train securement & prevention of uncontrolled movements
  - Single-Person Train Operations
  - Dangerous goods classification and disclosure
  - ERAPs (Emergency Response Assistance Plans)
  - Safety Management Systems (SMS)
  - AND much more....
Safety first: What we are doing

• Transparency and Emergency Preparedness
  • Federation of Canadian Municipalities, Canadian Association of Fire Chiefs
• Tank cars
  • Retrofitting or removal of DOT-111 tank cars
• Training & Outreach
  • TRANSCAER® and Responsible Care®
• Industry Collaboration / Mutual Aid
  • Agreements with railways and other industry associations and their members
  • Emergency Response Assistance Canada
• Investments
  • $13 billion since 2002
• RAC Safety Culture requirement
  • Tools, training
Safety first

• Proximity Guidelines
  • Adoption of FCM/ RAC guidelines across Canada

• Enhanced insurance and liability regimes
  • Shippers’ fund would fund accidents

• Grade crossing improvements
  • Will enhance safety of crossings
  • Fewer crossings

• Operation Lifesaver
  • Dumb Ways to Die
  • Classrooms, contests, social media outreach
Sustainability

• A collaboration with the Network for Business Sustainability
• Outreach session with NGOs and academics on November 18

• Purpose of the meeting:
  • To initiate a dialogue with civil society and scope a sustainability agenda for the railway sector
  • To listen and better understand issues of importance from this audience

• What we heard
  • Railway sustainability should include environmental, social and economic issues, including safety.

  • Pembina institute
  • Nature Conservancy
  • David Suzuki Foundation
  • McMaster University
  • Stratos
  • International institute for Sustainable Development
  • Earth Day Canada
  • Sustainalytics
  • University of Waterloo
Railways Reporting to the TSB - Main-Track Accident Rates

Main-Track Accidents per Million Train-Miles

Source: TSB 2013 Annual Report