





← Minot

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Minot Accident Investigation

Public Hearing
Washington, D.C.
July 15 and 16, 2002

Carol Carmody – Chairman of the Board of Inquiry



National Transportation Safety Board

Minot Investigation

- Extensive NTSB materials laboratory testing
 - Rail components
 - Tank car steels
- More than 12,700 man-hours



Office of Railroad, Pipeline and Hazardous Materials Investigations

- Since the date of the Minot accident:
 - 36 accident launches
 - 28 railroad reports completed
 - 13 railroad accident investigators



Parties

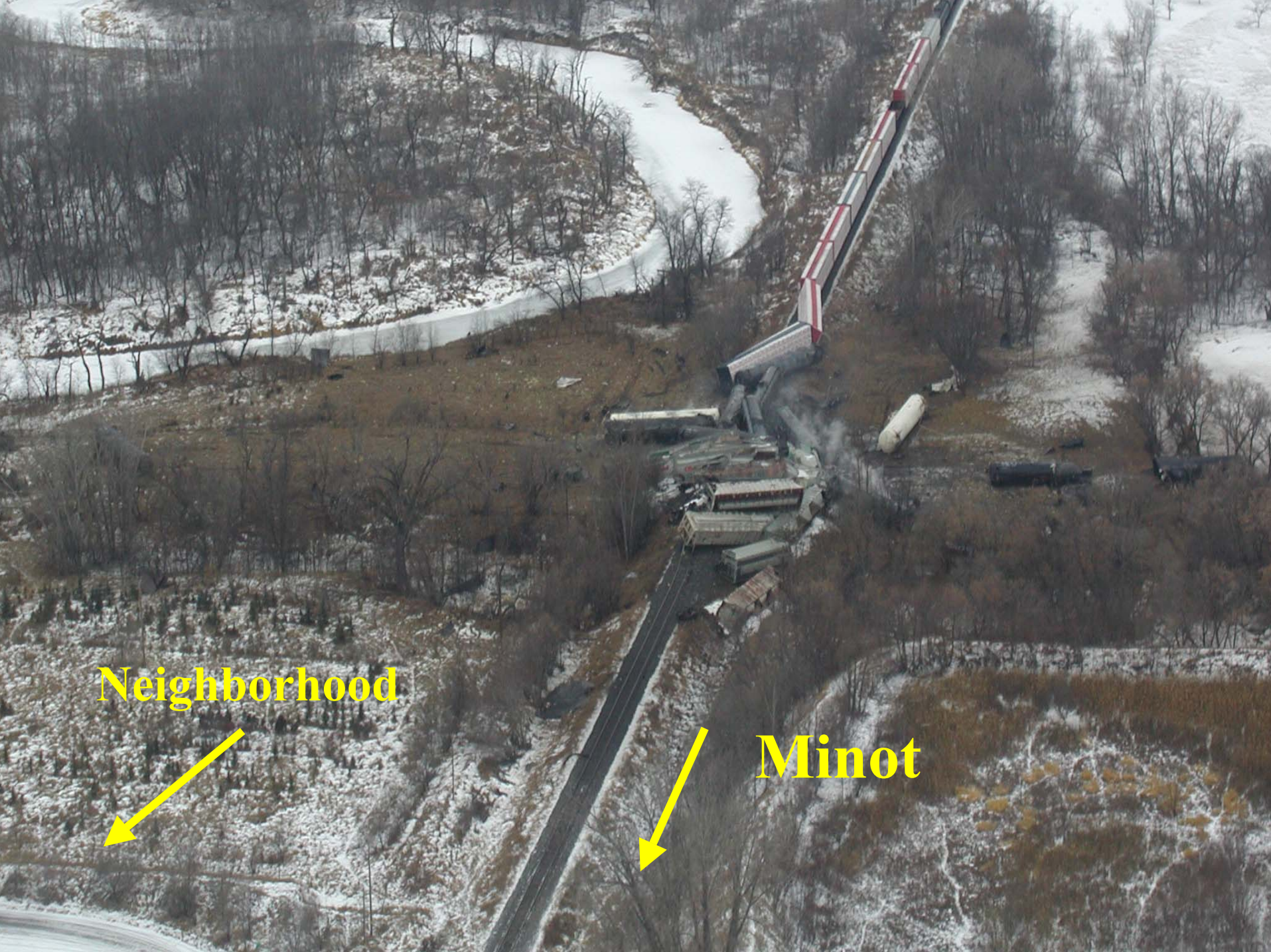
- Canadian Pacific Railway
- Federal Railroad Administration
- City of Minot
- Minot Rural Fire Department
- Trinity Industries, Inc.
- General American Transportation Corporation
- Association of American Railroads - Tank Car Committee
- Brotherhood of Locomotive Engineers
- United Transportation Union
- Brotherhood of Maintenance of Way Employees





Minot





Neighborhood



Minot



Derailment

- 31 railroad cars derailed
- 15 tank cars carried anhydrous ammonia
- 5 of 15 catastrophically failed





Anhydrous Ammonia Release

- 5 tank cars ruptured
- 29,350 gallons per car average
- Approximately 146,700 gallons initially
- Approximately 74,000 gallons additional



Anhydrous Ammonia Properties

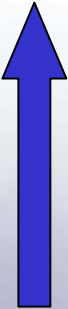
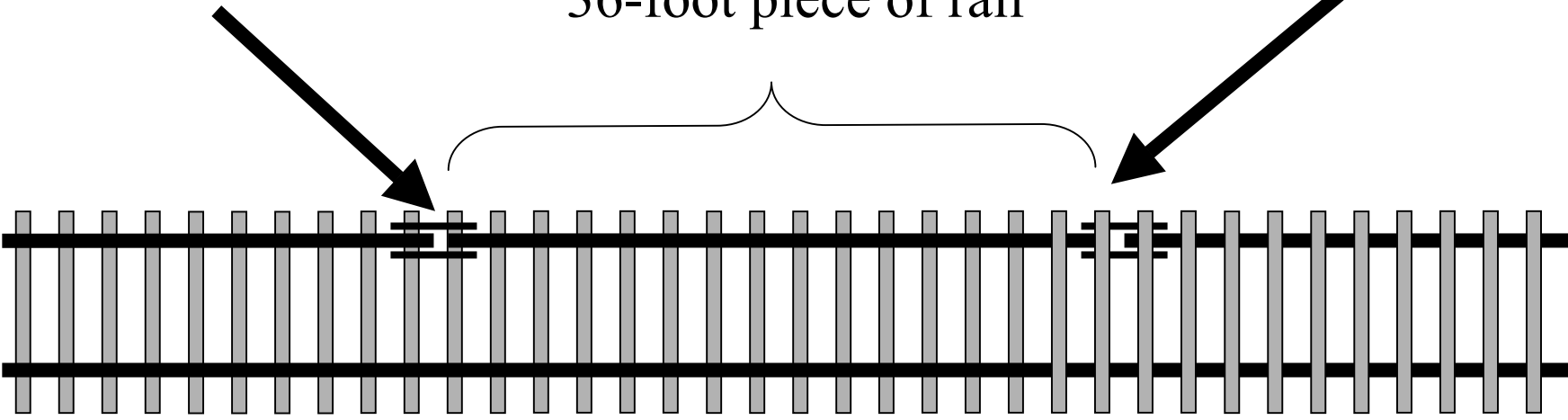
- Liquefied compressed gas
- Non-flammable gas & inhalation hazard



West Joint

36-foot piece of rail

East Joint



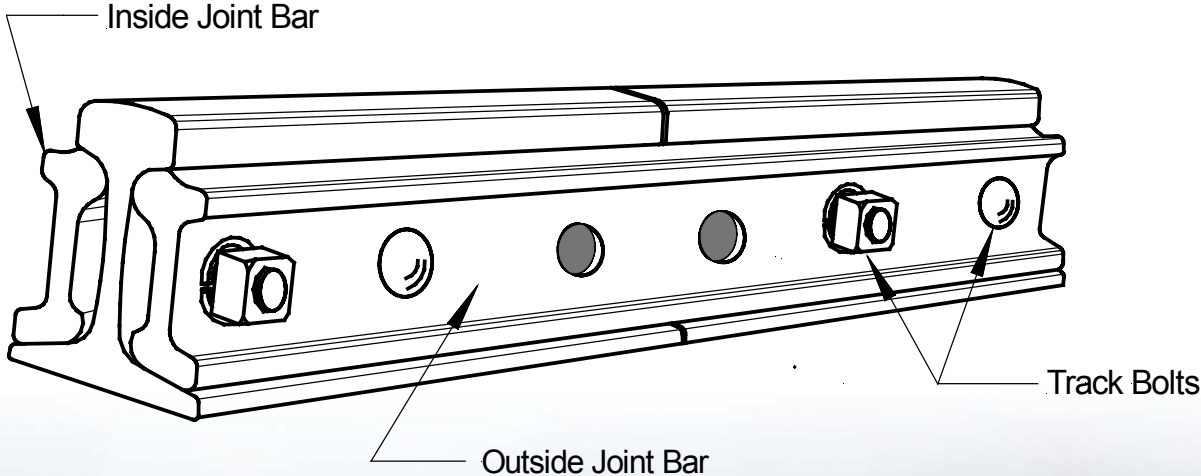
North

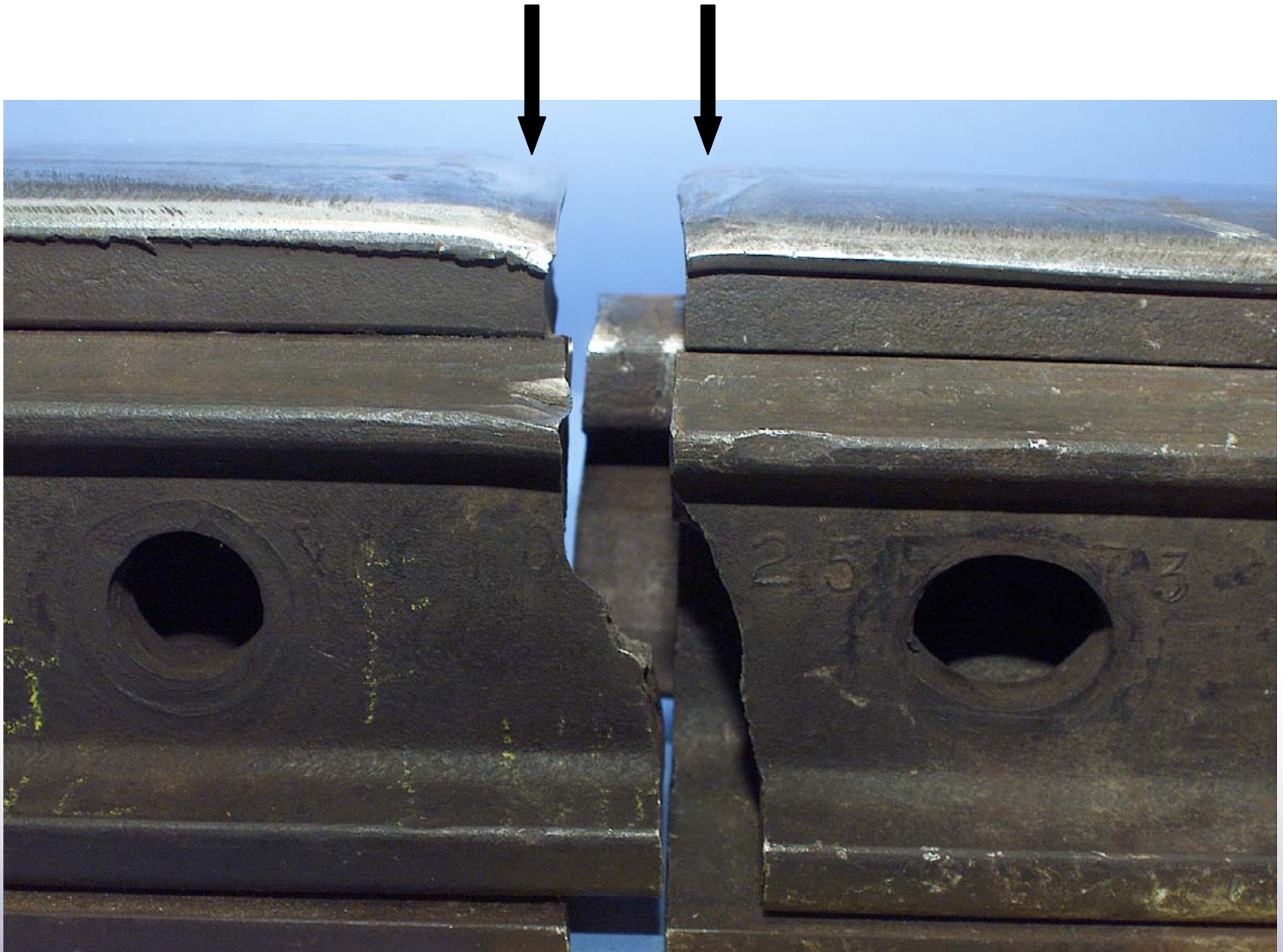
Minot



National Transportation Safety Board

Joint Bars





National Transportation Safety Board

Safety Issue

- Canadian Pacific Railway's programs and practices for the inspection and maintenance of joint bars in its continuous welded rail.



Safety Issue

- The Federal Railroad Administration's oversight of continuous welded rail maintenance programs.



Safety Issue

- Tank car crashworthiness, specifically the adequacy of non-normalized steels to resist tank fracture propagation below ductile-to-brittle transition temperatures.

