

**Testimony before the Minnesota Senate Transportation Committee
RE: SF 1417 – Minimum Crew Size for Certain Rail Carriers**

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Citizens Acting for Rail Safety – Twin Cities (CARS – TC) is a local, non-partisan, grassroots advocacy group that works with residents, legislators, and agency officials to improve rail safety to benefit the health, safety, and security of people, wildlife, and the environment. Along with our sister CARS groups in the CARS – Midwest¹, we formed in response to the exponential growth of oil and ethanol transportation by rail over recent years. CARS-TC strives to bring the citizen voice to bear on issues associated with high hazard freight trains going through our communities.

Our understanding is that the proposed bill is intended to require a minimum of two-person train crews on all freight trains in Minnesota. This is a positive step toward reducing the risk of train incidents attributed to human error and/or technology failure; toward improving response strategies in the case of a train incident; and toward reducing extended wait time for emergency vehicles and others impeded by blocked at-grade rail crossings in such an emergency (because a one-person train crew must wait for a support crew to arrive to de-couple and separate train cars which are blocking at-grade crossings).

To clarify the context of our advocacy for 2-person crews, CARS-TC, together with our sister organization members of CARS-Midwest, has also advocated at the federal level that final regulations establish the following tiered train crew staffing and equipment requirements:

1. High hazard freight trains (HHFT) require four-person train crew with lead locomotive and rear distributed power unit (DPU)² or locomotive; with HHFT not eligible for exceptions to the multi-person train crew requirement.
2. General freight trains require two-person train crew, and
3. All freight trains which do not have train crew at the rear should be limited in length.

CARS-TC shares the concerns of community safety groups, Railroad Workers United, and other frontline rail employee unions, regarding the possibility of one-person train crew becoming standard operating practice in the rail carrier industry, for any railroad Class, and starting with trains operating on lines on which Positive Train Control (PTC) has been installed.

One-person freight-train crews should not be allowed - - just as solo-pilots are not allowed for transport-category aircraft. Minimum train-crew staffing standards should be governed by law and safety regulation, and not by collective bargaining efforts between rail carriers and unions; and, further, train crew staffing regulation ought not be vulnerable to undue influence by lobbying efforts of rail carriers.

CARS-TC recommends two-person train crew be required for all rail carriers (i.e., Class I, II and III). Due to possible security vulnerabilities, multi-person train crew should be maintained even when Positive Train Control (PTC) is installed on mainline track. PTC is not a substitute for adequate train crew staffing. Trains carrying high-hazard freight especially require multi-person train crew. (See Exhibit II and Exhibit III in our handout for further discussion.)

Case studies of train incidents such as the December 30th, 2013 Casselton, North Dakota derailment and explosion, clearly show that multi-person train crew provide better capacity for response, containment, and mitigation of risks associated with catastrophic train incidents. (See Exhibit III in our handout for analysis.)

Thank you for your careful consideration of this public safety matter. This standard of a minimum two-person on-train crew for freight rail will improve the Minnesota rail safety program, and may save lives and communities.

Exhibit I. Personal Accounts of Community Impact Caused by Freight Rail

CARS-TC and our sister-organizations in CARS-Midwest includes many citizens living in communities along and near these rail lines who, with great reason, have become advocates for improved rail safety programs. This is not only for our wellbeing and our neighbors and other communities along the tracks, but also for the crew who drive these trains through our towns every day – the collective public safety must be a priority. If one-person train crews are permitted, this will be an indicator that individual safety and public safety at large is not as important as rail industry profits.

Members of CARS-Midwest have had the opportunity to meet a woman from Lac Megantic, Quebec, and hear her eyewitness account of that terrible night on July 6, 2013, as well as what life has been like for her town since. There will never be a happy ending to that story.

Another member of our group had an oil train derail in the middle of her town, three blocks from her home with her children in the house. That mother's terrifying thought was that she would witness a Lac Megantic-type catastrophe happen before her very eyes. Innocent people should not have to lose their lives, and families and towns should not become forever shattered.

Members of our group have had derailments happen near where they live, in sensitive, wildlife areas where water quality, animal and plant life, as well as the livelihood and drinking water for thousands of people and dozens of communities has been put at risk more than once.

CARS-Midwest has dealt with rail industry secrecy and self-policing related to 100 year-old rail bridges in our communities that have fallen into questionable disrepair. We have observed only marginal remediation in some cases as citizens have spoken out about their condition.

The proclamation that people who live near rail lines knew what they were buying into is a false argument on two counts:

First: the railroad industry is generally exempt from the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, which was created to help communities plan for emergencies involving hazardous substances. EPCRA requires hazardous chemical emergency planning by federal, state and local governments, Indian tribes and industry. Since rail carriers claim exemption to the federal EPCRA the public and emergency planners frequently do not have the benefit of rail carriers' hazard analysis data.

Second: the recent, dramatic increase of oil and ethanol shipments by rail occurred well after many had purchased their homes near freight routes.

Railroad industry self-regulation, including the use of one-person train crew, erodes confidence in the U.S. rail safety program. Modern freight rail deserves improved safety stewardship by federal, state and local government.

Exhibit II: Survey Reveals Staffing Practices that May Not Support Optimal Safety and Security Strategies

A 2009 survey of the Brotherhood of Locomotive Engineers and the Brotherhood of Maintenance of Way Employees Division rail workers evaluated safety and security measures in place on any one workday during the survey period. Members from 46 states and employed by 34 railroads (more than two-thirds of the responses are from employees of the nation's top four rail carriers) completed 4,034 surveys.

The survey results reveal there are weaknesses in our nation's rail transit system including the following:

- Disturbing lack of security along the freight rail routes and in rail yards across the country.
- Rail carriers' increasing reliance on remotely controlled technology to replace experienced engineers, who are the "eyes and ears" in the event of a crisis - - especially when freight trains are carrying hazardous materials.
- Minimal security training for employees who have been warned they could be the target of a terrorist attack.
- Startling disinterest by rail carriers in improving security along the rail routes and yards at points of vulnerability, including locomotives, tracks, bridges and tunnels. Other key findings are:
 - A Second certified engineer is not available to relieve the primary engineer in an emergent situation 87% of the time.
 - The average engineer works a 10.2 hour day without a break.
 - 54% of surveyed engineers have observed other running trains left unattended in a rail yard, siding or along right of way.
 - 90% of survey participants reported that equipment access was NOT secure.
 - 63% of engineers admit they left their running train unattended for periods of time (55% of those trains had hazardous materials on board) and that it is a necessity due to lack of staffing.

The results of this survey highlight current train crew staffing practices that likely impair public safety and security of the U.S. rail transit system.

Exhibit III: Train Incident Reports Support Four-person Train Crew for High Hazard Freight Trains

Analysis of the FRA document on the December 30th, 2013 Casselton, North Dakota train derailment and explosion incident (i.e., Casselton Incident) which accompanies this proposed rule promulgation reveals that the separation of upright oil tank-cars from the derailed tank-cars greatly mitigated the danger and damage caused by this high hazard freight train incident. The separation maneuvers described in the report would not have been possible without a multi-person train crew, a lead locomotive, and a rear distributed power unit (DPU)² or locomotive.

The industry terminology for this train set-up is controlling locomotive(s) in the lead and DPU power (another railroad term for a locomotive or locomotives, short for "motive power.") at the rear of the train. The separation operation described could not have been done with a caboose, since it doesn't exert any motive power. The decoupling maneuver would have to be executed by at least two employees -the engineer and another employee. In this instance, the move was made more quickly because there were additional BNSF employees present who were driving motor vehicles (i.e. the road foreman of engines) who could ferry the conductor back to the location where the train was uncoupled, rather than walking back. Of course this option would only be available if the tracks ran along side a road. The railroad might claim the operation of uncoupling the train tank-cars could be performed by any employee and need not be a trainman (i.e., conductor). That is true, but only if these additional employees are present at the site of the train incident. It could easily take an hour or more for an employee in a motor vehicle to be dispatched to the scene of the accident. In the case of the Casselton Incident, five train crew (i.e., two-person train crew from the high hazard freight train containing oil and three-person train crew from the grain train) were on site at the time of the derailment. Without multi-person train crew being at the site of the incident, at the time of the incident, disaster mitigation strategies could not have been quickly accomplished.

Requiring four-person train crew (i.e., two-person train crew in lead locomotive and two-person train crew in rear DPU or locomotive) on high hazard freight trains will ensure that adequate staffing needs are met. Multi-person train crew can best perform the many safety tasks needed in hauling high hazard cargo, in particular when emergencies like derailments occur, including:

- Communicate with other train crew and dispatch.
- Coordinate with emergency first responders.
- Decouple and move upright hazardous rail cars in the vicinity away from the derailment.
- Analyze and recognize safety issues along the whole length of the train and surrounding environment.
- Have visual contact with cars along the entire length of the train. When on any curve, a single engineer does not have a clear view to the later portion of the train, and would be unable to assess the safety issues without sight lines to all of the freight cars.
- Share responsibility of general duties, which may create some redundancy but redundant or back-up systems are the basis of most well designed safety and security plans. In an emergency situation this can save lives and communities.

Trains in general, but especially high hazard freight trains, which are not crewed in part on the rear end of the train, ought to be severely limited in length (i.e., number of train cars). When there is a derailment or other incident that prevents the train from moving, crossings can be blocked for indeterminate periods of time while waiting for additional crew to arrive at the scene, and the possibility of decoupling the train to clear the at-grade crossing is delayed excessively.

Footnotes

1. Citizens Acting for Rail Safety – Midwest (CARS-Midwest) is comprised of affiliate chapters in Minnesota and Wisconsin:

- CARS-Twin Cities Area, MN
- CARS - Winona, MN
- CARS - La Crosse, WI
- CARS- Milwaukee Area, WI
- CARS- Watertown, WI

2. Distributed power unit (DPU) refers to the physical distribution at intermediate points throughout the length of a train of separate motive power groups. Such power groups may be single units or multiple consists, and are remotely controlled from the leading locomotive. The concept of the distribution of motive-power was originally developed to permit the operation of longer trains where operational considerations or economics required it; however, distributed power has since also been used under circumstances where it is desired to have motive-power at each end of a train simply for reasons of operational flexibility. https://en.wikipedia.org/wiki/Distributed_power

When a DPU arrangement is created on a train, the DPU is linked by radio to the controls on the lead locomotive. The radio linkup transfers control of all the functions of the DPU to the leading locomotive, so that it functions effectively as though it were physically coupled in normal fashion to the other locomotives. The DPU can be operated simultaneously with the leading locomotive. Alternatively, the engineer can separately operate the leader locomotive(s) and the DPU. The operation of the DPU as a dependent unit can be terminated by breaking the radio connection and then completing a few simple reset tasks. The former DPU reverts to operation as an independent unit, or units, if there are more than one coupled together. The engineer can board the DPU, terminate the control connection with the leading unit (a relatively simple task) and then operate the former DPU independently.

3. High Alert2 – Four Years Later Workers Continue to Warn of Security Gaps on Nation’s Railroads

<http://www.ble-t.org/pr/pdf/highalert2complete.pdf>

<http://www.ble-t.org/pr/pdf/railsecuritybo>

Minnesota Cities & Towns along Bakken Crude-Oil-Rail Routes

Aldrich
Annandale
Anoka
Audubon
Barrett
Becker
Belgrade
Benson
Big Lake
Bluffton
Brainerd
Breckenridge
Brooklyn Center
Brooklyn Park
Brooten
Buffalo
Champlin
Clara City
Clear Lake
Clontarf
Columbia Heights
Comstock
Coon Rapids
Corcoran
Cottage Grove
Cottonwood
Crystal
Dakota
Dayton
De Graff
Delano
Detroit Lakes
Dilworth
Donnelly
Doran
Eden Valley
Elbow Lake
Elk River
Falcon Heights
Farwell
Florence
Frazee
Fridley

Glenwood
Glyndon
Goodview
Granite Falls
Greenfield
Hancock
Hanley Falls
Hastings
Hawley
Herman
Hills
Hoffman
Holland
Hopkins
Ihlen
Independence
Inver Grove Heights
Jasper
Kellog
Kensington
Kent
Kerkhoven
Kimball
La Crescent
Lake City
Lake Park
Lauderdale
Little Falls
Long Lake
Loretta
Lowry
Lynd
Maple Lake
Maplewood
Marshall
Maynard
Medina
Minneapolis
Minneiska
Minnesota City
Moorhead
Morris
Murdoch

Nashua
New Hope
New York Mills
Newport
Norcross
Otsego
Paynesville
Pennock
Perham
Pipestone
Plymouth
Ramsey
Randall
Raymond
Red Wing
Regal
Rice
Robbinsdale
Rockford
Royalton
Russell
Ruthton
St. Cloud
St. Paul
St. Paul Park
Sartell
Sauk Rapids
Sedan
South Haven
South St. Paul
Staples
Tintah
Verndale
Wabasha
Wadena
Watkins
Wayzata
Wendell
Willmar
Winona
Wolverton

Source: MNDOT maps

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