

BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON RAILROADS

HEARING ON
CURRENT ISSUES IN RAIL TRANSPORTATION
OF HAZARDOUS MATERIALS

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TESTIMONY OF
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Thank you Mr. Chairman, Madame Ranking Member, and Members of the Subcommittee. My name is Tom Pontolillo, and I serve as the Director of Regulatory Affairs for the Brotherhood of Locomotive Engineers and Trainmen, which is a division of the Rail Conference of the International Brotherhood of Teamsters. On behalf of more than 33,000 BLET members, 70,000 Teamsters Rail Conference members, and roughly 175,000 railroad workers who serve this nation's transportation needs, I want to express my appreciation to the Subcommittee for holding this hearing on current issues in rail transportation of hazardous materials, and for the opportunity to testify today.

During the 36-month period beginning in mid-January of 2002, three tragic accidents occurred involving the release of toxic by inhalation — or TIH — hazardous materials. The first, in Minot, ND, claimed one life, seriously injured eleven others, and resulted in the release of anhydrous ammonia. The second involved a collision between two trains near Macdona, TX, in which chlorine gas was released; additionally, there were three deaths — including 23-year old BLET member Heath Pape — and forty-one serious injuries. The third, also involving a collision resulting in a chlorine gas release, happened in Graniteville, SC, killing 28-year old BLET member Chris Seeling and eight others, as well as seriously injuring 75 people. I do not believe it is an overstatement to say that this issue is a personal one for me, as I am sure it is for many of the other witnesses who will appear before you.

Having said that, it is undeniable that our economy — indeed, our very lifestyle — is heavily reliant upon the many hazardous materials that chemical plants and refineries create and ship across the length and breadth of our nation. It is equally true that shipping hazardous materials by rail is the safest and most efficient and environmentally friendly transportation option available to us. For these reasons, and by virtue of the common carrier status of all railroads, it is incumbent upon us all to jointly find ways to minimize, if not eliminate altogether, the likelihood of another accident like the Minot, Macdona, and Graniteville tragedies.

My testimony today will touch on five general subjects that are of particular concern to the men and women I represent. They are: security, staffing, training, accident causation, and technological and operational concerns. The perspective that I present combines ground-level observations from the field with what we have learned at the staff level. My hope is that the Subcommittee's consideration of this subject will benefit from what the workers who have to deal with hazmat every day have to say.

While the general subject of rail security is a somewhat different matter than that under consideration by the Subcommittee today, it is very difficult to distinguish between safety and security in the post-911 world. Last year, the Teamsters Rail Conference published a report entitled *High Alert: Workers Warn of Security Gaps on Nation's Railroads*, which was immediately dismissed by the industry as bargaining propaganda. *High Alert* reports the results of a survey of BLET members — and members of Rail Conference affiliate Brotherhood of Maintenance of Way Employees Division — from 46 states and 34 railroads, between July of 2004 and June of 2005.

Of particular relevance to today's hearing are two facts: (1) of those surveyed, 59% reported that trains carrying hazardous materials passed their work area on a given day, and (2) 86% of

respondents stated that the rail yard where they work or report is in close proximity to schools, government buildings or densely populated areas. Indeed, these findings were corroborated in a report by the Centers for Disease Control entitled *Public Health Consequences from Hazardous Substances Acutely Released During Rail Transit*, which noted that hazardous materials “frequently are transported over, through, and under areas that are densely populated by schools, hospitals, or nursing homes, where the consequences of an acute release could result in environmental damage, severe injury, or death.”

Reasonable cause for concern over lack of security continues to exist. Just last Wednesday, the Akron, Ohio, *Beacon Journal* reported that two boys, ages 17 and 16, admitted to derailing two locomotives and 103 cars of a CSX train near Barberton, Ohio, by placing a tie on the track. Fortunately, that train carried only coal and, while tons of the coal were spilled, a far more serious outcome was averted. We have supported and will continue to support Congressional efforts — like those of the Ranking Member of the full Committee, in sponsoring H.R. 2351, and of Congressman Lynch’s H.R. 4372 — to address this concern.

The second issue I wish to highlight for the Subcommittee is staffing levels. Today, much of America’s rail network is operating near or at capacity. Further, the industry is moving more freight with fewer workers than at any time in its history. Productivity as measured by freight ton-miles-per-worker has soared over 500% between 1978 and 2004, and has increased by 24½% in the last five years alone.

With gasoline prices hovering around \$3 per gallon for the foreseeable future, and the nation’s highway system in a state of decline, the pressure on the industry to do more — and in less time — will only increase. Along with this increase in business opportunity comes an increase in risk: from physical equipment and plant that undergo increased stresses, from fatigued railroad workers pressed by increased demands on their time, and from greater congestion that results from running more trains over the same track during the same period of time.

Unfortunately, because of mergers and railroad managements’ never-ending quest to eliminate workers, staffing levels are at an all time low and continue to drop. Hiring barely keeps up with retirements, and serious recruitment and retention problems abound because the industry’s competitive advantage in the job market has all but disappeared. A 12- to 16-hour day is not unusual for a railroad worker, and in many cases is becoming the norm. As a matter of fact, according to 2006 hours of service data published by one of the four largest Class I railroads, through May 31st, an average of over 105 operating crews are on duty in excess of fifteen hours **every day**, with almost three crews **per day** on duty in excess of twenty hours.

There is no question in our minds that safety degradation because of fatigue is a ticking time bomb in the railroad industry. The National Transportation Safety Board has, on numerous occasions, pointed to crew fatigue as a potential contributing factor in an accident. The industry’s response has not gone nearly far enough, and — of late — at least the Class I carriers are moving backward. At a time when business is bursting at the seams, and more workers are needed in all crafts, the industry’s chief negotiator proposes to resolve its staffing shortages by

(1) combining all shop craft workers into a single composite mechanic, (2) contracting out all signal and maintenance of way work, and (3) eliminating all but one operating crew member.

The consequences of the industry's goals on safety would be dire, to say the least. The quality of both inspections and maintenance would decline dramatically, if the industry had its way, and a new, untested and unstudied method of operation would be introduced. Staffing, we believe, is very much a subject of interest for this Subcommittee, because the Railway Labor Act frequently deposits unresolved collective bargaining disputes on the doorstep of Congress, in the form of Presidential Emergency Board recommendations.

The rapid turnover now ongoing in the industry — fueled by the first wave of retirements of Baby Boomer generation railroad workers — also strains the industry's training programs for all crafts, which is the third subject I want to address today. We have concluded that the railroad industry simply does not devote sufficient resources either to providing initial training for new workers or for periodic retraining for more experienced workers. Far too often, training schedules are dictated by the need to deploy new workers in the field, rather than ensuring that those workers, and their more senior co-workers, have the necessary tools to work safely and efficiently.

Worker training in the handling of hazardous materials has been a particular sore point for the BLET, and for all of Rail Labor. The training provided by the industry is so minimal that we, long ago, took matters into our own hands. Hazardous materials training programs have been provided under labor sponsorship at the National Labor College, which is located at the George Meany Center in Silver Spring.

Our Railway Workers Hazardous Materials Training Program has been a resounding success. The program has, over its fifteen years, continually evolved and expanded to meet the training and competency needs of rail workers that are not afforded by the railroads. Initially offering only one course, the program now offers five. Training has moved beyond the conventional classroom to include simulation and on-line activities. A core of professionally trained instructors has been replaced with a corps of peer instructors. Because of this program, thousands of rail workers are trained every year and tens of thousands of rail workers are working more safely and in safer environments.

Since the onset of training in April 1991, the union-run program has trained more than 20,000 rail workers. Evolving from an 8-hour program of awareness training only, the National Institute for Environmental Health Sciences (NIEHS)-funded and George Meany Center-sponsored program now offers five courses: a 5-day Chemical/Emergency Response training in the classroom; an on-line Emergency Responder Awareness Level 101 course; the OSHA 10-hour General Industry Safety and Health Outreach Program; disaster site training; and the newest addition, a Radioactive Material Transportation Safety Program, which is funded by a separate grant from the U.S. Department of Energy.

The new program begins next month at the National Labor College, and will include a Modular Emergency Response Radiological Transportation Training — or MERRTT — “train the

trainer” course. By contrast, we are unaware of any railroad currently conducting training focusing on transportation of spent nuclear fuel and high-level radioactive waste, even though the Department of Energy is expected to begin a 38-year project to transport such waste from DOE sites to storage and disposal facilities as early as next year. The labor hazmat program has trained workers in 49 states and the District of Columbia. We also have fostered the creation of community partnerships that include joint rail worker, fire fighter, EMT, and public safety personnel training in communities throughout the U.S.

The program has a new emphasis on railroad security and disaster response and teaches the 5-day students how to serve as skilled support personnel in an incident command emergency setting. Much of the program material is available in Spanish and a comprehensive web site serves both the English and Spanish-speaking work force. The 5-day program addresses the training requirements of the Department of Transportation’s Hazardous Materials Regulations at 49 C.F.R. Part 172, as well as the requirements of OSHA First Responder and Operations Level training under 29 C.F.R. Part 1910.120. Railroads generally do not provide wages or support for workers attending the program. In fact, — and this is most unfortunate — members sometimes are not allowed time off from work to attend the program, even though the railroad is not paying wages.

The program currently serves eight rail unions,¹ and at least ten crafts,² from major railroads as well as from commuter and short-line railroads. This cross-company, cross-union, cross-craft training has proved invaluable, as one group learns from another. Each union has its own craft-specific tasks and challenges, and prior to this hazmat training program, there was little, if any, cross-union training. Hazards and challenges faced by those in the yards may be different than those faced by road train crews, and different still from those who work along the track or in the shops. Understanding the work of other crafts, the safety and health challenges that each face, and the coordination of each craft’s efforts in an emergency, enhances railroad hazardous materials safety and security. A well-trained and knowledgeable workforce is the first line of defense and can prevent a minor incident from becoming a major hazardous materials accident. The eight rail unions have worked together to enhance rail safety by providing comprehensive training to its members and by providing substantial administrative and personnel support to the union-run Railway Workers Hazardous Materials Training Program.

Labor has been able to offer these programs through a combination of federal funds and subsidies from the North American Railway Foundation, which is a private non-profit

¹ Brotherhood of Locomotive Engineers and Trainmen (BLET); Brotherhood of Maintenance of Way Employees Division (BMWED); Brotherhood of Railroad Signalmen (BRS); International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers (IBB); SEIU’s National Conference of Firemen & Oilers (NCFO); Transport Workers Union (TWU); Transportation-Communication International Union (TCU); Brotherhood of Railway Carmen; and United Transportation Union (UTU).

² Brakemen, Laborers, Workers from the Building & Bridge Department, Signalmen, Carmen, Switchmen, Conductors, Track Department Workers, Locomotive Engineers, Yardmasters, and Hostlers.

organization. However, subsidies and contributions are hard to come by, as you can imagine. Nonetheless, we take great pride in having trained approximately 20,000 railroad workers since the program's inception. At the end of the day, though, this represents but a small fraction of the railroad workers who require thorough, in-depth training. Simply stated, the industry has to step up to the plate in a much bigger way when it comes to training, because the margin for error today is far smaller than it has been for a long time.

The fourth topic I want to touch upon is the canard that eliminating human-factor caused accidents will eliminate the problems. Proponents of this "blame the pin-puller" theory point to FRA accident data, which indicate that the most common primary cause of accidents and incidents is human error. However, focusing upon FRA data, alone, will lead us to miss a far bigger picture, for three reasons.

One is the fact that FRA's data provides only a partial picture. Not reflected in FRA data are incidents that fall below applicable reporting thresholds. Similarly unreported in these data are incidents that may occur at a facility, which may or may not be of minor consequence. For example, FRA data for the 13-month period from December 2003 through December 2004 indicate that human factors was shown as the primary cause in 61.22% of accidents on yard tracks involving hazmat, while equipment defects was shown as the primary cause in 3.79% of such accidents. However, in an article in the January 28, 2005 edition of its *Morbidity and Mortality Weekly Report*, the Centers for Disease Control reported that — of 1,165 "rail events" involving hazmat reported to the Hazardous Substances Emergency Events Surveillance ("HSEES") by 16 States between 1999 and 2004, for which a primary cause was determined — 61% resulted from equipment failure, and only 24% from human error. These two sets of data provide different pieces of the puzzle, but both are required in order to see the puzzle as a whole.

A second fact is that FRA's data summarizes reports filed by railroads and largely reflects causation as determined by the reporting railroad. Except for a relative handful of accidents, FRA has audited none of the data, because it lacks the resources to do so. Also, focusing on primary cause, alone, can lead one to miss a much larger, and potentially equally hazardous, problem. For example, the NTSB Report on the Graniteville accident specifically identified as a contributing factor the absence of a feature or mechanism to remind the crew of train P22 that a switch was not properly aligned. This finding was significant because (1) the task of properly aligning the switch was functionally isolated from other tasks the crew was performing, (2) the crewmembers were rushing to complete their work and secure their train before reaching their hours-of-service limits, (3) the crew had achieved their main objective of switching cars and were focused on the next task of securing their equipment and going off duty, and (4) the switch was not visible to the crew as they worked, leaving them without a visual reminder to properly align the switch.

In the absence of a Root Cause Analysis of one or more accidents, such underlying secondary or tertiary causes are not apparent from a review of FRA's data. Fortunately, performing root cause analyses of railroad accidents has become easier to accomplish in recent times. Just last month, FRA's Office of Research and Development published a report concerning its Root Cause Analysis of six accidents/incidents involving remote control locomotive operations. The HFACS

classification system originally developed for naval aviation mishaps was modified slightly to reflect operational differences between naval aviation and railroad operations, and the resultant HFACS-RR taxonomy was applied to the cases under review. This analysis uncovered organizational and supervisory factors that were present in nearly every case, and also that the technological environment was a significant contributor in all but one case.

We believe that safety of rail transportation of hazardous materials can be enhanced by conducting similar studies of both train accidents/incidents and other types of hazmat events. As technology plays an increasing role in every aspect of hazmat transportation, it becomes ever more difficult to ascertain any but the most obvious causes of an accident. Proper investigation of accident causation, via a Root Cause Analysis, should be a cornerstone of any risk management system, and is worth the extra cost such an undertaking would create.

The third fact is that — even according to FRA's raw data — the primary cause in nearly two of every five hazmat accidents in yards is other than human factors. Track defects account for 15%, and "miscellaneous" for almost 14%. Rigorous analysis of these types of accidents also is called for, and a similar review of hazmat accidents on other than yard tracks also should be undertaken. We firmly believe that such analyses should precede any legislative or regulatory action, to ensure that the job is done properly the first time.

As you may recall, the NTSB determined the probable cause of the Minot accident and resultant release of TIH anhydrous ammonia was an ineffective inspection and maintenance program that did not identify and replace cracked joint bars before they completely fractured, which led to the breaking of the rail at the joint where the derailment occurred. FRA's Railroad Safety Advisory Committee, of which I am a member, has established a Continuous Welded Rail Working Group, and FRA is keeping all stakeholders focused on addressing this shortcoming. This Working Group, in a short period of time, has accomplished much, and I am confident everyone will be pleased with the results of the process.

Lastly I would like to address a few technological and operational considerations that impact rail transportation of hazardous materials. You will hear during this hearing about Positive Train Control — or PTC — from numerous witnesses. You may even hear about a time in the future when PTC will eliminate all accidents caused by human error, and be invited to infer that this time may not be far away. I would respectfully suggest that you should be both inquisitive and skeptical concerning such claims.

Our experience over the past quarter century with the introduction of new technologies in the railroad industry demonstrates that: (1) initial claims of the utility of the technology tend to be overblown; (2) the industry tends to limit its implementation to those features that produce economic savings, and only addresses potential negative safety implications when forced to by FRA; and (3) the industry tends to use technology at or beyond its design limitations unless proscriptively restricted by FRA. Thus, FRA must be a proactive watchdog for safety at every step of the implementation of new technology.

Fortunately, FRA has established a solid foundation for the development, testing and implementation of PTC systems through promulgation last year of Subpart H to Part 236 of Title 49 of the Code of Federal Regulations, which sets forth the standards for development and use of processor-based signal and train control systems. Rigorous and transparent testing protocols are mandated, and the performance standards incorporated into the rule should ensure that no degradation of safety occurs as a result of PTC implementation.

Indeed, it is the position of Rail Labor that — with adequate investment and proper planning — PTC systems can be built to serve the needs of the general freight rail system as well as inter-city and commuter passenger railroads. The proper implementation of PTC systems can help reduce accidents and, therefore, mitigate if not eliminate many hazardous material releases associated with train accidents. We further believe that the nation's rail industry can realize the greatest safety benefits by utilizing PTC systems in conjunction with the existing signal systems. Current signal circuits provide fail-safe "vitality," while PTC provides just what its name implies: positive train control and separation.

At the present time, PTC is in an embryonic stage. While they hold some promise, none of the few systems that are being tested over small territories actually contain all three core features by which PTC is defined: positive train separation, speed restriction enforcement, and positive enforcement of roadway worker protection zones. Moreover, these new technologies cannot be viewed as a panacea for the railroad industry. PTC and the next generation signal systems are tools to improve and enhance safety and security across the nation's railroads. They are not the "end-all" and they are not, in their present form, fail-safe or even remotely infallible. Even after implementation, it still will require the concerted efforts of the maintenance of way worker who installs the track, the dispatcher who controls the train movements, the signalman who maintains the integrity of the system, and the train crew who operate the train, to provide increased safety and security on our nation's railroads.

Because of the proven safety benefits of present-day signal systems, it is imperative that these systems are properly maintained and remain in operation. However many railroads have petitioned the FRA through the Block Signal Application provisions of current regulations to remove signal systems and convert their method of operations to Dark Territory using Direct Traffic Control, or DTC. Eliminating current signal systems only increases the likelihood of catastrophic hazardous material events when an accident occurs.

Rail Labor opposes elimination of existing signal systems because of the well-documented safety benefits afforded by these types of signal operation. Clearly, it is in the best interest of residents of communities throughout America to have the assurance of rail operations based on the protection provided by a signal system. The Graniteville tragedy provides a good example of the continuing value of traditional signal systems. The segment of track where the accident occurred lacked wayside signals, and the method of operation was DTC. A basic signal system would have prevented this accident. Even a switch monitoring device would have informed Brother Seeling's crew that the hand-operated switch was not properly lined and the train would have received a signal indication to stop the train. Switch monitoring devices provide this level of

protection from dangers caused by human error — as was the case at Graniteville — as well as from hazards posed by acts of vandalism.

We also must be mindful of the fact that, regardless of the promise a fully developed PTC system holds, new technology brings with it new problems. Two such problems already identified with respect to PTC is crew distraction caused by monitoring PTC information displays, and over-reliance upon PTC that leads to degradation of train handling skills. We must be forever diligent to ensure that any new technology the railroad industry implements does not introduce more new hazards than it eliminates. Accordingly, Rail Labor firmly believes that there continues to be a long-term need for switch monitoring in Dark Territory in order to prevent accidents caused by misaligned switches.

We also believe — for both safety and security reasons — that hazardous materials emergency response plans should be developed among railroads, municipalities and states. While civil authorities already have plans in place to deal with hazmat situations, I can tell you that train crews and other railroad workers are neither familiar with nor trained in them. However, railroad workers often are the earliest “on-the-scene” personnel to interact with first responders to a hazmat accident. Therefore, we support including railroads in the development of such emergency response plans, and strongly advocate that affected railroad workers receive training concerning those plans, so that they provide appropriate assistance consistent with protecting their own personal safety, at the very time when minutes — and even seconds — can mean the difference between life and death.

One tool in an emergency response plan that includes the railroad can be something that is increasingly found at the nation’s highway/rail grade crossings. Rail Labor has long recommended that a nationwide toll-free telephone reporting system be developed to allow the public to report grade crossing signal malfunctions. Although this system is not presently required by regulation, many Class I railroads have voluntarily implemented some type of 1-800 notification system, but most Class II, Class III, and/or short line railroads have not. Interestingly, but not surprisingly, the public frequently utilizes these toll-free systems to report varied railroad conditions, in addition to malfunctioning grade crossing signals. Establishment of a nationwide toll-free telephone notification system, and incorporation of that system in a railroad’s hazmat emergency response plan, can provide a powerful yet relatively inexpensive tool for the public to report derailments or other events that affect safety and security on railroad property.

In 2006, addressing rail transportation of hazardous materials also necessarily includes consideration of issues raised by the transportation of spent nuclear fuel and high-level radioactive waste. As I previously noted, DOE is on the verge of embarking upon a 38-year plan to relocate SNF and HLW to central locations. Because of litigation, it may develop that each load must be moved twice. There is no question that the safest and most efficient means of transporting SNF and HLW is by rail.

The extent to which these materials are currently transported is minuscule when compared to DOE’s projections for the future. A thorough and careful review of existing regulations is necessary, because they were crafted for what is in many ways a different industry. Work on

preparing the industry has begun. In fact, FRA has studied various operational options and has concluded that SNF and HLW should be shipped via dedicated trains, a conclusion we wholeheartedly support. At the same time, however, much more needs to be done. For example, at the present time, train crews who will operate these trains may be exposed to higher doses of radiation than even nuclear power plant workers. Moreover, no requirements or standards currently exist for monitoring railroad workers' exposure to SNF and HLW.

The BLET participates in DOE's Transportation External Coordination Working Group and has been a vocal supporter of standards that provide appropriate protection both for railroad workers and for the communities through which SNF and HLW trains operate. We will continue to devote necessary resources to this endeavor. This issue is an important one for the Subcommittee, we believe, because the "change in the mix" that will result from a substantial increase in SNF and HLW heightens the importance of the other issues we have raised here today.

In summation, then, we believe there are a number of issues related to rail transportation of hazardous materials that deserve the Subcommittee's attention. To the extent that security and safety are intertwined, we urge the Congress to continue to work toward legislation that will enhance security on the nation's railroads.

As the successors of the Baby Boom generation of railroad workers are being integrated into the industry, severe challenges with respect to both staffing levels and worker training have arisen; challenges that could negatively impact safety. We will continue to lead the fight for the sufficiently-sized and trained workforce that is necessary to improve industry safety, and we urge the Subcommittee to hold the industry's feet to the fire, particularly concerning hazmat training.

We ask the industry to — once and for all — acknowledge that accident prevention only begins, rather than ends, with pointing the finger of blame at the last human being who made a mistake. We believe FRA should conduct Root Cause Analysis of a representative sample of hazmat accidents prior to undertaking any regulatory action concerning hazmat operating procedures, whether at its own initiative or in response to legislation sponsored by this Subcommittee. And we urge the Subcommittee to support adequate funding for FRA to accomplish any goal you may set.

We also caution that PTC is far more a glimmer in the industry's eye than a bright new dawn that is on the horizon. The technology is in its earliest testing stages, and one core feature has not even been field-tested yet, to our knowledge. For at least the foreseeable future, existing signal systems will continue to provide the cornerstone for safe operations, and switch monitoring devices are necessary for Dark Territory operations.

Railroads and the communities through which they operate should share a common plan for emergency response to hazardous materials accidents, and railroad workers — who are on the front line of the operation — should be conversant with those plans. This is even more critical as DOE ramps up shipments of spent nuclear fuel and high-level radioactive waste, a subject that should receive increased attention from all stakeholders.

Once again, I thank the Subcommittee for inviting and hearing me today, and would be pleased to address any questions you may have.