TRANSPORTATION AND HOUSING AND URBAN DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2015

WEDNESDAY, APRIL 9, 2014

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:50 a.m. in Room SD–138, Dirksen Senate Office Building, Hon. Patty Murray (chairman) presiding.

Present: Senators Murray, Johnson, Collins, Coats, Hoeven, and Heitkamp.

AN ASSESSMENT ON HOW TO KEEP OUR RAILWAYS SAFE FOR PASSENGERS AND COMMUNITIES

STATEMENT OF HON. ANTHONY FOXX, SECRETARY, DEPARTMENT OF TRANSPORTATION

OPENING STATEMENT OF SENATOR PATTY MURRAY

Senator MURRAY. Good morning. The subcommittee will come to order. We are here today to talk about rail safety. Whether a railroad is carrying crude oil through towns across America, or people are taking a well earned vacation or commuting to work, we need to make sure that people are safe, whether on the train or near the tracks.

For our first panel I want to welcome back Secretary Foxx. We look forward to hearing what the Department of Transportation is doing to ensure the safety of our railroads today. And before we go on, I want to just thank you personally for the quick release of emergency relief funds for the Oso mud slide in my State. The devastation there has been, as everybody can imagine, unimaginable. And I know the Department is going to be a strong partner as we continue this recovery. And I just wanted to personally thank you for that today.

I also want to welcome Debbie Hersman. She is chairman of the National Transportation Safety Board. We had the opportunity to work together when the Skagit River Bridge collapsed about a year ago. And I really want to thank you for all your hard work, and look forward to hearing your thoughts on how we can improve rail safety today.

And I look forward on our second panel, to hear from our expert witnesses, Ms. Barb Graff—she's the director of Seattle's Emergency Management Office—and Mr. Tim Pellerin—he is chief of the Rangeley Fire Department who is with us as well. Both have valu-

able perspectives on the challenges of responding to field train accidents. We appreciate your being here.

Rail continues to be one of the safest modes of transportation, and 2013 was actually the safest year on record. But the increase in domestic energy production is changing the industry. With advances in technology, we now have access to oil deposits that were unobtainable just a few years ago.

Today, we meet 66 percent of our demand for crude oil with domestic production right here in North America. As our energy dependency improves—independence improves, the way oil is brought to refineries is also changing. Most oil used to be imported overseas in ships, but today more and more of it moves by rail and pipeline. In my home State of Washington, there was virtually no shipment of crude oil by rail as recently as 2011. But now due to the expanding drilling of crude oil from the Bakken shale in North Dakota and Canada, 17 million barrels of oil were shipped across Washington State last year alone.

And that number will only to continue to grow. Shipments are expected to triple to 55 million barrels in this year. And with those 55 million barrels of crude oil moving through Washington State by rail, that is only the tip of the iceberg. There are 10 more refinery expansions and proposals under consideration all across Washington State. If approved, those proposals would bring millions of barrels of crude oil on rail right through communities like Seattle, and Spokane, and Bellingham, and Vancouver, and more. If these projects are fully realized, they would add 11 train trips per day. It might not sound like a lot, but that would amount to $241 million in barrels of oil per year coming into Washington State by rail.

Oil and gas are not the only energy products breaking record levels in rail shipments. Since the enactment of the renewable fuel standard in 2005, ethanol shipments have increased 441 percent. Ethanol is now the most frequently shipped hazardous material.

But the shipment of energy products over rail has safety implications. Since July, there have been major rail accidents involving crude oil in Quebec, Alabama, and North Dakota. These accidents have resulted in lost lives, forced entire towns to evacuate, caused over $1.2 billion in property damage, and contaminated the environment. As the NTSB (National Transportation Safety Board) pointed out in January, our current regulations were written long before anybody could imagine how much oil would move over rail.

Federal oversight must adapt to these rapid changes in domestic energy production. We need to have the right policies in place to prevent accidents and respond to emergencies when they do happen. And these policies need to address the safety of the entire supply chain from the point of oil production to the refinery and during every movement in between.

For starters, we know that human error and track defects account for more than two-thirds of all train accidents. We need to improve automated track inspection technology and have the right number of track inspectors in the field. This is why we included 45 additional safety staff at the Federal Railroad Administration in the 2014 transportation spending bill.

In addition, changes to train car design are long overdue and a necessary safety improvement. I cannot emphasize enough that we

need regulatory certainty on this issue for both new builds and the existing fleet. But there are many other questions that need to be answered, including are some shale oil deposits, like those in the Bakken region, more volatile? Are there processes that energy companies can use to make oil safer to ship? And are you getting all the information you need from industry to make informed decisions on these issues?

Finally, if an accident does occur, we need to have the resources and trained personnel in place to respond. So I want to know if the Federal Railroad Administration (FRA) should be doing more oversight on oil spill response plans. What is FRA doing to ensure State and local emergency response plans are in place and sufficient to deal with the realities of this rapidly changing industry? The requirements for response plans are more robust for pipelines and ships than they are for railroads. Should we be looking to develop a consistent level of preparedness across all modes of transportation?

So I look forward to discussing these issues with all of our witnesses today. Your feedback will provide us with valuable information as we make a decision on the administration's budget request for 2015.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PATTY MURRAY

The Subcommittee will come to order. We are here today to discuss rail safety. Whether a railroad is carrying crude oil through towns across America, or people taking a well-earned vacation or commuting to work, we need to make sure people are safe, whether on the train and near the tracks.

For our first panel, I would like to welcome back Secretary Foxx. We look forward to hearing what the Department of Transportation is doing to ensure the safety of our railroads.

But first, I want to thank you for the quick release of emergency relief funds after the Oso mudslide in Washington State. The devastation there has been unimaginable. I know the Department will continue to be a strong partner as the community makes its long recovery.

I also want to welcome Debbie Hersman, Chairman of the National Transportation Safety Board. We had the opportunity to work together during the Skagit River bridge collapse in Washington last year. I appreciate your hard work, and I look forward to hearing your thoughts on how we can improve rail safety.

And I look forward to hearing from the expert witnesses on our second panel, Ms. Barb Graff, the Director of Seattle's Emergency Management Office, and Mr. Tim Pellerin, Chief of the Rangley Fire Department. Both have valuable perspectives on the challenges of responding to fuel train accidents.

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With advances in technology, we now have access to oil deposits that were unobtainable just a few years ago.

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As our energy independence improves, the way oil is brought to refineries is also changing. Most oil used to be imported overseas in ships, but today more and more of it moves by rail and pipeline.

In my home State of Washington, there was virtually no shipment of crude oil by rail as recently as 2011.

But now, due to the expanding drilling of crude oil from the Bakken shale in North Dakota and Canada, 17 million barrels of oil were shipped across Washington State last year alone.

And that number will only continue to grow: Shipments are expected to triple to 55 million barrels in this year.

And those 55 million barrels of crude oil moving through Washington State by rail are only the tip of the iceberg.

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—Are there processes that energy companies can use to make oil safer to ship?

—And, are you getting all of the information you need from industry to make informed decisions on these issues?

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The requirements for response plans are more robust for pipelines and ships than they are for railroads. Should we be looking to develop a consistent level of preparedness across all modes of transportation?

I look forward to discussing these issues with our witnesses today. Your feedback will provide us with valuable information as we make decisions on the Administration's budget request for 2015.

Senator MURRAY. With that, I will turn it over to my ranking member, Senator Susan Collins. I really appreciate your being here and your work on this.

STATEMENT OF SENATOR SUSAN M. COLLINS

Senator COLLINS. Thank you very much, Madam Chairman. It is good to see you again, Secretary Foxx, and I welcome Chairman Hersman for our—before our subcommittee today.

I also am particularly pleased that we have two witnesses from the great States of Maine and Washington. Fire Chief Tim Pellerin of Rangeley, Maine, and Barb Graff, Seattle's Emergency Management Director, will be testifying on the second panel to share with us their unique frontline perspectives in responding to incidents involving hazardous materials.

The horrific derailment that occurred in Lac-Mégantic, Quebec last year, almost 30 miles from the Maine border, brought to light the importance of ensuring the safe transportation of energy products. In the early morning hours of July 6, a freight train carrying hundreds of thousands of gallons of crude oil was sent hurtling toward the small picturesque Canadian village. I want to direct everyone's attention to the picture on the easel, which illustrates what this lovely little town looked like before this horrific accident.

The train derailed in the center of the town, leveling several blocks and killing 47 residents. This picture shows the devastation that can occur when hazardous materials are not safely transported. As you can see, it is an extraordinarily huge fire, and you can see the devastation and its aftermath.

The train—out of this terrible calamity, I was heartened to hear the stories of the more than 30 Maine firefighters—the chief is one of them who is here with us today—who answered their Canadian neighbors' call for help, and rushed to this terrible scene. I look forward to hearing from the chief on his firsthand experiences in Lac-Mégantic, and also to learn from him what he would recommend that we do.

And I also must say how proud I am that the chief presented to me today a picture of the fire truck that they brought from Rangeley, Maine. And you can see the American flag on it that was helping to put out the horrendous fire that was blazing. Since the accident, the NTSB has been working with the Transportation Safety Board of Canada, and I commend the chairman for doing that kind of collaborative investigation.

While this tragedy hit so very close to home for us in Maine, there have been several other derailments of crude oil and other hazardous materials recently across the country. Despite these incidents, the railroad industry maintains that it has upheld a high safety record, and according to the Association of American Railroads, more than 99 percent of rail HAZMAT shipments reached their destination without a release of product. But when you have an incident like this occur, that is of little comfort to those who lost their lives and to a town that was utterly destroyed.

Mr. Secretary, when you appeared before this subcommittee just weeks ago, I asked you about the administration's proposal for a new $40 million fund to support the safe transportation of crude oil and other energy products. You explained that the Department needs "the flexibility to be able to distribute resources where they are needed, whether it is inspectors, research, or testing."

You made clear to me that there is no such thing as a silver bullet to address the challenges of crude oil transportation. This is a complicated, multi-faceted problem that requires coordination among several agencies within the Department. We must, however, look at three components of addressing this important safety issue—prevention, mitigation, and response. This includes everything from preventing derailments by fixing railroad tracks, minimizing leakage by strengthening tank cars, and ensuring that our brave emergency responders and firefighters are properly trained and equipped.

Yet it should not stop there. The Department must work with all railroads, class one and short line alike, the oil and gas industry,

as well as State and local community emergency responders to determine a holistic approach to improve safety.

It is also important to recognize that much of that rail network exists in rural America, and that presents unique challenges to small communities that often lack the resources to effectively respond to hazardous material emergencies. The path forward is a complicated one, but it is absolutely essential that we pursue it.

I am encouraged by the progress being made through voluntary measures agreed to by the railroad industry and the DOT (Department of Transportation) and the cooperation between the American and Canadian governments. I look forward to hearing from our witnesses today. Thank you, Madam Chairman.

Senator MURRAY. Thank you very much. As members know, we have a vote at 11:00 and two panels on this committee, so I would ask all of the members who have opening statements to submit them for the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TIM JOHNSON

Thank you, Chairman Murray and Ranking Member Collins, for holding this hearing on railway safety. As you know, safe, efficient, and cost-effective rail transport is critical for the Nation's economy. South Dakota depends on rail to move the State's agricultural goods and other important products to markets across the country and overseas, sustaining jobs and the rural economy. In addition, rail transport moves key products into South Dakota to support business and maintain the quality of life.

Since last fall, there have been major problems with rail transport in South Dakota, posing serious problems for agriculture and small and large businesses in the State. This damages South Dakota's rural economy, hampering growers, elevator operators, ethanol producers, utilities, and many other businesses that rely on rail to transport goods. The inability to consistently move shipments in a timely manner severely restricted the ability of farmers to sell grain, ethanol producers to ship fuel, and power plants to purchase coal. With the abundant harvest last fall and only limited ability to ship, grain elevators are full and with the warming weather the ability to temporarily store grain is rapidly coming to an end. The rail problems have also forced some ethanol producers in the State to cut back on production because they have no place to put the product, limiting both sales and employee wages.

It appears that the current rail shipping problems stem from several factors, including an overall increase in rail shipping of goods due to the improving economy, the brutal weather this past winter, the large harvest last fall, and the increase in rail shipping of crude oil in our part of the country. All shippers need an even playing field from the railroads. We need to take a hard look at how they are choosing what loads to move to see whether there is undue preference being shown to particular shippers. They should not be playing favorites.

With the seasonality of much of the agricultural production, we need to consider how those commodities will fit into the larger rail transport network in a sustainable manner in the future, so that regular shippers of other products do not limit access during the critical post-harvest period. With the growth of renewable fuel production, we also need to identify how we can consistently move those homegrown products to market efficiently and effectively, especially when the plants may not be located in proximity to main lines.

I understand that BNSF, CP, and the other railroads are working to address the problems in their systems. They have indicated that they anticipate returning to near normal service in the next couple of months. I applaud and look forward to the Surface Transportation Board hearing on these issues later this week. I will closely monitor these service issues going forward.

Senator MURRAY. And we will go directly to the testimony, and, Secretary Foxx, we will begin with you.

SUMMARY STATEMENT OF HON. ANTHONY FOXX

Secretary FOXX. Thank you, Chairman Murray and Ranking Member Collins, members of the subcommittee, and the panel of distinguished witnesses who will follow our panel today.

Before I begin my remarks, though, let me recognize Chairman Hersman, who has done extraordinary work over the past 10 years at the NTSB in making all forms of transportation safer. I know that I speak for many in the group of transportation advocates when I say that she will be missed, and I wanted to say that to you personally today.

As all of you know, the oil being produced in North Dakota's Bakken region is a big part of the reason that America is now the world's largest energy producer. But at DOT, we also understand that America cannot just be a world leader in producing this energy. We also must be a world leader in safely transporting it as well. This is why over the last 8 months the U.S. Department of Transportation has taken more than a dozen steps to strengthen all the ways that we deliver this oil, by truck, by rail, and by pipeline.

We have issued two emergency orders, two safety advisories, and a safety alert in addition to advancing new rail safety and tank car regulations. We are also conducting investigations through Operation Classification, better known as the Bakken Blitz, in order to better understand the characteristics of Bakken crude, and to make sure that it is classified correctly.

I want to thank Senators Hoeven and Heitkamp in particular for working with us on this issue. We are also working with industry to make sure they do their part as well. In February I issued a call to action to the Association of American Railroads, and they have responded, agreeing to a series of voluntary actions, including speed reductions, increasing inspections, using new brake technology, and applying HAZMAT routing routes to crude shipments.

More still needs to be done, and that's why the President's $302 billion transportation proposal includes $10 billion over 4 years for our freight network to help us expand it, to reduce bottlenecks, and, of course, to improve safety. In addition to all of that, the President's proposal also addresses how we ship our energy products head on. It includes a $40 million flexible fund to tackle the new and emerging risks associated with transporting energy products. The fund would be managed by my office to coordinate among other different modes of transportations involved, and would be used to support research, investigations, and other efforts to improve the safe transportation of crude.

Since my first day as Secretary, since the first day of our Department in fact, our top priority has been to ensure that safety of America's transportation system. That is what we will continue to do, especially with regard to transporting our energy.

I want to thank you again for the opportunity to testify today, and I am happy to answer your questions.

[The statement follows:]

PREPARED STATEMENT OF HON. ANTHONY FOXX

Chairman Murray, Ranking Member Collins, and Members of the Subcommittee thank you for the opportunity to meet with you today to discuss the Department

of Transportation's work in ensuring the safe transportation of energy products throughout the Nation. This emerging issue affects multiple aspects of our transportation network and ensuring the safety of that system is my top priority.

Over the past decade, the United States has successfully expanded our domestic energy production. In particular, the crude oil and natural gas extracted from the region of North Dakota has yielded impressive results and now provides over 900,000 barrels of oil daily. As a result, North Dakota is now our second largest oil producing State—yielding more than 10 percent of all oil produced in the United States. All of this is good news for our economy and good news for our energy independence.

However, at the same time, the increased presence of energy products within our borders and the need to transport them to refineries and distribution points nationwide have raised emerging concerns about our ability to move these products safely through our highways, waterways, and rail systems. Today, I want to share with you the ongoing efforts within the Department of Transportation to address these concerns and to highlight specific initiatives within the fiscal year 2015 President's Budget that would support both prevention and response efforts in this area.

The Department of Transportation has been focused on the safe transportation of hazardous materials for many years. Because hazardous materials are transported by several modes of transportation, the Department's prevention and response activities are shared by several of our Operating Administrations. The Pipeline and Hazardous Materials Safety Administration (PHMSA), Federal Railroad Administration (FRA), and Federal Motor Carrier Administration (FMCSA) all play a role in ensuring that hazardous materials are transported safety.

PHMSA provides oversight and guidance to more than 40,000 companies involved in the commercial transportation of petroleum products and hazardous materials. Each day, about a million different explosive, poisonous, corrosive, flammable, and radioactive hazardous materials are transported through our transportation corridors—representing as much as 6 million tons of hazardous materials. The majority of the products under PHMSA's jurisdiction represent oil and natural gas.

Over the past few years, PHMSA's efforts have focused on two fronts: increasing compliance with existing rules and regulations while at the same time increasing both industry and public awareness of the risks associated with the transportation of oil and other energy products by rail. PHMSA's enforcement efforts have yielded significant results. In fiscal year 2013 alone, PHMSA conducted 1,655 high risk hazardous materials inspections. As a result of these inspections, PHMSA opened 224 enforcement cases and issued more than 460 citations including some with penalties of nearly $1.6 million.

At the same time, PHMSA also devotes significant attention to educating the industry and the public on hazardous materials safety and partners with the States to increase awareness on safety standards and practices. To enhance the dialogue between PHMSA and State and industry partners, PHMSA established a Joint Safety Advisory Committee to address rail safety concerns and to illicit feedback on needed safety improvements. These steps are all part of PHMSA's aggressive campaign on multiple fronts to mitigate risks and ensure transportation safety.

We recognize—as is often the case—that comprehensive solutions to our difficult transportation issues require a multimodal focus. In the case of crude oil and energy products transportation, much of this material is moved by trucks and rail or a combination of both as the product travels from the oil wells to refineries and distribution points. At every stage of the process opportunities exist for safety risks that must be mitigated. This is why PHMSA is joined by FRA and FMCSA in addressing hazardous material transportation safety concerns.

For example, FRA has long held the authority to issue Emergency Orders as a method for addressing safety concerns on rail. In August of 2013 FRA worked with PHMSA on an Emergency Order to address the proper attending and securing of trains. In February 2014, FRA and PHMSA issued another Emergency Order highlighting the importance of proper testing and classification of crude oil prior to shipping, and the importance of using proper packaging for the specific hazardous materials to be transported. The use of these joint orders has been very helpful in gaining immediate attention on problem areas.

In response to recent train accidents involving tank cars carrying crude oil, in January oil industry representatives and rail industry CEOs met with me and Administrators Quarterman, Szabo, and Ferro in a "Call to Action". At this meeting, the Rail CEOs were asked to develop specific plans and recommendations to immediately improve the safety of crude oil shipments. I sent a letter to the American Association of Railroads (AAR) asking for their help in implementing a series of voluntary actions that would improve the safety of railroads transporting crude oil and

the communities they move through. President and CEO Edward Hamberger signed the agreement the same day and support from individual railroads followed shortly.

This "Call to Action" resulted in several important changes that will go a long way in improving safety and I am pleased that our industry partners have joined with us in this critical effort. The AAR agreed to:

—apply hazardous materials routing analysis to trains with 20 or more tank cars loaded with petroleum crude oil, which will help determine the safest and most secure route for the product to travel;

—adhere to speed restrictions for Key Crude Oil Trains (20 or more tank cars filled with petroleum crude oil) and additional speed restrictions if these trains are traveling in high urban areas;

—use distributive power locomotives and other solutions to prevent train pile-ups;

—install wayside defective bearing detectors every 40 miles to prevent equipment-related accidents;

—work with the railroads to develop a list of emergency response resources along Key Crude Oil train routes that can be provided to emergency responders upon request; and

—provide $5 million to develop and provide training on safe hazardous material transportation.

FRA and PHMSA have also been working jointly to conduct "Operation Safe Delivery". This initiative involves joint activities at all transportation phases to investigate how shippers and carriers are classifying crude oil and to understand the characteristics of the material. Efforts have focused primarily on the Bakken region and include spot inspections, data collections, and sampling that help in verifying compliance with Federal safety regulations.

The safe transportation of energy products also includes important efforts by FMCSA since trucks play such a pivotal role in the transportation of these materials. During 2014, FMCSA partnered with the North Dakota Highway Patrol, the Federal Railroad Administration, the Pipeline and Hazardous Materials Safety Administration, and the Montana Department of Transportation to conduct several multi-agency "Strike Force" Operations. These "Strike Forces" help to ensure materials are properly classified and motor carriers and drivers are operating safely. A "Strike Force" operation in February 2014 produced nine violations.

LOOKING FORWARD

While we are making progress in addressing the new and emerging safety risks associated with the safe transportation of energy products, we recognize that there is more to be done. This is why the President's 2015 Budget includes a request for a new $40 million flexible fund to support prevention and response associated with the safe transportation of crude oil. Building on our successful collaborations among the affected Operating Administrations, this funding would be concentrated in one fund and be available to support enhanced inspection levels, investigative efforts, research and data analysis, and testing in the highest risk areas.

This fund will be administered by the Department's Chief Financial Officer and Assistant Secretary for Budget and Programs who will ensure resources are made available to initiatives within the Federal Railroad Administration, Pipelines and Hazardous Materials Safety Administration, and the Federal Motor Carriers Safety Administration. Drawing on their expertise in specific subject areas, the Administrators for each Operating Administration, together with the Assistant Secretary for Research and designated representatives from the offices of the Assistant Secretary for Policy, General Counsel, and the Chief Financial Officer, would jointly serve as a decisionmaking Board and would be responsible for the effective administration of the fund. Eligible projects would be rapidly reviewed and approved by the Board before funds are transferred to an Operating Administration for implementation. Examples of eligible expenditures of the Safe Transportation of Energy Products Fund would include initiatives such as the following:

—Data Driven Safety Interventions—Funding will support the collection and analysis of transportation data on incident, injury, and fatality risks for bulk shipment of flammable liquids by road and rail. This data will be used to define the scope of the problem and to inform efforts/target funding toward the most effective safety interventions. Constituent modes would make proposals to the Board to secure funding for activities that enhance safety or to respond to current incidents. The Board could choose to prioritize multimodal efforts as appropriate.

—Additional Safety Personnel—At this initial establishment phase, the fund would be used to support additional personnel divided between FRA and PHMSA for safety inspection and enforcement personnel to provide the back-

bone of the multimodal effort for this first year. These resources will conduct inspections, investigations and testing for issues such as tank car performance, commodity classification, and root cause analysis of train derailments.

—Training and Outreach Efforts—to improve oil spill emergency response and community preparedness.

—Robust Regulatory Development—to focus on the implementation of comprehensive regulatory actions that would provide the industry with a combination of performance metrics and operating standards that will result in enhanced safety practices, more effective rail operations, and improved tank car survivability.

—Economic Analysis—to identify and evaluate costs associated with current system-wide risks of bulk shipments by rail as well as analyses of future system needs.

—NTSB Recommendations—Funds would also be used to address outstanding and anticipated NTSB recommendations.

The need for this initiative is especially important because the U.S. is now the global leader in crude oil production capacity growth, and because we expect this trend to continue for the foreseeable future.

CONCLUSION

As our domestic energy production efforts continue to expand, the Department of Transportation will draw on its long history of addressing the safe transportation of hazardous materials and use lessons learned to enhance our efforts in this new emerging area. We will also continue to explore new methods and strategies for ensuring these energy products are moved safely through our cities, towns and neighborhoods. We will continue working with our State and industry partners, to develop practical and workable changes that enhance safety and efficiency, ensuring that we maintain an open dialogue with the public to ensure their concerns are promptly addressed.

Thank you again for the opportunity to meet with you today. I look forward to working with all of you.

Senator MURRAY. Thank you. Chairman Hersman.

STATEMENT OF HON. DEBORAH A.P. HERSMAN, CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD, DEPARTMENT OF TRANSPORTATION

Ms. HERSMAN. Good morning, Chairman Murray, Ranking Member Collins, and members of the committee, and also the guests who are here. As Chairman Murray outlined in her opening statement, in the last decade we have seen a tremendous change in the types of commodities that are transported by rail.

As you all know, crude oil carloads have increased by over 400 percent since 2005. However, the safety regime did not prepare in advance, nor have they responded quickly enough to address the risks associated with moving unit trains of flammable liquids. Recent accidents illustrate that vulnerabilities still exist for communities situated along the rights-of-way, and risks remain unaddressed.

Ranking Member Collins described to a great degree the outcome of the accident in Lac-Mégantic. Forty-seven people were killed, and a town center was destroyed. The Transportation Safety Board of Canada is leading this accident investigation, but the NTSB is providing technical and personnel support to their work.

And, Senator Heitkamp, you know very well within our own borders we experienced an accident on December 30. Just a half mile from the town center of Castleton, North Dakota, 20 cars on a BNSF crude oil train derailed, spilling about a half a million gallons of oil and igniting a fire that burned for more than 24 hours, resulting in the evacuation of 1,400 people.

In January, we issued joint recommendations with TSB Canada addressing classification of hazardous materials, route planning for

hazardous liquid unit trains, and developing worst case scenario response plans. These common sense improvements are needed now. And I do want to recognize the work that Secretary Foxx and his team have dedicated to achieving voluntary commitments to make some of these improvements.

The NTSB has called for improvements to tank car design for decades. In 1991, we issued a report that reviewed 45 tank car accidents in places like Pasco, Washington, Easley, South Carolina, and Wilmington, California. And more recently, we also issued recommendations to PHMSA after a 2009 fatal ethanol unit train accident in Illinois. We called for improvements to the tank car design to prevent or mitigate a failure.

The NTSB has also called for better information to first responders when there is an accident. They are the ones who run towards the disaster when everyone else is running away, yet too often they must respond without critical safety information. First responders must have accurate and real time information about what is carried on the train. We called for this in 2007 following an accident in Anding, Mississippi, and much of this information can be electronically transferred directly to responders in the field.

Later this month, we will hold a 2-day forum focusing on transport of hazardous liquids by rail, and you are exactly right, Senator Collins—it is all about prevention, mitigation, and response. We have to do all three of these things better.

I would also like to provide a brief overview of some of our recent rail passenger accident investigations. We are now investigating five separate accidents on Metro North's properties. They have involved six fatalities and 135 injuries. We have issued several recommendations already to Metro North and to the FRA as a result of these investigations. And most recently, we determined that the engineer at the controls of the fatal accident that occurred in December suffered from undiagnosed sleep apnea. This serious medical condition can result in excessive daytime sleepiness, fatigue, and a lack of awareness. This is not the first time that we have identified sleep apnea as a factor in transportation accidents, and we have recommended that all modes at DOT take this issue seriously.

We continue to investigate a number of accidents all around the country—CTA in Chicago, BART in San Francisco. I look forward to answering any questions that you might have.

If I could ask the committee to indulge me. I have testified about two dozen times before Congress, and as all of you know, it is the people who sit behind us who do a tremendous amount of work to get us to where we are today. I would like to recognize the staff of the NTSB. Jane Terry and Rob Hall are sitting behind me today, but for 10 years there have been people who have sat behind me, helped me prepare to talk to people like you, and made sure that the NTSB was well represented. And so, I thank them.

And I wish Secretary Foxx all the best in continuing to fight the good fight for transportation safety. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF HON. DEBORAH A.P. HERSMAN

Good afternoon, Chairman Murray, Ranking Member Collins, and members of the subcommittee. Thank you for the opportunity to appear before you on behalf of the National Transportation Safety Board (NTSB) and to update you on our ongoing work to improve railroad safety by investigating railroad accidents and issuing safety recommendations. Our Nation's economy depends on a safe, reliable rail transportation system, and the American public expects and deserves nothing less. Recent railroad accidents under active investigation, including fatal accidents, remind us of the clear imperative to stay vigilant and stand ready to make improvements to the safety of railroad transportation. Our Nation's railroad systems are generally safe, but evolving demands on these systems mean evolving safety challenges, and much work is ahead in our shared mission of making our Nation's railroad systems as safe as they can be.

Recent events have placed railroad safety at the forefront of the national conversation. Last May, in Bridgeport, Connecticut, 76 people were injured when a Metro-North Railroad (Metro-North) commuter train derailed, fouled the adjacent track, and was struck by a train approaching on that adjacent track. Just over 1 week later, a Metro-North track foreman was struck by a train and killed in West Haven, Connecticut. In July, a CSX train operating on Metro-North tracks derailed in The Bronx, New York. On December 1, 4 people lost their lives and 59 others were injured when a Metro-North commuter train derailed in The Bronx after entering a curve with a 30-mile-per-hour (mph) speed limit at 82 mph. One month later, 2014 dawned with a team of NTSB investigators working the scene of a serious railroad accident near Casselton, North Dakota, where 20 cars of a 106-car BNSF Railway (BSNF) petroleum crude oil unit train ignited after colliding with cars from a derailed BNSF grain train.[1] More than 476,000 gallons of crude oil were released in the accident, and the massive fire triggered a voluntary evacuation of 1,400 people from the surrounding area and resulted in millions of dollars in damage. Last month on March 10, a Metro-North third rail electrician lost his life when struck by a Metro-North train in Manhattan, New York. And most recently, a team of NTSB investigators responded to a Chicago Transit Authority (CTA) train derailment inside the O'Hare International Airport station on March 24 in which 32 people were injured. Early information suggests fatigue may have played a role in the accident.

Our investigations into these accidents continue, and the second portion of this written testimony will update the subcommittee on what we have learned so far. At any time however, the NTSB may issue safety recommendations in its investigations. In our investigation of the Casselton accident, on April 7, we issued a safety recommendation to the Association of American Railroads (AAR) calling for improved nondestructive testing of rolling-stock axles to detect manufacturing material defects before they lead to accidents. On February 18, we issued three safety recommendations to Metro-North to install signs to clearly warn train crews that they are approaching areas of permanent speed restrictions and to install and review inward- and outward-facing audio and video recorders in locomotives and control cars, which is a longstanding NTSB recommendation to the Federal Railroad Administration (FRA) that remains open.

CURRENT SAFETY ISSUES

First, I would like to offer NTSB perspectives on current safety issues that the FRA and others, as appropriate, should expeditiously address. These recommendations reflect the fact that improving rail safety requires a layered approach: prevent accidents, mitigate those we cannot prevent, and ensure that emergency responders are well-equipped and well-trained to handle the accidents when they occur.

The NTSB has issued 106 recommendations to FRA since 2000 to improve railroad safety. Of those 106 recommendations, 55 remain open, and, of those 55 open recommendations, 29 remain open with unacceptable FRA responses. The percentage of open recommendations that have unacceptable responses is higher for the FRA than for any other Department of Transportation (DOT) modal agency or the U.S. Coast Guard. An appendix listing our open recommendations to FRA follows. We understand that the FRA's congressionally-mandated rulemaking projects occupy, as they should, a substantial portion of the agency's rulemaking resources. At the same time, however, the FRA's implementation of open NTSB recommendations—recommendations to reduce fatigue among train engineers,[2] to implement positive train control (PTC), to require better maintenance, and to make other safety

[1] A unit train is a train made up of cars carrying the same product.
[2] NTSB Recommendations Nos. R–12–017, and R–13–020 and –021.

improvements—will save lives. The FRA should develop and publish a plan for implementing open NTSB recommendations without further delay.

RECOMMENDATIONS

Recommendation No.	Overall status	Date closed	Subject
R–00–001	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Establish, with assistance from experts on the effects of pharmacological agents on human performance and alertness, procedures or criteria by which train operating crewmembers who medically require substances not on the U.S. Dept. of Transportation's list of approved medications may be allowed, when appropriate, to use those medications when performing their duties.
R–00–002	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Develop, then periodically publish, an easy-to-understand source of information for train operating crewmembers on the hazards of using specific medications when performing their duties.
R–00–003	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Establish and implement an educational program targeting train operating crewmembers that, at a minimum, ensures that all crewmembers are aware of the source of information described in R–00–2 regarding the hazards of using specific medications when performing their duties.
R–00–004	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Establish, in coordination with the U.S. Dept. of Transportation, the Federal Motor Carrier Safety Administration, the Federal Transit Administration, and the U.S. Coast Guard, comprehensive toxicological testing requirements for an appropriate sample of fatal highway, railroad, transit, and marine accidents to ensure the identification of the role played by common prescription and over-the-counter medications. Review and analyze the results of such testing at intervals not to exceed every 5 years.
R–01–002	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Evaluate, with the assistance of the Research and Special Programs Administration, the Association of American Railroads, and the Railway Progress Institute, the deterioration of pressure relief devices through normal service and then develop inspection criteria to ensure that the pressure relief devices remain functional between regular inspection intervals. Incorporate these inspection criteria into the U.S. Dept. of Transportation hazardous materials regulations.
R–01–017	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Modify 49 Code of Federal Regulations 219.250(b) as necessary to ensure that the exemption from mandatory postaccident drug and alcohol testing for those involved in highway-rail grade crossing accidents does not apply to any railroad signal, maintenance, and other employees whose actions at or near a grade crossing involved in an accident may have contributed to the occurrence or severity of the accident.
R–02–005	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require railroads to conduct ultrasonic or other appropriate inspections to ensure that rail used to replace defective segments of existing rail is free from internal defects.
R–04–001	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require all railroads with continuous welded rail track to include procedures (in the programs that are filed with the Federal Railroad Administration) that prescribe on-the-ground visual inspections and nondestructive testing techniques for identifying cracks in rail joint bars before they grow to critical size.
R–04–007	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Develop and implement tank car design-specific fracture toughness standards, such as a minimum average Charpy value, for steels and other materials of construction for pressure tank cars used for the transportation of U.S. Department of Transportation class 2 hazardous materials, including those in ''low temperature'' service. The performance criteria must apply to the material orientation with the minimum impact resistance and take into account the entire range of operating temperatures of the tank car.
R–05–009	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Develop guidelines for locomotive engineer simulator training programs that go beyond developing basic skills and teach strategies for effectively managing multiple concurrent tasks and atypical situations.

RECOMMENDATIONS—Continued

Recommendation No.	Overall status	Date closed	Subject
R–05–017	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Determine the most effective methods of providing emergency escape breathing apparatus for all crewmembers on freight trains carrying hazardous materials that would pose an inhalation hazard in the event of unintentional release, and then require railroads to provide these breathing apparatus to their crewmembers along with appropriate training.
R–06–007	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require railroads to implement for all power-assisted switch machines, regardless of location, a formal commissioning procedure and a formal maintenance program that includes records of inspections, tests, maintenance, and repairs.
R–07–002	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Assist the Pipeline and Hazardous Materials Safety Administration in developing regulations to require that railroads immediately provide to emergency responders accurate, real-time information regarding the identity and location of all hazardous materials on a train.
R–08–005	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Advise railroads of the need to examine their train dispatching systems and procedures to ensure that appropriate safety redundancies are in place for establishing protection and preventing undesired removal of protection for roadway workers receiving track occupancy authority.
R–08–006	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require redundant signal protection, such as shunting, for maintenance-of-way work crews who depend on the train dispatcher to provide signal protection.
R–08–007	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Revise the definition of covered employee under 49 Code of Federal Regulations part 219 for purposes of congressionally mandated alcohol and controlled substances testing programs to encompass all employees and agents performing safety-sensitive functions, as described in 49 Code of Federal Regulations 209.301 and 209.303.
R–08–009	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Review all railroads' internal rail defect detection procedures and require changes to those procedures as necessary to eliminate exceptions to the requirement for an uninterrupted, continuous search for rail defects.
R–08–010	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require railroads to develop rail inspection and maintenance programs based on damage-tolerance principles, and approve those programs. Include in the requirement that railroads demonstrate how their programs will identify and remove internal defects before they reach critical size and result in catastrophic rail failures. Each program should take into account, at a minimum, accumulated tonnage, track geometry, rail surface conditions, rail head wear, rail steel specifications, track support, residual stresses in the rail, rail defect growth rates, and temperature differentials.
R–08–011	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require that railroads use methods that accurately measure rail head wear to ensure that deformation of the head does not affect the accuracy of the measurements.
R–08–012	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Assist the Pipeline and Hazardous Materials Safety Administration in its evaluation of the risks posed to train crews by unit trains transporting hazardous materials, determination of the optimum separation requirements between occupied locomotives and hazardous materials cars, and any resulting revision of 49 Code of Federal Regulations 174.85.
R–09–001	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Establish uniform signal aspects that railroads must use to authorize a train to enter an occupied block, and prohibit the use of these aspects for any other signal indication.
R–09–002	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Study the different signal systems for trains, identify ways to communicate more uniformly the meaning of signal aspects across all railroad territories, and require the railroads to implement as many uniform signal meanings as possible.
R–09–003	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require that emergency exits on new and remanufactured locomotive cabs provide for rapid egress by cab occupants and rapid entry by emergency responders.

RECOMMENDATIONS—Continued

Recommendation No.	Overall status	Date closed	Subject
R–10–001	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require the installation, in all controlling locomotive cabs and cab car operating compartments, of crash- and fire-protected inward- and outward-facing audio and image recorders capable of providing recordings to verify that train crew actions are in accordance with rules and procedures that are essential to safety as well as train operating conditions. The devices should have a minimum 12-hour continuous recording capability with recordings that are easily accessible for review, with appropriate limitations on public release, for the investigation of accidents or for use by management in carrying out efficiency testing and systemwide performance monitoring programs.
R–10–002	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require that railroads regularly review and use in-cab audio and image recordings (with appropriate limitations on public release), in conjunction with other performance data, to verify that train crew actions are in accordance with rules and procedures that are essential to safety.
R–12–003	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require that safety management systems and the associated key principles (including top-down ownership and policies, analysis of operational incidents and accidents, hazard identification and risk management, prevention and mitigation programs, and continuous evaluation and improvement programs) be incorporated into railroads' risk reduction programs required by Public Law 110–432, Rail Safety Improvement Act of 2008, enacted October 16, 2008.
R–12–016	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require railroads to medically screen employees in safety-sensitive positions for sleep apnea and other sleep disorders.
R–12–017	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Establish an ongoing program to monitor, evaluate, report on, and continuously improve fatigue management systems implemented by operating railroads to identify, mitigate, and continuously reduce fatigue-related risks for personnel performing safety-critical tasks, with particular emphasis on biomathematical models of fatigue.
R–12–018	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Conduct research on new and existing methods that can identify fatigue and mitigate performance decrements associated with fatigue in on-duty train crews.
R–12–019	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require the implementation of methods that can identify fatigue and mitigate performance decrements associated with fatigue in on-duty train crews that are identified or developed in response to Safety Recommendation R–12–18.
R–12–020	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require the use of positive train control technologies that will detect the rear of trains and prevent rear-end collisions.
R–12–021	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Revise title 49 Code of Federal Regulations part 229 to ensure the protection of the occupants of isolated locomotive operating cabs in the event of a collision. Make the revision applicable to all locomotives, including the existing fleet and those newly constructed, rebuilt, refurbished, and overhauled, unless the cab will never be occupied.
R–12–022	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Revise title 49 Code of Federal Regulations part 229 to require crashworthiness performance validation for all new locomotive designs under conditions expected in a collision.
R–12–027	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require railroads to install, along main lines in non-signaled territory not equipped with positive train control, appropriate technology that warns approaching trains of incorrectly lined main track switches sufficiently in advance to permit stopping.
R–12–037	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Audit the waiver process to verify it is being managed as required by title 49 Code of Federal Regulations part 211.
R–12–038	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Audit the inspection and enforcement program in all regions for compliance with statutes and regulations related to railroad safety, and correct any deficiencies as required by title 49 Code of Federal Regulations part 209.

RECOMMENDATIONS—Continued

Recommendation No.	Overall status	Date closed	Subject
R–12–039	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Develop side impact crashworthiness standards (including performance validation) for passenger railcars that provide a measurable improvement compared to the current regulation for minimizing encroachment to and loss of railcar occupant survival space.
R–12–040	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Once the side impact crashworthiness standards are developed in Safety Recommendation R–12–39, revise 49 Code of Federal Regulations 238.217, ''Side Structure,'' to require that new passenger railcars be built to these standards.
R–12–041	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require that passenger railcar doors be designed to prevent fire and smoke from traveling between railcars.
R–12–042	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Work with the Federal Highway Administration to develop a model grade crossing action plan that can be used as a resource document by all States. At a minimum, such a document should incorporate information from U.S. Department of Transportation publications, industry studies, and the American Association of State Highway and Transportation Officials, as well as the best practices and lessons learned at the conclusion of the 5-year grade crossing action plans developed in response to 49 Code of Federal Regulations 234.11, ''State Highway-Rail Grade Crossing Action Plans.''
R–12–043	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Work with the Federal Highway Administration to update its website on annual reporting requirements for railway-highway crossings, to include comprehensive information on the individual grade crossing action plans developed by the States pursuant to 49 Code of Federal Regulations 234.11, ''State Highway-Rail Grade Crossing Action Plans.''
R–13–005	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Identify, and require railroads to use in locomotive cabs, technology-based solutions that detect the presence of signal-emitting portable electronic devices and that inform the railroad management about the detected devices in real time.
R–13–006	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Incorporate the use of handheld signal detection devices to aid in the enforcement of title 49 Code of Federal Regulations part 220 subpart C.
R–13–007	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require railroads to implement initial and recurrent crew resource management training for train crews.
R–13–008	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Conduct an audit of the Canadian National Railway's North Division program of operational tests and inspections to evaluate their effectiveness for promoting knowledge and compliance with rules regarding the execution of track authorities and the appropriate use of portable electronic devices.
R–13–018	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Determine what constitutes a reliable, valid, and comparable field test procedure for assessing the color discrimination capabilities of employees in safety-sensitive positions.
R–13–019	OAA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: When you have made the determination in Safety Recommendation R–13–18, require railroads to use a reliable, valid, and comparable field test procedure for assessing the color discrimination capabilities of employees in safety-sensitive positions.
R–13–020	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require more frequent medical certification exams for employees in safety-sensitive positions who have chronic conditions with the potential to deteriorate sufficiently to impair safe job performance.
R–13–021	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Develop medical certification regulations for employees in safety-sensitive positions that include, at a minimum, (1) a complete medical history that includes specific screening for sleep disorders, a review of current medications, and a thorough physical examination, (2) standardization of testing protocols across the industry, and (3) centralized oversight of certification decisions for employees who fail initial testing; and consider requiring that medical examinations be performed by those with specific training and certification in evaluating medication use and health issues related to occupational safety on railroads. [This recommendation supersedes Safety Recommendations R–02–24 through –26.]

RECOMMENDATIONS—Continued

Recommendation No.	Overall status	Date closed	Subject
R–13–022	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Require all information captured by any required recorder to also be recorded in another location remote from the lead locomotive(s), to minimize the likelihood of the information's being unrecoverable as a result of an accident.
R–13–023	OUA	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Publish the positive train control implementation update reports submitted by all railroads subject to the positive train control provisions of the Rail Safety Improvement Act of 2008 and make the reports available on your website within 30 days of report receipt.
R–13–038	OAR	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Work with the Federal Highway Administration to (1) include guidance in the Manual on Uniform Traffic Control Devices (MUTCD) for the installation of advance warning devices, such as movement-activated blank-out signs, that specifically use the word ''train'' to indicate the preemption of highway traffic signals by an approaching train, and (2) amend the MUTCD to indicate that preemption confirmation lights, while not intended to provide guidance to the general public, would be useful in providing advance information on train movements to law enforcement and emergency responders.
R–14–001	OAR	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Work with the Pipeline and Hazardous Materials Safety Administration to expand hazardous materials route planning and selection requirements for railroads under title 49 Code of Federal Regulations 172.820 to include key trains transporting flammable liquids as defined by the Association of American Railroads Circular No. OT–55–N and, where technically feasible, require rerouting to avoid transportation of such hazardous materials through populated and other sensitive areas.
R–14–002	OAR	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Develop a program to audit response plans for rail carriers of petroleum products to ensure that adequate provisions are in place to respond to and remove a worst-case discharge to the maximum extent practicable and to mitigate or prevent a substantial threat of a worst-case discharge.
R–14–003	OAR	.....	TO THE FEDERAL RAILROAD ADMINISTRATION: Audit shippers and rail carriers of crude oil to ensure they are using appropriate hazardous materials shipping classifications, have developed transportation safety and security plans, and have made adequate provision for safety and security.

I would like to provide further context on several specific NTSB recommendations issued to the FRA and other stakeholders, and safety issues that particularly relate to recurring accidents.

Untreated Sleep Disorders Among Locomotive Engineers

Several NTSB investigations since 2001 have revealed a safety risk that the FRA has not, to date, fully addressed: train crewmember fatigue due to untreated or insufficiently treated obstructive sleep apnea. Impairment from fatigue caused by obstructive sleep apnea caused at least two fatal accidents in the past: Clarkston, Michigan, in 2001, and Red Oak, Iowa, in 2011. Also, we have recently learned that the engineer involved in the December 1 Metro-North accident suffered from obstructive sleep apnea at the time of the accident. Fatigue resulting from undiagnosed obstructive sleep apnea among train engineers continues to pose a clear safety risk that FRA must address.

For more than a decade, the NTSB has recommended that FRA take appropriate measures to ensure that train crewmembers receive prompt diagnoses and treatment for fatigue-inducing conditions, such as sleep apnea. The NTSB's first recommendations on the subject emerged from an investigation of the 2001 collision of two trains near Clarkston, Michigan, in which two train crewmembers died and two others were seriously injured.[3] The NTSB determined that the probable cause of the accident was that the two crew members were sleepy due to fatigue most likely resulting from obstructive sleep apnea, and recommended that the FRA consider sleep problems when assessing the medical fitness of engineers and that the FRA

[3] NTSB, Collision of Two Canadian National/Illinois Central Railway Trains Near Clarkston, Michigan, November 15, 2001, Rpt. No. NTSB/RAR–02/04 (Nov. 19, 2002); see NTSB Recommendation Nos. R–02–24 to R–02–26.

require that incapacitating or impairing medical conditions be reported to rail carriers.[4]

Moreover, in its investigation of a 2011 freight train collision in Red Oak, Iowa, that killed two crewmembers,[5] the NTSB recommended that the FRA "[r]equire railroads to medically screen employees in safety-sensitive positions for sleep apnea and other sleep disorders" and that the BNSF, the rail carrier involved in the accident, "[m]edically screen employees in safety-sensitive positions for sleep apnea and other sleep disorders."[6] These recommendations remain open.

Fatigue has been raised as a potential issue in current investigations as well. As the NTSB vigorously investigates these accidents, we continue to call on the FRA to take strong action to ensure operating personnel are assessed for fitness with reference to appropriate medical standards that consider sleep disorders. Crewmembers with sleep disorders must receive proper medical treatment to protect against the adverse effects of fatigue in railroad operations.

Railroad Tank Car Design

The Nation's railroad network is taking on an expanding role—one that has profound economic importance—as a major channel for the transportation of crude oil and other hazardous products. As the NTSB noted recently, the Association of American Railroads' (AAR's) 2012 Annual Report of Hazardous Materials Transported by Rail states that crude oil traffic has increased by 443 percent since 2005 and that this growth is expected to continue for the foreseeable future. According to the FRA, the volume of crude oil transported by rail has increased dramatically in recent years, from approximately 65,600 carloads in 2011 to approximately 257,450 carloads in 2012—an increase of 292 percent.[7] Moreover, not only is more crude oil being transported by rail, but some of the crude oil being moved on the Nation's railroad system—such as that originating in the Bakken formation—may have more volatile properties. In January, the Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a safety alert advising "the general public, emergency responders and shippers and carriers that . . . the type of crude oil being transported from the Bakken region may be more flammable than traditional heavy crude oil," with the results of further tests of Bakken crude oil forthcoming.[8]

Furthermore, ethanol traffic transported by railroad increased 442 percent between 2005 and 2010; in 2012, ethanol was the most frequently transported hazardous material in the railroad system.[9] The evolving role of our Nation's railroad network in the transportation of flammable crude oil and ethanol requires interested parties to take a comprehensive approach to eliminate or significantly reduce the safety risks. This approach must include improvements to track inspection and maintenance programs and the crashworthiness of the tank cars that transport these materials.

Indeed, as the volume of flammable materials transported by rail grows, the Casselton, North Dakota, accident has become an increasingly commonplace story—and multiple recent serious and fatal accidents reflect substantial shortcomings in tank car design that create an unacceptable public risk. The crude oil unit train involved in the Casselton accident consisted of railroad tank cars designed and manufactured to Department of Transportation (DOT) Specification 111–A100W1 (DOT–111)—a design that presents demonstrated and serious safety concerns when used to transport hazardous materials such as crude oil. (See graphic below.) Specifically, the NTSB has identified vulnerabilities in DOT–111 tank car design with respect to tank heads, shells, and fittings that create the unnecessary and demonstrated risk that can result in the release of a tank car's product in an accident. Flammable materials such as crude oil and ethanol frequently ignite and cause catastrophic damage.[10]

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[4] NTSB Recommendation Nos. R–02–24, –25.

[5] NTSB, Collision of BNSF Coal Train With the Rear End of Standing BNSF Maintenance-of-Way Equipment Train, Red Oak, Iowa, April 17, 2011, Rpt. No. NTSB/RAR–12/02 (April 24, 2012).

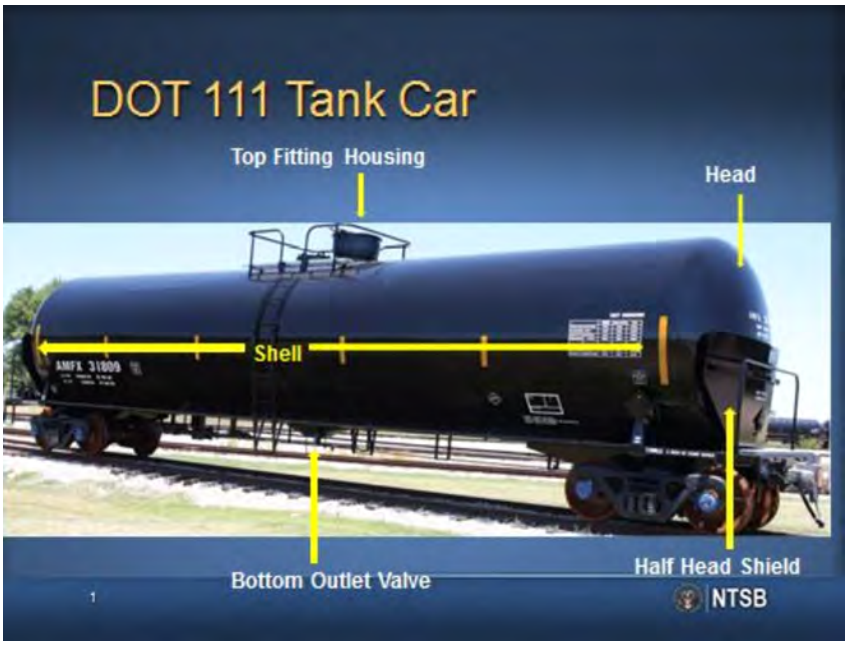
[6] NTSB Recommendation Nos. 12–16, 12–26.

[7] FRA Emerg. Order No. 28, 78 Fed. Reg. 48218, 48220 (Aug. 7, 2013).

[8] PHMSA Safety Alert: Preliminary Guidance from Operation Classification (Jan. 2, 2014).

[9] FRA Emerg. Order No. 28, 78 Fed. Reg. at 48221; see also NTSB, Letter to The Honorable Cynthia L. Quarterman, Administrator, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation (Jan. 21, 2014), at 7 n. 11–13 (and citations therein).

[10] See, e.g., NTSB, Derailment of CN Freight Train U70691–18 With Subsequent Hazardous Materials Release and Fire Cherry Valley, Illinois, June 19, 2009, Accident Rpt. No. NTSB/RAR–12/01 (Feb. 14, 2012), at 88 (concluding that, in accident involving breaches of DOT–111 tank cars, "If enhanced tank head and shell puncture-resistance systems such as head shields, tank jackets, and increased shell thicknesses had been features of the DOT–111 tank cars involved in this accident, the release of hazardous materials likely would have been significantly



The NTSB continues to find that accidents involving the rupture of DOT–111 tank cars carrying hazardous materials often have violent and destructive results. For example, on July 6, 2013, a 4,700-foot-long train that included 72 DOT–111 tank cars loaded with crude oil from the Bakken fields derailed in Lac-Mégantic, Quebec, triggering an intense fire fed by crude oil released from at least 60 cars. The fire engulfed the surrounding area and completely destroyed the town center. Forty-seven people died. The NTSB is assisting the Transportation Safety Board of Canada (TSB) in its investigation of that accident, and in January both the NTSB and the TSB issued safety recommendations asking the FRA and PHMSA, as appropriate, to require railroads to evaluate the safety and security risks of crude oil train routes and select routes that avoid populous and other sensitive areas; require railroads to develop comprehensive emergency response plans for worst-case releases resulting from accidents; and require shippers to sufficiently test and properly classify hazardous materials such as crude oil prior to shipment. We look forward to working with PHMSA and the FRA on implementing these recommendations.

In addition, the NTSB is investigating, or has investigated, a spate of recent similar accidents in the United States that demonstrate the destructive results when DOT–111 tank cars containing hazardous materials are punctured, including:

—the July 11, 2012, Norfolk Southern Railway Company train derailment in a Columbus, Ohio, industrial area in which three derailed DOT–111 tank cars released about 54,000 gallons of ethanol, with energetic rupture of one tank car in a post-accident fire;

—the October 7, 2011, Tiskilwa, Illinois, train derailment of 10 DOT–111 tank cars resulting in fire, energetic rupture of several tank cars, and the release of 162,000 gallons of ethanol;

—the June 19, 2009, Canadian National Railway train derailment in Cherry Valley, Illinois, in which 13 of 19 derailed DOT–111 tank cars were breached, caught fire, and released about 324,000 gallons of ethanol. The post-accident fire resulted in one death, nine injuries, and the evacuation of 600 houses within half a mile of the accident site; and

—the October 20, 2006, New Brighton, Pennsylvania, Norfolk Southern Railway Company train derailment in which 23 DOT–111 tank cars derailed, fell from a bridge, caught fire, and released more than 485,000 gallons of ethanol.

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reduced, mitigating the severity of the accident."). The capacity of a tank car is about 30,000 gallons or 675 barrels of oil.

Federal requirements simply have not kept pace with evolving demands placed on the railroad industry and evolving technology and knowledge about hazardous materials and accidents. While the current AAR industry standards adopted for DOT–111 tank cars ordered after October 1, 2011, that are used to transport packing group I and II crude oil impose a level of protection greater than corresponding Federal requirements,[11] the NTSB is not convinced that these modifications offer significant safety improvements.

The NTSB continues to assert that DOT–111 tank cars, or tank cars of any successor specification, that transport hazardous materials should incorporate more effective puncture-resistant and thermal protection systems. This can be accomplished through the incorporation of additional protective features such as full head shields, jackets, thermal insulation, and thicker head and shell materials. Because the average service life of a tank car may run 20–50 years, it is imperative that industry, the FRA, and PHMSA take action now to address hazards that otherwise would exist for another half-generation or longer.

Following the 2011 ethanol release and fire in Cherry Valley, Illinois, the NTSB reiterated its prior recommendation that PHMSA, in consultation with the FRA, require that railroads immediately provide emergency responders with accurate, real-time information on hazardous materials on a train.[12]

The importance of providing correct information to first responders highlights a related issue. Following the freight train derailment in Paulsboro, New Jersey, on November 30, 2012, which is the subject of an ongoing NTSB investigation, the NTSB learned of the critical importance to first responders of immediate, accurate information about the contents of a derailed tank car. First responders' ability to make good decisions in responding to a hazardous materials release depends on their clear understanding of what is in a tank car. Any improvement to railroad tank car safety must proceed hand-in-hand with an improved approach to ensuring first responders have adequate information to take appropriate life-saving actions. PHMSA indicates that it, along with the FRA, is working to implement this recommendation.

Although important decisions are clearly ahead for regulators and industry, the NTSB is pleased that at least some progress has been made. PHMSA published an advance notice of proposed rulemaking (ANPRM) on September 6, 2013, for potential safety improvements to DOT–111 tank cars, and we remain engaged in that rulemaking proceeding. In NTSB comments on the ANPRM dated December 5, 2013, we urged PHMSA to promptly address the four recommendations from the Cherry Valley accident report and to issue improved and effective regulations that reduce the risks associated with DOT–111 tank cars. We will continue to carefully monitor PHMSA's progress and will ensure decision-makers have the full benefit of the lessons the NTSB has learned through its investigations. The NTSB also continues to call on industry stakeholders to rise to the challenge and explore measures that will improve tank car design in the interim, and, on April 22–23, we will hold a rail safety forum on the transportation of crude oil and ethanol to get more information on this important safety issue in to the public domain.

Implementation of PTC Systems

PTC systems help prevent derailments caused by over-speeding, train-to-train collisions by slowing or stopping trains that are not being operated in accordance with the signal systems and operating rules, and track workers being struck by trains. The first NTSB-investigated accident that train control technology would have prevented occurred in 1969, when four people died and 43 were injured in the collision of two Penn Central commuter trains in Darien, Connecticut. The NTSB recommended in response to that accident that the FRA study the feasibility of requiring railroads to install an automatic train control system, the precursor to today's PTC systems.[13]

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[11] These new standards, for example, call for DOT–111 tank cars that transport flammable liquids in packing groups I and II (the highest-risk of the three packing groups, classified according to flash and boiling points) to be built with protective "jackets" around their tanks, constructed of normalized steel at least 7/16 inch thick, and call for non-jacketed tanks to be constructed from normalized steel (steel that has been subjected to a heat-treating process that improves its material properties) at least half an inch thick. See American Association of Railroads, Manual of Standards and Recommended Practices: Specifications for Tank Cars, M–1002. Corresponding Federal regulations require steel thickness of at least 7/16 inch, but they allow for the use of non-normalized steel and do not require incorporation of jackets or head shields. See 49 CFR part 179, subpart D.

[12] NTSB Recommendation No. R–07–4.

[13] NTSB Recommendation No. R–70–020.

More recently, in 2008, more lives were lost in a PTC-preventable accident when a Metrolink commuter train and a Union Pacific freight train collided head-on in Chatsworth, California, killing 25 people and injuring 102 others. The NTSB concluded that the Metrolink engineer's use of a cell phone to send text messages distracted him from his duties. PTC would have prevented the tragedy that resulted. In the aftermath of the Chatsworth accident, Congress enacted the Rail Safety Improvement Act (RSIA) of 2008, which requires rail lines with passenger service or that carry poisonous-by- or toxic-by-inhalation materials.[14] In 2012, however, the FRA exempted about 10,000 miles of track from the PTC mandate.

We continue to see accidents that could be prevented by PTC. The December 1 Metro-North accident in The Bronx, which killed 4 people and injured 59 others, would have been prevented by PTC. Since 2004, in the 25 PTC-preventable freight and passenger rail accidents that NTSB investigated, 65 people died, more than 1,100 were injured, and damages totaled millions of dollars.[15]

Implementation of PTC systems was included on the NTSB's Most Wanted List when the list was first published in 1990 and has remained on the list almost continuously since that time. We may never eliminate human error from the railroad system, but PTC provides a level of redundancy to protect the people on board trains and in surrounding communities when human factors, such as distraction or fatigue, might otherwise set an accident sequence into motion.

Some rail carriers have installed PTC or are working to meet the 2015 deadline. However, in August 2013, the Government Accountability Office (GAO) reported to the U.S. Senate that, due to a number of complex and interrelated challenges, the majority of railroads will not complete PTC implementation by the 2015 deadline.[16] The NTSB files are filled with accidents that could have been prevented by PTC, and for each and every day that PTC implementation is delayed, the risk of an accident remains.

There is much debate by policymakers over whether to extend the 2015 deadline established by the RSIA. Some railroads will meet this deadline. For those railroads that have made the difficult decisions and invested millions of dollars, they have demonstrated leadership. For those railroads that will not meet the deadline, there should be a transparent accounting for actions taken and not taken to meet the deadline so that regulators and policymakers can make informed decisions. Lives depend on it.

The NTSB has called for such a transparent accounting. Following the head-on collision of two Union Pacific freight trains in Goodwell, Oklahoma, the NTSB recommended that railroads covered under the RSIA PTC implementation mandate "[p]rovide positive train control implementation update reports to [the FRA] every 6 months until positive train control implementation is complete." Additionally, the NTSB recommended that the FRA publish these reports on its website within 30 days.[17]

This information should be made available online to ensure a transparent accounting for actions taken and not taken to meet the 2015 deadline so that regulators and policymakers can make informed decisions. However, because of the FRA's lack of sufficient action on this recommendation, we recently classified the recommendation as "Open—Unacceptable Response." We are disappointed by the FRA's recent position that it will not regularly and automatically provide the public with updates on rail carrier progress toward PTC implementation. The American people deserve full information on such important safety improvements.

Inward- and Outward-Facing Locomotive Audio and Image Recorders

The December 1, Metro-North accident in The Bronx raised questions about the actions of the engineer prior to the crash. The NTSB has repeatedly called for railroad carriers to install inward- and outward-facing audio and image recorders to answer similar questions that have arisen in other accidents. Recorders in locomotives and cab car operating compartments are critically important not only because they would assist NTSB investigators and others to understand what happened in a train in the minutes and seconds before an accident, but also because they would help railroad management prevent accidents by identifying and responsibly addressing

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[14] Rail Safety Improvement Act of 2008, Public Law 110–432, section 104 (2008).

[15] These accidents do not include Metro-North accidents.

[16] Gov't Accountability Office, Positive Train Control: Additional Authorities Could Benefit Implementation, GAO Rpt. No. GAO–13–720 (August 2013), available at http://www.gao.gov/assets/660/656975.pdf.

[17] See NTSB, Head-On Collision of Two Union Pacific Railroad Freight Trains Near Goodwell, Oklahoma, June 24, 2012, Rpt. No. NTSB/RAR–13/02 (June 18, 2013); Recommendation Nos. R–13–23 and R–13–27 (2013).

safety issues before they lead to injuries and loss of life and allow for the development of material that can be a valuable training and coaching tool.

The Chatsworth tragedy in 2008 again made the case crystal clear for understanding the activities of crewmembers in the minutes and seconds leading up to accidents. Discussing the strong safety case for a requirement for inward-facing cameras in locomotives, the NTSB noted that:

> [i]n all too many accidents, the individuals directly involved are either limited in their recollection of events or, as in the case of the Chatsworth accident, are not available to be interviewed because of fatal injuries. In a number of accidents the NTSB has investigated, a better knowledge of crewmembers' actions before an accident would have helped reveal the key causal factors and would perhaps have facilitated the development of more effective safety recommendations.[18]

Accordingly, the NTSB recommended that the FRA require the installation, in control compartments, of "crash- and fire-protected inward- and outward-facing audio and image recorders capable of providing recordings [for at least 12 hours] to verify that train crew actions are in accordance with rules and procedures that are essential to safety as well as train operating conditions."[19] The NTSB also recommended that the FRA "[r]equire that railroads regularly review and use in-cab audio and image recordings. . . to verify that train crew actions are in accordance with rules and procedures that are essential to safety."[20]

The NTSB recently reiterated these important recommendations in its report on the collision of a BNSF coal train with the rear end of a standing BNSF maintenance-of-way equipment train near Red Oak, Iowa, which resulted in fatal injuries to the two crewmembers of the striking train. Damage was in excess of $8.7 million. As the NTSB stated in its report, the accident again demonstrated the need for in-cab recording devices to better understand (and thereby prevent) serious railroad crashes that claim the lives of crewmembers, passengers, and the public.

In February, we issued our longstanding recommendation on this subject directly to Metro-North Railroad. An industry-wide FRA-mandated approach would be far more effective, but failing that, we will address the recommendation on an individual basis.

Strong Safety Cultures

Fostering the development of transparent, top-to-bottom safety cultures in transportation is an important priority of the NTSB. Creating and nurturing a thriving safety culture within rail carriers is even more imperative in light of the expanding role of the Nation's railroad system as a main transporter of flammable materials and the continual increase in passenger ridership.

The NTSB held a public forum on September 10 and 11, 2013, on successes and challenges associated with creating and maintaining strong safety cultures across the transportation modes, including rail. Panels of experts from academia, industry, and Federal regulatory agencies, such as the FRA, offered their perspectives on the significant organizational commitments and managerial work that are required to maintain safety cultures across large, complex organizations such as transportation carriers.

As members of the subcommittee well remember, organizational factors at the Washington Metropolitan Area Transit Authority (WMATA) contributed to the fatal June 22, 2009, Metrorail train collision near the Fort Totten station in Washington, DC. The NTSB found that WMATA leaders did not take sufficient action to make safety a priority and to identify and address safety issues from the top down: the WMATA General Manager did not provide adequate information about critical safety issues; the WMATA Board of Directors did not seek information about critical safety issues; and the Board of Directors did not exercise oversight responsibility for system safety.

While WMATA has addressed many of these issues, the NTSB is examining the role of safety culture in the Metro-North accident investigations. The NTSB public investigative hearing regarding two Metro-North accidents last May examined the importance of an organizational safety culture and the critical role that organizational culture plays in preventing accidents. The NTSB learned during the hearing that Metro-North has undertaken efforts to foster a stronger safety culture but that challenges remain. The then-president of Metro-North spoke of the "challenge" associated with creating "a clear understanding across the organization that safety is

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[18] NTSB, Collision of Metrolink Train 111 With Union Pacific Train LOF65–12 Chatsworth, California, September 12, 2008, Rpt. No. NTSB/RAR–10/01 (Jan. 21, 2010), at 58.

[19] NTSB Recommendation No. R–10–1.

[20] NTSB Recommendation No. R–10–2.

the core value and we're not looking for shortcuts, and that we want people to work safely."[21] Metro-North officials and labor stakeholders further assured the NTSB that Metro-North is taking action to address safety issues from the top to the bottom. Organizational issues within the railroad industry will continue to be an area of examination as the NTSB investigations of the Bridgeport, West Haven, two Bronx, and the Manhattan accidents continue.

In particular, the Bridgeport accident underscores the critical importance of regular, vigorous, and robust inspections of tracks. Railroad management must afford track workers adequate time and opportunity to conduct inspections and make repairs as necessary. As part of its ongoing investigation, the NTSB is undertaking a comprehensive review of Metro-North track inspections and follow-up work and is also looking at the adequacy of the FRA's Track Safety Standards.

The importance of building relationships between management and employees that foster a vibrant safety culture cannot be overlooked. Trust is an essential ingredient in those relationships. A culture in which front-line employees may openly report operational errors and safety issues without fear of reprisal is absolutely critical, and, as we have seen in the aviation context, improves safety.

The NTSB will continue to urge Federal regulators, such as FRA and the Federal Transit Administration (FTA), to facilitate establishment of appropriate safety cultures. The WMATA accident, in particular, underscored the critical need for rail mass transit operators to enhance and nourish safety cultures. Our 2014 Most Wanted List reaffirms our view that:

> [t]he FTA should consider the elements of safety culture, crew resource management, fatigue risk management, and technology, as well as lessons learned from the rail industry, as it moves forward with [new legislative authority to set and enforce new safety standards and conduct investigations]. Identifying and implementing these will be key to saving lives and preventing injuries.

UPDATES ON ONGOING INVESTIGATIONS

I would now like to update the subcommittee on developments in several recent investigations that are keeping the NTSB's railroad investigators very busy and demonstrate the need for continued vigilance in the railroad operating environment.

Metro-North Railroad Accidents

On December 1, 2013, the NTSB launched an investigative team to The Bronx, where a Metro-North Railroad commuter train with approximately 115 passengers on board derailed shortly after 7:15 a.m. near the Spuyten Duyvil station, while going from Poughkeepsie to Grand Central Station in New York City. Four passengers died in the Thanksgiving holiday weekend accident and at least 59 others sustained injuries requiring medical treatment. Metro-North estimated damage in excess of $9 million. The Bronx derailment was the fourth accident involving Metro-North property to trigger an NTSB investigation in 2013.

The NTSB issued a preliminary factual report on the accident on January 14, 2014. Based on evidence obtained to this point, our investigators have found that the accident train was traveling at approximately 82 mph when it derailed in the curve on approach to the Spuyten Duyvil station. The speed limit for the curve was 30 mph. PTC would have prevented this accident. Metro-North does not have a PTC system and has stated it will not meet the deadline, but it thought its system would be as robust as PTC. This accident demonstrated that it was not.

Investigators have conducted detailed inspections and testing of the signal system, train brakes, and other mechanical equipment, and thus far have found no anomalies. They found no pre-accident anomalies in the track in the derailment area. Investigators have interviewed the train crewmembers, including the engineer and first responders and will continue to obtain and examine evidence from NTSB headquarters as the investigation proceeds. We are receiving excellent cooperation from the parties to the investigation: the FRA, Metro-North, the New York Public Transportation Safety Board, Teamsters Local 808, the New York Police Department, the New York Fire Department, and Bombardier Transportation, which manufactured the cars involved in the accident.

As previously stated, in February, the NTSB issued three additional safety recommendations to Metro-North. As our investigation proceeds, the NTSB will be pre-

[21] NTSB, Board of Inquiry in the Matter of Two Metro-North Rail Accidents: Bridgeport Train Derailment on May 17, 2013, and West Haven Collision Death of a Metro-North Track Foreman on May 28, 2013, Tr. Vol. II at 329 (Washington, DC, Nov. 7, 2013).

pared to issue additional safety recommendations if we determine any further safety improvements are necessary prior to the completion of our investigation.

Last June, the NTSB issued an urgent safety recommendation following the May 28 accident in which the track foreman died, calling upon Metro-North to immediately implement redundant measures to ensure the safety of track workers[22] (Metro-North indicates it is implementing this recommendation), and the NTSB reiterated a safety recommendation to the FRA to require redundant signal protection, such as shunting, for maintenance-of-way work crews who depend on the train dispatcher to provide signal protection.[23] That recommendation is currently classified as open with an acceptable response.

I am pleased to inform the subcommittee that Metro-North has fully cooperated in all these investigations, at a difficult time for the railroad and its employees in the wake of several closely-spaced accidents. We anticipate and look forward to Metro-North's continued cooperation as the investigations proceed.

Although it is still too early in our investigations of these accidents to draw definitive conclusions, we will seek answers to the following questions, among others: What caused these accidents? Are there common threads among the accidents? What improvements can Metro-North, regulators, and others adopt that will prevent similar accidents from occurring in the future?

At the same time, we are closely studying FRA's March 2014 report to Congress on the agency's "Operation Deep Drive," a comprehensive assessment of the safety of Metro-North's operation. As we analyze FRA's findings, we are at least encouraged that FRA is taking a broad view in its safety oversight and has demonstrated willingness to identify and correct safety deficiencies while the NTSB's investigation proceeds.

The NTSB tentatively expects to complete our investigations of all four accidents involving Metro-North trains or property in mid-November. Last month, we sent a team to New York City to investigate another Metro-North worker fatality. It is troublesome that this is the fifth accident involving Metro-North in less than 1 year that we are investigating. We recognize and share the subcommittee's sense of urgency to understand what lessons can be drawn from these accidents and to ensure that the railroad industry and its regulators implement appropriate safety improvements to prevent recurrences, and if our investigation reveals problems that need immediate attention, we will not hesitate to issue appropriate recommendations before we complete the investigation.

Freight Train Collision and Crude Oil Release Near Casselton, North Dakota

As I noted above, the NTSB is investigating the December 30, 2013, Casselton, North Dakota, accident that resulted in a significant post-crash fire that triggered a voluntary evacuation of about 1,400 people from the surrounding community.

The accident sequence began shortly after 2 p.m. when 13 cars of a 112-car westbound BNSF grain train derailed. One of the derailed cars came to rest on the adjacent track. Shortly afterward, a 106-car BNSF petroleum crude oil unit train travelling east on the parallel track collided with the derailed grain car. The collision caused the head-end locomotives and the first 21 cars of the crude oil train to derail. Some of the crude oil tank cars were punctured during the accident releasing crude oil that ignited and caused the energetic rupture of several other tank cars. Dense smoke and concern over expanding fires resulted in voluntary evacuation of the surrounding area.

The crews on the two trains were uninjured. No injuries to the public were reported. Damage was estimated at $6.1 million.

On a preliminary basis, we have found that, of the 20 derailed tank cars, 18 were breached and more than 476,000 gallons of crude oil were released. NTSB investigators have completed the on-scene portion of the investigation, including interviews with the train crews and first responders. A broken axle and two wheels were shipped to the NTSB materials laboratory in Washington, DC, for further evaluation and analysis, as well as the locomotive event and video recorders. The parties to the investigation include the FRA; PHMSA; the BNSF; the Brotherhood of Locomotive Engineers and Trainmen; the International Association of Sheet Metal, Air, Rail and Transportation Workers, formerly known as the United Transportation Union; Trinity Rail Car; and Standard Steel, LLC.

On April 7, we issued a recommendation to the AAR to "require secondhand-use railroad axles to undergo nondestructive testing specifically designed to locate internal material defects in axles." We issued this recommendation after learning that the recovered broken axle broke because of a manufacturing defect The current non-

[22] NTSB Recommendation No. R–13–17.
[23] NTSB Recommendation No. R–08–6.

destructive testing requirements prescribed by the AAR are not effective in detecting internal material defects, including centerline voids as discovered in the Casselton axle, in secondhand-use axles. Alternate test methods, however, are capable of locating internal material defects, such as the centerline void we discovered in the axle involved in the accident. We have found that, had the broken axle in this case been subjected to more thorough nondestructive testing when it was reworked in 2010, the material defect would likely have been found and the axle would not have been allowed to be returned to service. Our recommendation calls for augmented testing to ensure that axles are safe to return to service.

CTA Accidents

The NTSB also continues to investigate recent two CTA accidents in the Chicago area, the most recent of which occurred March 24, 2014, at about 2:49 a.m. local time, when a CTA train collided with the bumper post at the end of a track at the CTA's O'Hare Station. The lead car rode over the bumper and went up an escalator at the end of the track. Thirty-two people, including the operator, were transported to the hospital. Damage to equipment was estimated at $6 million.

The train was operating at about 26 mph when it passed over the fixed trip stop, which applied the train emergency braking system. The distance from the fixed trip stop to the end of the track, however, was too short to allow the train to stop in time.

The operator said she dozed off shortly before the accident and that the last signal she recalled indicated that the next signal would require a stop. She said she woke up when the train passed over the fixed trip stop. We are continuing to gather evidence as we thoroughly investigate this accident.

We also continue to investigate the September 30, 2013, CTA train collision in Forest Park, Illinois, in which, at 7:42 a.m. local time, an unattended CTA train collided with a train in operation at the Harlem-Congress Station on the CTA Blue Line. One car derailed. No serious injuries were reported; however, two CTA employees, including the train operator, and 33 passengers were transported to local hospitals and were later released.

The unattended train, with neither an operator nor passengers aboard, had begun rolling out of the Forest Park Yard at 7:38 a.m. It traveled northward onto the southbound main track toward the Harlem-Congress station. Based on a preliminary review of the event recorder data, we believe it was traveling at 25 mph just before reaching the Harlem-Congress Station. At 7:41 a.m., CTA train 110, which was operating in service with eight railcars, was stopped as scheduled at the Harlem-Congress Station. At 7:42 a.m., the unattended train struck the in-service, stopped train.

Both trains were designed for multiple unit operation. Electrical power was provided by an outside third rail. Train movements on the Blue Line are controlled by a traffic control system, which consists of wayside track signal indications and in-cab signals in the train operator's cab. Initial property damage was estimated at $6.4 million.

On October 4, 2013, the NTSB issued two urgent safety recommendations [24] to the CTA. The recommendations address the need for redundant protection to prevent unintended train movements on the CTA system. The NTSB also issued one safety recommendation [25] to the FTA to advise all transit properties to review their operating and maintenance procedures for stored, unoccupied cars.

CONCLUSION

Thank you for the opportunity to appear before you and to provide updates on our ongoing investigations as well as NTSB perspectives on several compelling safety issues. Please be assured that the NTSB will remain engaged on these and all issues affecting transportation safety. I look forward to answering the subcommittee's questions.

Senator MURRAY. Thank you. Thank you to both of you today.

Mr. Secretary, there has been a lot of concern about the volatility of crude oil from the Bakken shale deposits. And in January, the Pipeline and Hazardous Materials Safety Administration issued a safety alert after the explosive accidents at Lac-Mégantic in Castleton indicated that Bakken crude oil may be more flammable

[24] NTSB Recommendation No. R–13–034 and R–13–035.
[25] NTSB Recommendation No. R–13–036.

than usual. My constituents are actually very interested in this because Bakken crude is being shipped to the refineries in my home State of Washington.

To provide an answer to this, I understand that you have announced an expanded sampling and testing of Bakken oil, and I wanted to ask you today when you expect that testing to be finished.

Secretary FOXX. Madam Chairman, the testing is ongoing. I would say to you that we will wrap up our testing as quickly and as expeditiously as we can. In addition to the sampling that PHMSA is undertaking, we have also required from the oil companies data samples from their own testing. And I am unfortunately here to deliver the news that we have not received a robust sample from the industry to this point.

As you well know, in a situation like this, given the questions about the volatility of the Bakken crude oil, that the more samples we have, the better we can evaluate next steps as it relates to——

Senator MURRAY. And so far the industry has not been cooperative in providing you that information?

Secretary FOXX. To my knowledge, only three of the oil companies have provided information. We have required that we get as much as we possibly can, and that is not a huge amount of sample data for us.

Senator MURRAY. Is that slowing down your ability to get us good information?

Secretary FOXX. It is not only slowing our ability to get you good information, it is also affecting our ability to develop the kind of coordination that we need to have with first responders so that they know exactly what is being moved through their communities.

Senator MURRAY. Okay. Well, assuming that you can get this from the industry and you have done your testing, if you find that it is to be at higher risk, would you change how DOT regulates the shipment?

Secretary FOXX. Depending on what we find, we would certainly develop safety measures designed and calibrated to address the particular substances that we have. That is one of the reasons why in our call to action we worked with the rail industry to do things, like reducing speeds and so forth, and on an interim basis as we work to learn more about this material.

OIL SPILL RESPONSE

Senator MURRAY. Okay. We are going to continue to pursue that line with you. In January the NTSB issued its report on the Lac-Mégantic accident, and the report raises several issues with the regulation of crude oil shipments by rail. Of particular interest were the board's findings on comprehensive oil spill response plans. Those kinds of plans ensure that carriers have sufficient personnel and equipment that are available to address an emergency.

Oil spill response plans are a well-known safety function in the maritime and the pipeline industries. I am well aware of those. But rail is, for all practical purposes, exempt under current regulations, and I find that very troubling. If all of our other means of prevention fail, we need to make sure that cities, like Seattle or anywhere, have the resources they need, and response plans are a very

meaningful way to provide FRA oversight, and have been proven. So if you could comment today more on your details, Chairman Hersman, on your recommendations to improve spill response for us.

Ms. HERSMAN. Chairman Murray, I think that one of the first times I interacted with you was at a field hearing on the Bellingham pipeline accident.

Senator MURRAY. That is correct, 10 years ago.

Ms. HERSMAN. And we know all too well when we have investigated accidents on the marine side, on the pipeline side, that there is an expectation to provide an oil spill response. After the Exxon *Valdez* incident, through the Oil Pollution Act of 1990, this country realized we must be prepared for worst case discharges or worst case scenarios. It makes absolutely no sense that we do not have similar requirements when we have, in essence, a moving pipeline with unit trains of crude oil or ethanol.

In Lac-Mégantic, 1.5 million gallons of crude oil were released. In these cases we must support our emergency responders in local communities because they cannot possibly be prepared for one of these worst case discharges. We must have a support structure in place for them, and that is the obligation of the shippers and the transporters to make sure this happens. They are the best equipped to execute contracts with response resources all along the route so that there is a rapid response. The communities that are along the rights-of-way deserve it.

Senator MURRAY. Similar to what we do with pipelines.

Ms. HERSMAN. Absolutely. Pipelines and the marine industry have done this for years, decades, in fact. They know how to do it, and it can be done.

Senator MURRAY. Okay. Mr. Secretary, to get more meaningful spill response plans, would we need legislation or can you do that on your own with your own authority?

Secretary FOXX. We believe that as we develop a regime of safety, that it would be helpful for our Department to work in conjunction with Congress. There will be areas where the agency capabilities are sufficient. There will also invariably be areas where we will need action by Congress. This continues to be an evolving area for us, but we are moving quickly to help move that conversation along.

Senator MURRAY. Okay. Well, we will be working with you on that. Let me move to the tank cars themselves. The DOT–111 is the Federal safety standard for tank cars used to ship liquids, including crude oil and ethanol. Unfortunately has a poor safety recording dating back decades, as you indicated, and the NTSB has been pushing for design improvements since the 1970s. I think we can all agree the standard needs to be updated, particularly given the dramatic growth in the shipment of hazardous materials like crude oil and ethanol.

While the resiliency of the tank car is not the silver bullet of rail safety, it is a community's really last line of defense to prevent a spill. I know the Department is working aggressively on a tank car rule, and recently Administrator Quartermaine said it would be released soon. Mr. Secretary, can we expect to have that tank car rule issued soon?

Secretary FOXX. Yes.

Senator MURRAY. This spring?

Secretary FOXX. We will work as hard and diligently as we can. And we—you know, I can assure you that we are not going to wait until 2015 to push this rule out. We are moving as quickly as we possibly can.

Senator MURRAY. And are you planning to address the phasing out of DOT–111 tank cars for the transportation of crude and ethanol?

Secretary FOXX. We agree that the DOT–111 either needs to be improved or phased out. And again, as an ongoing rulemaking process continues, there will be more as that rule is announced.

Senator MURRAY. Okay. Thank you very much, and I appreciate your responses to that. I will turn to Senator Collins.

TANK CAR INTEGRITY

Senator COLLINS. Thank you. I am going to follow up on your questions on the standards for tank cars because as Chairman Murray has pointed out, the NTSB has identified weaknesses with the DOT–111 for decades, and indeed made specific recommendations to DOT as a result of the ethanol train that derailed in Illinois in 2009. The railroad industry has petitioned DOT to improve the safety standards for tank cars, and even came out with its own design known as CPC–1232.

Let me start with you, Madam Chairman, first of all. Could you explain why the NTSB has determined that the current tank car, the DOT–111, is not suitable for the transport of crude oil?

Ms. HERSMAN. The suitability of the tank car depends on the commodity that is being transported. If you are moving corn oil, DOT–111 is just fine. But when you are moving crude oil, you are talking about a much greater risk, in particular, when transported in unit trains. We are talking about a hundred tank cars in a single train, and that really does compound risk when you start talking about a derailment.

We have seen poor performance historically of the DOT–111s in the event of a derailment or a collision. They breach. They puncture. They release their load. And the problem with crude oil is once you start a pool fire, you can have a chain reaction or a domino effect that other cars start to release their load, too.

It is a very volatile situation, and one that is very complicated for communities to respond to. The NTSB wants to see strengthened tank cars. That means improved head shields, better puncture resistance, making sure that the valves and the outlets are protected. These are all things that are doable. The biggest challenge that the industry has had is that they have had this boom in demand for transporting flammable products, and they have not had the right kind of containers to move it. They have got to catch up.

Senator COLLINS. And in your judgment, is the CPC–1232 design sufficient for transporting crude oil?

Ms. HERSMAN. We have seen that even the railroad industry and DOT are talking about going beyond the 1232. We think that is wise given the risk here. Again, we have to go back to the multipronged approach. It is about prevention in the first place, mitigation, which is improving these tank cars, and then response be-

cause there are real challenges in running, creating, building, and using a tank car that is completely resistant to failure. It is going to come at a cost. A new tank car design will have a weight penalty. It is about prevention, mitigation, and response. If you get into a high speed accident with a 1232, you are still going to have problems.

Senator COLLINS. Mr. Secretary, I want to press you further on the issue that Chairman Murray brought up, and that is the exact date that you expect to issue the new tank car standards. After all, this is not a new issue to DOT. The recommendations were made years ago by the National Transportation Safety Board. And the industry itself has petitioned the Department.

So for me, it is not sufficient to hear you say we will not let it go into 2015. I would like to know two things from you. One, what is your target date for issuing the new regulations, the new rules? And second, are they going to specifically address safety standards for building new tank cars as well as modifying existing tank cars through retrofits?

Secretary FOXX. Well, my target date is as soon as possible. That is about as——

Senator COLLINS. That is a frustrating answer, I have to tell you.

Secretary FOXX. I understand. It is frustrating for me to give it to you, but I can promise you, Senator, that we are working as hard as we can to get the rule done as quickly as we can.

I also want to make it very clear that the Department of Transportation is taking a very comprehensive approach to this. As you rightly pointed out in your opening statement, this is an issue that has prevention aspects, mitigation aspects, and emergency response aspects. And as we work with industry to adopt voluntary standards on things, as Chairman Hersman was just talking about, with new braking technology such that every car has a braking system on it, we reduced the risk that we have the kind of accordion effect of an accident that can create a much more tragic event.

With specific regard to the tank car standard, our desire is to have a very complete and thorough rule that addresses all aspects of what the second part of your question took into account—what a new tank car might look like, et cetera. I am a little constrained by my ability to talk about the specifics of what is being contemplated, but what I can promise you is that we are going to work as hard and as fast as we can to get the answer right.

The last point I would like to make is that part of developing the appropriate tank car standard is having a very comprehensive understanding of what it is we are transporting, and that is why the testing is so critical. And again, we have seen some unfortunate and tragic accidents happen both in Canada and in the United States over recent months. It has caused us great concern, and we are trying to develop a tank car standard that will be right on target to protect the public and the shippers as well.

INTERNATIONAL SAFETY COOPERATION

Senator COLLINS. Madam Chairman, one final question for you at least for this round. The State of Maine serves as a pass-through for crude oil trains traveling from North Dakota to refineries in New Brunswick, Canada. In your work with Canadian officials, do

we face special challenges because so many of these trains are crossing international boundaries?

Ms. HERSMAN. When you talked about the responders from Maine that went to Canada to help to help in Lac-Mégantic, Quebec, I think it points out that transportation safety and international friendship know no boundaries. I think when it comes to transportation safety, we are working very closely with our counterparts. Issues that the NTSB has identified we have shared with the (TSB) of Canada and vice versa.

We will continue to do that because it does not matter which side of the border these trains are on. There are risks that need to be mitigated.

Senator COLLINS. Thank you.

Senator MURRAY. Thank you. Senator Johnson.

Senator JOHNSON. Thank you, Madam Chairman. Secretary Foxx, your testimony rightly focuses on ensuring real safety as the transport of crude oil by railroads continues to grow. Although crude oil represents a relatively small segment of rail traffic, BNSF tells me that the oil-related traffic has increased by 229 percent since 2006.

In addition to safety concerns, the increase in oil shipments has other consequences for our rail transportation network. Severe bottlenecks in rail service in the Dakotas and upper Great Plains have left much of last year's harvest still sitting in piles.

Ethanol plants in South Dakota have been forced to slow production because they cannot move their product, and co-ops cannot get fertilizer shipments that farmers will need for spring planting. This situation is having a significant effect and potentially lasting impact in rural America.

The Surface Transportation Board will be examining rail service in a public hearing tomorrow, and I am pleased that a number of South Dakotans are planning on participating in that forum. I am also interested to hear your perspective on the service disruptions. Beyond the STB (Surface Transportation Board) proceedings, what can the Department of Transportation do to encourage more efficient and reliable rail service?

Secretary FOXX. Senator, thank you for the question. And I want you to know that our leadership has regularly met with railroad executives to express our concerns about service disruptions because we, too, share your concerns about the impact on other commodities and industries.

The Surface Transportation Board is the primary authority on these issues, and I understand that the STB is holding a hearing to discuss current rail service issues in the Midwest. Our FRA administrator, Joe Szabo, will be testifying on behalf of the Department, and we will highlight our safety concerns with respect to service disruptions and delays, as well as Amtrak's worsening on time performance, which is also an effect that we have seen.

To back up for a second, however, where you started is essentially the point, which is that we are seeing an exponential increase in the movement of crude oil by rail, 25 percent since January 2012 and 37 times the amount of crude oil by rail that we saw in 2005. With that kind of capacity coming onto the system, it is going to have other impacts.

And if I had one additional point to make to you, it would be that we not only need a larger surface transportation network from the standpoint of expanding capacity over our surface transportation system writ large. But we particularly need it now as we are having a growth in the movement of energy through all modes of transportation. And in order to ensure that it is safe, we need to make significantly more investments in our infrastructure to get there.

Senator JOHNSON. One of the challenging aspects of the service problems we are seeing in the Midwest is the seasonal nature of ag shipping, which causes a spike in transportation needs in the fall after harvest and again in the spring. In times of severely constrained capacity, what could be done to ensure that agricultural goods do not take a backseat to shipping other commodities, like crude oil?

SERVICE DISRUPTION

Secretary FOXX. This is a question that we are going to continue to need to engage with you and others in Congress on, as well as with the stakeholders in the private sector, including the agricultural community and others. But it is a subject on which we take as of vital importance to rail, and we will continue to engage with you and others on that topic, sir.

Senator JOHNSON. Ms. Hersman, do you have any comment?

Ms. HERSMAN. No, sir. That is outside of the NTSB's jurisdiction with respect to the service provisions.

Senator JOHNSON. Secretary Foxx, some of the other factors contributing to the service problems include the overall increase in rail shipping due to an improving economy, prolonged periods of extreme cold this winter, and the large harvest last fall. While I am hopeful that the rail service issues in the region will improve in the coming weeks, many of these same factors could very well be present again next fall and winter.

Although the railroads are planning substantial capital improvements, it seems to me that we also need to be looking at our overall transportation infrastructure and whether it is adequate to support a robust economic activity we would all like to see. Can you elaborate on the state of our transportation infrastructure and its ability to accommodate increased freight transport safely and efficiently? What steps should we take to bring our infrastructure up to par?

Secretary FOXX. Senator, we are expecting to have to transport 14 billion tons more freight between now and 2050. It is projected to grow exponentially, which is going to put enormous pressure on our current capacity. And if we do not make dramatic improvements in the maintenance and the expansion of capacity in this country, we are going to have more problems like the ones that you were just talking about.

I believe that there is also a very important aspect to this as well, which is we can have a new tank car standard. We can slow down speeds. We can take lots of different steps. But if there is a piece of broken track that catches the wrong tank car, that would be a calamity that is totally avoidable by making the kind of investments in our infrastructure that we need.

So from my vantage point, Senator, we have an awful lot of work ahead of us as a country, but it starts with making investments and ensuring that we have the safety regime and the number of inspectors that are needed to be able to ensure that we are able to move our commodities fast, but also safely.

Senator JOHNSON. My time has expired.

Senator MURRAY. Thank you very much. Senator Coats.

Senator COATS. Thank you. I know Senator Heitkamp has a committee to chair, and I am going to be very, very brief because I have got a commitment also at the State Department and I need to get up there. So I am just basically going to make a statement and allow you to respond for the record so I can yield back my time.

Clearly this enormous increase in the production of crude oil is of benefit to the United States, and it is a benefit to the world, and it has all kinds of implications for us economically, domestically, as well as in foreign policy, and on and on it goes. So nobody wants to slow that down. We want to encourage more.

But that clearly comes in conflict with the delivery system. And the proposed solutions that have been suggested by Chairman Hersman and you, Secretary, a lot of those are going to take time to implement, whether it is tank car design, replacement of tank cars, whether it is installation of the PTC (Positive Train Control) system. There already is an effort to delay that for a 5-year period of time for technical reasons. Most of the solutions are going to require some time, not to say that we should not do it. And so, obviously some—dealing with the safety culture and some of the options that you have looked at.

But I want to ask one question here. If we are looking at possible solutions or better ways of delivery, have you, Mr. Secretary, or have you, Chairman Hersman, weighed in with the administration relative to their decision on the Keystone pipeline? I mean, building a pipeline obviously is going to take some time, but it also falls in the category of the other solutions that are proposed. And I know this is a critical decision coming up that the President and Secretary of State has to make. But the State Department has put forward a positive report. There has not been any scientific proof that there is any kind of a major environmental issue here with this anymore as has been alleged for many years.

So I am just wondering if you either you, Mr. Secretary, or you, Chairman Hersman, have weighed in basically saying we have a real problem here. But one of the solutions, and you cannot use time as a reason not to do it because we probably would have to do all these things, is building that pipeline and getting the approval to do that. What is your thought on that?

KEYSTONE PIPELINE TECHNICAL ASSISTANCE

Secretary FOXX. From the Department of Transportation perspective, there is technical support provided to the State Department as they make their evaluation. But positionally, our stance is that whether crude oil is moving by pipeline or by truck or by rail or whatever, our responsibility is to ensure that it moves safely.

Senator COATS. So the State Department assessed your evaluation of the pipeline as being one of the possible ways in which we could address the safer transport of crude oil?

Secretary FOXX. We provide technical support for their consideration process. Quite frankly, I would like to submit to you maybe for the record a summation of what kinds of technical assistance we may have provided, but we would not have recommended one thing or another. Our position is to, however this stuff is moving in this country, it has to move safely.

[The information follows:]

KEYSTONE PIPELINE TECHNICAL ASSISTANCE

PHMSA is acting as a cooperating agency providing input only to the Department of State, who is the lead jurisdictional authority for determination of whether to approve or deny the project. Input/comments from PHMSA have primarily been in the area of pipeline safety, and when requested from Department of State.

Through its role as cooperating agency PHMSA has:

—Attended State Department Public Meetings when requested. For those meetings where a Q&A format was allowed (versus comment only), PHMSA helped respond to questions related to pipeline safety.

—In addition to requirements in accordance with the hazardous liquid pipeline safety regulations, Title 49 Code of Federal Regulations (CFR) Part 194, Part 195, and Part 199, PHMSA has worked with the State Department to develop a list of 59 conditions intended to help address public concerns related to pipeline safety that were raised during the State Department's commenting processes. The conditions are in the area of pipeline design, manufacturing, construction, operations, maintenance, inspection, reporting, record keeping and certification. Implementing these conditions would provide additional safety measures intended to address public concerns about this project and provide a degree of safety along the entire length of the pipeline system similar to that required in high consequence areas as defined in the regulations in Title 49 CFR Part 195.

Senator COATS. I understand that, but maybe you are sitting around the Cabinet meetings and so forth and so on, and maybe you get a plug in.

You know, I am sitting here in front of the result of not having a pipeline or at least we could reduce the possibility of that. But, Chairman Hersman, do you want to comment on that?

SHORT-TERM SAFETY IMPROVEMENTS

Ms. HERSMAN. The short answer is, no, the NTSB has not weighed in on the Keystone pipeline. The longer answer would be is you are absolutely right about the length of time for implementation of a new tank car design. The questions being asked about the DOT rulemaking are just the beginning. You still have a phase-in period to manufacture and implement new standards.

We think there are some things that can be done right now real time. Routing decisions, providing critical information to first responders, and operational decisions are actions that will benefit safety right now. For example, reducing operating speeds is included in the agreement that the Secretary made with the railroads. There are ways to mitigate risk without having to build a lot of time and money into it.

We have certainly investigated pipeline accidents, too, and have made recommendations about risks inherent in all modes of transportation. But I understand your point. It would have been more helpful had the industry been able to plan for transportation needs

and options prior to the boom. The problem is that the transportation infrastructure, whether it is rail or pipeline, was not in place to deal with the boom when it came.

Senator COATS. Yes. And it is clear they did not. It was unexpected. We did not know we were going to tap into all that. Governor Hoeven can tell us how that happened under his watch, and a great benefit to the United States.

But maybe, I guess, what I am suggesting is a little whisper in the ear, nudge of the elbow, you know, that this could be one of the ways that we could sort of help mitigate some of these disasters. Thanks, Madam Chairman.

Senator MURRAY. Senator Heitkamp.

Senator HEITKAMP. Thank you, Senator Coats, and thank you to the chairwoman and the ranking member for holding this important hearing. I think Secretary Foxx probably is sick of hearing from me at this point.

Secretary FOXX. No, not at all.

Senator HEITKAMP. We have spent a lot more time on this issue than anyone ever anticipated that we would. And it is so critical that we get this right, because no matter how many pipelines we build, we are still going to move crude on the rails. There is not going to be a pipeline that goes to Washington State or one that goes to New Brunswick. We are going to still be moving this. And I think one of the things that we have really been encouraging is a collaboration and a cooperation.

I want to just take off from the three various categories that we have been talking about because there have been a lot of committees that have been talking about this issue from Commerce, to Appropriations, to Homeland Security, a broader expansion of the rail.

So in prevention, I have kind of a list of things. We have got positive train control that is being held up by the FCC's inability to give the go ahead. That has been a big problem, right, Secretary? So I hope that you are encouraging and pushing everyone that you can to make that happen and to talk about the real important consequences of not getting positive train control in a timely fashion.

The second issue is technology, real time data, about what is happening on the rails. You are absolutely right. We have to have—we have to know when we have a track problem so that we can prevent it. We know that there are some technologies that can be deployed. The industry thinks they have some technologies. We need to amp that up with the Federal Railroad Administration.

The third thing, and this is really one of my questions, is greater inspections, more resources for inspections of those track lines and prevention. Now, very many States have now begun that discussion of ramping up their inspectors. I want to know what you are doing to coordinate with State DOTs and State inspectors to make sure that those inspections are actually value added, that you are consistent in terms of what you are looking at, and how you can use those resources to expand on the Federal inspections.

TRAINING STATE INSPECTORS

Secretary FOXX. You know, that is a great question, Senator. And one of the programs the FRA has implemented works with States

to train their inspectors. And so, when we see trends and safety concerns on a national level, we have a very direct way to impact the way that we can leverage our own inspection resources by training State inspectors to do the same types of evaluation that Federal inspectors would do.

The program has been very successful, and I know that we have recently signed on, I think, a new State that is going to be coming on board soon that you know about.

Senator HEITKAMP. Yes. One of the kinds of follow-ups there is the importance. I think before there used to be some grant funding to the States. And if we can take a look at whether that is something that should be reinstated, we should, in fact, get more rail inspectors out there.

Obviously equipment—testing equipment and getting equipment on a schedule, you know, one of the—without putting anyone on the spot here, one of the causes of, we believe, of the derailment was a broken axle on one of the trains, which was not the train that was carrying the oil, but carrying grain.

Now, let us talk a little bit about mitigation. We have tank cars, which I think has been covered. I share both the ranking member and the chairwoman's frustration in not getting a date certain. And I understand your frustration in not getting data on what, in fact, is the chemical makeup of Bakken crude and how that changes over a time. And I applaud your methods, and I know that API has been working to try and get more data to you. And if we are having problems with communication there, we need to fix those problems. And we cannot let a design—a new design of tank cars delay—be delayed by, you know, a struggle about getting data back and forth. So we need to understand that.

But I will tell you, you know, you say you have heard from three. We have heard it is four. But those four might, in fact, represent 50 percent of the production. So we have got to be a little careful when we say four because there may be some minor producers out there who are not, you know—and we do not know what percentage of those four. I think one definitely all their product on the rails. Some of these would also find pipelines.

And so again, I would really reiterate the need for you to communicate with anyone that you can to get this data as soon as possible and make sure that testing gets done.

DATA FROM SHIPPERS

Secretary FOXX. We are communicating every day.

Senator HEITKAMP. OK.

Secretary FOXX. And even among the three or four, there are variations in what is being provided to us. We, by the way, are very grateful to those shippers that are cooperating and providing the information that they have provided. But I can assure you that as this rulemaking process goes along, we are not stopping for anybody. We are moving through. We do not want there to be a situation where folks have slow stepped us on providing data on the front end, a rule is developed, and then the complaint is that we did not see the data, we did not understand exactly what we were shooting at once a rule is actually established.

Our desire is to have a ready——

Senator HEITKAMP. Mr. Secretary, I would be less concerned with that if I actually asked for it ahead of time and did not get it provided. And so, I think you have a pretty good response if you say, well, this data would have been useful before we promulgated the rule.

Secretary FOXX. Absolutely.

Senator HEITKAMP. If you are asking for that data now, I think it is critically important.

Secretary FOXX. Absolutely.

Senator HEITKAMP. And I know that they are paying close attention to statements that happen on the Hill, and hopefully this will once again encourage folks to be cooperative. This is a fact we can know. We can know what is in those tank cars. We may have a different judgment on what happens as a result of that knowledge, but we can know what is in those tank cars.

Secretary FOXX. Agreed. We will move this rule with absolute speed, but we want to make sure that we are hitting the right safety standard.

Senator HEITKAMP. And I do not——

Secretary FOXX. And that is exactly what we are doing. So, you know, I just want to make it very clear that any perceived delay with this rule is not the product of my saying let us slow this down. This is an agency that is data based. It is trying to do the very best in trying to level set a safety standard for tank cars.

Senator HEITKAMP. And I have run out of time, but I want to—I am not going to be able to stay here because I have got to go chair the floor. But I want to thank the fire chief for your excellent work and for what you do every day to keep the citizens of your community and obviously some of our neighbors to the north safe. Thank you, and we are working on getting you better information, better equipment, better training so that you can meet the challenges of your community.

Thank you to the chair and to the ranking member for letting me participate.

Senator MURRAY. Thank you. Senator Hoeven.

Senator HOEVEN. Thank you, Madam Chair, and I would like to thank Secretary Foxx for your willingness to come to North Dakota. We appreciate it as well as your willingness to meet with us and stakeholders on this issue on numerous occasions. And I understand you are putting a real priority on this important issue, as you should, and I want to thank you for that.

As you know, this is an issue that I have been concerned about and working on for some time. I had written to PHMSA in December 2012 and said, hey, industry needs these new standards for the 1232 or updated cars. And also on the pipeline aspect, something that I have been working on since governor days because as part of an energy plan for this country, we need an all of the above infrastructure plan, meaning pipelines, adequate rail capacity, and adequate road and truck capacity. And as I think both of you have said this morning, it has to be done as safely as possible.

So I would like to start, Secretary Foxx, with we have had some meetings with all the stakeholders there—the class one railroad CEOs with some of the oil company CEOs, API, manufacturers, the rail car owners. How do we get consensus so that we are attacking

this thing in a comprehensive way, meaning doing everything we can to prevent derailments, then making sure that we mitigate to the extent possible risk of fire or explosion and that we have adequate emergency response? How do we build that consensus as well as keep this moving so we get the comprehensive solution in places as quickly as possible?

CALL TO ACTION

Secretary FOXX. Senator, I have to tell you, I want to, first of all, thank you for your engagement on this issue, as well as Senator Heitkamp, and for attending our call to action meeting, which I think was a real leap forward for safety. What the rail industry developed in terms of a comprehensive response on speed reduction, brake technology, use of our HAZMAT routes, greater use of our HAZMAT routes, is a result of our conversation. I think all of those things moved more quickly because there was cooperation than it would have in any other way that we can imagine. And so, for that I want to thank you.

And so, further I think that we have achieved some level of consensus as it relates to the rail community. Now, we still would like to have more data from the shippers, from API, from the oil industry. I think that would be enormously helpful to us as we focus on what a comprehensive response should be.

And this is an ongoing process. We are working on the tank car standard today. We have other measures that we are also contemplating, including two-man crews. And there are other steps that we are going to take, but it all starts with knowing what we are transporting. If we know what we are transporting, if we know how to package it, we know how to help first responders, we know how to develop a comprehensive approach. We just want to make sure we are right.

Senator HOEVEN. And I think you are zeroing in on the right thing here because both with the new car standards, tank car standards, and retrofit, if you can build that consensus, I think that can help expedite the process not only in terms of getting to the rule, but in actually then in getting a new enhanced fleet out there on the tracks. I think that is critically important, and it requires all of those constituencies to get on board. So I hope and ask that you are continuing to convene that group, that working group, and getting them both to consensus and to moving PHMSA and OMB to a rule.

Secretary FOXX. We are working as much as we can to build consensus where we can. But there is obviously a tension between everyone agreeing and everyone not agreeing and waiting forever for an agreement to emerge.

Senator HOEVEN. Right. The process has to move.

Secretary FOXX. And so, in order to keep things moving, we are going to keep pushing and try to get consensus to the extent we can. Where we cannot, we are going to act as quickly as we can to make sure we are keeping the public safe.

Senator HOEVEN. On the resources issue, inspectors for FRA for PHMSA, have you detailed to the committee what you need in terms of additional inspectors and other resources, what you think the safety—you know, to meet the safety requirements?

SAFE TRANSPORT OF ENERGY PRODUCTS FUND

Secretary FOXX. There are two parts to that question. The President's framework for reauthorization has in place additional inspectors, additional ones for PHMSA, for rail, and even for FMCSA (Federal Motor Carrier Safety Administration). And those are specific needs that cut across not just crude oil shipments, but just in general making sure we have the right number of inspectors and so forth.

In addition to that, there is the $40 million allocation for the Safe Transportation of Energy Products and we believe that that is necessary because we have already found in the last 8 months where one agency has a pool of resources for inspections, or for testing, or what have you, and the other agency does not. But the other agency's jurisdiction is the one that we have to proceed under. And so, we have gotten into some issues with our modes having the right resources. And because we are dealing with an emerging situation, an emerging and dynamic industry, we feel like some flexibility is required right now.

Senator HOEVEN. All right. And as a member of the Appropriations Committee, I want to make sure we understand what it is you need and that we are working to that objective.

Secretary FOXX. Sure. Yes.

POSITIVE TRAIN CONTROL

Senator HOEVEN. Have you weighed in with the FCC (Federal Communications Commission) on positive train control because we are concerned—we understand that is a vital safety feature, and we are concerned about getting it deployed. So have you weighed in with FCC?

Secretary FOXX. We have. I met with the previous acting chair of the FCC. I have also spoken to the current chair of the FCC about these issues, and our staffs are talking all the time. That is absolutely going to be and is an issue with getting PTC implemented quickly.

Senator HOEVEN. Do you feel the timeline is achievable, that we are going to get the help from FCC to achieve the timeline?

Secretary FOXX. My instructions to our agency have been to do everything we can to ensure that that deadline is met. I will tell you we are hearing from industry that many of the class one railroads are feeling very challenged by that timeline.

Senator HOEVEN. If I might beg indulgence from the chair, just one final question for Chairman Hersman. Again, thank you for the information that you provided to us. You have been tremendous and forthcoming. My questions to you would be, do you weigh in or have you weighed in at all on positive train control, and what other recommendations would you have to advance this safety process that we are talking about here this morning?

Ms. HERSMAN. Are you talking about just for PTC or in general?

Senator HOEVEN. First, I just want to know if you—well, first, PTC and then any other recommendations that you feel would be helpful as we work to achieve this—you know, a new safety—comprehensive safety plan.

Ms. HERSMAN. The NTSB has made recommendations about versions of positive train control actually dating back to the 1970s. When we established our most wanted list of transportation improvements in 1990, positive train control was on it, and it is still on our most wanted list. We are disappointed about the discussion of delays for PTC. Safety delayed is safety denied. Every day that we do not do something is another day that we are vulnerable and we are exposed to risk.

We have had conversations also with the FCC. There are challenges, but we know there are some railroads that will meet the deadline, and some that will meet the mandate for a majority or a portion of their system. It is important to continue to hold people's feet to the fire, whether it government or industry, to make sure that this critical safety improvement happens.

IMPROVING RAIL SAFETY

Senator HOEVEN. Just any other recommendations to add to the discussion we just had in terms of a comprehensive solution on safety.

Ms. HERSMAN. We have discussed that rail safety is a multipronged approach. We must focus on preventing the accidents. PTC is certainly an important part of that solution.

We also must prevent derailments that are due to track defects. You have seen our investigation of the broken axle that was included in the Castleton event. That is an equipment defect, and we need to make sure that we are trapping those failures and those errors before they result in a catastrophic event. More needs to be done on the prevention side. If we did not have derailments and collisions, we would not be talking so much about tank car integrity. Keeping the trains safely on the tracks is really important. That is the first step.

When we talk about the packaging—the tank cars that they are moved in—we must establish better standards. What we have now is ineffective. There are a lot of folks in industry who are willing to move ahead, but they are hesitant to do that without specific standards. They do not want to build tank cars that will be obsolete. Therefore, it is important for the DOT standard to come out to give people some certainty with respect to building these cars.

And the third piece of it is the response side. We believe that we should have to have one level of safety, whether products are being moved on the water, through pipelines, or on the rail when it comes to the communities that are affected. We must have better emergency response plans, and that means support for the communities through which these unit trains travel. No community is prepared for a worst case event.

Senator HOEVEN. Thank you, Chairman.

Senator MURRAY. Thank you very much. I just have one more question on this topic and another one, Mr. Secretary, for you while you are here. We will turn to Senator Collins. And our vote is going to occur fairly quickly here, so I ask the second panel to indulge us on that.

But, Secretary Foxx, you talked with Senator Johnson about this issue. We are really seeing in my State the delays. Grain shippers and manufacturers are reporting disruptions due to this congestion.

I am hearing from manufacturers in Snohomish County who do not know if they are going to get the parts they need to get the products that they are developing out.

I know the Surface Transportation Board has responsibility, and there is going to be a hearing on this, as was mentioned, tomorrow. But I wanted to ask you, as FRA imposes some speed limitations to address safety concerns on crude shipment, it is going to have an impact on other businesses. Are you coordinating your safety oversight with their efforts?

Secretary FOXX. Yes, we are.

Senator MURRAY. So you are talking directly to them.

Secretary FOXX. Yes.

Senator MURRAY. Okay. We will be following up on a lot of the other discussions on this. Obviously it is very critical to this committee and to all of us that we get the safety issues right.

UNITED STATES MERCHANT MARINE ACADEMY SEXUAL ASSAULT SURVEY

But, Mr. Secretary, I wanted to talk to you while you were here about sexual assault and harassment at the merchant marine academy. And if my colleagues will indulge me, I want to take a minute on that. I know it is not within the scope of this hearing, but it is a very serious problem that has got to be addressed.

You came before this subcommittee last month. We talked about the very troubling results of the 2009 sexual assault and harassment survey at the academy. That year, in 2009, students reported seven assaults and 22 cases of harassment. Less than half of the faculty and staff surveyed felt that the academy's senior leadership fostered a climate intolerant of sexual assault.

Well, I have just now seen the report for 2011–2012 school year. It is very disturbing. It says during that school year, there were an estimated 25 sexual assaults and an estimated 136 incidents of sexual harassment. That is more than seven times the total number of harassment cases for all of the military academies combined, and it really is appalling. And almost as troubling is the fact that there is no record of these incidents being reported to academy officials. Clearly students there lack confidence in their leadership.

I am really floored and appalled by these results. I want to know what is going on here and what steps you are taking to change that culture so that faculty and students know that this will not be tolerated.

Secretary FOXX. Senator, I am troubled by the report as well. And when we last talked about this, you specifically asked me when the report would be produced, and I promised it to you in 2 weeks, and we met that target. But the statistics and the information is alarming.

I would point out that the information that you received covers years prior to the steps that were undertaken to change conditions at the academy, steps that included hiring a sexual assault prevention and response coordinator, implementing a new campus-wide sexual assault prevention training, upgrading the academy security system, and establishing a 24/7 hotline. There have been many other steps that have been taken.

And I will have to tell you that my great hope is that as we get reports in successive years about how these new steps are being taken and received and handled on the campus, that my expectation is that we will see reporting where an incident occurs, followed by an effective response from the administration. I would also suggest that in the coming weeks that we as a Department work to schedule some time with you and other interested members of the committee to meet with Admiral Hellis, who runs the U.S. Merchant Marine Academy. I would be happy to attend that meeting as well.

This is a very serious issue. We take it seriously, and we are going to take steps to get this right.

Senator MURRAY. This has to be a top priority.

Secretary FOXX. Yes, it is.

Senator MURRAY. I do not want to wait for a year for another report to come out and things are still happening. I want you to know this subcommittee is going to do a deeper dive into this matter, and I know I can count on your full cooperation.

Secretary FOXX. Yes, absolutely.

Senator MURRAY. So we will be following up on this. Thank you for your indulgence on that.

Secretary FOXX. Thank you.

Senator MURRAY. Senator Collins.

Senator COLLINS. Thank you, Madam Chairman, and I want to second your remarks and join in expressing my concern as well.

Secretary Foxx, my last question for you other than some I may submit for the record, I want to talk about the preparedness piece. I spent many years as either the chairman or ranking member of the Homeland Security Committee, so I am very prepared—very familiar with the programs like the fire grant program and the SAFER Act that help to boost the capabilities of our brave first responders, particularly our firefighters, in rural America. It is my understanding that the Department of Transportation also has emergency preparedness grants for local communities, and indeed provides about $28 million annually for planning and training.

In 2012, however, the Inspector General criticized the Department for its poor management and oversight of the program's expenditures and said that its effectiveness in helping emergency responders was not what it should have been. It is particularly troubling to me when I see those vast needs for equipment and training and planning in rural communities in my State where you have such brave men and women stepping forward to be our first responders, that an average of 76 percent of the recipients did not use all of their funding, and that some $13 million was returned back to DOT.

Now, I can tell you if I ask the chief could you have used an emergency planning grant, he undoubtedly would tell me yes. In fact, if I asked the chiefs of any of those small fire departments that came to the rescue in the train derailment in Canada, they all would say that they are starved for resources because of budget constraints.

So what actions is the Department doing to do a better job of making sure that that money is getting out there and that it is being used to strengthen preparedness? What is going on when the

needs are so great that so much of the money, an average of 76 percent, is not being spent?

EMERGENCY PREPAREDNESS GRANTS

Secretary FOXX. Senator, I would like to submit for the record on the current response of the Department to your question.

[The information follows:]

EMERGENCY PREPAREDNESS GRANTS

PHMSA's Emergency Preparedness grants have funded an average of $21 million in planning and training grants each year since fiscal year 2008. On average, grantees haven't been able to use about 19 percent, or $4 million, of these grants annually and have returned the funds to PHMSA. The result has been that at the end of 2012, the Emergency Preparedness Grant Fund, which contains the cash balances of these fees, had about $13.1 million in prior year balances of grant funds and fees collected. To reduce the balance, PHMSA refunded and lowered registration fees for registration year 2013–2014.

The percentage of grants being returned has been falling. For example, in fiscal year 2008, grantees used 79 percent of awarded grant funds. In fiscal year 2011, however, grantees used 85 percent of their awards. PHMSA continues to closely monitor the use of grant funds to ensure that grant funds are used effectively and efficiently. PHMSA is actively working with grantees to increase accountability and maximize the use of funds towards program objectives.

PHMSA believes that there are several key factors that inhibit grantees from completely expending their HMEP awards: (1) the period of performance is insufficient to expend all funds within 1 year; (2) the payout structure of the HMEP grant forces grantees to spend their own State and local funds first before receiving their Federal share through reimbursements; and (3) adjustments to improved grant oversight. In addition, other factors such as the inability to award supplemental funds and the fiscal sequesters have contributed to the high unexpended balance.

Period of Performance.—Grantees have 1 year to expend their HMEP awards. This relatively short performance period has proven to be burdensome on grantees since they must replicate their own solicitation process to pass through planning funds to Local Emergency Planning Committees (LEPCs). The pass through requirement results in an even shorter performance period increasing the likelihood that a portion of the funds will remain unexpended. A multiyear grant cycle which would allow grantees more time to expend their HMEP grant awards would help address this issue, as would elimination of the pass-through requirement. By doing so, grantees would have more time to utilize HMEP awards and avoid the administrative burden of hosting its own solicitation process.

Payout Structure/Reimbursement Process.—The HMEP program makes grant payment by way of reimbursement. Hence, grant recipients can only drawdown funds after expenses have been incurred. This forces grantees to use their own limited funds to carry out training and planning activities before seeking reimbursement. In cases where the State or local government does not have funds available to utilize prior to reimbursement, the grantee will not have access to its award. In such cases, planning and training funds remain unexpended due to the limited State and local resources.

Increased Oversight.—Enhanced oversight of grantees in response to the OIG recommendations has encouraged grant applicants to better evaluate their own programs and grant expenditures. An initial result of this effort has been a reduction in the amount of grant funds actually utilized by some grantees as they adjust to the changes. To better assist grantees, PHMSA has updated it guidance on allowable expenditures which informs grantees of the various uses of the HMEP planning and training grants.

Non-Grantee Factors.—The high unexpended balance is also a result of the program's inability to use returned funds to redistribute to other grantees. Each year, the program receives requests from grantees that require more funding, but are unable to award those funds due to certain constrictions that disallow a supplemental award process. As a result, these unexpended funds remain restricted once the fiscal year has ended. A supplemental award process would address this issue. This would allow disbursement of funds to grantees with a proven need for supplemental emergency response funding.

Finally, the fiscal year 2013 and fiscal year 2014 sequester have automatically reduced the amounts PHMSA can award to grantees. Despite the fact that the funds

were available and fully funded by user registration fees, the fiscal year 2013 and fiscal year 2014 sequesters restricted the Program's ability to access these funds since the EP grant is a non-exempt nondefense mandatory program. Because these funds are collected but can't be disbursed due to sequestration, it will add about $4 million to the unexpended balance.

Secretary FOXX. But I would like to preface that by saying a couple of things. First of all, the world has changed dramatically as it relates to the transportation of energy products in this country. And as a Department, part of my leadership at this point is to say to our team we have to mine every resource that we have available to ensure that they are being used to the maximum extent to ensure the safety of the American public. And if we have programs such as the ones that you were just describing that are being underutilized or not being used to the fullest extent to ensure the safety of these products and the emergency responders and so forth, it is incumbent upon us to fix that and ensure that we are making the most use of those resources.

But if we are able to have the response to the budget proceeding that we would like to have, which is the $40 million allocation we have talked about, one of the outcomes of that would be a comprehensive report on how DOT as an agency can strengthen our safety oversight of energy products around, and that would include mining every single resource we have and ensuring that we are using those resources to the fullest extent.

But you have my promise that following this conversation, I am going to go back to my team and ensure that we are doing every single thing we can to make effective use of those resources.

Senator COLLINS. Thank you.

Senator MURRAY. Mr. Secretary, thank you very much, and we will continue to follow this very closely with you. Chairman Hersman, thank you so much for being here today, for your recommendations, and for your long-time service. As you noted, you have been to my State during a number of tragic times, most recently obviously with the Skagit River Bridge. But we met first, as you mentioned, when an oil pipeline burst in the town of Bellingham, and 300 young kids were killed in that. So you have been doing this a long time. We wish you the best in your future. But thank you so much for your service to our country as well.

Senator COLLINS. I would echo that. Thank you.

Senator MURRAY. With that, we do have a vote that is going on, so I am going to go into recess, and I would just apologize to our second panel. We will take a short break while we go vote, and we will be back shortly for your testimony and your questions.

[Recess.]

Senator MURRAY. We will reconvene this hearing. Again, I want to thank both of our witnesses for your patience. I want to welcome from my home State of Washington Barbara Graff. She is the director of the Office of Emergency Management for the city of Seattle. I know the city and our State are working on many new initiatives to address the growing HAZMAT traffic. I thank you for making the trip all the way out here to share your experiences and recommendations.

And I also want to welcome Chief Tim Pellerin of Rangeley, Maine. Chief Pellerin, I understand you responded to the Lac-Mégantic accident and saw the destruction firsthand—Senator Col-

lins shared with all of us earlier—60 miles from your hometown. We look forward to the lessons you learned from that experience and what insights you have to protect our communities as well. And I join Senator Collins in welcoming both of you to this committee.

With that, we will go to your testimony and have some questions. And, Ms. Graff, we will begin with you.

STATEMENT OF BARB GRAFF, DIRECTOR, CITY OF SEATTLE OFFICE OF EMERGENCY MANAGEMENT

Ms. GRAFF. Thank you. Chairman Murray, Ranking Member Collins, members of the committee, good morning, and thanks for the opportunity to talk today about safety concerns related to the shipment of hazardous materials by rail, specifically crude oil.

My name is Barb Graff. I have been an emergency management director for 24 years, the last nine of those for the City of Seattle Office of Emergency Management. I also currently chair the National Emergency Management Accreditation Program Commission.

Before I go further, I would like to thank Senator Murray, Senator Cantwell, Representative DelBene and staff for your response to the mud slide north of us in Snohomish County. That disaster brings into sharp focus the necessity for emergency response systems and the ability to have worked together before a disaster hits so that our response is equal to the scale of the disaster. Thank you.

Seattle is the largest city in the Puget Sound—635,000 residents, a half million jobs, a thriving maritime and industrial sector, an active port, an extensive rail network that runs right through the city. The region's transportation systems have become more congested and tightly interdependent.

Two major freight carriers operate in Seattle, BNSF and Union Pacific. They each operate rail yards to support shipment of goods through the Port of Seattle. All yards are located in large, flat areas which ironically are identified as earthquake liquefaction zones. The tracks run south from the Port of Seattle, travel by two major sports stadiums through a tunnel under downtown Seattle, and along Puget Sound through residential neighborhoods and parks. This route is particularly prone to landslides and storms coming off the Puget Sound.

According to the U.S. Department of Transportation, areas up to one-half mile or more are considered vulnerable following an accident. An incident requiring warning, evacuation, or rescue could easily affect tens of thousands of people in densely populated areas of Seattle.

Responsibilities of government when accidents occur include public warning, evacuation, fire suppression, hazardous material containment, decontamination, rescue, sheltering, and providing vital information about the incident.

Currently, there are approximately three train shipments per week in our area. Once permits are approved and increased refining construction is completed, the volume could easily be as many as 3 to 11 trains per day. The most effective investment is in mitigation. Stronger transport vehicles, slower speeds through densely populated areas, strict adherence to rules about properly labeling

what is carried in the cars, and meaningful penalties for not abiding by regulations.

Seattle Mayor Ed Murray recently signed a resolution adopted by our council relating to petroleum transport by rail. It urges the disclosure of volumes, frequency, and content of petroleum products. It asks for aggressive phase-out of older model tank cars. It requests restricting shipment of these products until the cumulative environmental and safety impacts are sufficiently studied and addressed. The State legislature has enacted a similar measure.

I would recommend that the Federal Railroad Administration take a similar action and identify nationwide those areas where the combination of increased transport of oil, identified vulnerabilities to natural disasters, population densities, and security vulnerabilities intersect. This will help inform policymakers about where disaster mitigation funding should be spent and where the rail companies themselves should take action.

Another recommendation specifically for earthquake prone areas like the Pacific Northwest is to invest in early earthquake warning systems. These systems make communities safer by sensing earthquakes at their source and literally radioing ahead that seismic waves are on their way. Warning systems can be used to safely and automatically halt transportation like trains, traffic, and elevators.

All of this speaks directly to the need for robust emergency management programs at the local level. We know that Congress has long sought better measurements of the country's preparedness to deal with emergencies like those suffered by Castleton, North Dakota.

I respectfully offer you the professional yardstick of the Emergency Management Accreditation Program standards. In the same manner as FEMA has funded cooperative agreements to study the viability of State emergency management programs, we could do the same thing by entering into a cooperative agreement to study 50 to 100 of the largest cities and counties, most populous where oil train traffic is expected to increase dramatically.

In conclusion, the safety of our public must always be our chief criteria for measuring the cost and benefit of increasing hazards. Allowing adequate time for local, State, and Federal emergency planning to address these impacts is critical.

In the Pacific Northwest where rail lines travel oil over soils susceptible to earthquakes, an early warning like those used in Japan to slow or stop passenger trains would be a wise investment with benefits that mitigate more than just train accidents. The tool to measure the adequacy of local emergency management programs exists in the Emergency Management Program. Please support FEMA in extending a cooperative agreement with EMAP to assess the adequacy of local emergency management programs at the city and county level.

Thank you for your time.

[The statement follows:]

PREPARED STATEMENT OF BARB GRAFF

Chairman Murray, Ranking Member Collins and members of the subcommittee. Good morning and thank you for the opportunity to testify here today. My name is Barb Graff. I am the Director of the city of Seattle, Washington Office of Emergency Management. The city's Office of Emergency Management serves as an inter-

disciplinary cross-departmental organization that partners with the community to prepare for, respond to, and recover from disasters. We work in partnership with our colleagues in the King County Office of Emergency Management and the State Office of Emergency Management.

I have been the Director of Emergency Management at the city for the past 9 years and before that was the Director of Emergency Management for the neighboring city of Bellevue for 15 years. I am currently a member of the International Association of Emergency Managers and the Chair of the national Emergency Management Accreditation Program Commission.

The city's Emergency Operations Center was built in 2008 and serves as the coordination hub for any emergency response for the city. We have activated the Seattle Emergency Operations Center 13 times for major full-scale exercise during my tenure and 29 times for emergencies—6 of which were large enough to be presidentially-declared as disasters.

Thank you for the opportunity to be here today to speak with you about the impact and safety concerns related to the shipment of hazardous materials by rail, especially crude oil.

Before I go further, I want to take this opportunity to thank Senator Murray, Senator Cantwell, Representative DelBene and their staffs for their response to the recent mudslide in Snohomish County. This disaster brings in sharp focus the necessity to have adequate emergency response systems in our region and the importance of working closely before a disaster hits, so that the response is equal to the scale of the disaster. Seattle has sent more than 70 people over the short course of this disaster to help with rescue operations, planning, logistics, public information and disaster relief.

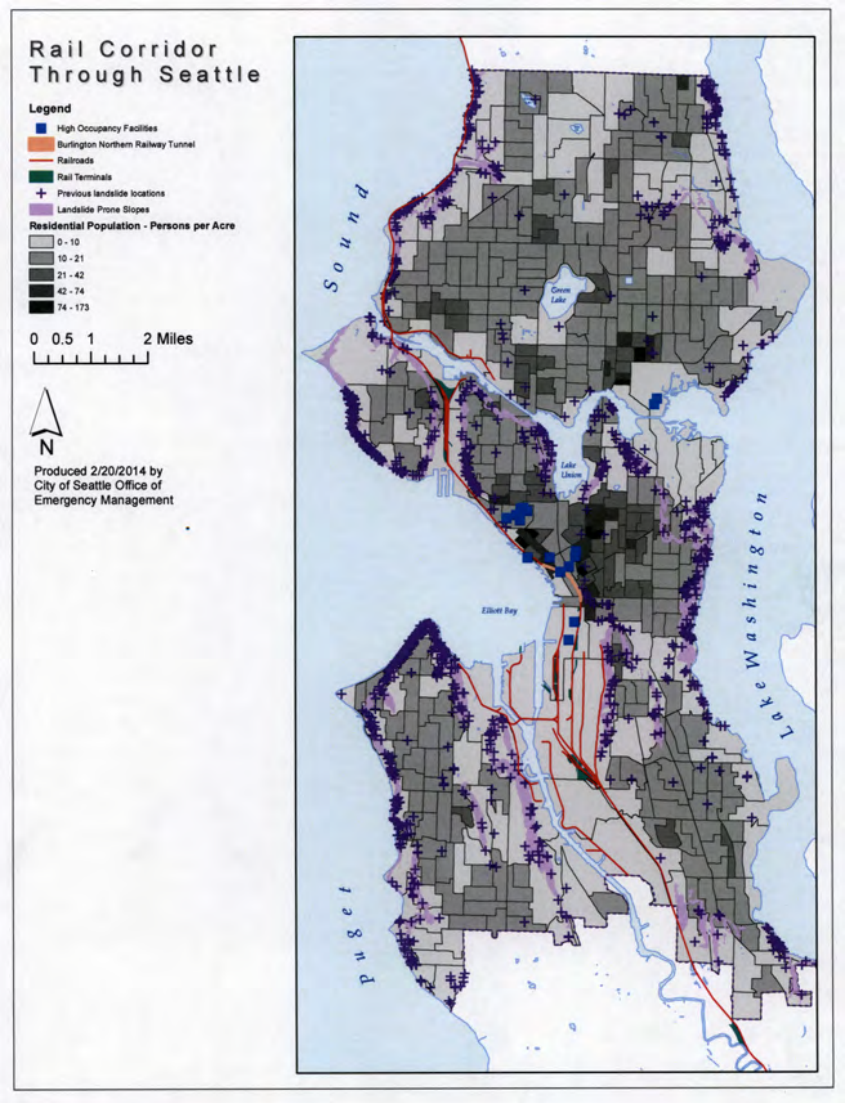
RAIL TRAFFIC THROUGH THE PUGET SOUND REGION

Seattle is the largest municipality in the Puget Sound region, with almost 635,000 residents and 502,000 jobs. Unlike some other west coast cities, Seattle is still blessed with a thriving maritime and industrial sector with an active port and extensive rail network that runs right through the city. Seattle's, and the region's, transportation systems have become busier, more congested, more tightly interdependent and lacking in substantial reserve capacity. Disruptions in one part of the system can produce large consequences far from the site of the disruption.

Two major freight carriers operate in Seattle—BNSF and Union Pacific. They each operate intermodal rail yards to support shipment of goods through the Port of Seattle. All the yards are located in large flat areas that are identified liquefaction zones, meaning during a major earthquake we can expect the land in the area to become liquefied.

The tracks themselves run north and south through the city. From the Port of Seattle north, the tracks travel by both Safeco Field, home of the Seattle Mariners, and Century Link Field, home of the Super Bowl Champion Seattle Seahawks. The tracks then travel through a tunnel under downtown Seattle and along Puget Sound through residential neighborhoods and parks. This route is particularly prone to landslides and storms coming off the Puget Sound.

To the south the tracks travel through the Lower Duwamish Waterway and head inland until they pass Tacoma where they run along the Puget Sound. (See the rail map below.)



Late last month, the city released its update to the Seattle Hazard Identification and Vulnerability Analysis (SHIVA) which identifies 18 separate hazards to which the city is vulnerable. Among those hazards are transportation incidents and hazardous materials incidents. When combined with some of the other hazards identified in the report, including earthquakes, storms and landslides, our rail network is particularly vulnerable to a catastrophic incident with consequences throughout the region. With the anticipated increase in train traffic transporting crude oil through Seattle, having an adequate and appropriate plan to mitigate for and respond to these types of incidents is becoming even more imperative. http://www.seattle.gov/emergency/publications/#s

Regional emergency management representatives have met with representatives of BNSF to discuss the increase in crude oil freight movement. BNSF emphasized with us the safety systems they have implemented (track monitors, hazardous materials teams, ordering newer model rail cars, lowering of speeds, landslide mitigation,

placarding, etc.), but also clearly indicated that they are regulated by the Federal Government, so State and locals have little, if any, ability to regulate these types of shipments. While we appreciate efforts being made by the freight rail lines, we are concerned about the possible regulatory gaps that might exist.

IMPACTS FROM A POTENTIAL OIL TRAIN INCIDENT

The crude oil coming through Seattle is from the Bakken reserves in North Dakota. Bakken crude oil is highly flammable and easily ignited at normal temperatures by heat, static discharges, sparks, or flames. Vapors may form explosive mixtures with air, and vapors may travel to source of ignition and flash back. Vapors may spread along the ground and collect in confined areas such as sewers and tanks.

According to the U.S. Department of Transportation, areas up to one-half mile or more from an accident site are considered vulnerable. An incident requiring warning, evacuation or rescue could easily affect tens of thousands of people in densely populated sections of Seattle.

Responsibilities of local government when accidents occur on railways include public warning, evacuation, fire suppression, hazardous material containment, decontamination, rescue, sheltering and keeping an information starved community fed—to name a few.

Cascading consequences of an oil train accident include:

—loss of life;

—destruction of property;

—risk to first responders;

—environmental degradation;

—economic damage to the region; and

—decreased community confidence in government's ability to protect public safety.

According to an Emerging Risk Task Force of the Region 10 Regional Response Team and Northwest Area Committee, "Bakken Crude represents new and unique challenges to oil spill preparation and the response community in the Northwest owing to their unique characteristics, relatively recent and dramatic increase in volumes shipped via new routes and transportation methods." Furthermore, "[t]he effectiveness of standard oil response equipment and strategies in addressing spills of Bakken Crude oils needs to be evaluated and the effects of spills on potentially impacted environments need to be available prior to the event of spills in order to streamline the process." http://www.rrt10nwac.com/FactSheets.aspx

FEDERAL ASSISTANCE FOR EMERGENCY PREPAREDNESS AND RESPONSE

While this subcommittee does not have jurisdiction over funding for homeland security programs, I would like to say a few words about these programs. The city of Seattle and the Puget Sound region have been the recipient of several Department of Homeland Security (DHS) grants. The city is grateful to receive Emergency Management Performance Grant funds that support 3 of the 13 people in the Office of Emergency Management. These staff members coordinate training, drills and exercises, and conduct hazards analysis, geographic information system (GIS) mapping, and emergency planning. In addition, the Puget Sound region is eligible to receive Urban Area Security Initiative grants based on risks and consequences within the urban area. We work collaboratively with our regional partners to identify our priorities for funding and have used these funds to buy first responder personal protective equipment, conduct structural collapse and specialized operations training, plan for the needs of vulnerable populations, and educate our public on how to be disaster ready, etc. These grants are critical to our level of preparedness and response to any disaster and it is absolutely imperative that these grants continue to be administered on a risk-based approach. The administration has proposed to change the administration of these grants to create the National Preparedness Grant Program which would leave overall coordination of the grant programs to the States. Such a move disregards the unique security needs of urban areas such as train accidents impacting tens of thousands of people or the interest that terrorist organizations or lone wolf actors might have in exploiting security vulnerabilities in an urban environment.

LOCAL PREPAREDNESS AND RESPONSE TO OIL TRAIN HAZARDS

At some point though, we cannot buy our way into adequately equipping our first responders into standing ready to deal with the increasing risk and impact associated with rail accidents like those experienced in Canada and North Dakota. Currently, there are approximately three train shipments per week in our area. Once permits are approved and increased refining construction is completed, the volume

could be as many as three trains per day. Petroleum trains normally consist of 80–100 tank cars nearly a mile long. The more effective investment is in mitigation—stronger transport vehicles; slower speeds through densely populated areas; strict adherence to rules about properly labeling what is carried in the cars and meaningful penalties for not abiding by regulations—penalties that should fully compensate the actual loss to a community incurred in accidents; people, first responders, and environmental reparation.

Seattle Mayor Ed Murray recently signed a resolution, sponsored by Councilmember Mike O'Brien and adopted by our city council related to petroleum transport by rail through Seattle and Washington State (http://clerk.seattle.gov/~legislativeItems/Resolutions/Resn—31504.pdf). The resolution:

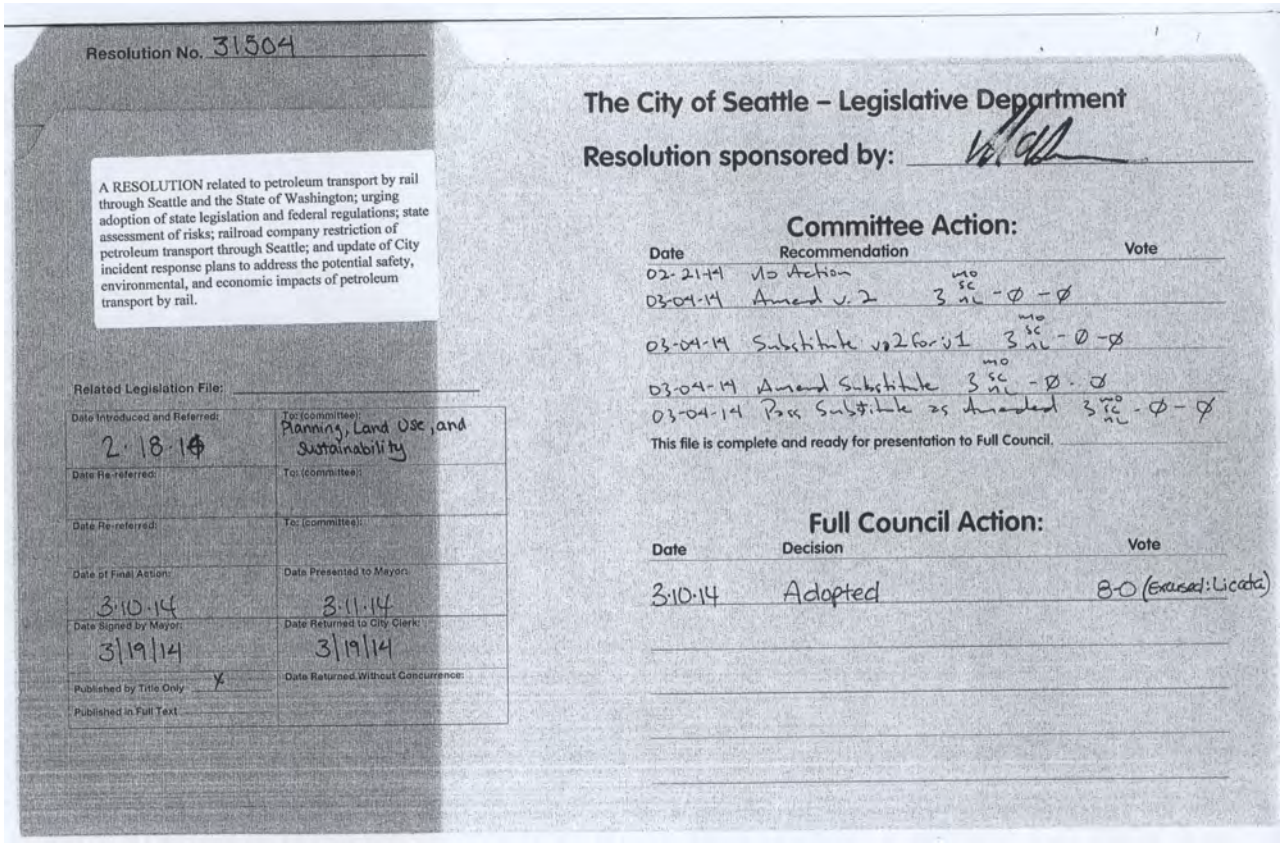
—Urges the disclosure of volumes, frequency, and content of petroleum products transported by rail;

—Asks for aggressive phase out of older-model tank cars;

—Requests restricting shipment of these products through particularly vulnerable parts of our urban core until the cumulative environmental and safety impacts are sufficiently studied and addressed; and

—Requests that the Seattle Office of Emergency Management and the Seattle Fire Department review, and if needed, update the city's incident response plans for the increasing risk imposed by the transport of petroleum by rail and report back by June 20, 2014.

The first version of the resolution follows. This version was not adopted.



Resolution No. 31504

A RESOLUTION related to petroleum transport by rail through Seattle and the State of Washington; urging adoption of state legislation and federal regulations; state assessment of risks; railroad company restriction of petroleum transport through Seattle; and update of City incident response plans to address the potential safety, environmental, and economic impacts of petroleum transport by rail.

Related Legislation File: _____

Date Introduced and Referred: 2.18.14	To: (committee): Planning, Land Use, and Sustainability
Date Re-referred:	To: (committee):
Date Re-referred:	To: (committee):
Date of Final Action: 3.10.14	Date Presented to Mayor: 3.11.14
Date Signed by Mayor: 3/19/14	Date Returned to City Clerk: 3/19/14
Published by Title Only X	Date Returned Without Concurrence:
Published in Full Text	

The City of Seattle – Legislative Department

Resolution sponsored by: _____

Committee Action:

Date	Recommendation	Vote
02-21-14	No Action	
03-04-14	Amend v. 2	3 MO SC NL - Ø - Ø
03-04-14	Substitute v2 for v1	3 MO SC NL - Ø - Ø
03-04-14	Amend Substitute	3 MO SC NL - Ø - Ø
03-04-14	Pass Substitute as Amended	3 MO SC NL - Ø - Ø

This file is complete and ready for presentation to Full Council.

Full Council Action:

Date	Decision	Vote
3.10.14	Adopted	8-0 (Excused: Licata)

Meg Moorehead
LEG oil train FISC
February 11, 2014
Version 1

Form revised: July 12, 2011

FISCAL NOTE FOR NON-CAPITAL PROJECTS

Department:	Contact Person/Phone:	CBO Analyst/Phone:
Legislative	Meg Moorehead 684-8929	

Legislation Title:

A RESOLUTION related to petroleum transport by rail through Seattle and the State of Washington; urging adoption of state legislation and federal regulations; state assessment of risks; railroad company restriction of petroleum transport through Seattle; and update of City incident response plans to address the potential safety, environmental, and economic impacts of petroleum transport by rail.

Summary of the Legislation:

This legislation urges Washington State to require information about petroleum products transported by rail be disclosed to the public. It urges improvement of federal regulations regarding tank car design and operations. It also asks state agencies, the Coast Guard, and local emergency response entities to assess the impacts and risks associated with transport of petroleum products by rail. It also requests that railroad companies restrict petroleum transport through Seattle pending further study of public safety and environmental impacts. And, it requests that the Seattle Fire Department and Office of Emergency Management to review and update City incident response plans to address risks from petroleum transport by rail.

Background:

Increased production of petroleum is expected to significantly increase the amount of petroleum and petroleum products transported by rail through the City of Seattle and State of Washington. Given the proximity of rail lines to Seattle residents, businesses and natural areas, there is concern that rail transport of petroleum will pose risks to public safety, the local economy and the environment. This legislation urges Washington State to require information about petroleum products transported by rail be disclosed to the public. It urges improvement of federal regulations regarding tank car design and operations. It also asks state agencies, the Coast Guard, and local emergency response entities to assess the impacts and risks associated with transport of petroleum products by rail. It also requests that railroad companies restrict petroleum transport through Seattle pending further study of public safety and environmental impacts. And, it requests that the Seattle Fire Department and Office of Emergency Management to review and update City incident response plans to address risks from petroleum transport by rail.

Please check one of the following:

__X__ This legislation does not have any financial implications.

No additional City government appropriations or revenues are anticipated from this resolution at this time.

Meg Moorehead
LEG oil train RES
February 10, 2014
Version 1

CITY OF SEATTLE

RESOLUTION 31504

A RESOLUTION related to petroleum transport by rail through Seattle and the State of Washington; urging adoption of state legislation and federal regulations; state assessment of risks; railroad company restriction of petroleum transport through Seattle; and update of City incident response plans to address the potential safety, environmental, and economic impacts of petroleum transport by rail.

WHEREAS, new technologies have resulted in the development of unprecedented amounts of both domestic and foreign oil, natural gas, tar sands, bitumen, and other petroleum products and derivatives, which will significantly increase the volume of petroleum and petroleum products moving by rail through Oregon and Washington from the first dedicated train in 2012 to a possible volume of nearly 800,000 barrels per day, if all proposed projects are built; and

WHEREAS, the volume of petroleum-by-rail moving through Seattle is expected to triple to over one million barrels per week; and

WHEREAS, the primary source of the petroleum anticipated to be transported by rail through Seattle is from the Bakken formation, which the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration has determined may be more flammable than traditional heavy crude oil; and

WHEREAS, the rail lines that will carry this petroleum run through Seattle's neighborhoods, parks, business and industrial areas, sporting arenas and stadiums, and along our waterfront, creeks, and other natural areas; and

WHEREAS, rail traffic also moves beneath downtown Seattle in an underground tunnel with no fire protection systems and limited emergency egress or ventilation; and

WHEREAS, recent derailments, spills, and fires, such as the recent derailment and explosion in Casselton, North Dakota, illustrate the potential catastrophic impacts which could occur to our community and environment from the transport of petroleum by rail; and

WHEREAS, the City of Seattle is deeply concerned about the threat to life, safety and the environment of potential spills and fires from the transport of petroleum by rail; NOW THEREFORE,

THIS VERSION IS NOT ADOPTED

CITY CLERK

Meg Moorehead
LEG oil train RES
February 10, 2014
Version 1

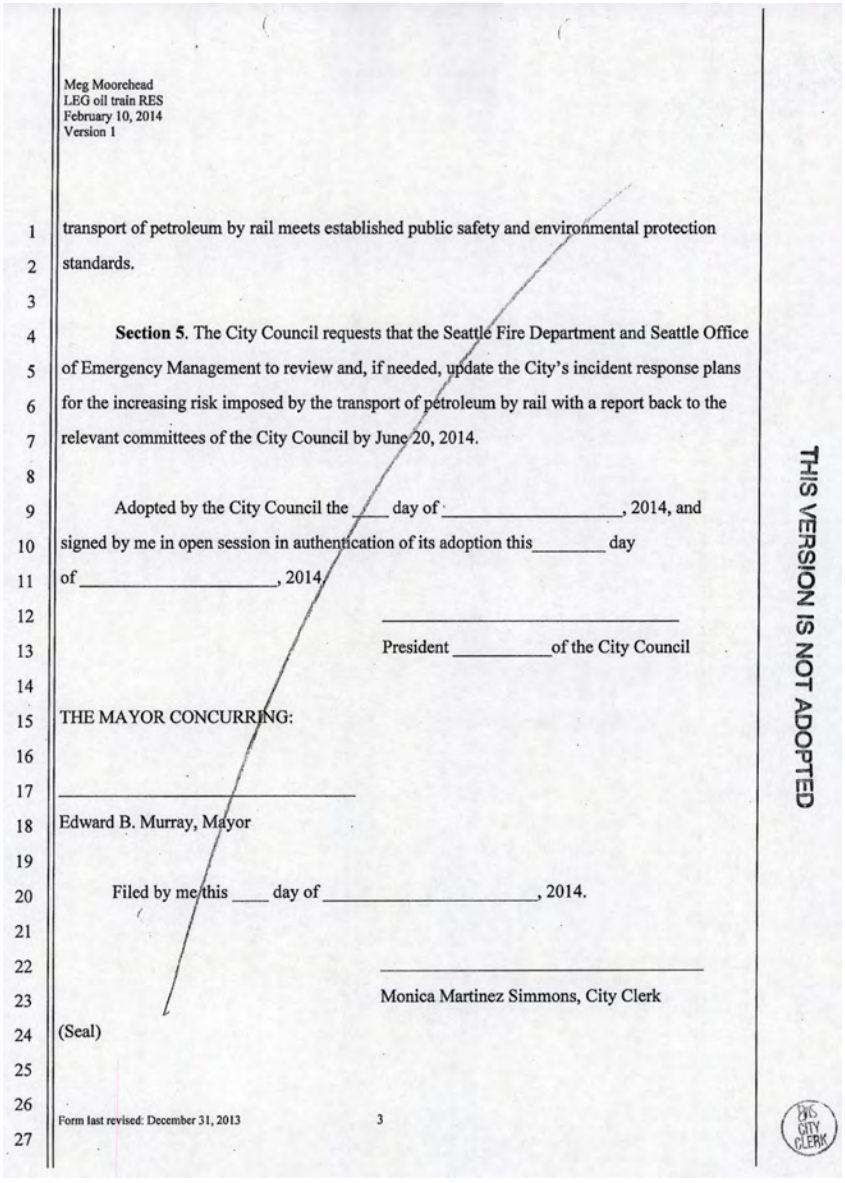
BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE, THE MAYOR CONCURRING, THAT:

Section 1. The City of Seattle strongly urges Washington State to adopt legislation requiring disclosure of the volumes, types of petroleum, petroleum products, and petroleum derivatives; transportation routes; and the frequency and duration of transfers of petroleum, so that the state and local communities can be fully informed of and plan for the risks posed by the transport of petroleum by rail.

Section 2. The City of Seattle strongly urges the U.S. Department of Transportation (DOT) to increase federal tank car design and operation regulations for petroleum product shipments and aggressively phase out older-model tank cars used to move flammable liquids that are not retrofitted to meet new federal requirements.

Section 3. The City of Seattle strongly urges the Washington Department of Ecology and the Military Department Emergency Management Division, in collaboration with the Washington Department of Fish and Wildlife, the Coast Guard and local government emergency response entities, to assess the impact to public safety, the environment, the economy, and traffic of petroleum transport by rail through Seattle and the State of Washington.

Section 4. The City of Seattle requests that any railroad company that operates rail lines adjacent to Seattle's sporting arenas, stadiums, and beneath the City in underground tunnels consider restrictions on the shipment of petroleum products along those routes until adequate study by relevant state, local, and federal government agencies have determined that the



Meg Moorehead
LEG oil train RES
February 10, 2014
Version 1

transport of petroleum by rail meets established public safety and environmental protection standards.

Section 5. The City Council requests that the Seattle Fire Department and Seattle Office of Emergency Management to review and, if needed, update the City's incident response plans for the increasing risk imposed by the transport of petroleum by rail with a report back to the relevant committees of the City Council by June 20, 2014.

Adopted by the City Council the ____ day of _____, 2014, and signed by me in open session in authentication of its adoption this_____ day of _____, 2014.

_____
President _____of the City Council

THE MAYOR CONCURRING:

_____
Edward B. Murray, Mayor

Filed by me this ____ day of _____, 2014.

_____
Monica Martinez Simmons, City Clerk

(Seal)

Form last revised: December 31, 2013 3

THIS VERSION IS NOT ADOPTED

CITY CLERK

Our Office of Emergency Management and Seattle Fire Department are pulling together this report and we would be happy to share the findings with you once it is completed.

The Washington State legislature recently took action to study these trains as well. In the Supplemental Operating Budget passed during the most recent legislative session, the Washington State legislature funded a $300,000 study of oil shipments through Washington State. The State Department of Ecology study will assess public health and safety as well as environmental impacts associated with oil transport. The study must provide data and analysis of statewide risks, gaps, and options for increasing public safety and improving spill prevention and response readiness. The department shall conduct the study in consultation with the State

Department of Transportation, the Emergency Management Division of the Military Department, the Utilities and Transportation Commission, tribes, appropriate local, State, and Federal agencies, impacted industry groups, and stakeholders. The department must provide an update to the Governor and legislature by December 1, 2014, and a final report by March 1, 2015. We will certainly be working closely with the State as they work on their study and provide them with the necessary information from our own analysis.

I would recommend that the Federal Railroad Administration take a similar action and identify nationwide those areas where the combination of increased transport of oil and already identified vulnerabilities to natural disasters, dense populations, and security weaknesses intersect. This will then help inform policymakers and others about where possible disaster mitigation funding should be spent or where the rail companies themselves should take action.

Another recommendation, specifically for earthquake prone areas like the Pacific Northwest, is to invest in earthquake early warning systems. These systems make communities safer by sensing earthquakes at their source and literally "radioing" ahead to say seismic waves are coming. Warnings can be used to safely and automatically halt transportation like trains, traffic and elevators. Warnings can be broadcast to the public to allow people to "drop, cover and hold on." Early warning systems work best when the earthquake source is far away. They are uniquely suited to the Pacific Northwest because our area is subject to huge earthquakes centered offshore. These earthquakes are similar to the one that devastated northern Japan in 2011. An early warning system could provide coastal communities and the densely populated Puget Sound region up to 5 minutes lead time. Early warning systems are not a magic bullet for every kind of earthquake. If an earthquake happens right under your community the warning time might be only a few seconds, but even a few seconds allow a number of automatic actions to protect factories, critical lifelines, and computer systems. And for the region's largest disaster risk, large offshore earthquakes, an early warning system makes a lot of sense.

The increasing volume of crude oil transport speaks directly to the need for robust emergency management programs at the local level. Congress has long sought better measurements of the country's preparedness to deal with emergencies like those suffered by Casselton, North Dakota. I respectfully offer you the professional yardstick for measuring accountability of emergency management programs—the Emergency Management Accreditation Program (EMAP) standards. In the same manner as the Federal Emergency Management Agency (FEMA) has funded cooperative agreements with EMAP to assess the viability of State and territorial emergency management programs, consider a cooperative agreement with the EMAP program to assess the programs in the 50 most populous cities and counties through which oil train traffic would increase. Congress would get specific metrics on the capabilities of local emergency management programs to analyze their hazards, plan appropriately, educate their public, engage their whole community of stakeholders and most importantly warn and protect their public. (See the EMAP Standard at http://www.emaponline.org/index.php?option=com_content&view=article&id=118&Itemid=110. Place your cursor over "What Is EMAP?" in the top left. Click on "The EMAP Standard" in the dropdown box. On the next page, click the icon on the right for the "Emergency Management Standard by EMAP.")

CONCLUSION

The safety of our public must always be our chief criteria for measuring the cost/benefit of increasing hazards. Allowing adequate time for thorough local, State, and Federal emergency planning to address these impacts is critical.

In the Pacific Northwest where rail lines travel over soils susceptible to earthquakes, an early warning system like those used in Japan to slow or stop their passenger trains would be a wise investment with benefits that mitigate more than just train accidents.

The tool to measure the adequacy of local emergency management programs already exists—the Emergency Management Accreditation Program. Please support FEMA in extending a cooperative agreement with EMAP to assess the most populous cities and counties through which rail lines run.

Senator MURRAY. Thank you very much. Chief Pellerin.

STATEMENT OF TIM PELLERIN, FIRE CHIEF, RANGELEY FIRE /RESCUE DEPARTMENT

Mr. PELLERIN. Good morning, Madam Chairman, Ranking Member Collins, members of the committee. I would like to start by first

saying thank you to both the chairman and Ranking Member Collins for inviting me down to testify, and especially to Ranking Member Collins for her dedicated and unwavering support of the first responders of the State of Maine.

My name is Tim Pellerin. I am the fire chief of the Town of Rangeley, which is located 50 miles west of the capital of Augusta in the western mountains of Maine. My department consists of 24 paid on-call volunteers. We cover 19 towns, townships, and plantations covering over 500 square miles, which has a population of 3,300, as well as the 10,000 during the recreational seasons.

In the early morning of July 6, 2013, an oil freight train with 70-plus cars, the bulk of which were carrying crude oil each containing 44,000 gallons, lost its brakes and careened into the village Lac-Mégantic. The unmanned train derailed, spilling its contents and igniting. The ensuring fire and explosions wound up destroying six city blocks, caused millions of dollars of damage, and resulted in the fatalities of 47 people.

To start from the beginning, at 4 a.m., the Franklin County Emergency Management Office in Maine received a call from Mutual Aid Assistance from the village Lac-Mégantic. I, along with seven other Maine fire departments, responded with eight pieces of fire apparatus, which consisted of various types of equipment, and 30 volunteer firefighters.

Arriving in Lac-Mégantic shortly after 6 a.m., we were faced with a true disaster with over 30 buildings on fire, six city blocks destroyed, a municipal hydrant system rendered completely inoperable due to the oil explosions. In addition, there were over 40 tank cars derailed, ruptured, leaking, and on fire. We were also faced with about a dozen derailed cars that were full, in jeopardy of exploding due to their proximity to the cars already on fire.

After assessing our situation and meeting with our Canadian counterparts, we were able to set our two highest priorities. The first was to get water to the buildings on Main Street that were still burning, and the second was to get water to the overheated rail cars before they exploded. We did this by utilizing our apparatus and hose and establishing a water supply draft from Lac-Mégantic over 3,000 feet away.

For the next 30 hours, apparatus from Maine was used along with the equipment from Canada, pumping over a million gallons of water in an attempt to contain this fire from spreading and doing any more damage. Eight thousand gallons of foam were trucked in from a refinery in Toronto to help extinguish the burning blaze. By noon time on Sunday, July 7, the burning rail cars had been extinguished with the foam. It took over 6 hours to finally extinguish all the burning, leaking cars, and by 2 p.m. Sunday, we had secured our equipment and were cleared to return back to Maine.

As we left this tragic scene, there were hugs, tears, and cheers saying thank you to the USA, thank you to the American firemen, and thank you for coming to help save our village. We arrived in Maine 2 hours later after 30 hours of operation in Canada. On the back on our aerial ladder tower truck in Rangeley, we had a 3′-by-5′ American flag secured to a safety rail that we had placed there for our Memorial Day parade in May. Throughout the weekend,

that flag became a point of focus, a symbol of help, and a symbol of hope for many Canadian firefighters, who often would come up to the truck and ask if they could have their picture taken with it.

After having bonded with our Canadian counterparts during those many long and strenuous hours, we invited them to the Town of Rangeley in September to reflect on our experiences that we had learned together. It was during this event that we presented the same American flag that hung on the back of our fire truck to our Canadian brother firefighters, the same flag that many Canadian firefighters came to realize was their symbol of help in their greatest hour of need. It was a bittersweet event as we formed a respect and friendship for each other, solidifying the firefighter bond of brotherhood and proving that this bond knows no borders.

However, we wish this had never happened and can only hope that those who have the power to make the change will do whatever it takes to prevent any such disasters in the future. The lessons we learned from this tragedy were many, including how a disaster such as this can affect a small community in many ways. It has affected both the operations and the morale of both the local fire department and community, of course, but at the same time, it strengthened our bond of friendship and brotherhood of our Canadian brother firefighters.

It is my opinion that a two-sided approach should be taken in order to improve and maximize the focus of rail and transport safety in America. I believe we need to be proactive rather than reactive, as well as being properly trained in large-scale disasters such as this.

First, I feel exactly as Ranking Member Collins stated. We need to do planning through enforcement. All the Federal, State, and hazardous materials laws must be enforced, regulated, and maintained for the rail transportation and shipping industry safety. Second, we need to make sure that both rail shippers and transporters have adequate plans in place so they may respond swiftly and appropriately for support during future major spills and disasters to which occurred in Lac-Mégantic.

Preparedness, we need to make sure that we develop and exercise realistic plans that when put to the test will work on all levels, especially the local level for both first responders, the rails, the transporters, but, most importantly, our citizens. And lastly, first responder large scale disaster training. We have got to have realistic large scale hazardous materials disaster training—my recommendation is Web-based with scenarios—at all levels, including the local levels that encompasses hazardous materials response, not just the large metropolitan areas, but for the urban and rural departments as well. Basically a program that would reach as many first responders and their mutual aid partners as possible so they can both train and respond to large-scale disasters and events with each other.

In conclusion, it is my belief every fire department in the Nation is well prepared and ready to handle the everyday common emergencies. However, events such as Lac-Mégantic teach us that we must work hard to prepare, train, respond to, and recover from future and similar events of this magnitude. We need to do our due

diligence to be sure that whatever future path is taken, it leads us to its tangible results with real long-term solutions.

The loss of lives and properties, the despair that we saw, the heartfelt thanks we received lays a testament to the fact that although our work was well done and appreciated, we must do whatever it takes to prevent such an unfortunate event from taking place in the future.

Thank you, Madam Chairman, Ranking Member Collins.

[The statement follows:]

PREPARED STATEMENT OF TIM PELLERIN

Good morning, Madam Chairman, Ranking Member Collins and members of the subcommittee.

My name is Tim Pellerin. I am the Fire Chief for the Town of Rangeley, Maine, which is located 50 miles west of the capital of Augusta in the western Maine Mountains.

The Rangeley Fire/Rescue Department consists of 24 paid on-call members and covers 19 towns, townships and plantations, covering 500 square miles. The area has a year round population of around 3,300 which swells to over 10,000 during the recreational seasons.

In the early morning of July 6, 2013 an oil freight train with 70-plus cars, the bulk of which each car contained 44,000 gallons of oil, lost its brakes and careened into the village of Lac-Mégantic. The unmanned train derailed, spilling its contents of oil and ignited. The ensuing fire and explosions wound up destroying six city blocks, caused millions of dollars of damage, and resulted in the fatalities of 47 people.

To start from the beginning, at about 4 a.m., Franklin County, Maine received a call for mutual aid assistance to the village of Lac-Mégantic which is about an hour and a half north of Rangeley, across the border in Canada. We, along with seven other Maine fire departments, responded with eight pieces of fire apparatus which consisted of various types of fire and emergency equipment and 30 volunteer firefighters.

As we crossed the Coburn Gore Border crossing into Canada, we could see large plumes of smoke from over 30 miles away.

Arriving in Lac-Mégantic shortly after 6 a.m., we were faced with a true disaster, with over 30 buildings on fire, six city blocks destroyed, and a municipal hydrant system rendered completely inoperable due to the oil explosions. In addition there were over 40 tank cars derailed, ruptured, leaking, and on fire. We were also faced with about a dozen derailed rail cars that were full and in jeopardy of exploding due to their proximity to the cars already on fire.

After assessing our situation and meeting with our Canadian counterparts, we were able to set our two highest priorities. One was to get water to the buildings on Main Street that were still burning, and two was to get water to the overheated railcars before they exploded. We did this by utilizing our apparatus and hose to establish a water draft supply from Lake Megantic, which was over 3,000 feet away from the fire scene.

For the next 30 hours apparatus from Maine was used along with equipment from Canada, pumping over a million gallons of water in an attempt to contain the fire from spreading any further. In addition, 8,000 gallons of foam were trucked in from the refinery in Toronto to help extinguish the burning rail cars. By 12 p.m. on Sunday, July 7, the burning rail cars had been extinguished with foam. It took over six hours to finally extinguish all of the burning and leaking train cars with foam. By 2 p.m. Sunday we had secured our equipment and were cleared to return back to Maine.

As we left this tragic scene, there were hugs, tears, and cheers saying thank you to the USA, thank you to American firemen, and thank you for coming to help save our village.

We arrived back in Maine 2 hours after starting the trip home, and having just completed over 30 hours of operations in Canada.

On the back of the aerial tower ladder truck from Rangeley there was a 3' x 5' American flag secured to a safety rail that we had placed there for our Memorial Day parade in May. Throughout the weekend that flag became a point of focus, a symbol of help and hope for many Canadian firefighters, who would come up to the truck to ask if they could have their picture taken with it.

The lessons we learned from this tragedy were many, including how a disaster such as this can affect a small community in many ways. It has affected both the operations and the morale of both the local fire department and community of course, but at the same time it strengthened our bond of friendship and brotherhood with our Canadian brother firefighters.

Upon arriving in Canada, we had to overcome many obstacles. First, there was no radio communications. Over 80 miles away from our dispatch center, we had no way to communicate with them. Our radio frequencies were incompatible with those in Canada. In addition we did not speak the same language. We were fortunate to find an interpreter within the fire department who was able to work with us over the weekend. Fire hose couplings also posed a problem as our hoses were not compatible with theirs. Much of our equipment was completely different from the Canadians fire equipment.

My conclusions are as follows. It is my opinion that a two-sided approach should be taken in order to improve and maximize the focus of safety in the transportation of hazardous materials within the United States. I believe we need to be both proactive, rather than reactive, as well as be properly trained in large scale disasters such as this.

First off, I feel it's important to be proactive by doing the following:

—*Enforcement*.—All Federal and State hazardous material laws must be enforced, regulated and maintained for both the rail and transportation shipping industry.

—*Planning*.—We need to make sure that both rail shippers and transporters have adequate plans in place so that they may respond swiftly and appropriately for support during future major spills or disasters, similar to that which occurred in Lac-Mégantic.

—*Course of Action*.—Develop and exercise realistic plans that when put to the test will work on all levels, especially the local level for both the first responders and the rail and transporters of hazardous materials.

Second, I suggest that we find a way to develop and continue to provide integrated and adequate large scale hazardous materials disaster training similar to the National Incident Management System (NIMS)/Incident Command System (ICS) training we received at all levels.

First Responder Large Scale Disaster Training.—Realistic large scale hazardous materials response training, either Web based or hands-on that encompasses all levels of hazardous materials response, not only for the large metropolitan areas, but for the urban and rural departments as well. Basically, a program that would reach as many first responders and their mutual aid partners as possible, so they can both train and respond for large scale hazardous materials events in conjunction with each other.

In conclusion, it is my belief every fire department in the Nation is well prepared and ready to handle the everyday common emergencies. However, events such as Lac-Mégantic teach us that we must work hard to prepare, train, respond and recover from future and similar events of this magnitude. We need to do our due diligence to be sure that whatever future path is taken it leads us toward tangible results with real long term solutions. The loss of lives and properties, the despair that we saw, and the heartfelt thanks we received lay testament to the fact that although our work was well done and appreciated, we must do whatever it takes to prevent such an unfortunate event from taking place in the future.

After having bonded with our Canadian counterparts during those many long and strenuous hours, we invited them to the town of Rangeley in September to reflect on our experiences we had together. It was during this event that we presented the same American flag that hung on the back of our fire truck to our Canadian brother firefighters, the same flag that many Canadian firefighters had their pictures taken with, that had ultimately become the symbol of help in their hour of need. It was a bittersweet event as we formed respect and friendship for each other, solidifying the firefighter bond of brotherhood, and proving that this bond knows no borders. However, we wish this event had never happened and can only hope that those who have the power to make change will do whatever it takes to prevent any such disasters in the future.

It is my sincere hope that you take some of these suggestions offered to you this morning, and do what you can to help improve the safety of rail transport for the first responders, and help us guard the lives of the citizens we serve and protect.

Senator MURRAY. Thank you very much, Chief, for that really critical testimony. Your firsthand experience makes a huge difference. And I share something in common with Senator Collins as

we are border States to Canada in Washington. And people often talk here about border issues, and for us we know the people across the border are our friends and neighbors. You responded exactly like that, and I just really commend you and your entire department.

Mr. PELLERIN. Thank you.

LOCAL EMERGENCY PREPAREDNESS

Senator MURRAY. Ms. Graff, let me start with you on questions. You have a lot of challenges as the director of Emergency Management in Seattle. And now this growth of crude oil traffic is one more for you to factor in as you plan for a lot of different events.

We are used to seeing energy supplies move by ship and pipeline, but with the growing domestic energy production, we are going to see a lot more of it moving by rail. According to our Washington Department of Ecology, rail shipments of crude through our State increased from very modest levels a few years ago to over 17 million barrels in 2013, and it is expected to triple to 55 million barrels this year.

Can you talk to us about what the City of Seattle is doing to prepare for that increase in the crude oil rail traffic?

Ms. GRAFF. Our city council recently passed a resolution signed by Seattle Mayor Ed Murray that has asked our Office of Emergency Management and our Seattle fire department to analyze what that impact is, and we would be happy to share the results of that. We have been given until June 20 to take a look.

We are kind of at the long end of what your line of questions asked this morning, though, and that is unless the actual product itself can be properly analyzed and, therefore, regulated and, therefore, shared with responders, we are still waiting for those answers as well.

Senator MURRAY. So you need the Department of Transportation to get that information as well.

Ms. GRAFF. Absolutely. Secondly, I would say it is one thing to prepare, and the chief and I were talking about this earlier. It is one thing to prepare for 95 percent of the calls that a community goes on, and we have adequate emergency response for plans for most of the things that we deal on a frequent basis, winter storms, et cetera.

But as we increase the frequency of such a hazard that is carried in these cars with the results that we have seen and heard about today, it is another to expect local departments, whether rural or urban, to have the kinds of materials necessarily—the phone to deal adequately with a fire, the public warning systems adequate to talk with members of your community in danger. There is an imbalance when we increase the hazard, but we do not increase the ability of the local community to deal with that hazard.

Those are some of the things that we will be studying and providing in a report to our mayor. We would be happy to share it with this committee.

Senator MURRAY. Okay. Good. I would really like you to do that. I appreciate that.

OIL SPILL RESPONSE PLANS

You heard the first panel this morning. There is a debate about whether the potential risks of these unit trains of oil demand changes and how we approach oil spill response plans for the rail industry.

The NTSB argues that rail carriers would be better prepared to mitigate damage if they had comprehensive oil spill response plans in place to ensure that the appropriate personnel and equipment are available. And as we have seen in some of these recent rail accidents, emergency response activities that have fallen on local communities are often not equipped for these kinds of disasters. I am assuming particularly in rural communities. I wanted to ask you, based on your experience do you think there should be a more robust spill response mandate on rail carriers.

Ms. GRAFF. I do, and I was in the community of Bellevue when the Wahkiakum County incident happened with Olympic BP. And we had infrequent contact with even pipeline carriers before that incident, and it is unfortunate that we have to wait until after an incident that we wind up disclosing more information.

A comprehensive emergency plan means that we have all talked with each other, and we have discussed all the products, all the hazards, all the response capabilities, and how we can fill any gaps. We cannot adequately measure gaps until we are comprehensive in our planning. We are delighted to come to the table and do that on a regular basis with many of our community members—the American Red Cross, the Coast Guard, the Navy, our colleges and universities. We would welcome that opportunity to look at a truly comprehensive plan in partnership with the railroads.

HAZMAT TRAINING

Senator MURRAY. Okay. I understand that railroad companies have conducted a number of HAZMAT safety training classes throughout our State. Do you know whether Seattle has received training and equipment resources from the railroads that are operating in our——

Ms. GRAFF. I know that the Seattle fire department has received training. I am not clear as to whether they have received any equipment. I would be happy to follow up and get back to you.

Senator MURRAY. Okay. If you could find that out.

I know that class one railroads have committed to spending $5 million to develop a specialized crude by rail training program for our local emergency responders at the Transportation Technology Center that is actually in Pueblo, Colorado. I know Seattle firefighters have gone through hazardous material training there already. Is that training easy to access? Have our Seattle emergency responders found these to be useful?

Ms. GRAFF. Since the program at Pueblo is grant funded, it is easy to access. It is not easy to pay for the backfill in overtime costs of the firefighters that we send. So we have to budget carefully to send the kind of people that we hope learn the material, come back, and act as trainers to the remainder of the department.

Senator MURRAY. Thank you. Chief Pellerin, your testimony was very moving. I cannot imagine what it was like for you to get that call and for your volunteer fire department to respond to that.

I wanted to ask you, during your response at that incident, how helpful was the local railroad? Did they provide any assistance with the actual emergency effort? Did they clarify what product was being loaded into those cars, anything like that?

Mr. PELLERIN. Madam Chairman, as of 2 weeks ago, we learned the cars were placarded incorrectly and identified as the wrong product, number one. Number two, on Saturday afternoon, three representatives from the rail industry showed up and took pictures and left. It was up to us with the Canadian counterparts in the Incident Command Group to determine that foam was the best applicable extinguishing agent. We had to get the foam. And it virtually was the Canadians' Incident Command System that determined that the best approach was to get 8,000 gallons of foam from Toronto, 7 hours away from the refinery. That was not the plan of the rail company. That was the plan of the Incident Command System.

This clearly identified that there was a failed—it was fail in place. There were no preemptive plans to help us to help Lac-Mégantic and them, and for the Emergency Management System, planning is the big piece of this. We need to enforce planning because to wait for the 9–1–1 call to come in, it is way too late.

Senator MURRAY. And you are there, and you do not know what you are dealing with in that car.

Mr. PELLERIN. Absolutely. And, you know, that particular day, and I was speaking to some of the firefighters in Lac-Mégantic because them being there first, they told us the stories of how the oil ran down the street like hot lava. And they actually saw people step out of their homes and be vaporized in the oil.

Senator MURRAY. Because they did not know what it was.

Mr. PELLERIN. Saw tragic death instantly. We got to, therefore, through planning, preparation, and preparedness, long before a response, do whatever it takes in America to prevent this from ever happening anywhere in our communities.

Senator MURRAY. So from your experience as a firefighter, is there a difference or something unique about fighting a crude oil fire versus some of the other types of fires that you face?

Mr. PELLERIN. Absolutely, Madam Chairman. I think the biggest part is we are prepared for the residential, common, everyday emergencies. We are not prepared for a major disaster like this. And when we are, the FEMA regulation says that generally, you know, it takes 72 hours before FEMA could come in and support in a major crisis.

But we have got to do something between that 72 hours and the first operational period that we are there, the 12 hours. Somewhere in between there, somebody has got to help support our programs and come in and be our back support, and say to us, we are here to help you. We have all the answers to your questions. We can provide you this, this, and this.

That did not happen that day in Lac-Mégantic, and there needs to be a better preparation, better planning, and better response by the oil and rail companies who ship this. And they need to be held responsible for that.

Senator MURRAY. Thank you very much for your testimony.
Mr. PELLERIN. Thank you.
Senator MURRAY. Senator Collins.

RAIL NOTIFICATIONS

Senator COLLINS. First, let me begin by thanking you both for your very helpful testimony. Oftentimes when we have hearings in Washington, we will hear from policy experts, Cabinet secretaries, as you have seen today. But it is so important for us, if we are going to shape the budget correctly, make the right policy decisions, to hear from those of you who truly are on the front lines. When disaster strikes, people in your communities do not dial 202, the Washington, DC area code. They dial 9–1–1. And I am so impressed to hear the testimony of both of you.

Chief, your testimony was both riveting and inspiring. It was also troubling to hear you say to the chairman that you did not get help from the railroads. That is very troubling to me.

I have a question for both of you, and that is, are you informed when hazardous materials are being transported through your communities or near your communities? Is there any sort of notification process so that you would be alert that there is—that there are tankers of crude oil that are being shipped by rail? Ms. Graff.

Ms. GRAFF. We are not.

Senator COLLINS. You are not. Chief.

Mr. PELLERIN. Senator Collins, no, we are not. Once a year we receive a hazardous materials report of what the companies are shipping over, whether it is via the rails, or road transportation, or any other type of transportation. But that is once a year, and that basically tells us the products, the quantities. And we get hundreds of these reports based on how much material is shipped through your communities.

And I can honestly say that that morning I did not take the opportunity to run to my office, try to figure out which report I needed to grab to take with me to Lac-Mégantic to try to determine what was burning up there, over a million gallons of which was spilled on the ground and burning. It does not work that way. We need to have a better response from the rail industry, from the shippers who should be responsible for this, who can come and help support us in the first operational period, the first 12 hours, to help provide us information that we need to do our job.

Senator COLLINS. I absolutely agree with you. And I was shocked to hear you say that the railroad representatives just came and took some pictures and then left, and that it was the people on the ground who had to figure out where they could get foam. And, of course, Toronto is a long ways from this small community in Quebec.

MUTUAL AID AGREEMENTS

I am curious whether the fire departments that responded—there were eight fire departments, I believe, 30 firefighters in total from Maine—had mutual aid compacts with one another and with their Canadian neighbors.

Mr. PELLERIN. Well, I can tell you specifically when I got out of bed that morning at 4:00 and I asked the dispatcher where we

were going again and they said Quebec, I thought, I really probably do not have a mutual aid per se agreement. But, Madam Chairman and Ranking Member Collins, let me say this. Every firefighter in the Nation and every fire department in the Nation, though we may not have a formal agreement, there is not one of us that would refuse to go if we were asked to help.

So I have a formal written agreement with the Franklin County Emergency Management Agency, who has a formal agreement with Maine Emergency Management Agency, who is part of the EMAP emergency response program. I do not know if that covers Canada, but I know there was no hesitation from any of my volunteers and any of the other seven departments, as well as the Franklin County Emergency Management Office that morning.

We got up, got out of bed, got dressed, grabbed our equipment, grabbed our day bags, and we headed north to Canada for whatever was waiting for us without any hesitation, and we would do it again. We did not have a—I am not sure if there was, Senator Collins, but we went, and we would never not go.

Senator COLLINS. And that is why I am so proud of our firefighters not only in Maine, but throughout the country. They always answer the call for help. They do not stand on bureaucracy. If someone needs help, you are there, and that is what is expected, but thank goodness you are.

When you arrived in Quebec, and for those who are less familiar than those of us who live in a border State, Quebec is largely French speaking. Was that an issue for you as far as communication? And also, was your equipment compatible with the Canadian equipment?

Mr. PELLERIN. That is a real issue that developed when we arrived. As you know, Lac-Mégantic, that part of Quebec, is very French speaking.

Senator COLLINS. Yes.

Mr. PELLERIN. And we quickly found when we arrived that most—all of us spoke English and unfortunately none of us spoke French. We were not able to communicate with them. We did find a liaison on the fire department who was able to communicate to the command post for us, and we assigned a communications officer with him for the weekend.

So we had no radio communications to our dispatch center. We were 85 miles north of that. We had communications with the Canadian firefighters because we did not have the same radio frequencies, could not speak the same language. Our hose couplings did not fit the same. Our equipment was not compatible. But through all that, we overcame those barriers, found solutions, and made it work so that we could extinguish the fire.

And what we simply did is we had one of our gentleman assigned to the—our liaison for the weekend, and when we needed something we would call our firefighter on the radio and we would tell him. He would relay it to Andre Lefleme, our liaison. He would relay it to the French or the Canadian command post, and they would communicate it back. And that is how we operated for 30 hours.

Senator COLLINS. As usual, you figured out a solution there on the ground. But I thought there probably would be a language barrier given that area of Canada.

WEB-BASED TRAINING

The other issue that you raised was that it would be helpful to have some Web-based training programs. Could you expand a little bit on that? And, Ms. Graff, if you could talk about that as well.

Mr. PELLERIN. Well, and Ms. Graff, my counterpart, explained it well. In a full-time department it is the backfill of hiring overtime. In volunteer departments, to be able to travel out to Pueblo Training Center or any of those places, it is really difficult because my volunteers work full-time jobs during the week Monday through Friday. And they have families and all the other things, so it is really hard. A lot of places, businesses, do not give them the time off to go to these classes. They have to use their vacation or just not get paid. So to travel to go to courses for volunteer rural fire departments is really difficult.

My personal opinion in being in the fire service for 34 years is that a good Web-based program with table top scenarios that we could devise and make—adapt to our local communities that we could work with our mutual aid partners either in a weekend class or an evening class, would be extremely helpful and beneficial to us, I think, because then you could get it down to the rural level, the urban levels, and not just the big metropolitan areas, because it is not just the big metropolitan areas that respond to the calls.

You can clearly see in the small communities of Oso, with that small volunteer fire department, that did not happen in a metropolitan area. That happened in a small rural community. And who would ever think in your mind that they would ask—call the fire department to come dig through the mud to try to find people, but they did. In today's world, they will call us for everything.

Senator MURRAY. Seventy-five feet deep.

Mr. PELLERIN. Yes. So I think Web-based training along with some scenarios would be the most beneficial for us.

Senator COLLINS. I think that is excellent and one we should follow up on. Ms. Graff.

Ms. GRAFF. I could not agree with the chief more. Web-based training is efficient. It is cost effective. I do think at some point when you are dealing with agencies with whom you do not work regularly, there is something to be said for the muscle memory that you get by training with them in the field. For instance, we do a lot of structural collapse training because of our earthquake risk in the Pacific Northwest. And it is not the firefighters who will operate the cranes and the heavy equipment, it is the skilled trade unions. And so, the fire department invites in the skilled trade unions to practice alongside.

It is one thing to learn that in a Web-based sort of training. It is a whole other to be on the wrong end of a back hoe trying to figure out how to collaborate. So I think it is a great start, and because it is cost efficient. It is good all the way across our country. At some point when we talk about specialized resources, we may want to make sure that we are doing everything we can to afford

firefighters' ability to be out there getting that muscle memory training.

STATE HOMELAND SECURITY GRANTS

Senator COLLINS. Thank you. That is very helpful. Let me just make one final comment, and that is the President's budget proposes to eliminate FEMA's State homeland security grant program. And that was a program that Joe Lieberman and I authored many years ago.

I am very concerned about that because it ensured that every State, even rural States, got some minimum amount to try to increase their level of preparedness, whether it is for a derailment or an earthquake or a terrorist attack. And I think it is really a mistake for that program to be eliminated. Training is so important, and one of the things that I know from investigating the poor response to Hurricane Katrina is that a disaster is the worst time to be exchanging business cards and trying to figure out who does what.

So I hope that we can work—it is not under this jurisdiction of this subcommittee, but I think that is a really important program. And I think the experience the chief has talked about just reminds us, as does the experience in Washington State, that disasters are not confined to big cities. And indeed, the resources to respond are likely to be far less available in small communities with on call firefighters.

So I just want to thank you both for what you are doing. Chief, your testimony was so eloquent. I felt like I was there with you, and I know how grateful our Canadian neighbors are. And it is, as Chairman Murray said, part of the wonderful relationship we have always had with our neighbors across the border to help one another in times of extraordinary need.

But my thanks to you and your team and the other seven fire departments that responded without hesitation—without hesitation—to truly a horrific disaster. So thank you for your bravery and your service.

Mr. PELLERIN. Thank you.

Senator MURRAY. With that, I want to thank both of our witnesses—Ms. Graff for coming all the way out here and for sharing your experience. Continue to look forward to work with you on this critical issue. And, Chief, I want to thank you as well.

As you know, the disaster in my State has re-taught me what I know, and our first responders on that scene, those firefighters. I was up there again Sunday, 2 weeks after, and some of those volunteers and those firefighters had not had one day off. They were still up there working. And it is just a real tribute to the kind of people who serve our country and our fire departments.

And so, I know that all of you did not question when you went up to Canada to fight a fire and continue to do so for hours without sleep. Thank you to your entire team and to all of our first responders once again.

ADDITIONAL COMMITTEE QUESTIONS

With that, this has been a critical hearing. We will take what we learned. There will be a number of our colleagues who could not be here today who will be submitting questions for the record.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. ANTHONY FOXX

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. PHMSA has raised concerns about the volatility of Bakken crude oil. Are there other shale deposits in the country raising similar concerns about volatility?

Answer. Yes. PHMSA continues its efforts to gather data and information across the Nation's new and existing shale plays regarding mined liquids and gases.

Question. Does the shipment of ethanol pose a similar concern?

Answer. No. Ethanol is a refined product and therefore has consistent properties. However, ethanol is still a flammable liquid and, due to large volume, can pose a safety risk when shipped in bulk by rail.

Question. In the event of a serious accident, what are the differences in emergency response management and recommendations for first responders responding to an ethanol spill versus a crude oil spill?

Answer. PHMSA's 2012 Emergency Response Guidebook (ERG) recommends similar methods for responding to incidents involving ethanol and crude oil. Both are classified as flammable liquids; however, the primary difference is that an ethanol fire requires alcohol-resistant foam versus regular foam which can be used to distinguish a crude oil fire.

Question. How is DOT working with other Federal agencies, such as the EPA and DHS, to ensure the safety of hazardous materials shipped by rail and that States and localities have the information and capacity to respond to accidents if they occur?

Answer. DOT continues to liaison with other agencies to provide a more comprehensive approach to ensuring safety of transporting hazardous materials by rail. PHMSA is exchanging energy information with DOE's Energy Information Administration, specifically on the production and commodity flow of crude oil. Additionally, PHMSA's outreach campaign is rooted in local communities to ensure they have the information and training they need through grant programs, workshops, and publications.

Question. Who is responsible for ensuring effective local emergency response in the event of a crude oil train accident?

Answer. State and local emergency officials are responsible for ensuring effective response in the event of a crude oil incident. Pipeline and Hazardous Materials Safety Administration's (PHMSA) regulations prescribe requirements for offerors and carriers intended to assist local emergency responders. For certain trains, rail carriers are required to provide information regarding the location of all rail cars containing hazardous materials in a train as well as emergency response information. This information is intended to enable first responders to easily identify rail cars (and the hazardous material) involved in a train accident and to develop and execute an effective response.

Regulations also require carriers of petroleum oil to develop and implement oil spill response plans intended to prevent and contain spills of oil during transportation.

There are two levels of requirements for response plan: basic and comprehensive. The basic plan, required for transporters of petroleum oil in a packaging with a capacity of 3,500 gallons or more, must (1) set forth the manner of response to discharges that may occur during transportation; (2) take into account the maximum potential discharge of the contents from the packaging; (3) identify private personnel and equipment available to respond to a discharge; and (4) identify the appropriate persons and agencies (including their telephone numbers) to be contacted in regard to such a discharge and its handling, including the National Response Center. The comprehensive plan is more detailed. The threshold for the requirements for a comprehensive oil spill response plan is a quantity greater than 42,000 gallons per package. Currently, there are no rail tank cars with a capacity of over 42,000 gallons that transport petroleum oil.

Question. Given that response capabilities may vary across the country, particularly in very rural areas, how can we ensure an effective response wherever crude oil and ethanol are transported by rail?

Answer. Because effective regulatory action takes time to develop, steps have been taken in the interim to ensure effectiveness of emergency response through improved awareness and capabilities of emergency responders across the Nation. On January 16, 2014, I issued a "Call to Action" challenging all stakeholders, including CEOs of member companies of the American Petroleum Institute (API) and CEOs of the railroads, to identify prevention and mitigation strategies that can be implemented quickly to enhance the safe transportation of crude oil by rail. As a result of the Call to Action, on February 21, 2014, the Association of American Railroads agreed to, among other actions, conduct an inventory of emergency response resources along crude oil train routes and share this information with local emergency responders, work with communities on key crude oil train routes to address location-specific concerns, and provide $5 million to develop and provide training on safe hazardous materials transportation. On May 7, 2014, DOT issued an Emergency Restriction/Prohibition Order requiring all railroads that operate single trains transporting 1 million gallons or more of Bakken crude oil to notify State Emergency Response Commissions about the operation of these trains through their States. Specifically, railroads are required to provide the number of trains per week meeting the 1 million gallon criteria (i.e., 35 tank cars) that travel through the State. This information will ensure that first responders are aware of the volume and frequency with which Bakken crude oil is transported through their communities so that they can prepare accordingly.

The Department also supports first responder training. For example, PHMSA provides funding through the Hazardous Materials Emergency Preparedness (HMEP) grant to ensure local emergency responders are prepared for, trained to effectively respond to, and mitigate the consequences of hazmat transportation incidents, such as crude oil by rail. Grantees are encouraged to use the grant for developing or revising emergency response plans and commodity flow studies to account for rail shipments of crude oil and training emergency responders to respond appropriately to accidents involving crude oil.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

Question. Secretary Foxx, thank you for your testimony regarding the Department's work to improve the safe operation of rail cars carrying crude oil and other hazardous materials on our rail systems. In your remarks you referenced the voluntary steps that the American Association of Railroads agreed to take regarding the safe transportation of crude oil via rail. What follow up will the Department be taking to ensure that these steps are being followed and will you recommend mandatory steps if they are not?

Answer. The Department is taking a number of steps on different fronts and will continue to do so when circumstances warrant. On May 7, an Emergency Order directed railroads with trains carrying large amounts of Bakken crude oil to notify the State Emergency Response Commissions (SERCs) of States whose borders they traverse. Over the last 10 months, PHMSA and FRA have undertaken more than a dozen actions to enhance safety while transporting of crude oil, including safety advisories, special inspections, and moving forward to develop a comprehensive rulemaking. We appreciate all the voluntary steps that industry has taken and agreed to take to improve the safe transport of these commodities. However, DOT is also ready to take appropriate steps through either its regulatory authority or emergency order authority to ensure the safe transport of crude oil.

Question. Much of your testimony rightfully focused on efforts to address safety concerns for the communities surrounding rail systems where crude oil is transported. What specific steps is the Department taking, on its own, or with other Federal partners, to mitigate the potential for accidents that could impact the environment and other natural resources?

Answer. The prevention and mitigation of accidents involving crude oil requires a comprehensive approach to the issues that involve the tank cars utilized in crude oil transport, the safe movement of the tank cars by the railroads, and appropriate and sufficient emergency response abilities should a release occur. DOT and the regulated community are working together to address each element of this comprehensive approach. PHMSA, in cooperation with FRA, is developing a comprehensive NPRM that is intended to not only address the appropriate tank car design for cars utilized in crude oil transport but to also identify various operational requirements

to ensure the safe transport of crude oil by rail. You can monitor progress at: (http://www.dot.gov/regulations/report-on-significant-rulemakings).

The Department has also taken the following actions:

—In 2010, PHMSA published the final rule to incorporate provisions contained in certain widely used or longstanding special permits that have an established safety record.[1] As part of this rulemaking, PHMSA permitted the use of alternative rail tank cars upon approval of FRA.

—In 2011, FRA issued a notice of approval pursuant to establish detailed conditions for the manufacture and operation of certain tank cars in hazardous materials service, including the DOT–111 unpressurized tank cars.

—PHMSA received a petition (P–1577)[2] from the Association of American Railroads (AAR) on March 9, 2011, requesting changes to PHMSA's specifications for tank cars (namely the DOT specification 111 tank car) used to transport packing group I and II materials. In addition, during the summer of 2011, at the AAR Tank Car Committee (TCC) meeting, a task force was created with a dual charge to develop an industry standard for tank cars used to transport crude oil, denatured alcohol, and ethanol/gasoline mixtures, and to consider operating requirements to reduce the risk of the derailment of tank cars carrying crude oil and ethanol.

—On March 1, 2012 the task force finalized its recommendations. Unfortunately, the task force did not address many of the recommendations provided by PHMSA and FRA. After considering the variation between the various stakeholders and the lack of actionable items by the task force, PHMSA decided to initiate an advanced notice of proposed rulemaking (ANPRM).

—In May 2012, PHMSA initiated an ANPRM to consider revisions to the Hazardous Materials Regulations to improve the crashworthiness of railroad tank cars. The ANPRM was responsive to Petitions for Rulemaking submitted by industry and recommendations issued by the National Transportation Safety Board (NTSB).[3]The ANPRM was also designed to build and improve upon the findings of the TCC and sought to examine the differences in the DOT approved tank car pursuant to the January 25, 2011 Notice and the tank car proposed in AAR's petition.

—Between April 2012 and October 2012, PHMSA received four other petitions from concerned communities and various industry associations requesting further modification to the tank car standards. The consideration of these additional petitions delayed the publication of this ANPRM.

—In 2012, PHMSA's Bakken Field Working Group and FRA's Bakken Rail Accident Mitigation Project were established.

—On August 2, 2013, DOT issued Emergency Order No. 28, requiring the railroads to properly secure rolling equipment. FRA and PHMSA also published a Safety Advisory recommending railroads take additional action to reduce risk throughout the rail network.

—In 2013, FRA and PHMSA began an intensified effort in the Bakken oil region to verify that crude oil is being properly classified in accordance with regulations, conduct unannounced inspections, and increase data collection and sampling.

—On September 6, 2013, PHMSA published an ANRPM to request further information regarding the crashworthiness of railroad tank cars.[4]

—On November 14, 2013, PHMSA and FRA issued a safety advisory reinforcing the importance of proper characterization, classification, and selection of a packing group.

—On January 2, 2014, PHMSA issued a safety alert to notify the general public, emergency responders, shippers, and carriers that recent derailments and resulting fires indicate that the type of crude oil being transported from the Bakken region may be more flammable than traditional heavy crude oil.

—On January 16, 2014, Secretary Foxx issued a "Call to Action" challenging all stakeholders, including CEOs of member companies of the American Petroleum Institute (API) and CEOs of the railroads, to identify prevention and mitigation strategies that can be implemented quickly to enhance the safe transportation of crude oil by rail. As a result, both the railroad and petroleum industries have renewed their commitment to enhancing emergency response communications and training.

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[1] See Federal Register http://www.gpo.gov/fdsys/pkg/FR-2010-05-14/pdf/2010-11570.pdf.

[2] See http://www.regulations.gov/#!documentDetail;D=PHMSA-2011-0059-0001.

[3] See NTSB recommendations: R-07-4, R-12-5, R-12-6, R-12-7 http://www.phmsa.dot.gov/hazmat/regs/ntsb/rail.

[4] See Federal Register http://www.gpo.gov/fdsys/pkg/FR-2013-09-06/pdf/2013-21621.pdf.

—On February 10, 2014, PHMSA met with emergency response stakeholders and industry groups to discuss training and awareness related to the transport of Bakken crude.
—On February 25, 2014, the Department issues an Emergency Order (EO) requiring stricter standards for testing and classification of crude oil transported by rail.
—PHMSA conducted a Multi-Agency Strike Force Operation in the Bakken region in February involving five Federal agencies and one State agency: PHMSA, Federal Motor Carrier Safety Administration (FMCSA), FRA, U.S. DHS Customs & Border Protection, and the North Dakota Highway Patrol Commercial Motor Vehicle Enforcement.
—On May 7, 2014 the Department issued an Emergency Order requiring railroad carriers to inform first responders and notify State Emergency Response Commissions about crude oil being transported through their towns and communities.
—On May 7, 2014, PHMSA and FRA issued a Safety Advisory requesting companies to take steps to avoid the use of DOT 111 tank cars when transporting Bakken crude oil.
—Annually, FRA and PHMSA both provide grants that support community awareness and emergency response. For example, since 1993, PHMSA's Hazardous Materials Grant Program has provided funding to ensure local emergency responders are prepared and trained effectively to respond to and mitigate the consequences of hazmat transportation incidents.
—DOT has gotten commitment from industry to address safety issues. For example, the American Petroleum Institute, American Chemistry Council, and the railroad industry committed to developing an inventory of emergency response resources along routes over which trains transporting large amounts of crude oil operate. Relevant information from the inventory will be made available to appropriate emergency responders. Furthermore, the railroad industry has committed approximately $5 million to develop and provide a hazardous material transportation training curriculum applicable to petroleum crude oil transport for emergency responders. The industry will also fund a portion of training costs through the end of 2014.

QUESTIONS SUBMITTED TO HON. DEBORAH A.P. HERSMAN

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. What does the Federal Railroad Administration need to do to ensure that freight rail has an equivalent level of preparedness to the pipeline and maritime industries?

Answer. In response to the Lac-Mégantic, Quebec accident, for which the NTSB is providing technical assistance to the Transportation Safety Board (TSB) of Canada, we issued companion recommendations to address emergency response planning and to ensure the same level of response is available in the rail industry as is in the pipeline and marine industries. The Lac-Mégantic accident shows that railroad accidents involving crude oil have a potential for disastrous consequences and environmental contamination equal to that of the worst on-shore pipeline accidents. Although railroad accidents involving large numbers of crude oil tank cars can have similar outcomes, oil spill response planning requirements for rail transportation of oil/petroleum products are practically nonexistent compared with other modes of transportation. Current regulations do not require railroads transporting crude oil in multiple tank cars to develop comprehensive spill response plans and have resources on standby for response to worst-case discharges. Although simple plans must be developed, the plans are not reviewed to evaluate the capability of rail carriers to respond to and mitigate discharges.

In the preamble to the June 17, 1996, final rule,[1] the Research and Special Programs Administration (RSPA)[2] stated its belief that 42,000 gallons in a single packaging is an appropriate and reasonable liquid quantity for a finding that a release would cause substantial harm to the environment, and thus should be the threshold for comprehensive planning. However, RSPA noted that on the basis of available information, no rail carrier was transporting oil in a quantity greater than 42,000 gal-

[1] Federal Register 61, no. 117 (June 17, 1996): 30533.
[2] RSPA was abolished by act of November 30, 2004 (118 Stat. 2424–2426), and certain duties were transferred to both PHMSA and the Administrator of the Research and Innovative Technology Administration, DOT.

lons in tank cars. During 1996, when the rulemaking was being considered, there were only 67 tank cars listed in the AAR UMLER[3] file with a capacity equal to or greater than 42,000 gallons. Only six of these cars were being used to transport oil or petroleum products.

The NTSB finds that as currently written, the regulation circumvents the need for railroads to comply with spill response planning mandates of the Federal Clean Water Act. Although the DOT 42,000-gallon threshold for comprehensive response plan development is equivalent to an unrelated threshold contained in a spill prevention, control, and countermeasures rule administered by the U.S. Environmental Protection Agency for nontransportation related oil storage facilities,[4] the DOT regulation is rendered ineffective because of its lack of applicability to any real-world transportation scenario. By limiting the comprehensive planning threshold for a single tank size that is greater than any currently in use, spill-planning regulations do not take into account the potential of a derailment of large numbers of 30,000-gallon tank cars, such as in Lac-Mégantic where 60 tank cars together released about 1.6 million gallons of crude oil.

RSPA stated further that the risk to the marine environment posed by oil in transport is proportional to the quantity of oil that could be discharged in an accident, and when the rule was developed 17 years ago, it was based on the relatively few petroleum shipments by tank car that were not being assembled as unit trains. The NTSB believes that because conditions have significantly changed with the recent massive growth in crude oil transportation, the regulations are no longer sufficient to mitigate the risks of petroleum product releases in accidents. Although no one tank car meets the current threshold for comprehensive spill planning, the Lac-Mégantic accident and the well-known poor lading retention performance history of DOT–111 tank cars have demonstrated that the worst-case release potential of these unit trains, in many cases greater than 2 million gallons, must be considered in the oil and hazardous materials spill planning process.

U.S. Coast Guard regulations for marine tank vessels require spill response planning to address a worst-case discharge, which is defined as the entire cargo on the vessel. Planning to respond to maximum potential releases for trains transporting crude oil, many of which are configured in unit trains as "virtual pipelines" of tank cars, also must take into account the entire quantity of lading.

Question. What are the differences between the standards, regulations and emergency response requirements for the transportation of crude by rail in Canada and the United States?

Answer. Many of the standards, regulations and emergency response requirements in Canada are similar. As a result of the Lac-Mégantic accident, the NTSB and TSB Canada issued companion recommendations to address the same outstanding safety issues: emergency response planning, correct classification of hazardous materials, and route evaluation and planning. We are hopeful that these recommendations will be implemented quickly to provide one level of safety for these trains that routinely travel between the United States and Canada.

In April 2014, Transport Canada announced that it would take action to phase out the DOT–111 tank cars by May 1, 2017. The U.S. Department of Transportation has not issued a companion requirement, but the NTSB has highlighted safety shortfalls of these cars for several years.

QUESTION SUBMITTED BY SENATOR SUSAN M. COLLINS

Question. Chairman Hersman, in your testimony you mentioned that "some railroads" will meet the Positive Train Control (PTC) deadline. Can you please clarify exactly which railroads will have fully interoperable PTC installed on their entire systems by December 31, 2015? Also, can you explain what data NTSB used in order to reach this conclusion?

Answer. The railroads that have informed the NTSB that they will meet the December 31, 2015 deadline are MetroLink, Alaska Railroad, and Amtrak. We have received this information directly from these operators. The Federal Railroad Administration will be responsible for verifying compliance with this law.

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[3] UMLER refers to the Universal Machine Language Equipment Register, which is a file of vital statistics for each rail car in service.

[4] Under 40 CFR part 112, if the facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons it could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil on the navigable waters or adjoining shorelines.

CONCLUSION OF HEARINGS

Senator MURRAY. And this now concludes the last hearing of this subcommittee that we will hold this year. Thank you very much.

[Whereupon, at 12:10 p.m., Wednesday, April 9, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]