

**TESTIMONY BEFORE THE PENNSYLVANIA HOUSE OF REPRESENTATIVES
HOUSE VETERANS AFFAIRS AND EMERGENCY PREPAREDNESS COMMITTEE
REGARDING RAIL TRANSPORTATION OF CRUDE OIL
MARCH 5, 2014**

Good morning. I would like to thank Chairman Barrar and the entire House Veterans Affairs and Emergency Preparedness Committee for inviting Norfolk Southern to submit testimony today regarding the movement of crude oil by rail in the Commonwealth of Pennsylvania. My name is David Julian, and I am vice president Safety and Environmental for Norfolk Southern, a position I have held since 2009. I joined the railroad 43 years ago, in 1971, and have served in a variety of positions in our Operations and Marketing divisions and corporate subsidiaries.

Norfolk Southern's Safety and Environmental Department is responsible for employee workplace and operations safety, public safety, infrastructure security, and environmental protection including emergency preparedness and response through effective risk-management programs.

Corporate Overview

To provide a brief description of Norfolk Southern, we are one of the largest freight railroads in North America. We operate over 20,000 route miles of track in 22 states, primarily east of the Mississippi River. We have approximately 30,000 employees, including more than 5,000 here in Pennsylvania. Our major employment centers in the Commonwealth include Allentown, Altoona, Harrisburg and Pittsburgh. Our total revenue in 2013 was \$11.2 billion.

It should come as no surprise that railroads are very expensive to maintain and operate. Over the past several years, Norfolk Southern's annual capital expenditure program has been in the \$2 to \$2.5 billion range, most of which goes to track maintenance and construction, signals and dispatching technology, locomotive and

freight car purchases, and maintenance shop facilities. In Pennsylvania alone, for the period 2010-2012, we invested more than \$430 million. It is worth noting that unlike other modes of transportation, railroads receive very little public funding, and when we do it is for projects that have clear public benefits. One of the major objectives of these ongoing investments is to make our rail network stronger so that we can handle the increased demands to move freight while maintaining safety and efficiency.

Crude Oil by Rail in Pennsylvania

Specifically as it relates to the movement of crude oil by rail, on an average day Norfolk Southern is operating four to six loaded unit trains of crude oil through Pennsylvania, along our main line route between Pittsburgh and Harrisburg. From Harrisburg, most of those trains are traveling down the east side of the Susquehanna River in Lancaster County to Maryland and ultimately Delaware. We also anticipate serving the facility here in Eddystone with unit trains of crude oil. The routing of those trains would be from Harrisburg to the Philadelphia area via Lebanon and Reading. Norfolk Southern is also moving smaller volumes of crude oil in regular freight service through Pennsylvania destined for New Jersey.

In my testimony today, I will cover several topics associated with moving crude oil safely, the ways that Norfolk Southern and the rail industry are working to advance safety, and steps that have already been taken or are being considered under federal regulatory action.

Crude Oil & Hazardous Material Safety Performance

The growth of North American oil in recent years represents an important opportunity for the United States to reduce our dependence on foreign oil. While this in itself is a positive outcome, the increase in domestically produced energy is creating more economic development opportunities all over the country, which translates into thousands of new jobs, tens of billions in annual savings in our nation's trade deficit,

and large amounts of new tax revenue at the federal, state and local levels. Rail has a critical role in delivering these benefits to our country. Between 2000 and 2013, the U.S. rail industry originated 825,000 carloads of crude oil. 99.993% of those carloads arrived at their destination without a release caused by an accident.

Norfolk Southern's metrics are comparable to those in the freight rail industry generally, and we exceed industry measures in some instances. Between the years 2000 and 2013, NS handled over 5.3 million loaded hazmat shipments, and 99.997% arrived at destination safely without a release due to an accident. Looking more closely at recent performance, in 2013, NS handled over one-half million loaded hazmat shipments, 99.999% of which arrived at destination without a release due to an accident. While these are notable statistics, we continually work to improve safety as even one accident is one too many.

For Norfolk Southern, safety comes first. Our corporate vision is "to be the safest, most customer focused and successful transportation company in the world." Our train accident rate is consistently among the lowest in our industry. Through investment in infrastructure, technology and equipment, and behavior-based safety training, coaching and reinforcing, Norfolk Southern is committed to providing a safe workplace for our employees and operating safely through the communities we serve.

Operating Restrictions that Apply to Crude Oil

As CSX discussed in its testimony, there are various operating restrictions in place to address the safe movement of hazardous materials on the nation's rails. These include regulatory requirements as well as voluntary industry operating practices adopted in the Association of American Railroads (AAR) Circular OT-55 which contains speed restrictions, train inspection requirements, and train handling provisions for Key Trains which encompass the majority of the crude oil traffic. And several Emergency Orders have been issued by the U.S. Department of Transportation (DOT) that

collectively requires a host of safety-driven mandates that apply to crude oil such as securement plans and packaging requirements.

Track Inspections

As an example of the levels to which Norfolk Southern goes to assure safe transit of all commodities carried there are numerous track inspections conducted over routes used to transport hazardous materials. Each week multiple visual inspections are conducted to assure the track and surrounding structure is in compliance with Federal requirements and Norfolk Southern standards. Norfolk Southern also deploys sophisticated rail inspection technologies using ultrasonic, laser, and visual measurement systems to assure proper track standards are maintained. Above and beyond this, new technologies have been deployed on NS locomotives to continuously monitor and report suspected anomalies for investigation and remediation as required. These systems, known as Vehicle Track Interaction systems, use sophisticated sensors and software to detect areas for further investigation, allowing Norfolk Southern to react in near real-time to potential anomalies.

Enhanced Tank Car Standards

As new crude oil sources with apparently higher flammability are used in energy production; as modeling of tank car failures in derailments becomes more sophisticated; and as commercially available materials of construction improve in the marketplace, we also must address the opportunities to reduce the risk of tank cars failing in an incident. Improved tank car construction standards for new builds and retrofits are a must.

Crude oil and thousands of other products are transported by railroads in tank cars safely every day across the nation's railways. The total North American tank car fleet consists of about 335,000 tank cars. Railroads themselves own less than 1 percent of these cars; nearly all are owned by rail customers and leasing companies.

There are dozens of different types of tank cars, approximately 228,000 of which are so-called "DOT-111" general service tank cars. These cars are considered the workhorses of the tank car fleet. Approximately 42,000 of these DOT-111 cars are used to transport crude oil today, and these include various different types of DOT-111 cars.

The AAR Tank Car Committee sets industry standards regarding how tank cars used in North America are designed and constructed. These standards often exceed the requirements of federal standards. The Tank Car Committee is comprised of railroads, rail car owners, rail car manufacturers, and rail hazmat customers that lease tank cars, with active participation from the U.S. Department of Transportation, Transport Canada, and the National Transportation Safety Board (NTSB).

The NTSB has been recommending enhanced standards for DOT-111 tank cars used to transport hazardous materials for years. Railroads also have been aggressively advocating for improved tank car standards for years, and we agree with the spirit of the NTSB's recommendations. We will continue to work cooperatively with the agency as it pursues our joint goal of enhanced transportation safety.

In March 2011, the AAR petitioned the Pipeline and Hazardous Materials Safety Administration (PHMSA) to adopt more stringent requirements for new tank cars used to transport Packing Group I and II hazardous materials, which include most crude oils. These tougher standards called for more puncture resistance through the use of a thicker tank car shell or a jacket, extra protective "head shields" at both ends of the cars, and additional protection for the fittings on the top of a car.

In July 2011, after PHMSA did not act on the AAR's proposal, the Tank Car Committee proactively and voluntarily adopted what the AAR had proposed to PHMSA as the basis for new industry standards for tank cars that are used to carry crude oil. The new standards, referred to as "CPC-1232," apply to new tank cars ordered after October 1, 2011. To date, approximately 18,000 tank cars have been built to this tougher CPC-1232 standard.

More recently, in November 2013, the rail industry filed comments in a PHMSA rulemaking proceeding recommending adoption of safety standards even more stringent than CPC-1232 for new tank cars being built to transport crude oil. The latest recommendation also called for aggressively retrofitting and/or phasing out older tank cars (including CPC-1232 cars and the older "legacy" DOT-111 cars) used to transport crude oil. The November 2013 filing recognizes that input is needed from shippers and tank car manufacturers to determine the precise parameters of a phase-out program and to identify the retrofits that should be required.

The rail industry continues to evaluate new modeling results to support scientifically credible and defensible positions for new tank car standards and retrofits, and further recommendations from the AAR will be forthcoming.

Emergency Preparedness & Response Resources

Norfolk Southern and the rail industry as a whole have a vast amount of resources and expertise that is dedicated not only to preventing incidents, but also to respond to an incident in the unlikely event that one occurs.

Pre-planning for incidents is essential to assist Local Emergency Planning Committees (LEPCs) in assessing the hazardous materials moving through their communities and the safeguards that are in place to protect against unintentional releases. Upon request, Norfolk Southern will provide bona fide emergency response agencies or planning groups with specific commodity flow information covering at a minimum the top 25 hazardous commodities transported through the community in rank order.

In the event of a major rail accident, Norfolk Southern provides train consist data (including shipper, consignee, and commodity descriptions for each hazardous material) to CHEMTREC in order that that information can be shared quickly with federal, state,

and local responders. Additionally DOT regulations require train crews to immediately share this information with emergency responders. Norfolk Southern also is currently participating on an AAR Task Force addressing electronic availability of hazmat information with Railinc, an AAR subsidiary. The goal is to develop a sustainable, accurate system that rapidly provides emergency responders with details about hazmat cargo at the car level, and ultimately to be able to provide the entire train consist information to emergency responders.

Norfolk Southern has well-established, robust emergency preparedness, training, and response programs. We train our own personnel as well as thousands of emergency responders each year. We have a hazardous materials group, an environmental operations group, and an industrial hygiene group that are on 24x7x365 emergency response duty. Many of these specialized personnel are Certified Hazardous Material Managers (CHMMs), Certified Industrial Hygienists (CIHs), Certified Safety Professionals (CSPs) and/or former employees of our emergency response contractors and the AAR Bureau of Explosives (BOE), and all receive regular hazmat training.

Norfolk Southern's emergency response personnel are also certified in accordance with 29 CFR Part 1910.120 as having 40 hours of initial training and annual refresher training under the Occupational Safety & Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) program. Norfolk Southern has over 300 employees who have been trained under this program, referred to as our NS Sentinels. They are located along key train routes across our network. We hold the initial 40-hour training at the Security and Emergency Response Training Center (SERTC), a world-class facility in Pueblo, Colorado that is operated by the Transportation Technology Center, Inc. This is an intensive rail specific course, with classroom instruction, hands on exercises, and it concludes with a full scale mock derailment drill and exercise.

Norfolk Southern's Sentinels are available to assist in the event of a crude oil or other hazardous material incident, and our refresher course from 2013 included a module on the hazards associated with crude oil. This crude oil specific training module was developed in a proactive fashion, even prior to the Lac Megantic incident. This past year, select employees who serve as emergency response personnel also received specialized refresher training for Site Safety Officers (SSOs) and tank car damage assessment training.

In 2013, we trained more than 4,800 state and local emergency responders at 108 locations across our 22-state network, including hundreds of emergency responders at 15 locations across Pennsylvania. In April, over a period of three days we plan to offer training to local emergency responders here in Eddystone. These efforts speak to our strong and active support of the Transportation Community Awareness and Emergency Response Program (TRANSCAER). Our programs to train state and local emergency responders have resulted in NS receiving the TRANSCAER National Achievement Award thirteen (13) times.

In addition to the direct training provided by Norfolk Southern, we also provide scholarships to representatives from emergency management agencies to attend the 40-hour rail-oriented emergency response course at SERTC to enhance their agencies' awareness and response capabilities associated with rail incidents. Norfolk Southern has been sending its own emergency response personnel to SERTC for training since 1991, and we have been issuing scholarships to local emergency management agency personnel to attend this course since 1998.

NS has Master Service Agreements, or what we call MSAs, with 44 different emergency response contractors throughout our system, many of which have multiple office and equipment storage locations, and a vast array of monitoring equipment, containment booms, industrial pumps, and other spill response and heavy equipment.

In Pennsylvania, NS uses six different emergency response contractors, as well as two specialized railroad re-railing and wreck response contractors.

Norfolk Southern also maintains MSAs with environmental consultants for support in environmental remediation and ecological assessments, as well as for worker protection, exposure assessment, vapor plume modeling and air monitoring services.

Vandergrift, PA Derailment

In the event of an incident, NS leverages the emergency preparedness policies and procedures I've just discussed. This was the case with the recent derailment that Norfolk Southern experienced in Vandergrift, Pennsylvania on February 13th. Twenty-one (21) tank cars derailed, including nineteen (19) containing heavy crude oil from Canada. Four of the tank cars leaked an estimated total of approximately 4,000 to 5,000 gallons of crude oil. Our emergency response contractors, consultants and personnel quickly responded to this incident, and the environmental impacts were minimal. There were no fires or injuries associated with this incident, and we worked closely with local, state and federal agencies. A complete investigation of the circumstances surrounding this derailment began immediately, and is still underway with no cause yet determined.

US DOT Safety Initiative with the Rail Industry

Over the past several months there have been numerous discussions between the rail industry and several agencies in Washington about further enhancing safety on moving crude oil by rail. On January 16th, top leadership from the nation's railroad and oil production industries met with U.S. Secretary of Transportation Anthony Foxx to discuss ways to improve the safety of crude oil by rail. At that meeting, Secretary Foxx charged officials from each industry with providing specific information to the DOT on immediate steps that will be taken to improve the safety of crude by rail, with a focus on actions that improve both accident prevention and mitigation.

As a result of this meeting, on February 21st, the U.S. Department of Transportation and the rail industry announced a rail operations safety initiative that goes above and beyond the AAR Circular OT-55 and Federal Railroad Administration (FRA) Emergency Orders. The railroads committed to institute various new voluntary safety operating practices regarding the movement of crude oil by rail. As previously detailed in the CSX testimony, this includes speed restrictions, additional rail inspections, track side monitors, and industry funding of training programs for local emergency responders. Norfolk Southern is a subscriber to this Agreement.

Conclusion

Norfolk Southern shares the urgency of this committee and the public at large regarding the need to augment the safe transport of crude oil by rail. We will continue to work with government, shippers, oil industry customers, and other stakeholders as necessary to identify additional safety enhancing steps that will help make the North American rail network even safer.

Thank you.