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July 22, 2014

The Honorable Anthony R. Foxx
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Foxx,

On June 10, 2014, the State of California Interagency Rail Safety Working Group released its report, "Oil by Rail Safety in California: Preliminary Findings and Recommendations" that describes the State's concerns regarding the current and anticipated increases in shipments of hazardous materials, especially volatile crude oil.[1] The Interagency Working Group's report makes several important recommendations for state and federal actions to increase the safety of rail shipments of crude oil. The California Public Utilities Commission (CPUC) is a participant in this Working Group, and is committed to implementing the Working Group's recommendations, including those below that request further action by the federal Department of Transportation (DOT), and the Federal Railroad Administration (FRA) in particular.

The CPUC is the lead state agency responsible for assuring the safety of the rail system in California and, in partnership with the FRA, enforces federal safety standards. The anticipated increase in crude oil transport into California raises significant concerns for our agency. We appreciate your attention to these issues over the last year, and we agree with you that more needs to be done. Below, I outline several of the tasks that our agency, along with other rail safety experts and other responsible agencies, agree need to be done. We look forward to working closely with you to pursue these common-sense improvements to public safety.[2]

1. Expedite Phase Out of Older, Riskier Tank Cars

Currently, as much as 82% of crude oil in the United States is shipped in older model DOT-111 tank cars. There is growing evidence that such cars are inadequate to protect against vapor explosions of highly flammable crude such as that from the Bakken shale formation.

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[1] http://www.caloes.ca.gov/HazardousMaterials/Pages/Oil-By-Rail.aspx

[2] The following recommendations have been renumbered here from the numbering used in the June 10, 2014, report. Where the CPUC Safety & Enforcement Division has determined that additional enhancements are needed, the recommendations herein are not limited to the recommendations of the report.

The remaining 18% of tank cars are new or retrofitted as a result of recent voluntary industry action to increase safety. We understand the Pipeline and Hazardous Materials Safety Administration (PHMSA) is currently considering regulatory changes that will address tank cars. On May 7, 2014, PHMSA issued Safety Advisory 2014-01 strongly urging the phase-out of the older DOT-111 tank cars—but it did not require this by any certain date. On April 23, 2014, Canada ordered that older tank cars be phased out by May 2017, and that the least crash-resistant DOT-111 tank cars be removed from dangerous goods service within 30 days.

I request that the DOT move expeditiously to finalize new and retrofitted tank car regulations that will result in a more rapid phase out of DOT 111 tank cars.

2. Consider a Moratorium on Shipping Non-stabilized Bakken Crude by Rail.

Recently it has been revealed that the Bakken shale formation crude oil ("Bakken crude") has not been "stabilized," i.e., the volatile gases have not been removed, before shipping in railroad tanks cars, despite the significant risks associated with this practice.[3] There is a real question as to whether Bakken and similarly volatile crude that has not been stabilized should be shipped. Even if it is shipped, there is growing evidence that it should not be shipped in anything but the newest and safest tank cars combined with other safety provisions as I request herein.

Additionally, it is clear from several ethanol train explosions that ethanol tank car breaches pose the same explosive risks as the Bakken crude does.[4] Ethanol should be shipped with the same safety measures as the non-stabilized Bakken crude.

I request that the DOT consider a moratorium on non-stabilized Bakken crude and similarly volatile crude being shipped by rail.

Short of such a moratorium being imposed, I request that any non-stabilized Bakken crude, similarly volatile crude, and ethanol only be permitted to ship in new or retrofitted cars.

3. Identify Priority Routes for Positive Train Control

Positive Train Control (PTC) is an advanced collision-avoidance technology that incorporates GPS tracking to automatically stop or slow trains prior to an accident. In particular, Positive Train Control is designed to prevent train-to-train collisions, derailments caused by excessive speed, and unauthorized movement of trains onto sections of track where repairs are being made or where a track switch is misaligned. The Rail Safety

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3 See, for example, Wall Street Journal, July 7, 2014, *North Dakota Fracking: Behind the Oil-Train Explosions: Volatile Gases Aren't Removed From Bakken Shale Crude; 'The Regulations Are Silent'* http://online.wsj.com/articles/north-dakota-fracking-behind-the-oil-train-explosions-1404761720
See also, State of New York, *Transporting Crude Oil in New York State: A Review of Incident Prevention and Response Capacity,* April 30, 2014, pages 48-49, http://www.governor.ny.gov/assets/documents/CrudeOilReport.pdf.

4 At least six ethanol tank car fire and explosions have occurred in the past five years: Cherry Valley, Illinois, 2009; Tehachapi, California, 2010; Arcadia, Ohio, 2011; Tiskilwa, Illinois, 2011; Columbus, Ohio, 2012; and Plenva, Montana, 2012.

Improvement Act of 2008 requires Class I railroads to install PTC by the end of 2015 on tracks that carry passengers or poison- or toxic-by-inhalation materials. The risks that have been illustrated by the Bakken crude train explosions this past year provide sufficient evidence that the danger posed by this product rises to the level of risk intended to be addressed by the criteria for PTC implementation. Since most routes for these trains already require PTC implementation , any incremental costs will not only be targeted to the new risks, but will be minimal as well.

I request that the FRA identify any routes where crude oil and ethanol trains are expected to run without PTC in California under current requirements and request that DOT consider requiring the implementation of Positive Train Control on these routes.

4. Require Electronically-Controlled Pneumatic Brakes on Bakken Crude, Similarly Volatile Crude, and Ethanol, Unit Trains

Electronically controlled pneumatic (ECP) brakes instantly signal a brake application to all cars, whereas current pneumatic brakes rely on the time it takes to lower the air pressure in the train air brake line, which can be well over a mile long.

This new braking technology provides faster application of brakes and reduces the chances of brake failure. Although each car in a train and the locomotive must be equipped with this technology, unit trains, which typically are used for oil-by-rail transport, are especially suited for this type of technology because all cars travel together and can operate efficiently under an overarching braking system. Benefits include:[5]

- Shorter stopping distances - reduced by up to 70 percent.
- Brake signal transmission rate is increased.
- Brake application rate increased.
- In a derailment, brake application stops other cars faster, reducing the potential for them to derail.
- Graduated brake release - instead of full release with and potential loss of braking air pressure.
- Constant charging of reservoirs to prevent depletion of braking air pressure and loss of brakes.
- Reduction of undesired emergency brake applications.
- Improved train handling.
- Reduction of excessive in-train forces and the resultant derailment forces.
- Less brake shoe and wheel wear.
- Reduced fuel consumption.
- Information on the condition of the braking system is continuously available.

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5 Federal Railroad Administration (2006), *ECP Brake System for Freight Service: Final Report*, Booz Allen Hamilton. http://www.fra.dot.gov/eLib/Details/L02964
See also:
http://www.progressiverailroading.com/mechanical/article/Cost-constraints-economic-conditions-to-delay-widespread-electronically-controlled-pneumatic-brake-implementation--22315
http://www.ntsb.gov/news/speeches/rosenker/mvr080514.html

- Reduction of delays on steep grades, since brake cylinder air pressure retaining valves on cars would no longer need to be set and reset.

Crude oil and ethanol unit trains represent the ideal application of this new technology. Unit train car sets stay together for long periods of service, new car sets are being built, cars are likely undergoing retrofit, and the benefit is magnified by the magnitude of the risk reduction that would be accomplished for these high-risk trains.

I request that the FRA require electronically-controlled brake technology on Bakken crude, similarly volatile crude, and ethanol unit trains.

5. Require Railroads to Provide the State of California Broader Accident and Injury Data

Under federal law, states are entitled to receive information about railroad accidents and injuries provided to the federal government. However, while individual accident reports are available through the FRA's website, the state does not have access to basic, broader data (that the FRA receives) needed to determine accident and injury rates and trends for railroads operating in California—so called "normalizing data." This includes information such as the rate of accidents or injuries based on locomotive miles, passenger and freight train miles, number of passengers transported, and employee hours.[6]

I request that FRA provide state-specific normalizing data to enable state accident analysis, including trend analysis and risk assessment, to evaluate the risks presented by the transportation of oil and ethanol by rail.

6. Ensure Compliance with Industry Voluntary Agreement

Earlier this year the railroad industry agreed with DOT to implement eight voluntary safety measures. While significant, these measures are only voluntary. It is critically important for state and federal authorities to monitor the agreement and ensure that the railroads comply with its provisions. To ensure that they are fully enforceable by federal and state authorities, DOT should codify the agreement into regulation.

I request that the FRA codify in regulation the provisions of the voluntary agreement.

In addition, the agreement calls for railroads to use a more sophisticated risk management tool that accounts for multiple risk factors in determining the safest and most secure rail routes for trains with 20 or more cars of crude oil.

I request that the FRA provide the analysis and results of the route analyses outlined above. This will enable the CPUC to better plan its inspection and risk management activities.

7. Improve Identifiers on Tank Placards for First Responders

[6] Notably, the railroads previously provided this type of state-specific normalizing data for many years for California, but not more recently.

Information about the flash point and vapor pressure of the specific type of crude oil in each tank car is of critical importance in the event of a derailment so that emergency responders can quickly determine what resources and equipment are needed to contain the incident. Currently, this information is on-board the train, but not captured visually on tank car placards. If first responders can quickly identify an incident involving Bakken crude, or similarly volatile crude, from a safe distance by using the visual information on the placard, decisions can be made on whether to attack the fire or spill, or take a more defensive posture and wait for additional resources.

As New York recently concluded in its report, the United Nations, which assigns unique hazardous materials identifiers on tank placards, should recommend new classifications based on crude oil characteristics to enable appropriate packaging and inform response personnel as to the qualities of the crude oil. This would provide the immediate visual identification required. I ask that DOT seek to accomplish these changes.

I request that DOT work expeditiously within the United Nations framework to create new hazardous material classifications. In the meantime, I ask that DOT, at a minimum, require some kind of external visual identification on tank cars of Bakken crude and similarly volatile crude, to aid first responders nationwide.

Thank you for your consideration of these important recommendations. With you, we are committed to assuring the safe movement of our Nation's energy supplies and industrial commodities. I would like to meet with you at your earliest convenience to discuss the status of our shared efforts to improve the safety of crude oil transport for the protection of the public and environment.

Sincerely,

Michael R. Peevey
President

Cc:
Members of the California Congressional Delegation
Joseph P. Szabo, Administrator, Federal Railroad Administration
Cynthia L. Quarterman, Administrator, Pipeline and Hazardous Materials Safety Administration
Cliff Rechtschaffen, Senior Advisor, Governor's Office, State of California
Mark S. Ghilarducci, Director, CalOES