CRUDE BY RAIL
FEDERAL ACTION NEEDED ON PUBLIC SAFETY

1. **The Department of Transportation (DOT) should adopt the strongest tank car standards that protect public health and safety.**

2. **BAN DOT-111 TANK CARS**
   DOT should immediately phase-out the use of pre-2011 tank cars to ship crude oil and ethanol.
   a. Since 1991 the National Transportation Safety Board ("NTSB") has called for the phase-out of DOT-111 tank cars because, "Clearly, the heads and shells of DOT-111 tank cars ... can almost always be expected to breach in derailments that involve pileups or multiple car-to-car impacts."
   b. The current crude by rail fleet consists of approximately 42,550 tank cars. The industry plans to increase rail capacity by adding 61,000 tank cars to the crude oil fleet before removing hazardous DOT-111 tank cars from the rails.
   c. Industry's plan to double the oil tank car fleet without removing the oldest, most dangerous cars increases the risk of deadly derailments, spills and fires.

3. **NOTIFY THE PUBLIC AND FIRST RESPONDERS**
   DOT should require the railroads to notify states, local governments and the public of the number and route of trains carrying crude oil in each state, the nature and type of crude carried, the volume of crude, and emergency preparedness information.

4. **REQUIRE COMPREHENSIVE OIL SPILL RESPONSE PLANS**
   Railroads should be required to prepare comprehensive oil spill response plans for worst-case accidents involving explosive Bakken crude and toxic tar sands diluted bitumen. (This is the subject of a separate rulemaking but has upcoming opportunities to weigh in with DOT as well)

5. **REQUIRE ADEQUATE INSURANCE**
   DOT should require the railroads to demonstrate their financial ability to cover the costs of a worst-case accident. The railroad industry is notoriously under-insured. The cost of the Lac Mégantic disaster is estimated at more than $1 billion and possibly over $2 billion. The railroad had only $25 million in insurance and has since gone bankrupt. Not only would financial assurance requirements spare taxpayers from footing the bill for rail disasters, but also third-party insurers often require additional safety measures that can prevent disasters. (Insurance coverage is not within the proposed regulations but must be addressed by the federal government)

BACKGROUND ON THE FULL SUITE OF ISSUES IN THE RULEMAKING

TANK CAR DESIGNS – The proposed rule floats three options for new tank car designs. All would require improvements beyond the industry consensus standards adopted in 2011, called CPC-1232 tank cars, in the form of jackets, thermal protection, full-height head shields, and improvements to the bottom outlet handle and pressure relief valve. The new industry standard called enhanced CPC-1232 has these features. The rulemaking will determine whether in addition to require:

- Thicker shells – The other options would have 9/16" shells compared to a 7/16" shell in the enhanced CPC-1232 tank car. API and AAR have recently coalesced around a ½" shell. The proposed rule shows that a 9/16" shell improves puncture force by 68% over a 7/16" shell. In addition, DOT has been assessing the benefits of going even further to 5/8" shells.

- Rollover protection and top-fittings protections – The PHMSA car would have rollover protection and greater protection for the top fittings. The proposed rule would not require retrofitting of existing tank cars to meet this requirement (a change made in OIRA review and that differs from the Canadian proposed rule). Reducing the thickness of the tank car shells removes some rollover protection and makes this feature more critical.

- Electronic Pneumatic Control ("ECP") Brakes – The PHMSA car would have ECP brakes, which have benefits in terms of both preventing accidents and reducing the severity of accidents. Industry is resistant to requiring ECP brakes soon because they have not yet been fully tested and proven and ECP brakes must be on all cars in a train. The proposed rule floats a speed limit that would apply to trains that lack ECP brakes, which we support.

- Bottom outlet valves – NTSB has recommended additional protections to prevent bottom outlet valves from ripping off. It has identified elimination of bottom outlet valves or removing them during transport as the most effective options. The proposed rule allows other unspecified means of preventing activation during transport in addition to removing the valves without a performance standard or any analysis of efficacy.

HIGH-HAZARD FLAMMABLE TRAINS – The proposed rule makes most of its provisions applicable to high-hazard flammable trains ("HHFTs"), defined as a train with 20 or more cars loaded with hazardous flammable liquids.

We oppose this threshold and argue for no shipment of crude oil or ethanol in DOT-111 and other hazardous tank cars. Note that crude-by-rail trains likely fall within the HHFT definition, although ethanol may be shipped in manifest trains. Tar sands is shipped in both and the railroads predict (or hope) tar sands unit trains will be the next surge.

RETROFITTING OLD TANK CARS – The proposed rule appropriately requires retrofitting old tank cars to meet the new standards (except for the top-fittings) in order to continue to ship

hazardous fuels in HHFTs. The problem is with the long timeline for the phase out and retrofits.

TIMELINE AND PRIORITIES FOR PHASE-OUTS AND RETROFITS – The proposed rule would phase-out tank cars for use in HHFTs by October 2017 for packing group I, October 2018 for packing group II, and October 2020 for packing group III. AAR and API have teamed up and are asking for a 6-12 month ramp up period, which would push the entire timeline off by as much as another year. Some features of the phase-out are:

- PHMSA proposes to allow industry to grow the crude oil fleet before using newly constructed tank cars to replace hazardous ones, both DOT-111s and CPC-1232s. More specifically, the current crude fleet has 42,550 tank cars. Industry plans to add 61,000 new tank cars to the fleet over the next 4-5 years.
- PHMSA assumes no noncompliant tank cars will be retired. Instead, noncompliant tank cars will be transferred to tar sands and other shipping.
- Our comments propose a phase-out based on the risks posed by the safety deficits in the tank cars. Unjacketed tank cars are far more puncture-prone than jacketed ones and this is true for both DOT-111s and CPC-1232s. A risk-based phase-out would eliminate unjacketed DOT-111s immediately (~22,800 are in the crude fleet). The second stage would phase out or retrofit other DOT-111s and unjacketed CPC-1232s. Jacketed CPC-1232s would be retrofitted next. [Note there currently are about 14,000 CPC-1232s in the crude oil fleet and approximately 37,800 new tank cars are on order).
- The proposed rule puts off retrofitting so that retrofitting will not even begin until 2016 and then 1/3 of the fleet will be retrofitted annually over 2016-2018.
- Jacketed DOT-111s would be transferred to tar sands service in 2017 because no retrofitting is envisioned. It is not until 2018 that unjacketed DOT-111s will be retrofitted for tar sands service.
- We oppose the packing group phase-out scheme because it encourages reducing volatility of Bakken crude in order to allow it to be shipped in DOT-111 and other noncompliant tank cars for longer periods of time. DOT-111s are too dangerous to be used to ship any crude oil. In addition, given the false representation of Bakken as packing group III in Lac Mégantic and other misrepresentations uncovered in DOT's Bakken Blitz, it would be precarious to allow the industry to purport to reduce its volatility so it could be shipped in DOT-111s.
- Note that Canada's phase-out is faster for DOT-111s, prohibiting their use for any hazardous fuel shipments by May 2017.

TRANSFERRING DOT-111S TO TAR SANDS SHIPPING – The proposed rule would allow DOT-111s to be shifted to tar sand shipping without specifying whether dilbit would be shipped in the DOT-111s. Dilbit should be considered a flammable liquid and should not be shipped in noncompliant tank cars.

BRAKING SYSTEMS – The proposed rule would require HHFTs to have upgraded braking systems. Two possible systems – end-of-train ("EOT") braking devices and distributed power ("DP") are already in place on Class I and II railroads' HHFTs. ECP brakes (proposed as a

feature of the PHMSA tank car) are not yet in place. They would reduce accident severity by 36% compared to conventional braking systems whereas EOT and DP brakes reduce accident severity by only 18%. The railroads oppose immediate requirements to have ECP brakes, which must be on every car and locomotive in a unit train. Tank cars can easily be retrofitted to add ECP brakes after construction so subsequent implementation is workable. Our comments urge PHMSA to require ECP brakes as part of the tank car design standards, but possibly postpone implementation of this part of the rule. In the meantime, we support a 30 mph speed limit for HHFTs that do not have ECP after October 1, 2015.

Note that the proposed rule would impose a 30 mph for any train without EOT or DP braking systems without any date restriction **and** it would impose a 30 mph for any train whose tank cars are not operating in ECP brake mode.

SPEED LIMITS – The proposed rule would codify the voluntary industry 50 mph speed limit for HHFTs. In addition, it proposes three 40 mph speed limit options for HHFTs: (1) in all areas; (2) in areas with more than 100,000 people; and (3) in high-threat urban areas. We support the imposition of a 40 mph speed limit in all areas, pointing out the risks, the catastrophes that have unfolded in cities like Lynchburg that have far fewer than 100,000 people, and the places that would be left without protection under the other two options, such as sensitive environments, drinking water reservoirs, schools, industrial facilities and other places where people congregate.

The proposed rule would impose the 40 mph speed limit until the tank cars meet the new standards. We encourage PHMSA to consider a 30 mph speed limit during the transition and to avoid building automatic termination of the speed limits into the rule. Instead, we ask that PHMSA ensure predicted safety benefits have materialized before raising the speed limits.

RAIL ROUTING – PHMSA proposed to extend rail routing requirements to HHFTs. We supported this proposal, but the current rail routing system leaves it to the railroads to assess routing options based on a long list of factors. It is a secretive process that lacks oversight and accountability. We urge DOT to review the routes chosen by the railroads and to determine whether the current routing approach is sufficient to protect the public.

RAILROAD NOTIFICATIONS OF TRAIN ROUTES, FREQUENCY AND EMERGENCY RESPONSE INFORMATION – The proposed rule would codify the May 2014 emergency order that requires the railroads to submit notifications to state emergency response centers that disclose the routes and frequency of trains carrying 1 million gallons or more of Bakken crude in the state and basic emergency preparedness information. Initially, DOT indicated it preferred the information be kept secret and the railroads resisted public disclosure. Many states disclosed the information to the public under state public records acts.

We propose:

1. That the notification requirements apply to all trains shipping crude oil or ethanol (or to HHFTs as a fall back).
2. That the threshold be far lower than 1 million gallons – either one tank car or HHFTs.

3. That the notifications be provided to DOT, which would make them applicable to Freedom of Information Act ("FOIA") and electronic FOIA and thereby foster uniform and proactive public access requirements.

RAILROAD COMPREHENSIVE OIL SPILL RESPONSE PLANS – In an advance notice of proposed rulemaking (it had been included in the proposed rule but was separated out during OIRA review), PHMSA proposed to lower the threshold for comprehensive oil spill response plans ("OSRPs"), as urged by the NTSB. A 1996 rule established a 42,000 gallon threshold per tank car, which essentially exempted the railroads from preparing comprehensive oil spill response plans. Our comments support:

- Lowering the threshold to a single tank car or alternatively to HHFTs.
- Defining the worst-case discharge as spilling of the entire contents of each tank car in a very long unit train. We also support having two worst-case discharge prototypes, one based on an accident spilling explosive Bakken crude and one based on spilling tar sands dilbit.
- Federal approval and accountability – We urge PHMSA to ensure federal review and approval of OSRPs and compliance with environmental analysis and consultation requirements such as those in NEPA, the ESA, tribal consultations, and consultations with state and local governments.
- Transparency – We urge PHMSA to make draft and approved OSRPs available for public comment and affirmatively available to the public.

TESTING, CLASSIFYING AND CHARACTERIZING FRACKED OIL – The proposed rule includes requirements to test and properly classify Bakken and other fracked oil. We support a mandatory testing and classification scheme but oppose using reduced flammability or volatility classifications as a basis for shipping Bakken in DOT-111s longer than would otherwise be permitted. We also support requiring degasification of Bakken and other crude to remove toxic, explosive and corrosive gases.

ENVIRONMENTAL JUSTICE ANALYSIS – We urge PHMSA to assess the disproportionate impacts of crude-by-rail risks to communities of color and low-income communities.

FINANCIAL ASSURANCES – We urge DOT to require railroads and shippers to demonstrate their financial capacity to clean-up a worst case oil spill or accident. This is critical because the railroads are notoriously under-insured. The maximum amount of insurance available on the market is for $1.1 billion, while Lac Mégantic will cost significantly more than that. Many smaller railroads have only $25 million. Requiring financial assurances would ensure the taxpayers will not be stuck footing the bill and will assist in preventing accidents through third-party insurer scrutiny and requirements.

PREDICTING INCIDENCE AND SEVERITY OF ACCIDENTS AND DISASTERS – The proposed rule is predicated on the benefits from reducing the incidence and severity of rail

disasters. Our comments pointed out many ways in which the analysis under-estimated both the incidence of rail accidents and their potential harm. Industry comments claim that Lac Mégantic is an outlier and that future accidents will not be as severe. Given the enormous weight PHMSA is inclined to give to a comparison of costs of implementation and benefits from reduced harm, it is imperative that PHMSA not under-estimate the risks on the rails.