

**BEFORE THE
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION**

NOTICE OF PROPOSED RULEMAKING PROCEEDINGS

Docket No. PHMSA-2012-0082 (HM-251)

**HAZARDOUS MATERIALS: ENHANCED TANK CAR STANDARDS AND
OPERATIONAL CONTROLS FOR HIGH-HAZARD FLAMMABLE TRAINS**

**COMMENTS JOINTLY SUBMITTED BY
THE VILLAGE OF BARRINGTON, ILLINOIS
AND THE TRAC COALITION**

Because no community, whether large or small, has any ability to control the deadly products that move through it on a daily basis in railroad tank cars, they must rely on regulatory protection mandated by the United States Department of Transportation (DOT) and its component Administrations: the Pipeline and Hazardous Materials Safety Administration (PHMSA) and the Federal Railroad Administration (FRA). TRAC greatly appreciates the effort that has been made by PHMSA and FRA to address the clear and present dangers associated with the rapidly expanding transportation of highly flammable liquids in DOT Specification 111 tank cars. However, we urge you to expand your focus by reconsidering and expanding application of the proposed new regulations so as to require the use of the most robust packaging possible to handle the movement of all flammable and combustible hazmat liquids, even when these commodities are not being transported in high hazard flammable trains (HHFTs).¹

¹ Proposed changes to 49 CFR Part 171.8 Definitions

TRAC recognizes that its position will entail some costs as the owners of tank cars would be required to retrofit existing cars or acquire new ones that satisfy the enhanced standards of construction that will be mandated. However, TRAC notes that the one-time costs of retrofitting, when amortized over thirty to forty years, pales in significance to the potential costs associated with a catastrophic incident where damages are measured in billions of dollars and numerous fatalities. When juxtaposed with the \$2.15 billion in revenues that the railroads earned in 2013 by transporting crude oil alone, PHMSA must understand that an aggressive tank car fleet replacement for use in transporting Class 3 flammables and combustibles is a financially viable imperative.

While TRAC recognizes that the railroads must continue to take steps to improve their tracks and operations in order to prevent derailments, it also recognizes that the railroads do not own the structurally deficient equipment filled with flammable liquids that they are required by law to transport. Nor do they perform the tests that are required to ensure that the products in the defective tank cars have been properly classified. As such, not only will the general public benefit, but also the liability interests of the railroad industry will benefit from a rigid timeline that would require DOT-111 and CPC-1232 tank cars to be retrofitted or, in the alternative, completely removed from the transportation of all flammable hazmat liquids, whether in PG I, II or III. Given the undeniable fact that nothing was done by industry to modify the DOT-111 tank car standards for two decades, even though the National Transportation

Board (NTSB) repeatedly called attention to the fact that the DOT-111 was prone to structural failure in accidents, there is no reason to prolong the use of that tank car -- or the insufficiently upgraded CPC-1232 -- in a hazmat transportation service that places the public at risk.

PHMSA Should Apply Any New Standard To All Tank Cars Used To Transport PG I, II and III Hazardous Materials.

TRAC respectfully submits that perpetuating the indefinite use of tank cars that are prone to rupture in derailments to transport a wide variety of flammable/combustible liquids, including ethanol and crude oil, so long as no more than 19 carloads are transported in a single freight train, deprives the public, at large, of truly meaningful protection. TRAC questions the justification for focusing on HHFTs when PHMSA explicitly recognizes that a catastrophic incident could be triggered if as few as 5 tank cars were to split open following a derailment *and* even though PHMSA's analysis of 46 crude/ethanol derailment accidents since 2006 indicates that in 20 of those accidents, the breach of a single tank car resulted in a spill of hazmat with the potential to endanger the surrounding public. Moreover, it is noted that in 9 of the 13 incidents highlighted in Table 3: Major Crude Oil/Ethanol Train Accidents in the U.S. (2006-2014), fewer than 20 carloads of hazmat were breached.

By permitting the continued transportation of highly flammable commodities in a tank car that has been acknowledged to be defective and unsafe, the proposed regulation fails "to ensure that hazardous materials are packaged safely" as required by the federal Hazardous Materials regulations

(HMR). Those requirements apply to all shipments of highly flammable liquids and not just to shipments moving in HHFTs. Yet under the regulations proposed in this NPRM, the deficient workhorse of the rail tank car fleet – the DOT-111 – is somehow deemed suitable for transporting flammable hazmat for another 40 years in anything other than in HHFTs. This “wobble room” latitude in coverage amounts to a full 40% of flammable hazmat not being covered by any new safety enhancements.

Placed in the 2012 data context provided by PHMSA in Table TC 27: *2012 Class 3 Tank Car Originations by Commodity*, this means that at least 281,404 tank car originations could be exempted from improved safety regulations annually. This also means that at least 771 carloads of flammable hazmat will travel each day of the year in deficient tank cars that will be allowed to remain in service throughout the United States for up to their remaining 40 year lifespans. As an additional point for consideration, even that astoundingly large number is only valid if one assumes that these tank car originations remain at the 2012 level as provided for in the NPRM and will not experience any growth despite North America undergoing an unprecedented surge in the exploitation of the continent’s energy resources.

A review of what is considered by PHMSA under this NPRM to be “acceptable” for shipment in a deficient tank car (when it’s not part of an HHFT, which would be the case most of the time) highlights TRAC’s concerns. Such products include diesel fuel (UN1202), gasoline (UN1203), acetone (UN

1090), aviation fuel (UN1863), and corrosive flammable liquids (UN2924).

Plainly, these commodities are highly dangerous whether they are placed in a manifest train carrying one tank car or in a unit train composed of more than 20 tank cars. While focusing on the vision of exploding tank cars transported in mile-long HHFTs handles the unfortunate optics of the danger, the limited proposed regulations sidestep the heart of the underlying problem -- tank cars too dangerous for the shipment of any Class 3 flammable/combustible liquid.

TRAC views this NPRM and its focus on HHFTs as an expedient, but largely hollow solution to the underlying problem of shipping flammable hazardous goods in packaging that is not suitable for the job. As PHMSA has acknowledged in the NPRM, “NTSB indicated that the DOT Specification 111 tank car can almost always be expected to breach in the event of a derailment resulting in car-to-car impacts or pile-ups.”² As PHMSA is also aware, the DOT-111 tank car’s record of rupturing is twice that of other tank cars.³ Statistics clearly show that it doesn’t take a complete derailment of an entire unit train to trigger significant economic and environmental consequences and cause injuries and even deaths, so the entirety of the problem must be addressed in PHMSA’s final rules.

That being the case, PHMSA should follow Transport Canada’s lead and establish a strict timetable that will require TC/DOT-111 and CPC-1232 tank cars to be retrofitted if they are to be used for the transportation of any

² RIA at page 73.

³ Id. P. 12

flammable liquids in PG I, II and III.⁴ By taking that step, essential harmonization can be achieved in the North American transportation of flammable liquids. Given the long acknowledged inadequacies of the DOT-111 tank car, and the reality that the CPC-1232 demonstrated its structural inadequacies in the Lynchburg, VA derailment earlier this year, there is no plausible reason to divert from the same basic course taken by Transport Canada. Simply put, it is irrational to create an artificial situation in which “soda can” tank cars can be used to transport highly flammable liquids in ordinary manifest trains, but that very same dangerous tank car will be barred from HHFTs used to transport liquids of comparable risk.

TRAC must question PHMSA’s comment that “[a] requirement to retrofit existing cars would be costly.”⁵ Even at a ballpark retrofit cost of approximately \$30,000 per car for the Option 1 tank car, that expenditure would allow the equipment to continue in the rapidly expanding energy sector for 30 to 40 more years.⁶ Furthermore, because of limited retrofit shop capacity at the onset, it wouldn’t be possible to remove every deficient DOT-111 and CPC-1232 tank car from service in a single year, which would result in a

⁴ The use of non-retrofitted TC/DOT-111 tank cars for the transportation of all flammable liquids, including those in PG III, would be completely banned after May 1, 2025. Furthermore, while authorizing the continued use of TC/DOT 111 tank cars to transport all flammable liquids until May 1, 2017, after May 1, 2017, any TC/DOT 111 tank car used to transport crude and ethanol packing groups I, II, and III must be retrofitted.

⁵ 79 Federal Register at 45060.

⁶ When amortized over the remaining life of the car, the cost of retrofitting is less than \$1,000 per year.

short-term fleet shortage. As a result, the costs of retrofitting could be spread over two to four years.

Although industry howls about its sunk costs associated with the existing fleet of tank cars used in this service, TRAC reminds PHMSA of the \$1.3 billion cost to GM for the recall of 7 million vehicles.⁷ Why shouldn't the same "fix it" approach apply to the existing fleet of deficient DOT-111 and CPC-1232 tank cars in Class 3 flammable service? One would assume that GM could have easily used the same burdensome costs argument in opposition to an expensive recall, so why should the arguments of tank car owners and lessors in defense of using deficient tank cars hold much sway with PHMSA? If PHMSA promulgates "half-way measure" safety rules to protect industry's risky investment given the long-known and deadly standard for the existing fleet of Class 3 flammable service tank cars, it would be sending the message to all regulated industries that if you wait long enough to fix a known problem and that problem becomes big enough, regulators will "have your back." TRAC sincerely hopes that in promulgating final rules this is not the message that will be telegraphed to the public and the regulated community.

Industry made a profit-driven decision to continue using deficient tank cars lacking the structural integrity to transport the upsurge in energy-related, flammable, and combustible commodities. That decision reflected a clear

⁷ <http://money.cnn.com/2014/04/24/news/companies/gm-earnings-recall/index.html>

disregard of known risks 20 years ago -- just as it does today.⁸ Industry wants to get raw materials to refineries as quickly as possible without worrying about packaging inadequacies. Why not -- it's a cash cow. However, the fact that the involved industries turned a blind eye to tank car safety for two decades is not a reality that should be allowed to endanger the American public for the next 40 years, especially when the rail industry recognizes the need for new standards and the need to retrofit the existing fleet of tank cars.

TRAC'S RESPONSE TO THE PROPOSED NPRM REGULATIONS.

Although TRAC disagrees with PHMSA's limited approach to regulating only HHFTs, it nevertheless supports the agency's laudable efforts to address the mounting risks posed by transporting PG I, II and III hazardous materials in tank cars that are not sufficiently robust to transport these dangerous commodities. In responding to the NPRM, TRAC will prioritize the order of the proposed revisions on rail routing, tank cars, braking, speed restrictions, classification of mined gases and liquids, and notifications to SERCs in terms of their significance vis-à-vis communities through which these dangerous hazmat commodities travel. PHMSA should assume -- unless explicitly expressed otherwise in these comments -- that TRAC's positions are based on these regulations being applied to all tank cars used to transport Class 3 flammable/combustible liquids and not just those moved in HHFTs.

⁸ PHMSA is asked to note that the same type of profit-driven decision and conscious disregard of known risks has recently subjected BP, another prominent member of the oil industry, to potential fines of up to \$18 billion.

Since May 2008, when the first two tank cars filled with Bakken crude departed from Dore, North Dakota, it has become apparent that railroads will have an expanding and highly prominent role in this emerging energy transportation market.⁹ For this reason, PHMSA is urged to create a regulatory framework that will enhance the safety of this transport in a fully comprehensive fashion in this current rulemaking. TRAC urges PHMSA to seize the opportunity it now has to maximize the protection offered the public, and not take a “wait and see” approach to applying the greatly enhanced DOT-117 tank car standard to the rail transport of all Class 3 flammables and combustibles.¹⁰

Enhanced Tank Car Standards for All New and Existing Tank Cars Should Be Established.

Robust tank car integrity is the essential basis for enhanced safety because it is the primary way to lessen the consequences caused by the inevitable accidents that will continue to occur. Based on that reality, TRAC strongly supports PHMSA’s proposed adoption of Option 1, the DOT Specification 117 tank car, which appears to “have the greatest net social benefits, with benefits primarily generated from the mitigation of accident severity.”¹¹ TRAC is mindful of the ongoing efforts of the railroad industry and

⁹ *Dangers Aside, Railways Reshape Crude Market*, Wall Street Journal, September 22, 2014 at p. 1.

¹⁰ TRAC also urges PHMSA to consider whether the new DOT 117 standards need to be applied to other classes of hazmat such as Class 8 corrosives as they also pose an unquestioned risk to communities when the packaging is inadequate for the product being transported.

¹¹ Fed Register at 45052.

others to improve the safety of tank cars *and* the financial expenditures that have already been made to acquire new equipment that has incorporated certain of the enhanced tank car features currently proposed by PHMSA. However, those past actions should not stand in the way of a comprehensive response to reducing risks associated with the transport of dangerous hazardous materials.

While certain interests have urged PHMSA to allow the newer CPC-1232 cars to remain in service for prolonged periods without modifications¹², PHMSA must place the public interest ahead of the profit motive by imposing strict deadlines on the future use of such cars in the absence of modifications that would bring them within the proposed performance standards that would permit the car to carry the DOT Specification 117P. In particular, TRAC asks PHMSA to accelerate the timeline for ending the continued use of DOT-111 and CPC-1232 tank cars in all flammable liquid hazardous materials (and not just in HHFT service).¹³ There certainly is no need to stretch the timeline to October 1, 2020.

According to the data in this NPRM, there are a total of 97,800 DOT-111 and CPC-1232 tank cars in Class 3 flammable liquid service. Per the RSI, there are another 37,800 CPC-1232 tank cars on backlog through 2015. This amounts to a total of 135,600 tank cars industry indicates it foreseeably needs for Class 3 flammables service. If new car build capacity is 34,000 annually as

¹² This supposedly “safer” tank car was involved in the April 30, 2014 Lynchburg, VA derailment and only traveling at 23 mph at the time of the incident.

¹³ Fed Register at 45043.

the RSI says (and won't or can't be expanded to meet greater demand), it will take less than 4 years to completely replace the existing fleet of tank cars in Class 3 flammable service. With 72,330 of these tank cars in ethanol and crude service (42,550 in crude and 29,780 in ethanol service), these cars could be prioritized and replaced with the DOT-117 tank car model in just over two years -- with no new build capacity added. TRAC suggests that if strict timelines and manufacturing standards are established with no further delay, American industry will find a way to respond with alacrity to an aggressive fleet replacement schedule.

The Cost/Benefit Analysis Should Be Expanded.

There can be no quarrel with PHMSA's conclusion that the DOT Specification 117 tank car "tends to produce the lowest net costs under most scenarios."¹⁴ Even if net "benefits may fail to exceed costs for all options if no high-consequence events are assumed to occur,"¹⁵ that should not be the sole determinative in defining enhanced safety regulations. The public interest in safety must be fully taken into consideration. As of this moment, that has not been done.

With respect to the costs and benefits of the NPRM proposals, TRAC offers these thoughts. The Office of Management and Budget (OMB) – the governmental entity charged with conducting cost-benefit analyses for major federal rules – has had numerous meetings with industry to discuss the costs

¹⁴ RIA at 190.

¹⁵ RIA at 190.

of PHMSA's proposed safety-enhancing rules. Between May 19 and July 23 of this year, OMB has had 18 such meetings with industry.¹⁶ After reading in media reports of these meetings, TRAC (on June 18) contacted OMB expressing concern that these meetings would result in a skewed look at costs vs. benefits. In fact, TRAC's co-chairs offered to travel to Washington to meet with OMB personnel to discuss the inadequacies of how industry generally measures cost and benefit when faced with stronger safety regulations. They didn't even receive the courtesy of a reply. That reality says a lot about the need to give adequate weight to community comments on the NPRM *if* the rules being developed are truly meant to protect public safety and the environment.

Let's face facts. When disaster strikes any community, it's the local elected leaders and their first responders who are responsible for dealing with the consequences. The local elected leaders (i.e. TRAC mayors and their peer mayors across the nation) must face the impacts on the residents, businesses and infrastructure (water, sewer, storm drains, phone, cellular) of their communities (not to mention the spirit of an impacted community) and then oversee the environmental remediation and rebuilding that occurs after a hazmat release. We recognize the real costs to communities of such an

¹⁶ These meetings were with STATOIL on July 23, Tesoro on July 21, American Petroleum Institute on July 11 and May 19, Continental Resources on July 7, Shell on June 24, the Railway Supply Institute on June 16, the American Association of Railroads and the American Short Line Railroads Association on June 10, the Renewable Fuels Association on June 9, BNSF on June 6 and June 3, ExxonMobil on June 6, ADM Transportation and Trucking on June 4, the American Chemistry Council on June 3, Phillips 66 on June 2, Quantum Energy on June 2, and the American Fuel and Petrochemical Manufacturers on May 30.

incident and these must be factored in when the cost/benefit analysis is done. It is safe to say that we cannot consider the partial solution envisioned in this NPRM a good starting point for a real cost benefit analysis because the public's interests have been given short shrift.

In this regard, Lac-Mégantic's worst-case scenario has been instructive. Where in the "Regulatory Impact Analysis" for this NPRM does one find the "costs" measured for the 20 orphans who will face a future without their parents, or the costs of post-traumatic stress that had led to multiple suicides in the town as of December 2013 and are expected to lead to even more? The same question must be asked regarding the continuing fight by its local elected leaders to secure clean-up and rebuilding funding when industry says, "Sue me. I'm not responsible." All such costs are missing from the cost-benefit analysis in this NPRM.

Furthermore, PHMSA/OMB didn't even tally in the costs industry will bear when trial juries award massive civil damage awards to victims of accidents involving tank cars that have not been built or retrofitted to the most robust standards. TRAC once again invites attention to the accident that caused TRAC to petition for a change in tank car standards for the existing fleet in spring 2012 -- the CN ethanol train derailment in Cherry Valley, IL. That one accident resulted in a civil settlement of approximately \$36 million

with the family of the woman killed.¹⁷ If the civil liability cases stemming from the Lac-Mégantic tragedy result in ballpark compensation of that level, all the industry players in that event that are found partially liable will be looking at a joint cost of approximately \$1.7 billion. Furthermore, PHMSA and industry should expect that juries will send a strong message to industry that its continued callousness to loss and suffering in the face of a widely known hazard is unacceptable. None of this is accounted for in this NPRM, and that's exactly what will kill the golden goose for industry and impede progress in the nation's drive to energy independence.

Non-retrofitted Tank Cars Should Not Be Transferred To Alberta, Canada To Be Used In Tar Sands Service.¹⁸

TRAC requests PHMSA to reconsider its proposal to permit 43,537¹⁹ of the non-retrofitted but jacketed DOT-111s and CPC-1232 tank cars to be

¹⁷ That settlement alone, more than doubled the “total cost of fatalities” computed in the RIA at 32. Rather interestingly, although Table B5 reflects the 2009 incident at Cherry Valley, the cost of the settlement was not taken into consideration.

¹⁸ While PHMSA refers to this commodity as Alberta tar sands, “tar sands was coined in the early years of the industry and was used to describe the oil sands deposits found in northern Alberta. Oil sands is now more commonly used, and is a more accurate term, because bitumen, a heavy petroleum product, is mixed with the sand, and oil is what is derived from the bitumen.” <http://www.oilsandstoday.ca/whatare oilsands/Pages/QuickFacts.aspx>. CAPP goes on to define bitumen in its report at page 35: “A heavy, viscous oil that must be processed extensively to convert it into a crude oil before it can be used by refineries to produce gasoline and other petroleum products.”

¹⁹ Per the RIA at pages 78 through 82, these 43,537 tank cars proposed for tar sands service consist of 5,600 jacketed DOT-111's, 4,850 jacketed CPC-1232's, 7,787 of the oldest non-retrofitted DOT-111's that would be retrofitted with just a jacket, and the 25,300 jacketed CPC-1232's currently on order backlog through 2015. Since this NPRM expects the rules to be promulgated in 2015, TRAC added the RSI numbers outlined in the RSI presentation to

transferred to Alberta, Canada to carry tar sands.²⁰ As PHMSA has explicitly recognized, “The bitumen-laden heavy crude from the tar sands is not as volatile as light crude but it may be *particularly damaging to the environment.*”²¹ Further, PHMSA has acknowledged that “costs of cleanup may be higher for heavier crude that does not burn.”²²

TRAC is concerned that ramifications of transferring non-retrofitted DOT-111 and CPC-1232 tank cars to Alberta for the transport of tar sands have not been adequately considered. Akin to the Bakken crude situation circa 2008, the transport of oil sands from Alberta is still in its infancy. As has been reported, “[a]t the beginning of 2013, the rail loading capacity originating in Western Canada was only about 180,000 b/d. As a result of a number of new facilities and minor expansions coming into service throughout 2013, the capacity has now increased to 300,000 b/d. By the end of 2015, western Canada uploading capacity for crude oil is expected to exceed 1.0 million b/d. Several proposed facilities can be further expanded beyond the initial stated capacity so it is conceivable that rail capacity could be expandable to 1.4 million b/d.”²³ Given the further projection that the Province of Alberta resides on top of the oil sands that hold 167 billion barrels of these reserves,

OMB on June 16, 2014 for CPC-1232’s currently on order backlog through 2015, which is why the NPRM assumption of 23,237 moving into Alberta oil sands service and TRAC’s assumptions differ.

²⁰ RIA at page 81.

²¹ RIA, at page 81, n.66 (emphasis added).

²² RIA at page 28.

²³ Canadian Association of Petroleum Producers, Crude Oil Forecast, Markets and Transportation, June 2014.

encouraging the transfer of non-retrofitted cars with less than full due diligence is the equivalent of opening a Pandora's Box.

Because bitumen at 50° F has the consistency of a hockey puck, it must be heated or blended with a diluent in order to decrease viscosity. In the case of bitumen moving by pipeline, a 70:30 bitumen to diluent ratio is required in order to decrease the viscosity of the produce to transport it through pipelines. For movement by rail, coiled and insulated tank cars are required for transporting oil sands.²⁴ However, under the proposed regulations, what would prevent a shipper from adding sufficient diluent in the process of loading a legacy DOT-111 or CPC-1232 tank car with oil sands so as to ensure it has the viscosity to facilitate uploading and offloading²⁵ and prevent the commodity from solidifying in cold weather? Unfortunately, the NPRM does not address the issue of how the percentage of diluent used in the transport of oil sands by rail could impact the commodity's volatility and flashpoint, and how that commodity should then be classified for packaging purposes.

Furthermore, it has been noted that “[h]igh sulfur and/or water content in the crude oil (oil sands) could impact the need for lining and stainless fittings, which could either impact the life of the tank car or require additional

²⁴ March 2014 CAPP Report: *“Transporting Crude Oil by Rail in Canada”* at page 10.

²⁵ A PLG Consulting presentation delivered in Calgary, Alberta on September 3, 2014 states, “U.S. Gulf Coast is logical home for WC (Western Canada) heavy crude, however, unit train uploading facilities with steaming capabilities seem to be lagging growth of loading facilities in WC. Current unloading facilities are mainly handling dilbit in higher volume and railbit in lower volumes due to investment required for steaming equipment.”

safety features.”²⁶ There is nothing in the NPRM that examines such potential problems surrounding the assumptions that the existing fleet of deficient tank cars is safe enough for Alberta tar sands service. Furthermore, the reality that until very recently oil sands have been traveling on manifest trains, again calls into question the wisdom of focusing only on HHFTs in the proposed rules.

TRAC believes that it can be reasonably anticipated that the expansion of the oil sands market will be accompanied by an expansion of the market for the diluent needed to rectify that commodity’s lack of viscosity. One of the prime diluents used to facilitate oil sands transport is “condensate,” which is a light oil that is produced when natural gas comes to the surface and pressure is released and temperatures are lowered. Condensate is extremely flammable and toxic. Moreover, condensate vapors are heavier than air and may travel considerable distances to a source of ignition and flashback.²⁷ Given the possibility that the use of condensate may impact the flammability of Alberta tar sands crude, and because the environmental risks associated with the derailment of tank cars containing tar sands near waterways are extremely high, TRAC does not agree with the decision to allow non-retrofitted DOT-111 and CPC-1232 tank cars to be used to transport Alberta tar sands.

²⁶ Id. at page 21. In May 17, 2013 congressional testimony, the NRDC noted that Midwest pipelines carrying tar sands dilbit spilled 3.6 times as much crude per mile than the national pipeline average between 2010 and 2012 based on a review of PHMSA’s own records. It would be advisable for PHMSA to give special consideration to this commodity’s corrosiveness when it comes to tank car packaging and monitoring of the cars’ structural integrity.

²⁷ “*Fact Sheet: A Brief on Condensate and Diluents*” prepared by Headwaters Initiative & Carrier Sekani Tribal Council.

At present, the primary sources for condensate are situated close to the Gulf Coast refineries, which are prime destinations for the Alberta tar sands. Therefore, it is logical to assume that it would be beneficial from a revenue enhancement standpoint to use the same tank cars used to transport the oil sands to the Gulf in the backhaul of condensate up to Canada. If that proves to be the case, any non-retrofitted DOT-111 and CPC-1232 tank cars used to transport tar sands would likely be eliminated from backhaul service unless the condensate is backhauled in trains with fewer than 20 carloads of Class 3 flammable liquids to avoid rules focusing solely on HHFTs. This also strongly suggests that the proposed transfer of older, non-retrofitted tank cars is ill advised, particularly when Canada has a limited supply of homegrown diluent capacity to meet growing oil sands demand. Because PHMSA has not factored these possibilities into the NPRM, the proposed rules are insufficiently protective of the public and the environment.

TRAC's stated concerns about oil sands transport in a structurally deficient tank car fleet is more than academic given the strong CN role in serving that market. The CN network directly connects Western Canadian crude oil supplies to markets in Eastern Canada, the west coast of Canada, the U.S. Midwest, and the U.S. Gulf Coast. In addition, CN provides access to tidewater so that producers may reach offshore markets in Europe and Asia.²⁸

²⁸ March 2014 CAPP Report: *"Transporting Crude Oil by Rail in Canada"* at page 11.

CN uses the EJ&E rail line that runs through the TRAC communities to route its trains, and that line serves as a direct route into BP's Whiting, IN facility. That refinery just completed an upgrade allowing it to process up to 80% heavy crude following the construction of a 102,000 b/d (barrels a day) coker and crude distillation unit,²⁹ so the TRAC communities can expect to see movements of heavy crude (oil sands) through them. Not only does the EJ&E run through 60 smaller communities in Lake, Cook, DuPage, Grundy, Will, and Kendall counties in Illinois and Lake County in Indiana, but the rail line is situated on the site of several fragile ecosystems and regional water resources.

The potential for extreme environmental damage related to tar sands rail transport is vividly illustrated by the cleanup efforts that followed the July 26, 2010 pipeline release of approximately 850,000 gallons of dilbit into Talmadge Creek, a waterway that flows into the Kalamazoo River in Michigan. In his May 7, 2013 congressional testimony, the Natural Resources Defense Council's Anthony Swift explained, "[o]nce spilled in a waterbody, the light petrochemicals – including toxins such as benzene and toluene – gas off, leaving the heavy bitumen to sink." His testimony was corroborated by EPA's on-site spill coordinator, who remarked that it took far longer to work on the submerged oil than surface oil, which was unanticipated by EPA as well as industry. In fact, three years after the spill, response activities continued, because the oil sands crude does not appreciably biodegrade. Because the dilbit sank to the river bottom where it mixed with sediment, the owner of the

²⁹ "Crude Oil Forecast, Markets and Transportation" by CAPP at page 16.

pipeline was ordered to dredge the river to remove the oiled sediment. As a result of this order, response costs are estimated to be approximately \$1.035 billion, which is substantially higher than the average cost of cleaning up a similar amount of conventional oil.³⁰ Given the potential for a derailment that could release oil sands into a waterway or an environmentally sensitive area that is the source for a community's drinking water, it can be anticipated that a similar catastrophic spill could result from a train accident.

Because the above concerns about using deficient tank cars for oil sands service are glossed over in the NPRM with a single footnote in the document,³¹ it is impossible for TRAC, or any other stakeholder, to ascertain whether PHMSA's assumptions regarding the transfer of deficient tank cars for a fairly new emerging crude by rail market are in any way supportable. Given what little is known at this point, TRAC urges PHMSA to err on the side of caution by including combustibles in the scope of its final rules.

Proper Classification and Characterization Of Mined Liquid And Gas Is Essential.

TRAC agrees with PHMSA's proposed § 173.41(b), which would link the certification requirements, as prescribed in § 172.204, to the proposed sampling and testing program for mined gases and liquids. The number of new shale plays across North America demands rigorous testing of all mined products if they are to be safely transported. Given the fact that many shipments will originate in Canada, TRAC would hope that the proposed

³⁰ <http://fas.org/sgp/crs/misc/R43390.pdf>

³¹ RIA at page 81, FN 66.

sampling and testing program will be harmonized, if it has not been already, with a an equally rigorous sampling and testing program in Canada.

In light of recent testing changes instituted by PHMSA that seemingly indicate that the agency now believes vapor pressure, in addition to flash point and boiling point, is a valuable and consistently reliable index for volatility, TRAC is puzzled as to why vapor pressure was excluded in the classification requirements in this NPRM. One cannot be placated by PHMSA's bland assurance that API's "draft standard is currently in the balloting process with API members and is on the path to finalization and thus is not considered in the rulemaking."³² Quite frankly, new car standards were in the works by an industry working group after the 2009 Cherry Valley, IL ethanol train derailment. Yet five years later, PHMSA has moved beyond the industry proposal and we still have no new tank car standards adopted.

Furthermore, why should PHMSA leave it to API members to vote on testing protocols? As the assumed expert, PHMSA should propose a standard rather than waiting for API members to decide what the regulated industry wants to do. After all, API is the entity that used flawed testing procedures to make the case that Bakken crude isn't qualitatively different from any other crude. In fact, an August 2014 GAO report to Congress indicates that industry wants clarification and guidance on this matter: "Representatives from railroads and crude oil terminals we spoke to, as well as from the oil and gas industry, have indicated that clarification about the requirements for testing

³² NPRM at page 45044.

and packaging crude oil is needed. Specifically, two of the railroads and two crude oil rail terminal operators told us that PHMSA needs to clarify its crude oil testing requirements, including to more clearly state which tests should be done and with what frequency. One of the terminal operators told us that without clearer guidance, they are unsure whether they are performing the right tests and testing with sufficient frequency. They are also concerned they may be incurring unnecessary expense from over-testing.”³³

TRAC’s concerns about proper classification of mined gases and liquids are further heightened by the fact that both an API-backed study and one from the refiners’ trade group, the American Fuel & Petrochemical Association, have agreed that vapor pressure was not a worry. However, Canadian oil-quality technicians don’t agree with that assessment.³⁴ For one thing, they question whether the vapor pressure tests used in industry’s and PHMSA’s earlier studies were flawed. Because much crude oil being produced domestically is so volatile, it can ‘boil’ with gas at the surface, these experts insist that the fuel be sampled with precision instruments. Otherwise the actual level of dangerous gas may escape undetected.

In short, PHMSA should take the lead and immediately establish testing rules which completely define the volatility risk of Class 3 hazmat shipments. If

³³ <http://www.gao.gov/assets/670/665404.pdf> at page 39.

³⁴ May 22, 2014 Canadian Crude Quality Technical Association: “CCQTA Information Regarding the Measurement and Reporting of Light Ends and Vapor Pressure of Life Crude oil” and Grabner Instruments/AMETEK, Inc. report titled: “Why Crude Oil Vapor Pressure Should Be Tested Prior to Rail Transport”.

PHMSA has now determined that syringe-style cylinders must be used when collecting and sampling the crude, it should require their use.

TRAC suggests that PHMSA already has enough historical information and new “best practices” testing data to set an industry standard for crude oil testing and sampling. When all is said and done, state of the art vapor pressure testing should be required. TRAC also suggests that PHMSA look more closely at “ullage” – the vapor space in a closed container. Per the Grabner Instruments/Ametek report, “as a general rule, if the ullage level is very low or almost non-existent, then the vapor pressure of crude oils becomes very high.” PHMSA assumes that tank cars can be loaded to 1% outage³⁵, so this volatility factor must be taken into account. Additionally, to serve as a failsafe against any industry misclassification of the hazmat it is shipping, PHMSA needs to order shippers of Class 3 flammable materials in Packing Groups I, II and III to use the DOT-117 – or even a pressure car if necessary -- as its packaging. Clearly any delay in setting testing and classification standards is unconscionable in terms of public safety, and provides an unacceptable level of confusion for the regulated community.

Braking Enhancements.

TRAC strongly supports PHMSA’s proposal that “[a]fter October 1, 2015, a tank car manufactured in accordance with proposed § 179.202 or § 179.202-11 for use in a HHFT must be equipped with ECP brakes.” In taking this position, TRAC recognizes that it would be highly expensive to require ECP

³⁵ RIA at page 126.

brakes on every freight train consisting of tank cars carrying hazmat. However, PHMSA must mandate that ECP brakes be installed in all tank cars that are used in hazmat unit trains and that all new tank cars suitable for use in the transportation of Class 3 flammable liquids be equipped with ECP brakes. While such tank cars will default to regular airbrake operations on a manifest train in which all cars are not equipped with ECP circuitry, requiring it for all DOT-117 tank cars will provide flexibility in use for the new tank cars as market needs expand, and should avoid the need to make any production line changes that could slow overall production.

Notification to SERCs.

TRAC supports the codification of the May 7, 2014 DOT Emergency Order requiring each railroad transporting 1 million gallons or more of Bakken crude oil in a single train to provide written information relative to that shipment to State Emergency Response Commissions (SERCs). However, the proposed rule doesn't go far enough, in that it should extend to cover the rail shipment of all Class 3 flammable hazmat commodities in an amount of 42,000 gallons or more – not 1 million gallons – traveling on a single train. This extended coverage would be very much in keeping with the public safety goals of the 9/11 Commission Act of 2007 and the 42,000 gallon hazmat spill threshold requirements of the Federal Water Pollution Act of 1990.

The 9/11 law was a response to the possibility of terrorists using the rail transport of “security-sensitive materials” for attack purposes, while the latter law was meant to protect the environment from a discharge of oil and

hazardous substances. 42,000 gallons of flammable/combustible hazmat materials would certainly fit the bill as a terrorist target and environmental spill hazard, and as a result, should be included in the SERC reporting to insure that the states and potentially impacted communities are doing the type of emergency response planning and realistic response planning exercises necessary to maximize public and environmental protection.

In a September 2, 2014 article in Government Security News, Denise Rucker Krepp, former Special Counsel to DOT General Counsel, Senior Counsel on the House Homeland Security Committee, and author of the 9/11 Act rail provisions noted that, “The 9/11 Act requires rail carriers to share information with local officials and conduct security exercises. The exercises are supposed to be as realistic as practicable and DHS is required to evaluate them.”³⁶

Krepp goes on to say, “it's my recommendation that governors and local officials contact DHS and request copies of the rail carrier security plans and the exercises that have been conducted in their jurisdiction. A successful response and recovery operation will be dependent upon state and local maintained resources and the men and women who are responsible for these resources should know how the rail carriers expect to use them.” TRAC agrees with Krepp’s assessment – especially as it relates to sharing such information with local communities.

³⁶ http://gsnmagazine.com/node/42376?c=infrastructure_protection

In this regard, TRAC urges PHMSA to clarify to the railroads that the plans submitted to SERCs must also be shared directly with communities that regularly have any single trains transporting at least 42,000 gallons (or two rail cars) of Class 3 flammable hazmat (in Packing Groups I, II, or III) traveling through them.

The response training that the Class I railroads agreed to create for local responders in their February 2014 voluntary agreement with the Secretary of Transportation was an important first step in upgrading proper hazmat training. It has been helpful that the Class I railroads have made it a point recently to meet with some local response agencies and officials across the country to discuss the types of hazmat that are traveling through them and the particular railroad's plans for deploying emergency response capabilities and assets, but again, it is entirely voluntary.

PHMSA needs to codify these community outreach and information-sharing efforts in its final rules. Communities need to know that these efforts will continue on a regular basis in the years ahead. In addition, PHMSA must insure that first responder training opportunities are expanded to insure that communities along rail routes experiencing regular Class 3 flammable liquid hazmat traffic receive proper training and that the railroads are conducting joint training exercises with them. If, as Krepp has advised, these steps were codified by PHMSA in the final rules, it would go a long way towards getting emergency responders prepared, and identify the location and quantities of all

assets needed by emergency responders before the worst case scenario ever occurs.

As a side benefit of the SERC and local communities notification mandate, this NPRM has made clear that the collection of baseline data to assess and analyze risk has been problematic and filled with data gaps both at PHMSA and FRA. Requiring that this information be collected and shared with SERCs and local communities at a lower quantity threshold would provide a broad data set that should prove invaluable to rail regulators at both PHMSA and the FRA in the years ahead.

Finally, TRAC urges PHMSA not to ignore its prior requests of 2012 and 2013 that railroads be required to transmit electronically to emergency dispatch centers a train's manifest immediately following an accident or derailment. Knowing what one is actually responding to in the event of a rail accident is essential information for emergency responders to have in real-time, as it protects personnel during the initial event assessment. While TRAC is aware that the railroad industry is creating a phone app that could be used to pull up a train's manifest by reading a rail car's markings, this assumes that a person having need of such an app could get close enough to the train accident to actually have it function properly. Because there's no guarantee that all rail accidents will conveniently occur in an easily accessible locale, that's not a risk local governments are willing to take.

Rail Routing.

TRAC generally supports the proposed expansion of rail transportation route analysis under subpart I of part 172 of the HMR to include HHFTs. In particular, TRAC agrees with PHMSA's reasoning that "[a]lthough voluntary actions were taken by the crude oil carriers from the Secretary's Call-to-Action, codification of these provisions is necessary. Codification is also a check on higher risk routes or companies."³⁷ Most importantly, until codified, "[t]here is nothing in place/no incentive to require continued compliance with voluntary actions."³⁸

However, while TRAC is supportive of routing analysis, it cannot ignore the fact that Lac-Mégantic proves that avoidance of heavily populated areas does not necessarily eliminate the possibility of a catastrophic incident, especially when the severity of the event is magnified by the combination of deficient tank cars and highly explosive Class 3 flammable liquids. Simply stated, every TRAC community located on CN's EJ&E line is acutely aware that this rail line has likely become the primary option for CN's hazmat routing through Chicago and beyond. As a result, we are extremely concerned about the already increased number of tank cars -- likely filled with Bakken or other crude oil -- and their potential to create a fate similar to the Lac-Mégantic tragedy in the event that a CN HHFT or manifest train (containing fewer than 20 deficient DOT-111 or CPC-1232 tank cars) were to derail in any town in which drinking water is sourced from a shallow water aquifer or surface water.

³⁷ RIA at 70-1.

³⁸ RIA at 71.

Operating under the assumption that the TRAC communities are located on CN's preferred route for transporting hazmat, it is crucial that CN (and any other railroad that is operating through similar communities in order to avoid downtown Chicago or any other population centers) be required to comply with the requirements set out in § 172.820(g)(2). TRAC also highlights PHMSA's reference to the Implementing Recommendations of the 9/11 Commission Act of 2007 and the requirement of § 172.820(g)(2) that compels railroads, after selecting alternative routes, to identify points of contact with **local** officials, as well as State and tribal officials, and provide information regarding the carrier's routing decisions to those officials. Although this regulation has been in effect for several years, little, if anything, is known regarding CN's routing protocols following its acquisition of the EJ&E line in 2009.

It is hoped that PHMSA and FRA, in reviewing the railroads' route selections, will also demand documentation of all steps taken by railroads to alert communities regarding their routing decisions. If local communities are to be treated as sacrificial lambs to save the lives of individuals in large population centers, they must be kept well informed of the characteristics of hazardous commodities that are likely to pass through their communities and have the opportunity to provide input in identifying local high-risk targets. Even more importantly, they should be assured that the railroad equipment that is being used to transport deadly products through them is built to the highest possible standards and is not inherently deficient and likely to breach in a derailment scenario. Because there are 112 roadway/rail grade crossings

on the EJ&E rail line, TRAC views this knowledge as an imperative that must be factored into the region's emergency response planning.

It is TRAC's understanding that many shortline railroads routinely operate over excepted track.³⁹ Given the prohibition against operating a freight train that contains more than five cars requiring placarding on excepted track, this means that any HHFT will have to be broken into multiple segments in order to move five cars at a time over any excepted track it must traverse. That being the case, TRAC questions how many smaller railroads will have adequate, secure trackage that will allow them to comply with the regulatory restriction and related security standards. Given the practical limitations associated with excepted track, it seems certain that shipments of the types of hazardous materials covered to destinations that are located on smaller Class III railroads will not necessarily move in HHFTs, but will instead move in smaller quantities in manifest trains. If that is the case, there would appear to be little or no incentive on the part of shippers to utilize DOT-117 tank cars for movements of products such as ethanol and crude oil that, by destination necessity, must be routed through smaller communities. If this unintended consequence were to occur, the Class I railroads that are likely to originate the freight trains will continue to transport significant amounts of highly flammable products in manifest trains of deficient tank cars before turning

³⁹ The provision of data regarding how much Class 3 flammable/combustible hazmat is carried by Class II and II railroads would have been valuable information for the public to have in assessing the impact and efficacy of the proposed rules.

them over to the smaller railroads for ultimate delivery. In such instances, rerouting will be of minimal significance.

As a final comment on rail routing, TRAC is highly supportive of requiring the application of key train operational rules and safeguards, such as roadside detectors, to all rail lines regularly carrying Class 3 flammable and combustible hazmat in either HHFTs or manifest trains. With industry sending ever greater quantities of heavy-tonnage tank cars hauling hazmat over the nation's rail infrastructure, it is imperative to have a real-time knowledge of how this is impacting equipment.

The Imposition of Speed Restrictions May Be Counterproductive.

TRAC questions PHMSA's assumptions about the necessity for mandating reduced speeds because speed has not been a significant factor in any of the catastrophic accidents save one. TRAC notes that only 2 of the 46 mainline derailments of crude oil and ethanol from 2006 through 2013 involved speeds of 50 mph or more, and only 8 involved trains traveling at speeds between 40 mph and 48 mph. Furthermore, the December 7, 2008 derailment in Page, ND at 55 mph released only 140 gallons of crude oil, whereas the June 19, 2009 derailment in Cherry Valley, IL at 19 mph released 232,693 gallons of ethanol, and the November 7, 2013 derailment in Aliceville, AL at 39 mph released 455,520 gallons of crude oil.

Of course, in Lac-Mégantic speed was a factor because the train was a runaway – no one would have deliberately operated that train at 60 mph on

that segment of rail line. In Cherry Valley, speed did not matter because, unbeknownst to the conductor and engineer, the track was washed out. This caused the derailment – not a train going so fast it could not be stopped once the washout was known by the locomotive engineer.

TRAC cautions against using speed reductions to give a false sense of security to the public, when in fact, it is not likely to provide much in the way of additional safety benefits. As a general rule, the railroads take into account topography, weather, and other operational factors to determine the safest optimal speed for a rail line on any given day, so a “one size fits all” speed limit for hazmat trains just sets an artificial limit that may not be warranted and has the consequence of slowing the entire rail network. In fact, Canadian producers have stated that an average crude unit train already travels at a speed of 17.4 mph⁴⁰ – far below the maximum speed limits PHMSA is proposing.

In particular, TRAC is concerned that unwarranted speed reductions may further undermine public safety by causing more vehicle delays across grade level rail/roadway crossings. When grade crossings are blocked by slow-moving trains, ambulances are delayed in reaching emergency victims and hospitals; fire trucks and police cars are delayed in responding to emergencies, and motorists get frustrated and are more prone to making unsafe train avoidance maneuvers. Furthermore, interference with commuter and passenger rail is exacerbated – especially in urban and suburban areas.

⁴⁰ March 2014 CAPP Report: “Transporting Crude Oil by Rail in Canada” at page 2.

Because PHMSA has been highly focused on the cost-benefit analysis of imposing new safety rules, it would seem that mandating an overall speed reduction for HHFTs is an expensive requirement that would do little to improve safety – especially in light of the proposal mandating enhanced ECP braking technology on HHFT trains. TRAC would much rather see industry invest in new DOT-117 tank cars at an aggressive fleet replacement rate, as well as invest more heavily in the track wayside detection infrastructure and inspections that could prevent an accident from occurring in the first place.

Respectfully Submitted,

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