

**BEFORE THE PIPELINE AND HAZARDOUS  
MATERIALS SAFETY ADMINISTRATION,  
U.S. DEPARTMENT OF TRANSPORTATION**

**Standards and Rulemaking Division (PHMSA)  
Attn: PHH-10  
U.S. Department of Transportation - East Building  
1200 New Jersey Avenue, SE.  
Washington, DC 20590-0001**

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**PETITION FOR RULEMAKING:  
LIMITATION ON WEIGHT AND NUMBER OF CARS FOR RAIL  
TRANSPORT OF CRUDE OIL AND OTHER HAZARDOUS LIQUIDS**

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**SUBMITTED BY  
THE CENTER FOR BIOLOGICAL DIVERSITY AND  
RIVERKEEPER**

**November 25, 2014**

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The Center for Biological Diversity and Riverkeeper (“Petitioners”), on behalf of themselves and their members, submit the following petition for rulemaking pursuant to the Pipeline and Hazardous Material Safety Administration (“PHMSA”) regulations, 49 C.F.R. § 106.95, for the adoption of a new standard limiting the weight and total number of cars that may be used in a unit train or manifest train carrying crude oil and other hazardous liquids.

This new requirement is necessary to reduce the potential for train derailments and associated hazardous materials spills and fires, which pose a high risk of environmental, human health and economic harm.

**I. Proposed Action Summary and Explanation of Purpose (49 C.F.R. § 106.100(a)(1))**

Pursuant to 49 C.F.R. § 106.100(a)(1), the Petitioners state that the proposed action is an amendment to the Hazardous Materials Regulations (“HMR”; 49 CFR Parts 171-180) to include a limitation on the number of cars and weight of trains hauling hazardous liquids, including, specifically, crude oil, in both unit trains and manifest trains. The purpose of the proposed action is to prevent or reduce the risk of derailment of trains carrying crude oil and hazardous liquids,

and mitigate the potential harm associated with derailments that do occur, by limiting the weight and length of trains carrying these hazardous materials.

The length and weight of such trains has been recognized by PHMSA as one of the main causes and exacerbating factors of several disastrous derailments that have occurred in the past few years. PHMSA has recognized that the inherent dangers of transporting crude oil and other hazardous materials by rail are significantly compounded when such transportation is in long, heavy trains. PHMSA has a duty to take action to protect the public and environment from further derailments, and must therefore limit the weight and length of trains transporting crude oil and other hazardous liquids, as set forth in this petition.

DOT has found that the “growing reliance on trains to transport large volumes of hazardous liquids poses a significant risk to life, property, and the environment;” however, PHMSA has failed to undertake action to remedy one of the most obvious underlying reasons for why the rate of accidents for crude and ethanol shipments has drastically increased over the past few years, even while the overall accident rate for every other rail transport has decreased.<sup>1</sup> PHMSA’s own analysis and statements on the issue indicate that features unique to the operation of trains carrying crude oil and other hazardous liquids differentiate their risk, including the fact that they “are longer, heavier in total.”<sup>2</sup> Furthermore,

“PHMSA and FRA found that several factors give rise to higher expected damages and probability of a catastrophic event. **First**, the volumes of crude oil and ethanol carried by rail are relatively large when compared to rail shipments of other hazardous liquids. In particular, the volume of crude oil shipped by rail has been increasing rapidly during the past several years. **Second**, the crude oil originating in the Bakken oil fields is volatile which increases the risks while it is in transportation. **Finally**, crude oil and ethanol are shipped in HHFTs, compounding the risk when an accident does occur.”<sup>3</sup>

Clearly, these factors are individually *and* collectively significant, yet PHMSA has failed to take action to reduce derailment risks by limiting the weight and length of trains carrying hazardous materials.

This is inconsistent with the best interests of the public, and the tenets of the Hazardous Materials Transportation Act (“HMTA”), which directs the Secretary of Transportation to “prescribe regulations for the *safe transportation*, including security, of hazardous materials in intrastate, interstate, and foreign commerce.” 49 U.S.C. § 5103(b) (emphasis added). Allowing trains carrying highly hazardous liquids to hurtle across our landscape in a manner that increases the risk of derailment and catastrophic damage violates this statutory duty. PHMSA should promulgate rules that provide for the safest possible means of conveyance, and reduce the potential for further derailments. A rule limiting the number of cars and weight for trains

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<sup>1</sup> See Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains (Docket No. PHMSA-2012-0082 (HM-251)) (the “Proposed HHFT Rules”), 79 F.R., at 45019. The Petitioners each submitted detailed comments to PHMSA on the rulemaking, pointing out numerous deficiencies in its proposal that must be remedied prior to finalizing the new HHFT regulations.

<sup>2</sup> See the Regulatory Impact Analysis (“RIA”) accompanying the Proposed HHFT Rules at 24.

<sup>3</sup> *Id.* at 20.

shipping hazardous liquids by rail is necessary to protect people and the environment from preventable harm.

Because hazardous liquids, such as volatile light crude oils and sinking, heavy crude oils, are shipped in long, heavy trains, the risks inherent in transporting those materials are compounded. A long, heavy train with over 100 railcars filled to capacity with hazardous liquids is, PHMSA acknowledges, inherently dangerous (PHMSA has even labeled some of these “High Hazard Flammable Trains”). Clearly, then, a new rule is warranted to mitigate this inherent danger. PHMSA has admitted that trains used to transport large volumes of hazardous liquids poses a significant risk to life, property, and the environment, and, due to the projected continued growth of domestic crude oil production and the growing number of train accidents involving crude oil, “the potential for future severe train accidents involving crude oil in [large unit trains] has increased substantially.”<sup>4</sup> This proposed rule is necessary to prevent these accidents from occurring, and to avoid the harm that will otherwise occur to life, property and the environment from preventable derailments.

Given the recent derailments, explosions, and spills from trains carrying hazardous liquids across North America, our concern about further catastrophic crude oil and other hazardous liquid releases from rail cars is fully justified.<sup>5</sup> According to an analysis of PHMSA data by research firm McClatchy DC, more crude oil was spilled by rail in 2013 (over 1.15 million gallons) than was spilled during all the years between 1975 and 2012 combined (800,000 gallons).<sup>6</sup> State records support this growing concern, showing a startling increase in small spills and releases across the nation.<sup>7</sup> Indeed, a separate analysis of accident records by the Associated Press concludes that at least 10 crude train derailments since 2008 have resulted in significant quantities of crude oil spills, totaling almost 3 million gallons of oil, nearly twice as much as the largest pipeline spill in the U.S. since 1986.<sup>8</sup>

The Petitioners therefore request that PHMSA undertake rulemaking to establish a limit on the weight and number of cars that may be used in transporting petroleum crude oil and other liquid hazardous materials by rail, in order to reduce the acknowledged derailment risk that long, heavy trains carrying such commodities pose to people, the economy, and the environment.

## **II. Explanation of Interest (49 C.F.R. § 106.100(a)(3))**

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<sup>4</sup> Proposed HHFT Rules, 79 F.R. at 45019.

<sup>5</sup> For the purposes of these comments, which are in response to proposed rules that generally apply to trains carrying 20 or more railcars of Class 3 flammable hazardous materials (i.e., volatile crude oils and ethanol), use of the phrase “crude oil” should be read to include concerns about ethanol transport, and, unless otherwise specified, concerns about transport of any quantity of such materials.

<sup>6</sup> Curtis Tate, *More Oil Spilled From Trains in 2013 than in Previous 4 Decades, Federal Data Show*, McClatchy DC (Jan. 20, 2014) (*available at* <http://www.mcclatchydc.com/2014/01/20/215143/more-oil-spilled-from-trains-in.html>).

<sup>7</sup> U.S. Rail Transportation of Crude Oil: Background and Issues for Congress, Congressional Research Service Report R43390 (February 6, 2014), at 10 (“CRS Report”).

<sup>8</sup> Mathew Brown, *Train Accidents Stir Worries About Crude Transport* (Feb. 17, 2014) (*available at* <http://www.bigstory.ap.org/article/train-accidents-stir-worries-about-crude-transport>).

Pursuant to 49 C.F.R. § 106.100(a)(3), the Petitioners state that they are organizations dedicated to environmental protection as set forth below, and represent the interests of their members and the public in preventing derailments of trains carrying hazardous materials, and the resulting harm to life, property and the environment.

The **Center for Biological Diversity** is a national, nonprofit conservation organization with more than 800,000 members and online activists dedicated to the protection of endangered species and wild places. As part of its mission, the Center has worked to inform the public about the risks posed by the transportation of hazardous liquids by rail, and sought to prevent and limit the harm that oil trains pose to our most imperiled species. This has included commenting on the recent proposed hazardous material rail transport rules, as well as the submission of a petition for an emergency order to require comprehensive response plans for Class 3 Flammable rail transportation of PHMSA-defined High Hazard Flammable Trains.

**Riverkeeper** is a member-supported environmental watchdog organization dedicated to defending the Hudson River and its tributaries and to protecting the drinking water supply of nine million New York City and Hudson Valley residents. Through enforcement and litigation, policy and legislation, as well as educational outreach, Riverkeeper works to stop polluters, champion public access to the river, influence land use decisions, and restore habitat, benefiting the natural and human communities of the Hudson River and its watershed. As part of its mission, Riverkeeper gathers information on the potential impacts of a crude oil spill on or near the Hudson River and works cooperatively with local, state, and federal agencies to improve both spill response planning and spill prevention. Riverkeeper has also collaborated with the Waterkeeper Alliance and “keeper” organizations around the nation in working to ensure that the waterways, communities, economies and ecosystems of the nation are protected from the risks of hazardous material rail transport.

### **III. Proposed Language (49 C.F.R. § 106.100(a)(2))**

Pursuant to 49 C.F.R. § 106.100(a)(2), Petitioners hereby petition the PHMSA to amend the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to include a limitation on the weight and number of cars for trains hauling hazardous liquids, including crude oil, in both unit and manifest trains. The HMR should limit unit trains carrying hazardous liquids to 30 cars, and limit the total weight of any trains that include hazardous liquids to 4,000 tons. Specifically, Petitioners propose creation of a new section, which would read as follows:

#### **49 C.F.R. § 174.87 – Maximum allowable length and weight**

(a) For petroleum, including crude oil or any fraction thereof, and any other liquid hazardous materials transported by rail, the maximum allowable number of rail cars carrying such commodities per train, whether in a unit train or in a mixed-cargo train, shall be 30.

(b) For petroleum, including crude oil or any fraction thereof, and any other liquid hazardous materials transported by rail, the maximum allowable total weight of a

train carrying such commodities, whether in a unit train or in a mixed-cargo train, shall be 4,000 tons total weight.

(c) For all trains subject to subsections (a) and (b), above, the railroad must maintain a record of the train weight and/or number of cars, and submit that record to the Federal Railroad Administration.

#### **IV. Information in Support of Proposed Action (49 C.F.R. § 106.100(a)(4)) and Specific Cases Showcasing Need for Proposed Action (49 C.F.R. § 106.100(a)(5))**

##### **a. Increase in Rail Transport of Crude Oil**

The amount of crude oil being transported by rail throughout North America has increased dramatically in recent years. In 2008, only 9,500 rail cars of oil were transported on America’s Class I railways. The volume of crude oil carried by rail increased 423 percent between 2011 and 2012, and volumes continued to increase in 2013, as the number of rail carloads of crude oil surpassed 400,000.<sup>9</sup>

Recent reports indicate that crude oil transport by rail is continuing its dramatic rise. The amount of crude oil products moved by rail increased 9% during the first seven months of 2014 compared with the same period in 2013.<sup>10</sup> According to the US Energy Information Administration (“EIA”), around 759,000 barrels of crude oil per day were moved by rail during the first seven months of 2014.<sup>11</sup>

A Government Accounting Office (“GAO”) report indicates that this trend is not likely to change course anytime soon. The GAO report states that, “increased production in 2012 and 2013 was the largest annual increase since the beginning of U.S. commercial crude oil production in 1859,” and adds that “according to EIA officials, U.S. production of crude oil is expected to continue to increase—by 48 percent from 2012 to 2019—and will remain above the 2012 level through 2040.”<sup>12</sup>

##### **b. Specific Cases Show the Significant Toll of Derailments and Disasters**

The increased transport of oil-by-rail has resulted in several catastrophic and deadly rail accidents throughout North America, with hundreds of thousands of gallons of crude oil being spilled into our nation’s waterways. From 2008 to 2013, for example, there was a near tenfold increase in crude-by-rail spills (from 8 incidents in 2008 to 119 incidents in 2013).<sup>13</sup> These

<sup>9</sup> See PHMSA Proposed Rulemaking, Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Hazardous Trains at 7, Docket No. PHMSA-2012-0082 (HM-251).

<sup>10</sup> US Energy Information Administration, *Rail Deliveries of US Oil Continue to Increase in 2014* (available at <http://www.eia.gov/todayinenergy/detail.cfm?id=17751>)

<sup>11</sup> *Id.*

<sup>12</sup> Government Accounting Office, Report to Congressional Requesters, *Oil and Gas Transportation* (August, 2014) (available at <http://www.gao.gov/products/GAO-14-667>) (“GAO Report”).

<sup>13</sup> *Id.* at 34. While most of these incidents are categorized by the GAO as small, “significant accidents involving crude oil have increased in recent years, with one incident occurring between 2008 and 2012 compared to eight

resulted in more than 1.1 million gallons of crude oil spilled in the U.S., more in one year than the total amount spilled from 1975-2012.<sup>14</sup>

Disastrous derailments of oil trains have recently occurred in North Dakota, New Brunswick, Alabama and Quebec, the latter causing the death of 47 people, the evacuation of approximately 2,000 people from the surrounding area, and the incineration of a popular tourist town. Most recently, on April 30, 2014, an eastbound CSX train consisting of 105 tank cars loaded with Bakken crude oil from North Dakota derailed in downtown Lynchburg, Virginia. Seventeen of the train's cars derailed, and one of the tank cars was breached. A petroleum crude oil fire ensued, shooting flames and black smoke into the air. Emergency responders evacuated approximately 350 individuals from the immediate area. Three of the derailed tank cars containing petroleum crude oil came to rest in the adjacent James River, spilling up to 30,000 gallons of petroleum crude oil into the river, threatening habitat and human health, and resulting in the closure of the City of Richmond's main drinking water intake.

### **c. Rail Transportation of Crude Oil and Other Liquid Hazardous Materials is Inherently Dangerous**

The National Transportation Safety Board ("NTSB") has concluded, in the wake of the past several decades of hazardous material rail disasters, that rail transport of hazardous materials – including crude oil – is inherently dangerous and has sought several changes in the regulations to prevent train derailments and spills, and associated harm.<sup>15</sup> The inherent dangers of transporting hazardous liquids by rails has been confirmed and reinforced by PHMSA in recent proposed regulations, safety alerts, and orders.<sup>16</sup> Moreover, the PHMSA has determined that human error, deteriorating tracks and other factors leading to collisions cannot be eliminated, making continuing derailments a certainty.

The agencies have specifically called out the DOT-111 and CPC-1232 railcars used to transport hazardous liquids as playing a major role in this danger. According to the NTSB, DOT-111s **"can almost always be expected to breach in the event of a train accident resulting in car-to-car impacts or pileups."**<sup>17</sup> PHMSA has similarly found **"that the DOT Specification 111 tank car provides insufficient puncture resistance, is vulnerable to fire and roll-over accidents, and the current bottom outlet valves are easily severable in HHFT accidents."**<sup>18</sup>

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incidents since 2012." *See also* Pipeline and Hazardous Materials Safety Administration (PHMSA) data (available at <https://hazmatonline.phmsa.dot.gov/IncidentReportsSearch/search.aspx>).

<sup>14</sup> Curtis Tate, *More Oil Spilled From Trains in 2013 than in Previous 4 Decades, Federal Data Show*, McClatchy DC, Jan. 20, 2014 (available at <http://www.mcclatchydc.com/2014/01/20/215143/more-oil-spilled-from-trains-in.html>).

<sup>15</sup> *See*, September 6, 2013, advance notice of proposed rulemaking responding to eight petitions for rulemaking and four NTSB Safety Recommendations related to the transportation of hazardous materials by rail, 78 F.R. 54849.

<sup>16</sup> *See* Proposed HHFT Rules, 79 F.R. at 45029.

<sup>17</sup> Proposed HHFT Rules, 79 F.R., at 45026, *citing* National Transportation Safety Board, Railroad Accident Report—Derailment of CN Freight Train U70691-18 With Subsequent Hazardous Materials Release and Fire (emphasis added), <http://www.nts.gov/doclib/reports/2012/RAR1201.pdf> (February 2012).

<sup>18</sup> *Id.*, at 45059.

Despite these known risks, DOT-111 tank cars are the most commonly used tank cars in crude-by-rail transport, because “PHMSA’s regulations allow its use for all types of crude oil, regardless of packing group.”<sup>19</sup>

PHMSA notes that transporting large volumes of crude oil poses “safety and environmental risk[s] **regardless of the packing group;**” that even one tank car breaching can lead to a “considerable oil spill (~35,000 gallon per tank car);” and that, on average, recent accidents show that five cars “release product with an average quantity release of approximately 84,000 gallons ... result[ing] in significant environmental damage.”<sup>20</sup>

In a PHMSA-issued safety alert, the agency urged the oil industry (railroads and offerors) “to select and use the railroad tank car designs with the *highest level of integrity reasonably available within their fleet* for shipment of [crude oil] by rail,” adding, in no uncertain terms, that the industry should “avoid the use of older, legacy [DOT-111 cars] for the shipment of such oil to the extent reasonably practicable.”<sup>21</sup>

Despite these warnings, these cars remain on the rails, and PHMSA has not taken steps to immediately remove them from service for hazardous liquids.<sup>22</sup> The Proposed HHFT Rules would, in fact, continue to allow these cars to be used for the transportation of highly flammable and explosive Bakken crude and ethanol over a 5-year phase-out period, thereby allowing for the increased risks associated with these tank cars to continue for some time. Further, the Proposed HHFT Rules would not prevent these dangerous tank cars from continuing to be used to transport other, highly dangerous hazardous liquids, such as heavy crude oils (e.g., “tar sands” oil). Indeed, in the Proposed HHFT Rule, PHMSA admits that it expects many of these dangerous cars to be transferred to tar sands services.<sup>23</sup>

Overall, PHMSA admits there are inherent risks in hazardous liquid transportation by rail, advises that railroads should avoid using certain railcars, fails to outright prohibit the use of those railcars, and, instead, proposes regulations whereby those dangerous railcars would be allowed to remain in service for five years and transferred to shipping other highly dangerous hazardous materials and crude oils. The proposed weight and length limitations are therefore necessary to address the inherent risks that continued use of these tank cars in long, heavy trains pose to the public and the environment.

#### **d. Federal Agencies, Including PHMSA, Specifically Acknowledge the Compounded Danger of Long, Heavy Hazardous Material Trains**

<sup>19</sup> GAO Report, at 40. Packing groups are, for crude oil, the three different classifications that can be assigned to a cargo of product with varying degrees of dangerous flammability characteristics.

<sup>20</sup> Proposed HHFT Rules, 79 F.R., at 45061, Table 22 (emphasis added).

<sup>21</sup> *Id.*

<sup>22</sup> Notwithstanding the fact that this Rulemaking Petition is focused on reducing the risk and impacts of crude oil trains of essentially unregulated length, Petitioners have taken independent actions to improve the safety of crude oil rail transport, including calling on FRA to issue an emergency order banning the continued use of DOT-111s for transport of crude oil.

<sup>23</sup> Proposed HHFT Rules, 79 F.R. at 45060.

In response to the many accidents involving hazardous liquid transportation by rail in recent years, on August 1, 2014, PHMSA issued the Proposed HHFT Rules. These rules were intended to update and clarify the hazardous materials regulations to prevent and mitigate the consequences of a train accident involving 20 or more carloads of certain flammable liquids in a single train (labeled High Hazard Flammable Trains - “HHFTs”).<sup>24</sup> As stated by PHMSA,

“transporting crude oil can be dangerous if the crude oil is released into the environment because of its flammability. This risk of ignition is compounded in the context of rail transportation of crude oil. It is commonly shipped in [unit trains] that may consist of over 100 loaded tank cars, and there appear to be uniquely hazardous characteristics of crude oil.”<sup>25</sup>

PHMSA elaborated, noting that:

“there are many unique features to the operation of unit trains to differentiate their risk ... [they] are **longer, heavier in total**, more challenging to control, and can produce considerably higher buff and draft forces which affect train stability. In addition, these trains can be more challenging to slow down or stop, can be more prone to derailments when put in emergency braking, and the loaded tank cars are stiffer and do not react well to track warp which when combined with high buff/draft forces can increase the risk of derailments.”<sup>26</sup>

This makes clear that the length and weight of trains carrying crude oil and other hazardous liquids make them more susceptible to derailment. The agency’s Proposed HHFT Rules, however, failed to address the size and weight of trains carrying hazardous liquids, even though PHMSA admits that these factors contributed to the recent spate of oil and ethanol train derailments. In fact, PHMSA anticipates that further elongation of these hazardous material trains will occur; the agency notes that the additional safety features PHMSA has proposed will not negatively impact capacity because “DOT believes the railroads will optimize unit train length which may result in longer trains.”<sup>27</sup>

Clearly, then, PHMSA should be looking to mitigate this compounded, inherent danger. Remarkably, the one way to reduce the danger of long, heavy trains – a limit on the length or weight of those trains – was not considered in the Proposed HHFT Rules.<sup>28</sup>

<sup>24</sup> Pursuant to the PHMSA Proposed HHFT Rulemaking, the proposed definition for a High Hazard Flammable Train (HHFT) to be included in 49 CFR 171.8 is: 20 or more carloads in a single train of a Class 3 flammable liquid.

<sup>25</sup> Proposed HHFT Rules, 79 F.R., at 45041.

<sup>26</sup> See the Regulatory Impact Analysis (“RIA”) accompanying the Proposed HHFT Rules at 24 (emphasis added).

<sup>27</sup> Proposed HHFT Rules, 79 F.R., at 45056 (emphasis added).

<sup>28</sup> In reality, were 15 crude oil railcars (or any number between 1 and 120) part of a 120 railcar train carrying mixed, heavy commodities, operators would still have a difficult time slowing or stopping the train, the train could still be more prone to derailments during emergency braking, and the train generally would be challenging to control. Furthermore, if the product were changed, from Bakken crude to tar sands heavy crude, the long, heavy train would, again, be just as difficult to control. Indeed, numerous scenarios can be created; for example, under this rule, a hypothetical train with 19 cars of Bakken, explosive crude oil, 19 of tar sands heavy crude, 19 of non-ethanol hazardous chemicals, and, say, 60 coal cars would be exempt from any of PHMSA’s new requirements (i.e., brakes, speed reduction, disclosure, tank car design upgrades, etc.). Were such a train to need to suddenly brake, or encounter failing track infrastructure, disaster would surely result.



**e. PHMSA Should Limit the Number of Cars and the Total Weight for Rail Transport of Crude Oil and Other Liquid Hazardous Materials**

Based on PHMSA’s own analysis, it should be promulgating regulations to limit the overall length and weight of trains carrying crude oil and hazardous liquids to reduce the risk of derailment and protect people and the environment from further derailments and oil spills that could otherwise be avoided.

As set forth above and at length in PHMSA’s Proposed HHFT Rules, trains carrying hazardous liquids – and particularly those carrying large amounts of crude oil and ethanol – “pose a significant risk to life, property, and the environment.”<sup>29</sup> As mentioned above, there is inherent danger in the rail cars used (DOT-111s worst of all), and compounded danger in long, heavy trains. This conclusion was clearly made by PHMSA when it discussed oil spill risks in the Proposed HHFT Rule: the agency concluded that even one tank car breach can lead to a “considerable oil spill;” a five-car release can “result in significant environmental damage;”<sup>30</sup> and it assumes that a “catastrophic event will stem from a derailment resulting in the damage of 5 or more tank cars.”<sup>31</sup>

In sum, PHMSA has noted that the potential for derailments of these trains is exacerbated by the number of cars in a train carrying hazardous materials (that can cause significant damage if released), and the weight of such trains (which makes a train more unwieldy, makes emergency braking less effective, and adds significantly to the kinetic and potential energy of a disaster). Therefore, a limitation on the length and weight is necessary to prevent further derailments.

Scientific studies have confirmed that longer, heavier trains have a higher likelihood of derailment.<sup>32</sup> According to the U.S. Department of Transportation’s Federal Railroad Administration, the American Association of Railroads (“AAR”) has determined, through testing and analysis using AAR’s Vehicle Track Systems, that a “no problem” train would require a limit of less than 4,000 tons total train weight.<sup>33</sup> A “no problem” train is one that has much less likelihood of derailment, meaning that trains greater than 4,000 tons are at higher risk for accidents. Therefore, trains carrying crude oil and other hazardous liquids, including manifest trains, should be limited to that weight, to reduce the potential for further derailments of trains that PHMSA has stated pose a significant risk to life, property and the environment.

Furthermore, according to the Congressional Research Service’s report on U.S. Rail Transportation of Crude Oil, “Class I railroads have transitioned to using bigger and heavier cars,

<sup>29</sup> Proposed HHFT Rules, 79 F.R., at 45069.

<sup>30</sup> *Id.*, at 45061, Table 22 (emphasis added).

<sup>31</sup> RIA, at 192.

<sup>32</sup> See, for example, Anderson and Barkan, Derailment Probability Analyses and Modeling of Mainline Freight Trains (available at

<http://railtec.illinois.edu/CEE/pdf/Conference%20Proceedings/2005/Anderson%20and%20Barkan%202005.pdf>)

<sup>33</sup> U.S. Department of Transportation, Federal Railroad Administration: Report to the Senate Committee on Commerce, Science and Transportation and the House Committee on Transportation and Infrastructure (June 2005).

raising the maximum weight on many track sections from 263,000 lbs. to 286,000 lbs.”<sup>34</sup> This increased weight allowance only exacerbates the potential for derailments when dozens of these cars are used in unit or manifest trains. It is further clear from the Proposed HHFT Rules that tank cars carrying hazardous liquids are at the maximum weight limit for rail cars (and certainly will be if the proposed rules are adopted and safety features such as thicker shells and jackets are required). If a 4,000 total ton (8 million pounds) limit is employed, then this translates into a limit of just under 30 cars per unit train ( $8,000,000 / 286,000 = 27.9$ ).

These limitations are necessary in order for PHMSA to fulfill its self-proclaimed mission “to protect people and the environment from the risks of hazardous materials transportation.”<sup>35</sup> According to PHMSA, its “vision is that **no harm** results from hazardous materials transportation,” and that it will “work continuously to find new ways to reduce risk toward **zero** deaths, injuries, environmental and property damage, and transportation disruptions.”<sup>36</sup> Among the many actions PHMSA should take to meet this statutory standard, one of the most critical is for PHMSA to require that trains carrying hazardous liquids meet the “no problem” threshold identified by AAR (“the world’s leading railroad policy, research, standard setting, and technology organization that focuses on the safety and productivity of the U.S. freight rail industry.”),<sup>37</sup> which is a total weight of 4,000 tons.

## V. Conclusion

From coast to coast, the U.S. is facing an immediate, imminent threat from crude-by-rail operations and hazardous material transport in general. Given that the problem is growing at an exponential rate, immediate and comprehensive action is required. Over the past year, despite three rulemakings by PHMSA and FRA wherein the agencies recognized that the dangers of associated with crude by rail transport are exacerbated by the use of long, heavy trains, the agencies have failed to propose limiting the length or weight of trains transporting such materials.

In order to fulfill the PHMSA’s statutory mandate to “prescribe regulations for the safe transportation, including security, of hazardous material,”<sup>38</sup> to “consider the assignment and maintenance of safety as the highest priority,”<sup>39</sup> and to prevent harm from resulting from hazardous materials transportation, PHMSA must promulgate a regulation that addresses what PHMSA itself has identified as a contributing factor in oil train derailments: train length and weight. Given the “risks to life, property, and the environment that are inherent in the transportation of hazardous materials,”<sup>40</sup> and that PHMSA is bound by law to “reduce railroad-related accidents and incidents,”<sup>41</sup> it must act to remedy this oversight. For the foregoing

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<sup>34</sup> Congressional Research Service, U.S. Rail Transportation of Crude Oil: Background and Issues for Congress (May 5, 2014) (available at <http://fas.org/sgp/crs/misc/R43390.pdf>).

<sup>35</sup> <http://www.phmsa.dot.gov/about/mission>

<sup>36</sup> *Id.* (emphasis added).

<sup>37</sup> See AAR’s website, <https://www.aar.org/Pages/AboutUs.aspx>

<sup>38</sup> 49 U.S.C. § 5103(b)(1).

<sup>39</sup> 49 U.S.C. § 108(b).

<sup>40</sup> 49 U.S.C. § 5101.

<sup>41</sup> 49 U.S.C. §20101.

reasons, the Petitioners hereby petition the agency to limit the length and weight of trains carrying crude oil and other hazardous liquids to prevent derailments, as set forth above.

Respectfully submitted,

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