The Renewable Fuels Association (RFA) appreciates the opportunity to submit these comments in response to the advanced notice of proposed rulemaking concerning the shipment of hazardous materials by rail. This action could have significant implications for the movement of fuel ethanol via rail. RFA is the leading national trade association for America's ethanol industry. Founded in 1981, our mission is to drive expanded production and use of American-made ethanol and co-products by raising awareness about the benefits of renewable fuels. The success the RFA has been able to achieve on behalf of American ethanol producers is due to the support from its member companies. We have a diverse group of members, large and small businesses, publicly-traded companies and farmer-owned cooperatives.

Safety is a top priority of the ethanol industry, especially when it comes to ethanol transportation on the rail ways. RFA has assembled a variety of resources to serve as guidance documents and to ensure proper precautions are taken to avoid an incident involving ethanol and the rail ways. RFA's Plant and Employee Safety Committee is extremely active in developing resources and best practices to keep the industry on the path to continuous improvement.

RFA is the guiding force behind the Ethanol Emergency Response Coalition. A voluntary industry/government group developing safety and emergency response information for the first response community specifically focused on ethanol incident training since 2006. RFA supports the www.ethanolresponse.com website as a “one-stop shop” of ethanol safety and emergency information. RFA is also a national sponsor of TRANSCAER®, which is a voluntary national outreach effort that focuses on assisting communities to prepare for and to respond to possible hazardous materials transportation incidents. The RFA and TRANSCAER® were awarded a grant from the Federal Railroad Administration to hold Ethanol Safety Seminars across the country in conjunction with short line railroads. The goal of these seminars is for attendees to gain full ethanol emergency
response training experience that they can put to use immediately in the field as well as pass along to other emergency response teams.

Railroads have a strong safety record for moving hazardous materials. The U.S. Department of Transportation's Federal Railroad Administration (FRA) announced that 2012 was the safest year in rail history with 99.997% of the approximately 1.7 million carloads of hazardous materials shipped in 2012 successfully reaching their final destination without a release caused by an accident. A variety of hazardous materials essential to daily life are transported on rail lines that pass through urban and rural areas.

Denatured Fuel Ethanol is transported on the railroads using a DOT-111 railcar. The DOT-111 railcar is subject to rigorous building specifications and routine safety and integrity inspections. The entire tank car is inspected for proper operating order before, during and after each and every load. Tank cars manufactured after July 1, 1974 have a 50 year life as built. On average, 85% of the current ethanol rail fleet is less than 7 years old. These cars were purchased in good faith that they would provide their service life. The RFA is actively involved with the American Association of Railroads (AAR) Tank Car Committee looking for improvements to the tank car design, loading and unloading actions as well as employee education and knowledge about tank cars.

I. Regulatory priorities should focus on the root cause of derailments instead of the railcar design.

From 2006 to 2011 there were approximately 8.58 million shipments of hazardous materials via tank cars, of which 1.38 million were denatured fuel ethanol. In that time, only 163 ethanol cars were involved in derailments with 66 cars releasing product. Ethanol derailments are extremely rare events.

The major causes of the incidents were substandard track integrity, switching failures, inspection errors, maintenance problems, or lack of communication between train crews (human error). Broken rails and welds of the tracks have resulted in approximately 670 derailments between 2001 and 2010, which far exceeds the annual average of 89 derailments for all other causes. In addition, statistical analysis supports the concern that broken rails results in the highest severity and frequency of derailments.

Rather than focusing exclusively on railcar design, a more prudent approach would be to invest in initiatives that address these root causes and keep the railcars on the tracks. Such initiatives should include improvements in inspection and track maintenance protocols, utilizing available technology to assist in reducing human error (e.g., Positive Train Control), and improved communication systems for rail operations. These types of actions would provide a better cost-benefit ratio and help stop the derailment incidents from occurring at all.

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2 American Association of Railroads Tank Car Committee Docket Subcommittee 1; T5.27, October 2013

3 American Association of Railroads T87.6 Task Force Summary Report
The diverted focus to redesigning an already robust railcar has garnered comments like “they have known since 1991 that these cars are flawed”. DOT 111 railcars are not flawed; they were built to DOT regulatory specifications to last 50 years and have an excellent safety record when kept on the tracks. Why did PHMSA allow the ethanol industry over the last decade to invest in this proven, safe, and well-regulated equipment before the industry took voluntary action in 2011 moving forward?

RFA strongly believes that DOT, FRA and PHMSA need to address the root cause of the recent train derailments in a swift and comprehensive manner. DOT must look closely at recent incidents and develop sensible regulations that address the human errors and substandard railways that lead to incidents. Otherwise, train derailments, whether carrying hazardous material or human passengers will continue to injure people, property, and the environment.

II. We continue to support P-1577 as submitted, keeping the option of a jacketed or non-jacketed car.

The AAR members and the Tank Car Committee petitioned (P-1577; March 9, 2011) the Pipeline and Hazardous Materials Safety Administration (PHMSA) and Transport Canada to establish new standards for DOT-111 tank cars used to transport hazardous materials in packing groups I & II. The petition proposed new construction standards allowing for cars to be jacketed or non-jacketed to obtain the same safety objectives. The submitted petition specifically recommended no modifications for existing tank cars.

The AAR agreed to forward the petition to PHMSA as a result of a unanimous decision by the Tank Car Committee. AAR created a Task Force T87.6 in July 2011. The Task Force was created with a dual charge to develop an industry standard for tank cars used to transport crude oil, denatured alcohol and ethanol/gasoline mixtures as well as consider operating requirements to reduce the risk of derailment. At the initial meeting on August 17, 2011, the working group decided by consensus that the P-1577 tank car would be the baseline car and the industry voluntarily began building these new cars ordered beginning October 1, 2011.

RFA continues to support P-1577 and the T87.6 Task Force recommendations for newly built cars as adopted by the industry and for these cars to be “grandfathered” in and exempt from any future modifications that may otherwise be required by the final regulatory requirements for tank car construction.

We request that PHMSA separate new tank car construction regulatory requirements from any potential modification to existing railcars in a stand-alone rulemaking for the timely adoption of P-1577 requirements for the construction of new DOT-111 tank cars used for the transportation of ethanol and crude oil. Tank cars are being built every day and there is currently an 18-month backlog. Builders and shippers have made significant capital investments in cars built to P-1577 and T87.6 construction standards in good faith, expecting PHMSA’s approval of that standard.
III. We do not support costly modifications to the existing DOT-111 tank car fleet based on current available data that has not been third-party reviewed.

In July 2013, the AAR reconvened the T87.6 task force. The T87.6 Task Force met and reviewed further improvements for tank cars but after numerous meetings no consensus could be found amongst committee members as to recommended modifications for the existing fleet. The RFA and most other stakeholders continue to support P-1577, which recommended no modification requirements for the existing fleet of tank cars carrying flammable liquid in Packing Group I and II.

This ANPRM is requesting detailed data, of which the RFA does not have routine access. UMLER, Train II and the Rail Transportation and Engineering Center (RailTEC) University of Illinois at Urbana-Champaign supply the data which cannot easily be independently filtered or verified. We work closely within the T87.6 group where we have access to data via reports given at the task force meetings. The RFA just recently became aware of the risk-based analysis data supplied by RailTEC; Conditional Probability of Release (CPR). CPR is the probability that a derailed tank car in a FRA reportable accident releases some or all of its contents. Probabilities are given for the tank car as a whole, and for its constituent components: heads, shell, top fittings and bottom fittings. The main results are the product of a logistic regression on a subset of the records in the rail accident database. Although we admire the work being performed by RailTEC and recognize the analytical approach as another assessment tool, we have no way to independently verify or filter the findings. We believe it is too early to use this data to wholly support expensive modifications to the existing fleet.

A presentation was given at a recent T87.6 meeting by RailTEC detailing the CPR probability number of suggested safety improvements of the railcar in a derailment accident scenario. Individual modifications such as top fittings protection, half height / full height head shields and increased head and shell thickness show marginal improvements of 11 -15 percent. It takes a combination of improvements, such as top fittings protection and the most expensive retrofit of adding a head and shell jacket to reach a theoretical 50 percent improvement in the loss of product in a derailment. A conservative cost estimate shared at the meetings for this retrofit could be over $90,000, not including out-of-service time for the tank car.

Another science research paper; Finite Element Analyses (FEA) of Railroad Tank Car Head Impacts describes engineering analyses of a railroad tank car impacted at its head by a rigid punch. The dynamic, nonlinear FEA models were used to predict puncture of the tank car head. The results presented in the paper indicated that increasing the head thickness and adding a head shield provides only marginal or incremental improvements in puncture resistance.

The T87.6 Task Force could not come to consensus on modifications to existing cars. The discussions at the meetings unraveled, as numerous concerns were raised regarding the requirement for head shields, jacket and thermal protection for tank cars transporting denatured fuel ethanol, crude oil and other flammables. The addition of head shields, jacket and thermal

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4 Class 111 Tank Car Fleet Analysis, Chris Barkan, Rapik Saat, Xiang Liu Rail Transportation and Engineering Center University of Illinois at Urbana-Champaign, Todd Treichel, RSI-AAR Railroad Tank Car Safety Research and Test Project, report to T87.6, Oct. 15, 2013

protection decreases the volume and weight capacity of the tank car. Reduction in tank capacity will result in additional movements and, assuming the probability of a derailment remains the same, an increased number of derailed cars. The modifications that add weight to the car could lead to fatigue failure and are limited by the truck components and change the brakes ratio. Also short lines and shippers facilities tracks may not support the heavier cars, especially ethanol, as production facilities are located in rural areas.

Jackets, head shields and top fittings protection require re-engineering the individual car by qualified shops. The addition of a jacket and thermal protection will increase inspection, maintenance and transportation costs as well. In addition to the cost, we are concerned by the lack of qualified shops to perform this work. Requiring a jacket will require a full tank stress relief test, for which there are no qualified shops.

These technical reasons for no modifications to existing cars are the same today as they were in 2011. Some may think it is enough to move forward with modifications because they think we have the CPR data that shows improved scores for modifications to the existing cars. However, we do not have the data for the re-engineered modifications that shows the proposed solutions will not create different safety issues that do not exist today.

IV. Monetary costs for modifications to existing DOT-111 for Denatured Fuel Ethanol are exceptionally high.

The Rail Services Institute (RSI) modification cost estimate of $1 billion is a very conservative estimate. In ethanol service, we currently have approximately 29,000 cars that would need modification, which is the lower estimate of ethanol fleet cars (based on the drought year 2012 movements). If the regulatory requirement of a jacket with thermal protection is being contemplated for modifying existing tank cars, just the cost to modify ethanol cars alone could reach $2.6 billion, not including out-of-service time.

Tank cars that will be required to go back to the shop for modifications will further increase compliance costs. RSI currently estimates this modification to take 12 weeks; again we think this is very conservative due to the complexities and lack of qualified shop space. We estimate this loss due to out of service time at a conservative $56.8 million, based on the 12 weeks with a two-week round trip to shop and a $600 per month lease rate which is also conservative. This estimate does not include the shipping cost to move the railcar to the shop for modifications. Moving 29,000 empty railcars round trip to the shop for modifications could cost another $58 million.

The ethanol fleets are considered newer cars. Most were built over the last 10 years and purchased in good faith to last 50 years in service. A large number of these existing ethanol cars are due for routine qualification in 2014 and 2015. All the shops available to do potential modification work are already at full capacity. The increased demand for shop space for modifications will further delay the ability of cars to get into compliance and back into service, requiring shippers to find additional cars to move their product at an additional cost.
RFA greatly appreciates the opportunity to participate in the ANPRM process and we look forward to working with PHMSA and other stakeholders to ensure that the increased volumes of crude oil and ethanol and other flammables that move by rail are transported safely. We strongly support the standards in the P-1577 petition and the T87.6 Task Force recommendations, and believe it is PHMSA who has the authority and responsibility to institute these new standards to ensure certainty for stakeholders. If have questions regarding the content of this letter contact Kelly Davis at kDavis@ethanolrfa.org or Kristy Moore at kmoore@ethanolrfa.org

Sincerely,

[Signature]

Bob Dinneen