

**Before the United States Department of Transportation  
Pipeline and Hazardous Materials Safety Administration**

**Docket No. PHMSA-2012-0082  
HM-251  
RIN 2137-AE91**

**Hazardous Materials:  
Rail Petitions and Recommendations  
To Improve the Safety of Railroad Tank Car Transportation**

**Comments of the American Chemistry Council**

**December 5, 2013**

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The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care<sup>®</sup>, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a \$770 billion enterprise and a key element of the nation's economy. It is one of the nation's largest exporters, accounting for twelve percent of all U.S. exports. Chemistry companies are among the largest investors in research and development.

Safety has always been a primary concern of ACC members, and they have intensified their efforts, working closely with government agencies to further enhance transportation safety for their products. Specifically with regard to the Advance Notice of Proposed Rulemaking (ANPRM) published by the Pipeline and Hazardous Materials Safety Administration (PHMSA) in this docket, the companies represented by ACC account for a significant portion of tank car shipment of hazardous materials that move on the North American railroad system.

The nation depends on chemical producers every day to form the building blocks and processes necessary for safe drinking water, a plentiful food supply, abundant energy, and life-saving medicines. Chemicals are produced in few places, but are needed everywhere. That is why chemical companies depend on railroads and other carriers to safely transport their materials wherever they are needed. Any regulatory changes should support the safe transport of these vital materials and not restrict or prevent their movement.

A comprehensive federal regulatory framework exists to address all facets of railroad hazmat safety and security. Tank cars that carry chemicals, crude petroleum, or other commodities already must adhere to strict federal and railroad standards and are inspected regularly.

According to the Association of American Railroads (AAR), more than 99.99 percent of rail hazmat shipments reach their destination without a release caused by a train accident. Through ACC's Responsible Care® initiative, member companies and our transportation partners are committed to continuous improvement in every aspect of transportation safety. Collectively, ACC member companies have invested billions of dollars in training, technology, and tank car safety. In addition, ACC helps first responders prepare for emergencies through programs like CHEMTREC® and TRANSCAER®.

PHMSA and the Federal Railroad Administration (FRA) should adopt a comprehensive approach to safety. An effective strategy to enhance the safe movement of chemical shipments by rail must encompass more than just tank car designs and help address the root causes of recent accidents that resulted in tank car breaches. It begins with accident prevention strategies that address railroad operational failures and railroad infrastructure defects – the leading causes of rail accidents. When shippers entrust their cargo with railroads, they need to know that the carrier is taking the precautions needed to safely transport the materials and prevent any accidents. Stronger tank car standards or any other accident mitigation strategy are no substitute for this commitment to accident prevention.

Regarding the specific NTSB recommendations on tank cars and the issues outlined in the ANPRM, ACC believes that PHMSA should:

- Prioritize the implementation of tank car enhancements in a manner that will most efficiently yield safety benefits.
- Initially focus its analysis on the types of equipment that actually represent the largest portion of the on-going construction of new tank cars, namely cars for crude oil and ethanol-related products. Wide-ranging consensus had been developed around the criteria for such new cars.
- Recognize that safety benefits will be achieved more efficiently through improving standards for new cars, in comparison to retrofitting or replacement of cars that are already in service.
- Conduct the required regulatory impact analysis. Additional information is needed to assess the potential safety performance improvements and technical feasibility, as well as the relative costs, of potential upgrades.

ACC urges PHMSA to conduct a thorough analysis and prioritize tank car enhancements on the largest portion of the ongoing construction of new tank cars. ACC also believes that safety benefits will be achieved more efficiently through improving standards for new cars, as opposed to retrofitting existing cars, and through full assessment of the safety and feasibility of proposed upgrades. The quickest and best way to for PHMSA to improve safety through this rulemaking is to focus on recommendations that have the support of all transportation stakeholders and employ proven technologies. Specifically, the agency should expedite a federal standard for new tank cars that carry petroleum and ethanol.”

#### **Overview of These Comments**

ACC appreciates the opportunity to comment in this important rulemaking docket, where PHMSA is examining an array of possible changes to the Department of Transportation's Hazardous Materials Regulations (HMR). As noted in the ANPRM, which was published in the Federal Register on September 6, 2013, the agency has requested comments on eight separate petitions from the public as well as four recommendations that were issued by the National Transportation Safety Board.

In these comments, ACC will principally address four of the pending petitions:

- Petition P-1577
- Petition P-1595
- Petition P-1612
- Petition P-1548.

ACC is a named petitioner in the latter three filings. However, ACC was also among the organizations represented by the submission of Petition P-1577 by the Association of American Railroads. ACC is one of the participating members of AAR's Tank Car Committee (TCC).

In addition, ACC will address the NTSB recommendations and Petition P-1587.

### **Petition P-1577, TCC Docket T87.6, and CPC-1232**

Central to this ANPRM is Petition P-1577, which was submitted to PHMSA early in 2011 by AAR on behalf of the TCC. ACC strongly supported the filing of Petition P-1577 as a way to request that the agency establish new standards for the construction of DOT Specification 111 (DOT-111) tank cars. As PHMSA itself has summarized Petition P-1577 in the ANPRM, the TCC had "reviewed tank car performance under the current standards and investigated the benefits of potential improvements ... intended to enhance the safety of the existing specification." ACC cast its TCC vote in favor of this approach to obtaining a thorough Federal regulatory examination of ways to revise tank car standards with the objective of improving the crashworthiness of DOT-111 tank cars. As it was filed, Petition P-1577 covered a broad range of hazardous materials from various Hazard Classes (not just flammable liquids). The products for which tank car designs were included within Petition P-1577 are characterized as being in either Packing Group (PG) I or PG II under the HMR.

Fundamental to addressing the issues in this ANPRM is a proper understanding of the basis on which Petition P-1577 was developed and submitted to PHMSA by AAR. It was a consensus petition filed on behalf of the entire TCC membership, which includes ACC and other shipper organizations, the tank car building and leasing companies, and the railroad carriers. The broad consensus reflected in Petition P-1577 looked to the establishment of Federal regulatory standards that would – as precisely described by PHMSA in Docket No. HM-251 – "only be required for newly constructed DOT Specification 111 tank cars that transport PG I and II hazardous materials" (Federal Register, Volume 78, page 54854). All of the elements of Petition P-1577 that were brought forward for PHMSA's consideration applied exclusively to the

construction of new DOT-111 cars that would go into service carrying PG I and PG II materials. As summarized in the ANPRM, those elements dealt with:

- construction to 286,000-pound Gross Rail Load (GRL) standards;
- head and shell thicknesses and jacketing;
- at least a half-inch half-head shields;
- use of normalized steel;
- top fittings protection;
- pressure-relief valve criteria.

But, to repeat, Petition P-1577 was a consensus request that PHMSA examine revisions only “for newly constructed DOT Specification 111 tank cars that transport PG I and PG II hazardous materials.” That petition did not address any aspects of the existing fleets of hazmat tank cars that were already transporting PG I and PG II products. (Nor did the petition apply to equipment being used for the movement of PG III materials). Therefore, Petition P-1577 did not seek, and does not provide the basis for, retrofitting or replacing DOT-111 cars that that previously built and placed into service. Indeed, there was a consensus at that time that the industry groups did not have all of the information that would be necessary in order to request that PHMSA consider changing the regulations that governed well over 100,000 existing DOT-111 tank cars. Additional information would be needed on the safety performance and technical feasibility, as well as the relative costs and benefits, of potential upgrades. It was recognized that those existing tank car fleets have different age profiles, carry different hazardous materials, reflect different investment levels, etc. For those reasons, neither the retrofitting of existing cars nor their possible replacement were included in the multi-industry consensus that led to the submission of the document that PHMSA accepted and designated Petition P-1577. In addition, certain DOT-111 tank car operating issues, such as the potential benefits and costs of revising outage levels, were not addressed when AAR filed Petition P-1577 with the support of ACC and the rest of the TCC membership.

The TCC subsequently established a task force under its Docket T87.6, which is also described in the section of the ANPRM that deals with Petition P-1577. As PHMSA has noted, that task force received “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 of tank cars carrying crude oil classified as PG I and II, and ethanol.” So another critical aspect of the consensus process is that the product scope of TCC Docket T87.6 began and has remained unchanged. TCC Docket T87.6 has exclusively addressed tank cars used in the transportation of ethanol (and certain related products) and crude oil in PG I and PG II.

The recommendations that were carefully developed on a cooperative basis by industry experts under TCC Docket T87.6 certainly deserve PHMSA’s full and careful consideration. Those recommendations deal with tank car design and rail operating factors, including roll-over protection, hinged and bolted manways, bottom outlet valves, product outage levels, rail integrity; various general rail safety improvements that are not specifically related to hazardous materials, speed restrictions for hazmat “key trains;” and emergency response. And as will be discussed below in connection with Petition P-1595 and Petition P-1612, the work of the task

force created under TCC Docket T87.6 resulted in a consensus about the design of new tank cars that were going to be constructed in large numbers for ethanol and especially for crude oil.

In addition to the filing of Petition P-1577 and the work conducted in TCC Docket T87.6, there was a third major non-governmental development. On August 31, 2011, AAR issued Casualty Prevention Circular (CPC) 1232. The scope of CPC-1232 is clear: It states certain AAR “requirements” for tank cars “built” for moving PG I and PG II materials with the following proper shipping names:

- "Petroleum Crude Oil"
- "Alcohols, n.o.s."
- "Ethanol and Gasoline Mixture"

Once again, the scope and focus of CPC-1232 are unmistakable: newly constructed cars (not existing equipment), only PG I and PG II materials (not those in PG III), and only crude oil and ethanol-related products (no other commodities).

To conclude this discussion of three key documents – Petition P-1577, TCC Docket T87.6, and CPC-1232 – ACC emphasizes that they were developed to define characteristics for tank cars that had not yet been built. Moreover, further consensus that supported both TCC Docket T87.6, and CPC-1232 was clearly limited to parties with an interest in the movement of crude petroleum in PG I and PG II, and the movement of ethanol and certain related products.

### **Petition P-1595 and Petition P-1612**

On July 11, 2012, ACC joined with other organizations to request, by means of what was designated as Petition P-1595, that PHMSA separately address the matter of standards for the construction of new tank cars for crude oil in PG I and PG II, and for ethanol. The details of that proposal are set forth in Petition P-1595 and summarized well in the ANPRM. ACC believed when it joined in that petition – and ACC continues to believe – that PHMSA should initially focus its analysis on the types of equipment that actually represent the largest portion of the ongoing construction of new tank cars. The first reason, as detailed above, is that wide-ranging consensus had been developed around the criteria for such new cars, largely through the work conducted under TCC Docket T87.6. Equally important is that the most immediate safety benefits can be achieved through design changes that are set by regulation for tank cars that have yet to be constructed. ACC certainly recognizes that railroad operating practices and many other factors play important roles in preventing derailments and in reducing the potential for the release of hazardous materials. Tank car design is also one of the important components in the comprehensive approach that is necessary when assessing the safe transportation of hazardous materials in railroad service. In general, safety improvements are achieved more efficiently through improving standards for new cars, in comparison to retrofitting or replacement of cars that are already in service.. Those existing cars would have to be cleaned and taken out of service, would have to undergo considerable physical changes, and would have fewer years of service remaining over which to spread such costs.

In fact, even without regulatory action by PHMSA, what have come to be called “CPC-1232 compliant” new tank cars have been and are being built in accordance with the recommendations arising from Petition P-1577, TCC Docket T87.6, etc. That is where the consensus was developed, and that is where safety could be most directly and immediately enhanced by Federal action in a manner that is acceptable to all stakeholders, including the Government and the public.

Then, subsequent to the submission of Petition P-1595, ACC and three other organizations filed another specific request for targeted regulatory action. PHMSA designated that document as Petition P-1612. The petitioning organizations proposed that the industry consensus that had been developed regarding new tank cars for crude oil and ethanol be adopted as a direct final rule. The clear purpose and intention of Petition P-1612 was to obtain rapid regulatory approval of what had by then become the consensus for the construction of tank cars that were already being built and put into service handling those named products.

### **Responses to Questions in the ANPRM**

With regard to the questions posed about Petition P-1577 in the ANPRM, ACC responds as follows. Other petitions are also addressed in this section, as appropriate:

- *Would the proposed revisions under P-1577 decrease the release of hazardous materials during derailment? If so, what is the basis for this conclusion?* Although the proposed revisions would tend to reduce the release of hazmat during derailments, ACC believes that the agency must conduct an appropriate cost/benefit analysis as part of the proceeding in which PHMSA would take final action to adopt the revisions that were proposed for new DOT-111 cars in Petition P-1577, as supplemented by the more specific Petitions P-1595 and P-1612. ACC also notes that FRA is currently examining significant issues relating to rail infrastructure and operations.
- *Should PHMSA segment the petition and first address requirements for tank cars carrying Class 3 materials (because there is an abundance of work to inform the rulemaking), then the remaining hazard classes within PGs I and II? If so, why?* Yes, ACC believes that PHMSA should proceed in that manner. In fact, such an approach is what ACC specifically proposed in its Petitions P-1595 and P-1612.
- *The proposed tank car requirements do not include thermal protection and therefore do not address thermal damage specifically. Given that ethanol and crude oil are often shipped in unit trains or large blocks within a train and a pool fire is likely in the event of certain large incidents, should thermal protection requirements, such as those considered by the T87.6 Task Force, be a consideration? If so, why or why not?* PHMSA has correctly noted the higher level of risk that is inherent in shipping unit trains or large blocks tank cars containing ethanol or crude petroleum. The fact that 72 loaded cars of crude oil were involved in the Lac-Mégantic accident underlines that point. The transportation risk associated with unit trains relates not only to the hazard of the material being transported, but also to the potential for large numbers of cars to be involved in an

accident. Overall, however ACC looks to the carriers that operate the trains, and to the shippers of those specific commodities, for specific suggestions on this topic.

- *The proposed tank car requirements do not include thermal protection and therefore do not address thermal damage specifically. Given that ethanol and crude oil are often shipped in unit trains or large blocks within a train and a pool fire is likely in the event of certain large incidents, should thermal protection requirements, such as those considered by the T87.6 Task Force, be a consideration? If so, why or why not? PHMSA has correctly noted the higher level of risk that is inherent in shipping unit trains or large blocks of tank cars containing ethanol or crude petroleum. Transportation risk relates not only to the nature of the hazard presented by a single car of a particular hazardous material, but also to the total volume of such cars that are moving together. The fact that 72 loaded cars of crude oil were involved in the Lac-Mégantic accident underlines that point. Overall, however ACC looks to the carriers that operate the trains, and to the shippers of those specific commodities, for specific suggestions on this topic.*
- *Under the Docket HM-233A, PHMSA modified Sec. 179.13 to permit the operation of tank cars at a GRL of 286,000 pounds if the tank car owners obtain approval from the FRA. On January 25, 2011, FRA published a notice outlining the specification requirements for tank cars operating at 286,000 pounds GRL (76 FR 4250). As established by the January 25, 2011 notice, the approval requirements for minimum thickness and materials of construction for newly-constructed tank cars must be based on an analysis that considers puncture velocity. Under an ongoing research project conducted in conjunction with both the T87.6 Task Force and the Advance Tank Car Collaborative Research Project, data suggest that the puncture protection benefits of a 1/16 increase in shell thickness, as proposed in P-1577, are marginal. Further, the enhancements proposed by P-1577 may not be of value when considered relative to the risk associated with the increased weight of the tank cars. Will the changes proposed in the petition adequately improve the safety (puncture resistance) of tank cars? What is the overall impact on rail transportation safety and risk associated with the enhancements proposed for DOT Specification 111 tank cars under P-1577? These proposed revisions would tend to reduce the probability hazardous materials releases, but PHMSA must conduct an appropriate cost/benefit analysis as it proceeds. As discussed above in ACC's review of several of the main petitions in this docket, given the complexities inherent in addressing Petition P-1577, PHMSA should begin the process by focusing its resources on addressing the standards for new tank cars for ethanol and crude petroleum.*
- *The petition addresses some of the tank car design issues raised by T87.6 Task Force. In the P-1577 summary provided above, PHMSA highlights the remaining rail safety enhancements that were considered by the task force for both tank car design and rail carrier. What, if any, design and operations enhancements should PHMSA and FRA consider beyond those identified in P-1577 to improve the safe transportation of PG I and II materials? ACC has explained above that the elements of Petition P-1577, as augmented by TCC Docket T87.6 and CPC-1232, are certainly appropriate for new DOT-111 cars that will carry certain PG I and PG II flammable liquids, namely, petroleum crude oil, ethanol, and alcohols n.o.s. ACC supports those enhancements as those*

particular cars that are being constructed. The on-going construction of new cars and the substantial volume of material in a single unit train are significant factors behind the broad industry consensus around Docket T87.6. Finally, the railroad “operations enhancements” that the question mentions in relation to FRA are certainly significant, as ACC has already stated.

- *Does AAR Circular No. OT-55-N adequately address speed restrictions for key trains? Should PHMSA incorporate the language contained in AAR Circular No. OT-55-N into the HMR to account for the train speed considerations of the task force? Should PHMSA expand upon AAR Circular No. OT-55-N to include requirements for fewer than 20 cars? ACC defers to the expertise of AAR and its member railroads on whether the practices contained in Circular No. OT-55-N to be incorporated into the HMR, or should apply to a different number of hazardous materials carloads in a train.*
- *Are shippers ordering CPC 1232-compliant tank cars voluntarily to address safety concerns and the immediate need for new cars or because compliance with CPC 1232 is required? If so, please provide any relevant data about this. The shippers that are ordering such cars at this time are best able to respond to this question.*
- *How many CPC 1232-compliant tank cars are currently in service? ACC has no independent information to provide.*
- *PHMSA and FRA estimate that for an \$18,000 initial cost, a shipper will be able to transport an additional 13,000 to 16,000 pounds of product. This would result in fewer cars required to transport the same amount of product. What are the safety and economic benefits of increasing the product capacity of the tank car? Moving fewer cars to handle the same quantity of hazardous material would tend to lower the overall risk associated those movements. ACC is concerned, however, about any regulatory changes that would decrease the lading that can be carried in existing DOT-111 cars, because that would have the opposite effect. This is likely to occur in the event of retrofitting, which is not within the scope of the pending petitions P-1577, P-1595, and P-1612. Any PHMSA action that would result in decreasing the size of the load that could be carried in an existing tank car would require a greater number of shipments to move the same amount of product to customers. That, in turn, would tend to increase the safety risk, raise transportation costs, and require the purchase or leasing of additional tank cars merely to maintain the same level of service. Moreover, if retrofitting were to be considered in future regulatory action, the agency would have to carefully determine the costs of rearranging appliances on the end of existing tank cars, attaching head shields or jackets to tanks, heat-treating welds, replacing interior coatings, etc.*
- *Positive train control (PTC) is a system of functional requirements for monitoring and controlling train movements to provide increased safety. PTC is designed to automatically stop or slow to prevent accidents. Specifically, PTC is designed to prevent train-to-train collisions, derailments caused by excessive speed, unauthorized incursions by trains onto sections of track where repairs are being made and movement of a train through a track switch left in the wrong position. Are technologies available, such as*

*PTC, that would prevent derailments? If so, please provide any relevant data--including any projected improvements in safety performance that would reduce current rail transportation risks.* PTC is a Congressionally-mandated safety system that has been presenting complex challenges to the rail industry and to FRA. ACC notes that PTC's requirement extends only to passenger lines and main-line track on which Toxic Inhalation Hazard products are to move after December 31, 2015. Other rail safety developments and regulatory requirements, such as FRA's track integrity rulemaking, are also relevant to this discussion.

- *What, if any, are the additional implementation and operating costs associated with CPC 1232 compliant tank cars (e.g., higher fees charged by rail carriers)? Are there any additional benefits, if so, what are they?* ACC does not have any data on what rail carriers charge for their services.
- *Would the increased cost of CPC 1232-compliant cars slow the replacement of older cars? How does this impact the current backlog of cars?* Individual companies would have to provide PHMSA with this kind of information, because specific business decisions are involved.
- *What are the costs associated with re-tooling tank car construction facilities to manufacture CPC 1231-compliant tank cars? How would the costs impact small businesses that build these cars?* ACC does not represent those businesses.
- *Please comment on the accuracy of the estimated costs indicated by AAR and RSI, and include any additional anticipated costs of complying with the proposed revisions. Are there any additional anticipated benefits if the proposed revisions are adopted?* ACC is not aware that any additional benefits have been established in the record. As discussed above, ACC believes that the productive and efficient way for PHMSA to proceed is to focus first on standards for tanks cars that will be constructed in the near future to carry certain products. The stakeholders reached consensus on that matter, as ACC and other organizations explained Petitions P-1595 and P-1612.
- *If the PHMSA were to adopt the action requested by the petitioner, what is the appropriate timeframe for complying with the new requirements?* As discussed above, the petitioners in Petitions P-1577, P-1595 and P-1612 – including in each case ACC – sought PHMSA standards for new cars only. The timeframe would likely be prompt for new cars used in the transportation of ethanol and PG I and PG II crude oil. The timeframes certainly would have to be longer for other commodities, where consensus has not been reached. Each such commodity presents different characteristics and will require separate analysis. In no case should retrofitting be included in the consideration of Petitions P-1577, P-1595 and P-1612.

As for PHMSA's specific questions regarding Petitions P-1595 and P-1612, which deal with tank cars for the movement of ethanol and crude oil, ACC defers to the industries involved in the movement of those named products.

## NTSB Recommendations and Petition P-1587

In addition to the three petitions that deal with standards for new tank cars, Docket No. HM-251 encompasses five other petitions and four recommendations that were issued by the National Transportation Safety Board (NTSB). ACC will not address three of the petitions that were submitted by other parties: Petition P-1507, which was submitted by the Eastman Chemical Company in 2007, dealt with the Department of Transportation's process for obtaining One Time Movement Approvals (OTMAs). Eastman – which is a member of ACC – will be commenting directly on that petition in light of the current OTMA process. ACC has no comments on Petition P-1519 and Petition P-1547.

ACC has the following comments on the NTSB recommendations. Three of the four – Recommendations R-12-5, R-12-6 and R-12-7 – were issued in connection with the investigation of the accident that took place at Cherry Valley, Illinois. The fourth is Recommendation R-07-4.

- NTSB Recommendations. ACC concurs with Recommendation R-12-5, which called for enhanced protection for tank heads and shells, as well as additional top-fittings protection, to the extent that it relates to newly manufactured cars for the movement of ethanol and crude oil. In fact, Recommendation R-12-5, which was issued by NTSB about one year after Petition P-1577 had been filed with PHMSA, is entirely consistent with ACC's views on the design on new tank cars, as expressed in Petitions P-1577, P-1595, and P-1612.
- Bottom outlet valves (BOVs) were addressed in NTSB Recommendation R-12-6. ACC recognizes that there are differing industry views regarding BOVs, and it is important that PHMSA take careful account of the implications that might differ for new cars vs. existing equipment. Additional considerations as to BOVs include the nature of particular products (e.g., viscosity) and the extent to which existing loading and unloading facilities could accommodate tank cars without BOVs.
- With respect to Recommendation R-12-7, PHMSA should include center-sill or draft-sill designs as part of its consideration of standards for new DOT-111 tank cars.
- NTSB's earlier Recommendation R-07-4 dealt with emergency response information. ACC, which has operated the Chemical Transportation Emergency Center (CHEMTREC®) for more than 40 years, remains committed to providing appropriate information to assist emergency responders.

Petition P-1587, filed by the Village of Barrington, Illinois, is closely related to the NTSB recommendations and to Petition P-1577. Barrington and its co-petitioners concur with Petition P-1577's request that PHMSA adopt new regulatory standards for DOT-111 tank cars. As ACC has explained above, the agency should indeed publish such standards in a Notice of Proposed Rulemaking (NPRM). As ACC stated in Petition P-1595 and again in Petition P-1612, that process should begin with equipment for use in the transportation of crude oil and ethanol. Those are the products that move in unit trains and have been involved in several recent accidents, including the one in Lac-Mégantic, Quebec. In addition, there is already a wide consensus among various industries regarding such standards for new tank cars for crude oil and ethanol, and it is where PHMSA can most efficiently move to the NPRM stage. However, ACC does not agree with Barrington's Petition P-1587 to the extent that it would apply the same

standards to existing DOT-111 tank cars that are already in service moving a broad array of products. PHMSA should issue its NPRM in order to evaluate standards for newly manufactured cars for the transportation of crude oil and ethanol.

PHMSA should prioritize the implementation of tank car enhancements in a manner that will yield the greatest safety benefits. In general, safety improvements are achieved more efficiently through improving standards for new cars, in comparison to retrofitting or replacement of cars that are already in service. Requirements to replace or retrofit existing cars would have to be based on a holistic assessment of safety, engineering, cost, and feasibility of potential upgrades. ACC believes that such an effort would divert attention and resources from approaches that have the potential to achieve greater overall rail safety benefits.

### **Petition P-1548**

ACC submitted Petition P-1548, which deals with a specific safety aspect of rupture discs, asking the agency to revise the wording in Section 173.31(d)(1)(vi) of Title 49 of the Code of Federal Regulations. The stated purpose of that petition was to prevent damage to, or the loss of effectiveness of, rupture discs if they were removed from their initial placement in the relief device. ACC's proposal for the accomplishing that safety objective was for PHMSA to except rupture discs from removal if the inspection itself would damage, change, or alter the intended operation of the device.

ACC continues to support the operational control that the tank car be subjected to a pressure test of 10 psi for a minimum of 10 minutes to verify that rupture disks show no signs of leakage. With regard to the questions stated in the ANPR for Petition P-1548, ACC's responses are provided below:

- *Can commenters provide data indicating the percentage of rupture disks that were found to be defective during the currently required inspection?* ACC notes the 40 incidents cited in the ANPR for failed rupture disks. However, the members of ACC's Hydrogen Peroxide Panel believe that none of the cited incidents involved the transportation of hydrogen peroxide. The Panel has not collected specific information indicating failure rates.
- *What percentage of the 40 recorded incidents that involved a failed rupture disc would have been prevented had the rupture disk not been removed and inspected in accordance with §173.31(d)(1)(vi)? What is the basis for this conclusion if the commenter believes any would have been prevented?* As noted above, ACC believes none of the 40 incidents were related to the transportation of hydrogen peroxide. ACC continues to believe that additional incidents will be prevented if the rupture disks are not damaged as a result of being removed for inspection.
- *Is there an inspection program with an established history of safety that could be followed in lieu of removal and visual examination of the underside of the rupture disc, such as the procedures in Special Permit DOT SP-13219?* ACC believes that pressure

testing the rupture disk as described in SP-13219 provides an acceptable alternative to removal.

- *Can companies provide an explanation of how the rupture disc is damaged or its effectiveness is lost as a result of the required inspection?* Each rupture disc supplied includes an installation sheet. The installation sheets are not always available to rail or field personnel. If a car's rupture disc is handled or re-installed incorrectly there are several issues that can arise including: under/over torqued installation bolts, forgetting parts of the outer assembly, misaligning the rupture disk or installing it upside down, warping of the rupture discs, and other possible issues.
- *How much time is required to inspect rupture discs in accordance with the existing regulation?* For hydrogen peroxide, the Panel estimates approximately 15 minutes are required to remove the disk and physically inspect it. A similar time estimate would be appropriate for reinstallation by an experienced technician.
- *What are the comparative costs and benefits of Special Permit DOT SP-13219 and ACC's proposal, which expands Special Permit DOT SP-13219 beyond limited shipments of certain peroxides and without the alternative inspection program?* ACC has not collected cost data for peroxide shipments or other products.
- *Under the action requested by the petitioner, what criteria should shippers use to determine if an inspection would damage, change, or alter the operation of the device?* An example of operational controls that could be used is as follows:

#### Operational Controls

- 1) Prior to offering, the shipper must conduct the visual inspection of each car in accordance with § 173.31(d) (1) (vi) except that the frangible disc is not required to be removed for inspection. All other applicable requirements of § 173.31 must be complied with.
- 2) Prior to each shipment, each tank car will be subjected to a pressure test of 10 psi for a minimum of 10 minutes to verify the rupture disc shows no sign of leakage. This leakage test requirement does not apply to shipment of tank cars containing residue at no more than 3 percent of the total volume.

### **Concluding Comments on Docket No. HM-251**

ACC's view is that PHMSA should proceed expeditiously where wide consensus has already been established and data are more likely available. As noted in Petitions P-1595 and P-1612, that would be to address crude oil in PG I and PG II, and the ethanol-related products before taking on a much more complex set of materials that present different issues (e.g., whether jacketing is appropriate where there are concerns about moisture and possible corrosion that would not be evident). Shop capacity for the construction of new cars must be assessed. Beyond that, shop capacity for any potential retrofitting of existing tank cars – which could require extensive work – will be a serious challenge given the complexity of retrofits, the inspection

peak of the existing tank car fleet, and the recent AAR changes in tank car facility certification requirements.

PHMSA's stated "goal in this ANPRM is to gather the necessary information to determine a course of action in a potential Notice of Proposed Rulemaking." ACC shares that objective, and looks forward to participating in that NPRM. For any questions about these comments, please contact the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Tom E. Schick". The signature is written in a cursive style with a large initial "T" and "S".

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