BEFORE THE
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

PETITION TO AMEND 49 C.F.R. PART 107 AND 49 C.F.R. PART 179
RELATING TO TANK CAR STANDARDS

PHMSA Docket No. ______

PETITION FOR RULEMAKING

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Pursuant to 5 U.S.C. § 553(e) and 49 C.F.R. §§ 106.55(c) and 106.95, the American Chemistry Council ("ACC"), the American Fuel & Petrochemical Manufacturers ("AFPM"), the American Petroleum Institute ("API"), the Chlorine Institute, Inc. ("CI"), the National Association of Chemical Distributors ("NACD"), The National Industrial Transportation League ("NITL"), the Society of Chemical Manufacturers and Affiliates ("SOCMA"), The Sulphur Institute ("TSI"), the U.S. Clay Producers Traffic Association, Inc. ("USCPTA"), and The Fertilizer Institute ("TFI") (collectively, the "Petitioners") hereby petition the Pipeline and Hazardous Materials Safety Administration ("PHMSA") to commence a rulemaking proceeding to modify existing rules and to adopt new rules that explicitly prohibit any person from requiring compliance with tank car specifications that are different from those in applicable regulations, except as authorized by a special permit. The requested rule changes would affect 49 C.F.R. Parts 107 and 179. As described herein, the proposed rules are desirable to remove any doubt that PHMSA has fully exercised its statutory authority to establish national tank car safety standards to the exclusion of all other entities, including the Association of American Railroads
(“AAR”), which has in the past and may in the future attempt to impose standards that deviate from PHMSA’s regulations. The overarching purpose of this Petition is to establish unequivocally that DOT, not AAR, has been vested with the exclusive authority to determine what tank car standards are in the public interest and that the AAR has no authority to require compliance with different standards.

In light of the filing requirement of 49 C.F.R. § 106.95, the Petitioners are submitting this Petition to both the Office of Chief Counsel and the Standards and Rulemaking Division. Nevertheless, because the two rule changes requested herein are closely related and arise from the same legal and factual background, the Petitioners have presented them in this consolidated Petition.

This Petition contains all information required by 49 C.F.R. § 106.100(a) and optional information described in § 106.100(b). Part I identifies the interest of Petitioners in this matter. Part II sets forth the text of the proposed modifications and additions to the rules, accompanied by a brief description. Part III summarizes the purpose of the proposed rules. Part IV provides relevant historical context. Part V addresses PHMSA’s legal authority and imperative to grant this Petition. Part VI provides support that specifically pertains to the requested modifications to Part 179. Part VII similarly provides support that specifically pertains to the proposed additions to Part 107. Part VIII provides optional supporting information, pursuant to 49 C.F.R. § 106.100(b), that pertains to both sets of proposed rules.

I. Identity and Interest of Petitioners.

ACC is an industry association that represents America’s leading chemical companies. ACC’s 143 members produce and manufacture a wide variety of chemicals and related products that are essential to supporting modern life in the U.S. and around the world. Chemistry and the
products derived from it protect our food supply, enable fresh air and water, ensure safe living conditions, and provide access to efficient and affordable energy sources and lifesaving medical treatments in communities across the globe. ACC is committed to improved environmental, health, and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing.

AFPM represents approximately 400 refiners and petrochemical manufacturers. AFPM members account for more than 97% of U.S. refining capacity and virtually all petrochemical manufacturing facilities. AFPM’s members produce gasoline, diesel, jet fuel, and the petrochemical building blocks that are needed for medical devices, clothing, computers and cell phones, and the products that make modern life possible. AFPM’s members own and lease tens of thousands of tank cars and have invested more than two billion dollars in tank cars that comply with PHMSA’s tank car standards.

API represents over 660 oil and natural gas companies, leaders of a technology-driven industry that supplies most of America’s energy, supports more than 9.8 million jobs and 8 percent of the U.S. economy, and, since 2000, has invested nearly $2 trillion in U.S. capital projects to advance all forms of energy, including alternatives. API and its members are dedicated to meeting environmental requirements, while economically developing and supplying energy resources to meet consumer needs.

CI is a 190-member, not-for-profit, trade association of chlor-alkali producers worldwide, as well as packagers, distributors, users, and suppliers. The Institute’s North American Producer members account for more than 93 percent of the total chlorine production capacity of the U.S., Canada, and Mexico. Chlorine and related chemicals, including caustic soda, sodium
hypochlorite and hydrogen chloride, are used throughout the U.S. economy and are key to the protection of public health.

NACD has more than 440 member companies. These companies are vital to the chemical supply chain providing products to over 750,000 end users. They make a delivery every six seconds while maintaining a safety record that is more than twice as good as all manufacturing combined. NACD members are leaders in health, safety, security, and environmental performance through implementation of Responsible Distribution, established in 1991 as a condition of membership and a third-party verified management practice.

NITL was founded in 1907 and is one of the oldest and largest national associations representing companies engaged in the transportation of goods in both domestic and international commerce. NITL members include shippers and receivers of goods of all sizes, third party intermediaries, logistics companies, and other entities involved in the transportation of goods. Many members of the NITL are engaged in the transportation of products in tank cars via rail, and these tank cars are customarily owned or leased by such members. Consequently, NITL has a strong interest in regulations applicable to tank cars.

SOCMA is dedicated to specialty chemical manufacturers, distributors, and affiliated service providers. Since 1921 SOCMA has represented a diverse membership of small, medium, and large chemical companies located around the world bringing world-class support uniquely tailored to enhance the operational excellence of our member companies. SOCMA is the only U.S.-based trade association dedicated solely to the specialty chemical industry, making it the leading authority on this sector.

TSI is an international, non-profit organization established in 1960. With its 62 member companies, TSI is the global advocate for sulphur, representing all stakeholders engaged in
producing, consuming, trading, handling or adding value to sulphur. TSI seeks to provide a common voice for industry and to promote leading practices in the handling and transportation of all sulphur products while protecting the environment and communities in which TSI members operate.

USCPTA represents the nation’s clay producers, who transport commodities by tank car. The USCPTA is a voting member of the AAR Tank Car Committee.

TFI represents the nation’s fertilizer industry including producers, importers, retailers, wholesalers and companies that provide services to the fertilizer industry. TFI members provide nutrients that nourish the nation’s crops, helping to ensure a stable and reliable food supply. TFI’s full-time staff, based in Washington, D.C., serves its members through legislative, educational, technical, economic information and public communication programs.

The Petitioners’ members depend on the nation’s railroads for the safe, efficient, and secure transportation of several hundred million tons of products each year. These members own and/or lease thousands of tank cars to enable the rail transportation of their products across the country. Consequently, they are greatly affected by the regulatory framework applicable to rail tank cars, and, particularly, by PHMSA’s regulation of tank cars. The rules proposed in this Petition would directly impact Petitioners and their members by fostering uniformity in the nation’s tank cars, reducing uncertainty, and ensuring that changes in tank car standards are subject to normal regulatory processes.

Some of the Petitioners also are voting members of the AAR Tank Car Committee ("TCC"). As such, they have witnessed first-hand the actions of the TCC described herein that have given rise to the need for this Petition. AFPM has made numerous requests for a voting
seat on the TCC, which AAR has denied, citing a need to maintain a majority of rail carriers on
the committee.

II. The Language of the Proposed Rules.

With this Petition, Petitioners are requesting that PHMSA institute a proceeding to adopt
rule changes to 49 C.F.R. Parts 107 and 179. The proposed change to Part 179 would establish
what is already inherent in the statute, that a person may not require compliance with tank car
specifications that differ from those established in PHMSA regulations, except as allowed
through the special permit process proposed by further modifications and additions to Part 107.

In particular, this proposal would amend 49 C.F.R. § 179.1(b) by adding the underlined
language shown below:

(b) Except as provided in paragraph (c) of this section, tank car tanks and other
tank car package components to which this part is applicable, must be built to the
specifications prescribed in this part. No person may require, by contract, rule, or
otherwise, that such tank car tanks or tank car package components to which this
part is applicable be built to different specifications from those prescribed in this
part, except pursuant to a special permit granted in accordance with Section
107.129 of subchapter A.

As discussed in more detail herein, in recent years, the AAR has attempted to use its railroad
members’ majority control of the TCC to adopt certain tank car standards that differ from
PHMSA hazmat packaging specifications and to require industry-wide compliance with those
specifications through the AAR Interchange Rules to which all shippers must agree if they ship
by rail in North America. Such unilateral AAR action effectively usurps PHMSA’s role and the
Administrative Procedure Act (“APA”) protections that apply to PHMSA actions. The proposed
additional text in § 179.1(b) is intended expressly to preclude any person, and particularly the
AAR, from by-passing APA protections through requirements that tank cars comply with
standards that differ from PHMSA hazmat packaging specifications. Although the proposed rule
would prohibit AAR or any other person from unilaterally requiring compliance with
specifications that differ from PHMSA regulations, nothing in this rule is intended to prevent any
entity from voluntarily exceeding PHMSA specifications as to its own tank cars.

The proposal also would modify and expand the special permit process by amending 49
C.F.R. § 107.1 and adding a new section 49 C.F.R. § 107.129. This expansion implements the
limited exception to the restriction referenced in the proposed amendment to § 179.1(b). Its
purpose is to allow the AAR to implement standards that all industry stakeholders collectively
agree would enhance tank car safety, as AAR has done in the past through collaborative TCC
action, but only with FHMSA authorization in the form of a special permit pending permanent
PHMSA action in a formal rulemaking proceeding. This will provide due process protections
against unilateral AAR action that is taken without the collaborative concurrence of all
stakeholder interests or a PHMSA determination that such action is in the public interest.

In 49 C.F.R. § 107.1, the definition of “special permit” would be revised as follows (with
the new language underlined):

Special permit means a document issued by the Associate Administrator, the
Associate Administrator’s designee, or as otherwise prescribed in the HMR, under
the authority of 49 U.S.C. 5117 permitting a person to perform a function that is
not otherwise permitted, or, in the case of section 107.129, permitting the AAR to
require compliance with tank car specifications that differ from those otherwise
required, under subchapters A or C of this chapter, or other regulations issued
under 49 U.S.C. 5101 et seq. (e.g., Federal Motor Carrier Safety routing
requirements).

Also, 49 C.F.R. § 107.1 would be amended to add the following definition of “AAR”:

AAR means the Association of American Railroads.

This proposal creates a new section 49 C.F.R. § 107.129, which would be comprised of
the following text:
(a) General. This section describes the specific procedures and standards that apply to the issuance, modification, and termination of industry-wide special permits that may be granted to the AAR related to railroad tank car specifications. Once the Associate Administrator approves an industry-wide tank car specification (IWTCs) special permit, the AAR may require compliance through its Interchange Rules with specifications that differ from those described in part 179 as provided in the special permit. Unless specifically incorporated in this section, the other provisions of subpart B of this part shall not apply to either IWTCs special permit applications or the permits themselves.

(b) Application. IWTCs special permits may be sought by the AAR in conjunction with a Petition for Rulemaking to adopt new or revised tank car specifications recommended by the AAR’s Tank Car Committee. An application for issuance or modification of an IWTCs special permit must comply with the provisions of §§ 107.105(a)(1), (c)(1) – (c)(5), (c)(9), and (d). IWTCs applications shall not be afforded confidential treatment.

(c) Evaluation and processing. An IWTCs special permit application will be subject to the following evaluation and processing:

(1) The Associate Administrator reviews an application for an IWTCs special permit, modification of an IWTCs special permit, or renewal of an IWTCs special permit to determine if it is complete and conforms with the requirements described in this section. This determination will be made within 30 days of receipt of the application for an IWTCs special permit or modification of an IWTCs special permit, and typically within 15 days of receipt of an application for renewal of an IWTCs special permit. If an application is determined to be incomplete, the Associate Administrator may reject the application, and PHMSA will inform the AAR of the deficiency in writing. The AAR may resubmit a rejected application as a new application, provided the newly submitted application contains the information PHMSA needs to make a determination.

(2) An IWTCs special permit application that is complete is docketed as long as it is not a renewal application. Notice of the application is published in the Federal Register, and an opportunity for public comment is provided. All comments received during the comment period are considered before final action is taken on the application.

(3) Applications are usually processed in the order in which they are filed.

(4) As part of its evaluation of an IWTCs special permit application, the Associate Administrator may consult and coordinate, if necessary, with the Federal Railroad Administration as the Operating Administration. The Associate Administrator may also consult other agencies with hazardous material subject-matter expertise.

(5) During the processing and evaluation of an IWTCs special permit application, the Associate Administrator may request additional information from the AAR. If the AAR does not respond to a written or electronic request for additional information within 30 days of the date the request was received, the application may be deemed incomplete and denied. However, if the AAR responds in writing or by electronic means within the 30-
day period requesting an additional 30 days within which to provide the requested information, the Associate Administrator may grant the 30-day extension.

(6) The Associate Administrator may grant an IWTCS special permit application on finding that:

(i) The application complies with this section;
(ii) The tank car specifications in the application are the same as those in a pending rulemaking proceeding;
(iii) The application demonstrates that the proposed alternative will achieve a level of safety that: (A) is at least equal to that required by the regulation from which the special permit is sought, (B) is consistent with the public interest in the safe and efficient transportation of hazardous materials in commerce, and (C) is supported by objective scientific standards;
(iv) The application is supported by a majority of the non-railroad members of the AAR’s Tank Car Committee; and
(v) The application states all material facts, and contains no materially false or materially misleading statement.

(7) The Associate Administrator may grant or deny an IWTCS special permit application, in whole or in part. In the Associate Administrator’s discretion, an application may be granted subject to provisions that are appropriate to protect health, safety, or property.

(8) If the Associate Administrator grants an IWTCS special permit, AAR may implement the tank car specifications set forth in the special permit through the Interchange Rules.

(9) If the Associate Administrator denies an IWTCS special permit, PHMSA will provide the AAR with a brief statement, in writing, of the reasons for denial.

(10) The Associate Administrator will publish in the Federal Register a list of all IWTCS special permit applications, grants, denials, and modifications and all IWTCS special permit applications withdrawn under this section.

(d) Withdrawal. An application for an IWTCS special permit may be withdrawn as described in §107.111.

(e) Duration of an IWTCS special permit. An IWTCS special permit terminates according to its terms or 24 months from the date of issuance, whichever occurs first.

(f) Renewals. The AAR may apply to renew an IWTCS special permit for additional periods of 24 months, provided that the tank car specifications in the permit remain the subject of a pending rulemaking proceeding at the time of renewal. Renewal applications must comply with §§ 107.109(a)(1) – (2) and (a)(4). If, at least 60 days before an existing IWTCS special permit expires, the AAR files an application for renewal that is complete and conforms to the requirements of this section, the IWTCS special permit will not expire until final administrative action on the application for renewal has been taken.
(g) Modification, suspension, or termination. The Associate Administrator may modify, suspend, or terminate an IWTCS special permit in accordance with the standards and procedures of § 107.121, except that reference to § 107.113(f) in that section shall be replaced by reference to § 107.129(c).

(h) Reconsideration. Any person may request that the Associate Administrator reconsider a decision rendered under § 107.129(c) or § 107.129(g) pursuant to the standards and procedures of § 107.123.

(i) Appeal. A person who requested reconsideration under § 107.129(h) and is denied the relief requested may appeal to the Administrator. The appeal must meet the standards and procedures of § 107.125.

(j) Availability of documents for public inspection. Documents related to an application for an IWTCS special permit, including the application itself, are available for public inspection as set forth in § 107.127.

III. Summary and Purpose of the Proposed Rules.

The proposed modifications to Part 179 are designed to clearly enunciate what already is inherent in PHMSA’s statutory authority but is not acknowledged by all stakeholders. The relevant statutes and legislative history make clear that Congress intended the Department of Transportation (“DOT”) to create uniform national standards for transportation of hazardous materials. DOT must adhere to the due process requirements of the APA by developing such national standards through notice and comment rulemaking. The proposed rules would protect that process from usurpation by the AAR, which has claimed a right to require adherence to different tank car standards in its role as a standards setting body. The proposed rules would foreclose that argument by unequivocally prohibiting such action without DOT authorization.

Over at least the past two decades, the AAR, through the TCC and in its role as an industry association, has asserted itself as the de facto standard-setting body for tank car specifications whenever it disagrees with the DOT standards. The AAR either has required, or threatens to require, compliance with tank car specifications adopted by the TCC that differ from those considered and adopted by PHMSA, or those considered and expressly rejected for
adoption by PHMSA. The AAR has done so through its Interchange Rules which apply to every tank car that moves in interchange anywhere in North America. Consequently, no shipper may use a tank car that does not comply with AAR’s standards even though the tank car fully complies with PHMSA requirements. This is particularly troubling because AAR’s railroad members constitute a majority on the TCC and they generally do not own or provide tank cars for transportation. Thus, they are less concerned with the burdens of complying with their own requirements and the implications of those requirements for the broader public interest. Nor must the TCC comply with the procedural due process requirements of the APA.

This system effectively usurps PHMSA’s role as the regulatory authority over hazardous materials tank car specifications and, in so doing, bypasses the due process and notice and comment rulemaking requirements of the APA. Courts recognize the importance of utilizing notice-and-comment rulemaking when establishing laws and standards that govern everyday life.\(^1\) The proposed modifications to 49 C.F.R. § 179.1(b) would clearly and unequivocally assert PHMSA’s exclusive role as the source of nationally uniform tank car specifications by prohibiting any person, including the AAR, from unilaterally requiring compliance with tank car specifications that differ from PHMSA hazmat packaging regulations without the express review and authorization of PHMSA. Although this is implicit in the statute, AAR has exploited the absence of an express declaration in PHMSA’s rules to modify regulatory requirements as its members see fit.

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\(^1\) See, e.g., Mexichem Specialty Resins, Inc. v. EPA, 787 F.3d 544, 557 (D.C. Cir. 2015) (Explaining that courts are not required to accept an agency’s concession during litigation because “[t]he risk is that an agency could circumvent the rulemaking process through litigation concessions, thereby denying interested parties the opportunity to oppose or otherwise comment on significant changes in regulatory policy.”); Kappelman v. Delta Air Lines, 539 F.2d 165 (D.C. Cir. 1976), cert. denied, 429 U.S. 1061 (1977) (rejecting injunction desired by airplane passenger because the issue raised is better addressed “on an industry-wide basis in an agency rulemaking proceeding”).
The proposed modifications and additions to Part 107 also recognize the important role of collaborative efforts among various stakeholders in the tank car industry, including tank car manufacturers and suppliers, railroads, and rail customers, in counseling DOT in the development of the national tank car standards. To preserve that role with appropriate DOT oversight, the proposed rules add provisions to 49 C.F.R. Part 107 pursuant to which the AAR may apply to PHMSA for a special permit to require compliance with tank car specifications that deviate from PHMSA regulations, on a temporary basis, while PHMSA considers a permanent change to its rules in a pending rulemaking proceeding. The proposed changes to Part 107 provide for public comment upon AAR’s special permit application. There is unlikely to be strong opposition to an AAR application that seeks to implement standards that the TCC has recommended through the collaborative agreement of its various stakeholder members. On the other hand, if AAR attempts to impose requirements supported only by railroad members of the TCC, as it has attempted to do in the recent past, the disaffected stakeholders will have a clearly-defined process to contest AAR’s application and overcome the forced majority that rail carriers possess on the AAR-run TCC. This process allows truly collaborative safety-enhancing tank car specifications to become effective more expeditiously, while affording due process protections against unilateral AAR actions that usurp PHMSA’s rulemaking authority.

IV. Historical Context.

As common carriers, railroads are required to provide the instrumentalities of transportation, including rail cars, for their customers to use. However, tank cars are unique in this regard, as tank cars are typically provided by the shippers and not the railroads

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Consequently, shippers desiring to transport their bulk liquid and gaseous commodities by rail must obtain their own tank cars, either by purchase or lease, before engaging a railroad’s transportation services. The nation’s railroads own virtually no tank cars.\textsuperscript{4}

Although railroads do not provide tank cars, they still must be intimately familiar with tank cars in order to safely transport them across the country. To facilitate discussions regarding tank car safety, design, and improvements, the rail industry has long utilized the TCC, an AAR committee whose members include railroads, tank car manufacturers and suppliers, and railroad customers. DOT also is an \textit{ex officio} non-voting member. PHMSA and other DOT agencies recognize the influential role played by the TCC. Indeed, PHMSA expressly has delegated certain authority to the TCC to conduct the initial review of, and make recommendations regarding, proposed changes or additions to tank car specifications. See 49 C.F.R. § 179.4. In addition, PHMSA has authorized the TCC to approve designs, materials, and construction under existing tank car specifications. See 49 C.F.R. § 179.3.

Historically, the TCC has functioned collaboratively, with the various stakeholders (railroads, tank car manufacturers and suppliers, and railroad customers) reaching agreement on the recommendations and approvals specified in PHMSA’s regulations. That historical collaboration, however, has broken down on several occasions over the last two decades. These disagreements at the TCC were colored by the composition and internal rules of the TCC itself. Railroads hold a majority of the seats on the TCC, and TCC actions can be taken simply with a majority vote.\textsuperscript{5} Moreover, the TCC charter states that votes cannot take place unless there is a

\textsuperscript{4} See, e.g., Thomas M. Corsi, Ken Casavant, and Tim A. Graciano, \textit{A Preliminary Investigation of Private Railcars in North America}, \textit{Journal of the Transportation Research Forum}, Vol. 51, No. 1 (Spring 2012) at page 57 ("There are virtually no railroad or TTX-owned tank cars....The private rail fleet is singularly responsible for tank car movements...").

\textsuperscript{5} Changes to TCC rules require a 75% vote.
railroad majority present. Given this organizational structure, railroads can control and dictate the actions of the TCC, which is precisely what they have done by exercising their majority position to require compliance with tank car requirements that deviate from PHMSA specifications without the concurrence of other stakeholders.

The AAR has threatened to impose the tank car requirements "approved" by the TCC as the baseline standards for all tank cars through the AAR Interchange Rules. Because these rules apply not just to the railroads themselves, but also to tank car shippers who must agree to abide by those rules before any railroad will accept their private tank cars for service, the AAR is the self-anointed “gatekeeper” of all tank cars that can be used in North America. Thus, through the mechanism of the AAR Interchange Rules, the rail industry is capable of unilaterally requiring compliance with tank car specifications that deviate from PHMSA regulations.

Due to the AAR’s “gatekeeper” role for virtually all railroad transportation in the U.S., private AAR standards effectively become the national standards for tank car specifications regardless of the PHMSA hazmat packaging regulations. Two particularly notable events over the past decade illustrate this real-world concern.

First, in 2006, the AAR attempted to require that all tank cars used to transport chlorine and anhydrous ammonia comply with the tank car designs of a single car builder. Despite opposition from all five shippers and 2 of the 3 tank car builders on the TCC, and even the protests of the DOT representatives to the TCC, the railroad members pushed through their agenda for this new tank car design. Opponents protested that the proposal: (a) was unscientific and result-oriented; (b) had collateral consequences for rail safety; (c) disregarded alternative and less costly means of obtaining comparable safety benefits; and (d) was premature pending the conclusion of Volpe Center study commissioned by the Federal Railroad Administration
("FRA") to assess and analyze the forces imparted to tank cars during derailments. This last point was particularly significant because Congress itself had endorsed this study at 49 U.S.C. § 20155 and directed the FRA to initiate a rulemaking on tank car design standards upon conclusion of that study. In response to these protests, the AAR insisted that it had a right as a standards-setting body to require tank cars to comply with different baseline standards from those adopted by PHMSA.

DOT was sufficiently concerned with the AAR’s actions at the time to offer several written reproaches. In a September 5, 2006 letter to the AAR’s Executive Director—Tank Car Safety, FRA’s Hazardous Materials Division Staff Director, William Schoonover, criticized the engineering analysis underlying the AAR’s choice of car design as well as AAR’s separate risk analysis (attached as Exhibit A). He described AAR’s decision as “a micro-based approach to safety and not in line with the risk-based approach implemented by Federal regulations” and declared that the many deficiencies in AAR’s analysis “demonstrate a lack of scientific objectivity....” Ex. A, p. 5. In conclusion, Mr. Schoonover observed:

Whether or not the AAR Risk Analysis convincingly argues that improvements are possible to the cars typically used for chlorine and anhydrous ammonia, it fails totally in proving any inadequacy in the present designs and their serviceability. Barkan does not make the case that substantial investment in design enhancements will provide significant safety improvement when using a cost benefit approach. Such an approach is not only mandatory for the government when considering new specifications and requirements, but is routinely used by railroads, shippers, and car owners to drive their own business decisions.

Ex. A., p. 6 (emphasis added). When AAR acts unilaterally to require compliance with tank car requirements that are different from Federal regulations, it effectively usurps DOT’s role but without consideration of the impacts upon shippers, customers, safety advocates and other affected entities that may participate in the formal rulemaking process and without adherence to the same mandatory requirements for government action.
Around the same time period, Thomas Phemister, FRA’s Manager, Tank Car Safety Programs, published a White Paper titled “Delegations of Authority: Concepts of Stewardship” (attached as Exhibit B). This White Paper reviewed the positive historical role played by the TCC and its predecessors, in collaboration with government agencies and non-railroad stakeholders, to develop tank car safety standards dating back to 1927. It described the relationship between DOT and the TCC as “a relationship between a policymaker and a counselor,” and where, “[i]n all instances…, final policy judgments lie with the Department.” Ex. B., pp. 1-2 (emphasis added).

Within this historical context, the author then expressed concern that AAR’s actions were contrary to this framework:

Recent events within the TCC have concerned FRA, because the consensus process that has yielded so many significant improvements in the railroad transportation of hazardous materials broke down, in the Agency’s opinion, with the activity that led to the issuance of CPC-1175. This circular letter calls for specification changes for tank cars carrying chlorine and anhydrous ammonia and mandates their adoption within an accelerated time frame, and without provision for Departmental review.

FRA believes it has a responsibility to the body of experts it has relied on for so long to re-emphasize that the delegations to the [TCC] are best pursued with the concept of stewardship in mind. The American public is the direct beneficiary of properly exercised stewardship over the authority delegated to the [TCC] by the Federal government. Change to the standards for building and approving railroad tank cars can only be made if they are in the best interests of the public, it is they who permit petrochemical factories in their communities and who permit railroads—and other modes of transportation—to run through their cities, towns, and villages.

Ex. B., p. 2 (emphasis added). DOT, not AAR, has been vested with authority to determine what tank car standards are in the public interest.

In concluding, the author urged AAR to rethink its position and to act only with stakeholder consensus:
At the July, 2006, meeting of the [TCC], the consensus process was vitiated and votes were taken on proposals to amend the requirements for tank cars used to transport anhydrous ammonia and chlorine. In both cases staff proposals from AAR passed 13-8 and alternative proposals from [tank car shippers] failed by a reverse of the same vote count. All of the railroad members and Trinity Industries voted in the majority and all of the shipper associations and builders/fleet managers, except Trinity, voted in the minority. The proposals under consideration had been the subject of intense and, often, acrimonious discussion beginning in January, 2006. Part of what can only be seen as a desperate push by railroad and AAR employees to meet an unrealistic deadline imposed by railroad executives, this action by the [TCC] is a total abrogation of the stewardship process for considering improvements to tank cars since before the formation of either the [AAR] or the [DOT]. The delegation of authority to approve tank car construction and to consider changes in tank car specifications is premised on the coming-together of expertise from rail carriers, car builders, and tank car users. The Department believes that this failure of consensus, this failure to exercise stewardship over a safety trust that has existed since before either AAR or DOT existed must be corrected.

Ex. B., pp. 5-6. AAR ultimately retreated from plans to require compliance with these standards through the Interchange Rules after negotiating an interim tank car standard with other stakeholders, which they collectively petitioned DOT to adopt. But as demonstrated by subsequent behavior described below, AAR continues to assert a right to take unilateral action through its Interchange Rules even regardless of contrary PHMSA determinations.

More recently, in 2015, AAR pushed the TCC into a far more direct conflict with DOT when it proposed tank car top fitting and thermal protection standards that PHMSA had expressly declined to adopt just a few months earlier. In 2014, PHMSA initiated a rulemaking proceeding to consider various tank car specification changes in Docket No. PHMSA-2012-0082 for high-hazard flammable trains (based on input received from a 2013 Advanced Notice of Proposed Rulemaking). After careful consideration of comments received from all stakeholder

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6 See 78 Fed. Reg. 54849 (Sept. 6, 2013). High-hazard flammable trains ("HHFT") are those transporting 20 or more loaded tank cars of a class 3 flammable liquid in a continuous block, or 35 or more loaded tanks cars of a class 3 flammable liquid throughout the train. See 49 C.F.R. § 171.8.
interests, PHMSA decided that the new DOT-117 specification should include a thermal protection system sufficient to prevent the release of any lading in the car when subjected to a pool fire for 100 minutes. See 80 Fed. Reg. 26644, 26671 (May 8, 2015). Less than three months later, the TCC sought to impose an entirely different tank car thermal protection for class 3 flammable liquids,\(^7\) notwithstanding the result of the just-completed, multi-year PHMSA rulemaking process.\(^8\) In the same rulemaking, PHMSA also considered, but opted not to adopt, top fitting protection requirements for the retrofitted DOT-117R tank car specification.\(^9\) Again, AAR, through the TCC, sought to require top fitting protection requirements that PHMSA had expressly rejected.\(^10\) In other words, having failed to persuade PHMSA on these matters in the rulemaking, AAR threatened to take matters into its own hands by using its “gatekeeper” status to by-pass PHMSA.

If AAR is allowed to do this, there is very little role left for PHMSA to play in establishing tank car standards, not to mention the loss of due process protections for all other stakeholders and the absence of any public interest factors in the decision-making process. As previously discussed, railroads do not supply tank cars; therefore, the cost of any changes in tank car specifications is not borne by the railroads. Yet, the railroads’ control over both the TCC and the gatekeeper function of the AAR means that they can force tank car users to acquire new tank

\(^7\) See letter addressed to Edward Hamberger, AAR President and CEO (July 21, 2015) from representatives of six shipper organizations represented on the TCC. (attached as Exhibit C).

\(^8\) The AAR also sought administrative appeal of PHMSA’s final rule on the thermal protection issue, requesting that PHMSA require jacketed new or retrofitted tank cars meet a thermal conductivity standard. 80 Fed. Reg. 71952, 71959 (Nov. 18, 2015). PHMSA expressly denied AAR’s appeal on this issue. 80 Fed. Reg. at 71959-71960.


\(^10\) See Exhibit C.
cars or retrofit existing cars at potentially significant cost, without affording the due process protections that would apply to a PHMSA rulemaking under the APA.

Although both of the foregoing events were resolved through negotiations of interim solutions, these were crisis situations for tank car owners and users in which the rail industry possessed nearly all the negotiating leverage. The only alternative available to non-rail stakeholders was to initiate legal action, including a request for injunctive relief, challenging the AAR’s actions. Only DOT’s public statements truly brought any pressure to bear upon the AAR to negotiate. Through this rulemaking proposal, Petitioners seek to remove this threat of unilateral AAR action which is not reflective of the public interest that DOT represents. The proposed amendments to the rules would constitute a clear and unequivocal assertion of PHMSA’s exclusive jurisdiction to establish appropriate tank car standards by explicitly requiring PHMSA review and approval of TCC actions before AAR may impose those actions upon all tank car users.

V. PHMSA Has Legal Authority to Issue the Proposed Rules.

A. Congress has expansive power over interstate commerce.

Congress has broad authority to regulate interstate commerce under the Constitution, which includes the ability to regulate anything or anyone that “substantially affects” interstate commerce.\textsuperscript{11} The Supreme Court has made clear that Congress can regulate the “channels” of interstate commerce, the “instrumentalities” of interstate commerce, and those activities having a “substantial relation” to interstate commerce.\textsuperscript{12} In the exercise of its interstate commerce power, Congress has given broad authority to the DOT to issue regulations dealing with all aspects of hazardous materials transportation. See 49 U.S.C. § 5103(b)(1). Such a grant is well within the


\textsuperscript{12} Id., at 558-559.
concept of interstate commerce and, crucially, Congress has authorized the DOT to issue all regulations believed appropriate or necessary to effect such regulation of hazardous materials transportation.\textsuperscript{13} Under any one of the three \textit{Lopez} rationales, the DOT has authority to prohibit railroads from requiring compliance with tank car standards that differ from the applicable PHMSA regulatory specifications.\textsuperscript{14}

B. Congress has given the DOT broad rulemaking authority, which has been delegated to PHMSA.

As mentioned above, Congress has given broad rulemaking authority to the federal DOT in the area of hazardous materials transportation, and DOT has delegated this authority to PHMSA.\textsuperscript{15} In particular, Congress has stated that the “Secretary shall prescribe regulations for the safe transportation...of hazardous material...The regulations apply to a person who...transports hazardous material in commerce...[or]...designs, manufactures, [or] fabricates...a package, container, or packaging component that is represented, marked, certified, or sold as qualified for use in transporting hazardous material in commerce.” See 49 U.S.C. § 5103(b)(1). Regulations issued by DOT “may cover any safety aspect of the transportation of hazardous materials which the Secretary deems necessary or appropriate.”\textsuperscript{16} Moreover, the regulations can address not just interstate commerce, but activity which “affects” interstate commerce.


\textsuperscript{14} Such a DOT effort could be based on the “channel” theory as regulation of railroads, the “instrumentality” theory as regulation of tank cars, or the “substantial relation” theory as regulation of private industry standards imposed by the gatekeeper of interstate rail commerce.

\textsuperscript{15} See 49 C.F.R. §§ 1.96 and 1.97. Authority delegated to PHMSA by DOT includes “developing uniform safety standards” for hazardous materials transportation. 49 C.F.R. § 1.96(b)(1).

commerce.\(^\text{17}\) Congress has stated that the rulemaking authority given to DOT over hazardous materials transportation is a “relatively broad grant of authority.”\(^\text{18}\)

VI. The Proposed Modifications to 49 C.F.R. § 179.1(b) Are Needed to Protect PHMSA’s Exclusive Jurisdiction.

A. Congress has expressed a desire for uniform federal transportation standards.

Legislative history reveals a broad statement of Congress’s desire for uniform federal standards regulating hazardous materials transportation. Congressional findings supporting the Hazardous Materials Transportation Uniform Safety Act (“HMTUSA”) included the following:

[[I]n order to achieve greater uniformity and to promote the public health, welfare, and safety at all levels, Federal standards for regulating the transportation of hazardous materials in intrastate, interstate, and foreign commerce are necessary and desirable.\(^\text{19}\) Congress has expressed the same sentiment repeatedly across a variety of laws regarding hazardous materials transportation over the past several decades. During consideration of the Hazardous Materials Transportation Control Act of 1970, a House committee stated that “[t]he unanimous recommendation was that broad Federal regulatory authority over all areas of railroad safety be enacted.”\(^\text{20}\) This Committee also stated that “the railroad industry…has a truly interstate character calling for a uniform body of regulation and enforcement. It is a national system.”\(^\text{21}\)

\(^{17}\) House Report 93-1589 at page 25.

\(^{18}\) House Report No. 93-1083 at page 20 (June 6, 1974), accompanying H.R. 15223. See also House Report 91-1194 at page 16 (June 15, 1970), accompanying S. 1933, which became P.L. 91-458, the Hazardous Materials Transportation Control Act of 1970 (“The Secretary will have jurisdiction under the bill to regulate all areas of railroad safety in addition to those areas currently regulated.”).

\(^{19}\) Public Law 101-615 at Section 2(5) (Nov. 16, 1990).

\(^{20}\) House Report 91-1194 at page 11.

The original intent of the landmark Hazardous Materials Transportation Act ("HMTA"), enacted in 1975:

was to authorize the Department of Transportation (DOT) with the regulatory and enforcement authority to protect the public against the risks imposed by all forms of hazardous materials transportation, and to preclude a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations. HMTA applies to interstate commerce and any transportation that affects interstate commerce.\(^{22}\)

In 1990, Congress repeated that "consistency in laws and regulations governing the transportation of hazardous materials is necessary and desirable."\(^{23}\)

The preemption of state and local laws is only one part of the story here; the legislative history quoted above reveals that Congress intended for the federal standards created by DOT to be the governing national standards regarding hazardous materials transportation.\(^{24}\) By requiring compliance with different tank car standards through its Interchange Rules, the AAR is thwarting this Congressional purpose when substituting its requirements for those adopted by DOT, even standards that DOT has analyzed and expressly rejected as not being reasonable or justifiable to achieve the overall public interest. PHMSA thus has an express interest in protecting its public interest functions from being usurped by the AAR, which has no public interest mandate or procedural due process protections.

**B. The proposed action is necessary to ensure that PHMSA’s regulations remain the national tank car standards.**

Congress has long recognized an acute need for uniform national standards applying to hazardous materials transportation and granted DOT the authority to establish such standards that


\(^{24}\) Preemption is addressed in 49 U.S.C. § 5125.
are consistent with the public interest. A critical aspect of that authority is Congress’ express intent to preempt different state and local standards. 49 U.S.C. § 5125. Given Congress’ express desire for nationally uniform hazardous materials transportation standards, it makes little sense for differing state and local standards to be preempted while, at the same time, a private organization that acts as the gatekeeper for the national rail system, but has no public interest mandate or due process requirements, is permitted to impose discordant standards upon all users of the national rail system.25

The tank car specifications issued by the AAR supplant and usurp PHMSA’s role under federal law. They also do not meet the due process requirements of the APA’s public notice and comment procedures. Similarly, the AAR standards are not subject to judicial review to ensure conformity with the statute, adherence to the broad public interest, and reasoned decision-making. The requested modifications to Section 179.1(b) affirm that PHMSA’s tank car standards are the exclusive governing national standards, consistent with the legal framework already inherent in PHMSA’s underlying purpose.26

Although private industries generally have freedom to establish their own specifications and rules of practice, the characteristics of hazardous materials rail transportation reveal the need for the existing federal standards to be the national standards. For various safety and other reasons, hazardous materials transportation is heavily regulated by the federal government. Over two hundred years of legal precedent recognize the crucial importance of interstate commerce to the well-being of our country. Moreover, railroads are common carriers, thereby implicating the

25 Security and safety are fostered with nationally uniform federal standards. Uniformity also fosters DOT’s duties in international discussions, centralized reporting, and training. See 49 U.S.C. §§ 5120 (international issues), 5121(f) (central reporting system), and 5116 (training).

26 See, e.g., 49 C.F.R. § 173.31(a)(2) ("[t]ank cars and appurtenances may be used for the transportation of any commodity for which they are authorized in this part").
public interest. They also possess substantial market power when they act collectively through the AAR Interchange Rules to establish requirements with which every tank car owner must comply if they want to transport their products by rail. The due process and notice-and-comment rulemaking requirements of the APA address these concerns by ensuring that the applicable national tank car standards are developed by a government body entrusted to act consistent with the broad public interest rather than the narrow interests of the rail industry.

This does not preclude any individual tank car provider from voluntarily adhering to more stringent tank car standards as to itself; it merely precludes another person—namely, the AAR—from requiring tank car providers to comply with different standards than DOT has required. This is a particularly important distinction because railroads do not incur the cost of complying with the AAR’s tank car standards since they do not supply tank cars to their customers. The parties who actually acquire the tank cars, and supply them to the railroads, should have the ability to participate in and influence the process by which the tank car standards are created consistent with the public interest standard of the HMTA and due process protections of the APA. Any railroad which feels strongly about the need for more stringent standards is free to supply its own tank cars that comply with those standards. It is not free, however, to require privately-owned tank cars to comply with standards that deviate from the national standards set by DOT.

C. **The requested change ensures compliance with the APA for national tank car standards.**

The statute permits the imposition of baseline tank car specifications only upon full compliance with the APA. “A proceeding to prescribe the regulations must be conducted under section 553 of title 5, including an opportunity for informal oral presentation.” See 5 U.S.C.
§ 5103(b)(2). The proposed change to Section 179.1(b) ensures that the governing national tank car standards meet this rulemaking requirement.

VII. The Proposed Modifications and Additions to 49 C.F.R. Part 107 Provide a Mechanism for Temporary Deviations From DOT Standards, Pending a Formal Rulemaking, Subject to PHMSA Review and Authorization.

The TCC has long functioned as an effective forum for tank car industry stakeholders to consider and develop modifications to tank car specifications that increase safety, security, and transportation efficiency. Similarly, the AAR Interchange Rules have been an effective means at times to implement the TCC recommendations expeditiously, pending more thorough consideration by PHMSA in a formal rulemaking. But the ultimate arbiter of nationally uniform tank car specifications is DOT, and the AAR must not be permitted to undermine or usurp that authority through unilateral action. The changes proposed to 49 C.F.R. Part 107 will ensure that the valuable collaboration of the TCC continues in the future and that their safety-enhancing recommendations can be implemented expeditiously, pending a formal PHMSA rulemaking, but subject to appropriate due process review through PHMSA’s special permit process.

The governing statutes are broad enough to encompass this extension of the special permit process. The DOT can issue a special permit authorizing a “variance” from the relevant statute or regulation. See 49 U.S.C. § 5117(a)(1). Indeed, the special permit “Safety Evaluation Form” used by PHMSA speaks in terms of a variance “‘from the packaging requirements of the HMR’ and ‘change[s] in materials(s) of construction.’”27 PHMSA has explained that “[s]pecial permits allow a company or individual to package or ship a hazardous material in a manner that varies from the regulations provided an equivalent level of safety is maintained.” See 79 Fed.

Reg. 15033 (Mar. 18, 2014). In short, special permits can be utilized for a deviation from or an enhancement of the tank car safety standards in PHMSA’s regulations.

The proposed rules provide a process for AAR to apply for a special permit that would allow it to require compliance with tank car specifications that deviate from PHMSA regulations, through the Interchange Rules, upon satisfying specified criteria and affording an opportunity for public comment. First and foremost, AAR may submit a special permit application only in conjunction with a petition for rulemaking that would make the proposed tank car specifications a permanent part of PHMSA’s regulations. Second, the application must have the support of non-railroad TCC members to ensure that the specifications truly are the product of a collaborative process. Third, the proposed alternative specifications must be consistent with the public interest in the safe and efficient transportation of hazardous materials in commerce and be supported by objective scientific standards. In response to an application for special permit, the proposed rules contemplate that PHMSA would invite public comment on these factors. PHMSA would make the final decision regarding a requested special permit, which, if granted, would be temporary for a specified time period sufficient to permit PHMSA to consider a permanent change in an APA-compliant rulemaking. These elements are similar to those already used by PHMSA for other special permits. See 49 C.F.R. §§ 107.113(b), (e), and (h).

Because each special permit would be only temporary, any permanent change in tank car specifications would need to occur through a notice-and-comment rulemaking. This ensures that the APA’s due process requirements would govern permanent changes to the national tank car specification standards, while not delaying implementation of truly safety-enhancing measures developed through a collaborative TCC process that also is subject to PHMSA review.
VIII. Additional Supporting Information.

Petitioners are providing the following information pursuant to 49 C.F.R. § 106.100(b), which describes optional information that PHMSA may request in response to a petition for rulemaking.

Costs and benefits of the proposal. 49 C.F.R. § 106.100(b)(1). The proposed modifications to Part 179 do not change the law; they merely remove ambiguity and otherwise clarify existing law. Hence, no costs should result from the adoption requested herein. In fact, the requested rule changes would reduce costs by eliminating uncertainty that currently exists when AAR insists upon a unilateral right to impose baseline specifications for tank cars without PHMSA authorization. If adopted, the proposal also would eliminate the need for expensive litigation regarding the propriety of divergent AAR tank car standards. In addition, the proposal would eliminate any costs attributable to compliance with different AAR standards. Furthermore, the proposed change to Part 107 would create benefits while reducing costs; it would provide for the expedited implementation of safety measures on a temporary basis, thereby providing benefits to the public, pending the permanent adoption of such rule changes in a formal rulemaking.

Direct effect of proposal on states, federal-state relationship, and distribution of government power. 49 C.F.R. § 106.100(b)(2). As far as effects on states, the proposed action would ensure that state and local governments (including police, fire, and emergency personnel) can have confidence that the standards in the PHMSA regulations are the national standards for tank cars and that any deviations have been reviewed, approved, and documented in a PHMSA special permit. The distribution of government power would be clarified with the proposal,
because it would preserve PHMSA’s position as the exclusive source of national tank car standards, which is PHMSA’s proper role.

**Regulatory burden.** 49 C.F.R. § 106.100(b)(3). The proposed action would have no regulatory burden on small businesses and, in fact, would assist small businesses by preventing the possibility of a unilateral AAR refusal to accept tank cars that meet PHMSA standards but not AAR standards. The proposal would have no regulatory burden on small organizations, small governmental jurisdictions, or Indian tribes.

**Recordkeeping.** 49 C.F.R. § 106.100(b)(4). The proposed action would create no recordkeeping or reporting burdens.

**Natural and social environment.** 49 C.F.R. § 106.100(b)(5). The proposed action would have no adverse effect on the quality of the natural and social environments. To the extent that tank car specifications affect the natural and social environments, the proposed action would ensure that decisions affecting these environments are made in the public interest and in a public forum pursuant to appropriate guarantees of due process, such as public notice, an opportunity for comment, and the availability of judicial review.

**IX. Conclusion.**

As described herein, the proposed rule changes are warranted under existing law and by a wide variety of policy considerations. Congress has granted broad statutory authority to DOT over regulation of hazardous materials transportation, including exclusive jurisdiction to adopt hazardous material tank car specifications. This Petition seeks to eliminate any ambiguity in PHMSA’s rules that the AAR may assert to justify its imposition of different tank car specifications through the Interchange Rules. Tank car standards are vital components of the rail transportation of hazardous materials, and the rule changes proposed herein would ensure that
PHMSA’s standards, which are adopted in the public interest and pursuant to notice-and-comment rulemaking, are recognized as the national standards for such transportation. If PHMSA determines that the concerns presented in this Petition do not require regulatory amendments, Petitioners nevertheless urge the agency to issue an interpretative statement that clarifies the scope of AAR’s authority to require compliance with hazardous materials tank car standards that differ from PHMSA regulations.

Respectfully submitted,

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Counsel for Petitioners

August 12, 2016
Exhibit A
September 5, 2006

Mr. Paul G. Kinnecom
Executive Director - Tank Car Safety
Safety and Operations Division
Association of American Railroads
50 F Street, NW
Washington, DC 20001-1564

Dear Paul:

Several times during the proceedings that arose out of the AAR’s SOMC (Safety and Operations Management Committee) charge, I made reference to problems FRA had found with the Barkan Report (RA-05-20). I have expressed many of these comments to Dr. Barkan in person, at various task force meetings, and during meetings of the larger Tank Car Committee, but I thought it fair to reduce my analysis to writing for my records and for yours.

At the January, 2006, Tank Car Committee meeting, Bob Fronczak presented a charge to the Tank Car Committee from SOMC. The charge directed the Committee to (1) develop a design for an enhanced tank car which would reduce the probability of a release of anhydrous ammonia or chlorine in an accident by at least 65 percent, and (2) examine the feasibility of phasing-in such enhanced tank cars over a 5 to 7 year time frame.

The SOMC directive stemmed from a presentation of its proposed new chlorine car by Trinity Industries, Incorporated to railroad executives. Trinity said that their tank car provided a 75 percent design improvement over the present car. Chris Barkan studied that car and determined that the improvements resulted in a 65 percent reduction in the conditional probability of release. SOMC adopted the 65 percent number and issued its charge to the Tank Car Committee.

The Barkan analysis used a linear approach to the evaluation, taking the 40-some years of data in the RSI/AAR Tank Car Safety Test and Research Project and determining an improved reduction is the potential of probable release on the assumption that thicker cars are harder to puncture than thinner ones. Early FRA sponsored research at Pueblo tends to show that adding a jacket to a tank car makes the car more resistant to puncture than simply adding the same thickness of steel to the shell.

My comments on the Barkan study would be incomplete if I failed to address the underlying driver for this concept. Because the analysis of the Trinity tank car was such an intrinsic part of the Barkan research, I will begin with a consideration of Trinity’s work even though the
Committee’s circular does not suggest mandating 286,000 pounds gross weight on rail. It should also be noted Trinity never considered anhydrous ammonia in their submission. The development of a proposed standard change for anhydrous ammonia rests squarely on the shoulders of SOMC and the Committee.

- **Trinity’s analysis:**

Trinity has received a PHMSA special permit\(^1\) to manufacture and sell a DOT specification 105J600W tank car for the transportation of chlorine which varies from the Federal standards because it has a protective housing welded, rather than bolted, to the tank nozzle and its maximum gross weight on rail is 286,000 pounds (as opposed to 263,000 pounds). The PHMSA permit authorizing the manufacture and sale of this tank car imposes several operational restrictions and inspection requirements on the use of the car (among other restrictions, the car cannot be used in free interchange and the manway nozzle welds must be qualified annually). The PHMSA special permit is based on a finding that the Trinity car used under its specified conditions provides an equivalent level of safety to current DOT specification cars.

In DOT’s view, the Trinity car design may yield safety benefits, however, inadequate analysis and testing has been done to date to quantify these benefits (if any). Nonetheless, the claim that the Trinity car provides a 65 percent reduction in the potential for a release in the event of an accident is unrealistic without considering other factors which contribute to railroad accidents.

DOT believes that the engineering analysis underlying the Trinity car is problematic\(^2\):

1. **Tank Shell:** Trinity reported that its tank shell is 25 percent thicker than the current DOT specification chlorine car, a DOT 105A500W specification car. Engineering evaluation performed by DOT suggests that this additional thickness leads to a 12 percent increase in puncture resistance, but AAR claimed a 50 percent increase in puncture resistance. It is not clear which potential gain was used to develop the AAR risk reduction figures.

2. **Tank Head:** Trinity’s evaluation is inconsistent with DOT and industry research which shows that a 90 ton conventional chlorine tank car head will survive an 18 MPH impact.

In June, 1984, the Volpe National Transportation Systems Center (Volpe) began an investigation for FRA into the relative puncture resistance of DOT 105A500W chlorine tank cars and DOT 112/340W propane tank cars equipped with \(\frac{3}{4}\)-inch steel head shields. This investigation included a series of full- and 1/5-scale tests conducted by the AAR at the

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\(^1\) SP-14167, revised and reissued August 10, 2006.

\(^2\) The full text of FRA’s evaluation of the Trinity special permit application was presented to PHMSA and made available to members of the Tank Car Committee.
Transportation Test Center (TTC) in Pueblo, Colorado. The final phase of testing included the use of actual tank cars. During the tests, a number of parameters, such as head and jacket thickness, impact location, and internal pressure were varied to determine their effect on the puncture resistance of the chlorine car. As a result of this research, report DOT/FRA/ORD-92/11 was issued. Trinity refers to this report in their analysis.

The TTC tests showed that the DOT 105A500W car tested had a puncture resistance near the 18 mph threshold required by 49 CFR §§ 173.31(b)(3) and 179.16 for tank cars transporting Class 2 materials. The DOT 112J340W tank car tested with the ½-inch head shield had a puncture threshold well above the 18 MPH requirement. The tests also showed that the puncture resistance is most strongly influenced by impact location and by jacket thickness, rather than mere tank shell or head thickness.

Trinity’s analysis suggested, for the tank head, a 33 percent improvement over present cars. When considering impact force as a function of approach velocity, a standard DOT 105A500W (the chlorine car without a head shield) is capable of withstanding an 18 MPH impact. Adding a .5-inch ASTM A572 Grade 50 head shield to the tank car increases the impact force to 21.5 MPH, an increase of 3.5 MPH, or a 19.4 percent overall increase in puncture resistance. Using the same testing-based calculations, raising the thickness to 1.136” ASTM A515 Grade 70 results in a net increase of 0.8 MPH (raising the capability to 22.3 MPH), or a 23.8 percent overall increase. The Department sees the 10 percentage point difference between Trinity’s calculated improvement and the 23.8 percent improvement borne out by actual testing as underscoring the need for actual testing to back up engineering calculations.

3. **Top Fittings:** In their submission for a special permit, Trinity stated, “This arrangement [the standard top fittings layout for compressed gas tank cars] does not always provide adequate protection in high-speed derailments.” Data from accidents as far back as 1965 seems to point to the contrary. With more than 2 million chlorine shipments during the same time frame, only 1 of the 14 losses in accidents from top fittings was reasonably deemed substantial, with 1000 gallons lost. The remainder of top fitting loses were small amounts, many of them 10 gallons or less, with an average of approximately 13 gallons. Adding these loses into a discussion of tank car betterments merely serves as a red herring. The real issue of catastrophic loss accidents centers on tank and head punctures where an average of roughly 10,000 gallons was lost per accident. In addition, all of the fatalities experienced in chlorine losses were the result of tank and head punctures and not top fittings loses. In summary, the historic data experience demonstrates that the protective housings on chlorine tank cars are not a significant factor in attempting to reduce the risk associated with large product losses. The application of significant resources to this area is probably not the best use of limited resources.

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3 The only other chlorine top fitting loss that could be called large involved only 100 gallons.
4. Tank Car Capacity: Trinity claimed that its new design would carry 96.3 tons of chlorine. Unfortunately, Trinity failed to take into account the regulatory requirement for a 125 percent maximum permitted filling density, effectively reducing the capacity of the car to about 94 tons.\(^4\) The filling density requirement has been in the U.S. and Canadian regulations for many years and takes precedence over other general filling limits for gases and TIH's. This limit has always provided a very conservative approach in line with the many extra safety features associated with chlorine shipments in tank cars. To demonstrate the calculations involved: The shell capacity of the Trinity car is 18,063 US gallons. The water capacity is, therefore, 18,063 X 8.32828\(^5\) or 150,434 pounds (using the factor in note 1 to the § 173.314 table).

Therefore, the maximum amount of chlorine authorized for the tank volume is 1.25 (125%) X 150,434 pounds or 188,042 pounds, well below the 192,600 pounds mentioned in Trinity’s documents. While the recommendations from the tank car committee do not include a proposal to require chlorine to move in 286K GRL cars, the effects of this miscalculation by Trinity are two-fold. On one hand, the claimed potential risk reduction due to shipping fewer, larger, cars (cited by Trinity at 7 percent) is actually about a third lower than that and, on the other hand, one provable mistake in an analysis of, and argument for, safer transportation, that calls into question all the other calculations, estimates, and predictions presented together.

- **AAR’s Risk Analysis:**

The AAR Risk Analysis (RA 05-02), the latest work of the RSI-AAR Tank Car Safety Project, considers all jacketed pressure cars without bottom outlets. From the outset, then, the analysis is not appropriate because chlorine cars are small, relatively stiff vehicles with unique dynamics when compared with much larger 33,000 gallon LPG or NH3 cars. Additionally, historical data suggests that chlorine cars actually survive better than predictive models surmise.

Of the 1,291 DOT Class 105 tank cars in the tank car accident database, 788 were chlorine cars. Of these, only 25 resulted in a release of product\(^6\) and only 10 of these cars lost product as a result of head or shell failure. Failures or breaches of the head or shell pose the greatest safety risk because such failures/breaches tend to lead to large quantities of chemical released. While the potential of a release from top fittings may be present during transportation, the historical data suggests that tank cars of chlorine survive better than predicted.

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\(^4\) For chlorine, the 5 percent outage requirement of § 173.24b and the 125 percent maximum filling density of § 173.314 are both applicable. In calculating how much product to load in a tank car, the maximum filling density is usually the limiting factor.


\(^6\) Three additional tank cars in the accident database were damaged and released product. However, the releases were the result of the pressure relief valve operating as intended; the pressure relief valves were undamaged; and the total release at each event was 2 gallons or less per car. These three cars were deemed irrelevant to the current inquiry and they were excluded from the data set.
The AAR’s Risk Analysis states that railroad accidents have declined in recent years. However, the data suggests that accidents with hazardous materials in the consist have actually slightly increased. Contrary to industry assertions, it is safe to say that the potential for human injury and environmental degradation have increased as a result of train operation and railroad business decisions. The accidents pressing SOMC into action illustrate this. None of the three releases was caused by the tank itself or the hazardous material in the tank. Minot was the result of a broken rail and inadequate inspection of continuous welded rail; Macdona and Graniteville were the result of human factors. As if to underscore the importance of human factors accidents, there has recently been a second accident at Macdona, in very nearly the same area and for the same cause. This more recent accident fortunately did not result in a hazardous materials release.

The assessment further indicates that chlorine and anhydrous ammonia pose the greatest risk. This is simply not the case. Other materials have greater risk potential, although they are shipped by railroad tank car less frequently. It is incorrect to state that materials meeting the definition of a Division 2.3 Hazard Zone B (chlorine) or Hazard Zone D (anhydrous ammonia) pose a greater risk than a material that meets the hazard Zone A criteria. AAR’s decision to attempt to mandate changes to only two of the many THI materials transported by rail is a micro-based approach to safety and not in line with the risk-based approach implemented by Federal regulations.

AAR’s Risk Analysis may provide an adequate beginning, but it needs considerable further refinement. For instance, assuming that the risk is shared equally between all types of materials in a specific car type (i.e. pressure cars without bottom outlets) is too broad-based to result in accurate assessment of safety improvements. Considering all DOT Class 105 tank cars as fungible is equally dangerous and the specific recommendations made in the analysis with regard to chlorine tank cars prove this point. A commodity by commodity analysis, considering the product/package pairs, must be accomplished prior to making sweeping decisions.

Since AAR’s RA 05-02 report is based on car type and neither the commodity nor the commodity/package combination, it is possible to replace any of the commodities with others carried in the same car type and expect similar results. For example, if an analyst substituted LPG for anhydrous ammonia, the Barkan analysis would show the same results, but real-world railroad accident experience proves that the consequences of breaching a tank of one of these commodities is vastly different from breaching a tank of the other.

One glaring omission in the Risk Analysis is the failure to consider the DOT 105J400W tank cars for ammonia service. Instead, researchers jumped immediately to a 500 pound car without any rationale. By the same token, there is no rigorous analysis of a standard configuration DOT 105J600W tank car instead of the untried design of Trinity. These deficiencies demonstrate a lack of scientific objectivity and are among the factors the Department will review in evaluating the new specifications.
Finally, the Barkan presentations (basically, RA 05-02 and its not infrequent updates and refinements presented at meetings of the T87.2 and T87.3CC Task Forces working on the SOMC charge) make reference to the Trinity top-fittings design as a “new, robust-design, top fittings protective housing” when, in fact, the Trinity proposal is an un-tested design markedly similar in nature to the former “Texas Wedding Ring” design that experienced significant failures in transportation before being prohibited. This past history, plus the evidence of fatigue cracking on the top of tank cars with especially rigid top assemblies, led FRA to recommend, and PHMSA to issue, a special permit with an annual inspection requirement for the top nozzle area. FRA and PHMSA believe that such strict requirements will enable the collection of controlled data to determine whether the design provides any enhancement over present cars.

The history of hazardous materials transportation in railroad tank cars is remarkable. Whether or not the AAR Risk Analysis convincingly argues that improvements are possible to the cars typically used for chlorine and anhydrous ammonia, it fails totally in proving any inadequacy in the present designs and their serviceability. Barkan does not make the case that substantial investment in design enhancements will provide significant safety improvement when using a cost benefit approach. Such an approach is not only mandatory for the government when considering new specifications and requirements, but is routinely used by railroads, shippers, and car owners to drive their own business decisions.

Together with all of us at FRA, I stand ready to work with AAR, or any other entity, on ways to improve tank car safety.

Sincerely,

William S. Schoonover
Staff Director, HM Division
Exhibit B
Delegations of Authority:
Concepts of Stewardship

A White Paper

Thomas A. Phemister
Manager, Tank Car Safety Programs
Hazardous Materials Specialist
Hazardous Materials Division
Federal Railroad Administration

Two key pieces of legislation confer on the Department of Transportation overriding responsibility for the design, construction, and repair of railroad tank cars: The Federal Railroad Safety Act and the Hazardous Materials Transportation Act.¹ Under the Federal Railroad Safety Act, the Secretary of Transportation is directed to "prescribe regulations and issue orders for every area of railroad safety . . . ."² Likewise, under the Hazardous Materials Transportation Act, the Secretary "shall prescribe regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce."³ The regulations prescribed by the Secretary "apply to a person manufacturing, fabricating, marking, maintaining, reconditioning, repairing, or testing a packaging or container that is represented, marked, certified, or sold by that person as qualified for the use in transporting hazardous materials in commerce."⁴

In drafting the first Federal standards for tank cars in 1927, the Interstate Commerce Commission relied heavily on the expertise of the American Railway Association's Committee on Tank Cars. A cooperative relationship between government and the railroad industry had been sanctioned as early as 1908 in the passage of the Explosives and Other Dangerous Articles Act. This relationship between the Department and the Tank Car Committee can best be described as a relationship between a policymaker and a counselor. The

¹ 49 U.S.C. §§ 5101 - 5127 and 49 U.S.C. §§ 20101 - 21311. Both acts stem from the early days of the Department of Transportation and each has been amended several times, often under a different "popular name." The names of these laws used here are a convenient shorthand because this is not primarily a legal analysis.

² 49 U.S.C. § 20103 - General Authority.

³ 49 U.S.C. § 5103(b) - General Regulatory Authority.

Committee brings the Department technical expertise. It reviews the
effectiveness of current standards and forwards recommendations for change.
Proposed amendments to the tank car specifications originating outside the
Committee must be referred to the Committee for review and comment prior to
departmental action. In all instances, however, final policy judgments lie with
the Department.

Recent events within the TCC have concerned FRA, because the consensus
process that has yielded so many significant improvements in the railroad
transportation of hazardous materials broke down, in the Agency’s opinion,
with the activity that led to the issuance of CPC-1175. This circular letter calls
for specification changes for tank cars carrying chlorine and anhydrous
ammonia and mandates their adoption within an accelerated time frame, and
without provision for Departmental review.

FRA believes it has a responsibility to the body of experts it has relied on for so
long to re-emphasize that the delegations to the AAR Tank Car Committee are
best pursued with the concept of stewardship in mind. The American public is
the direct beneficiary of properly exercised stewardship over the authority
delegated to the Tank Car Committee by the Federal government. Changes to
the standards for building and approving railroad tank cars can only be made
if they are in the best interests of the public, it is they who permit petro-
chemical factories in their communities and who permit railroads – and other
modes of transportation – to run through their cities, towns, and villages.

Stewardship over Resources:

When the Tank Car Committee exercises its delegated authority, it does not do
so in a vacuum. The common carrier duties spelled out in, among other
things, the Interstate Commerce Act mean that railroads are generally required
to provide transportation services in a reasonable manner and may not impose
unreasonable requirements as a condition precedent to providing rail
transportation services.

Certainly, the 1888 grant of the railroad’s petition to the ICC to absolve rail
carriers from the duty to provide tank cars did not also grant the railroad’s free
rein in imposing conditions on tank cars through AAR’s mandatory interchange
rules. Any additional safety requirements AAR imposes on, for example,
railroad tank cars designed to transport hazardous materials, must be

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5 The Merriam-Webster Online dictionary defines stewardship as “the conducting,
 supervising, or managing of something, especially: the careful and responsible management of
 something entrusted to one’s care.”
reasonable in light of the existing regulatory framework. The HMRs are designed as a comprehensive risk management system, prevention-oriented, and focused on identifying safety and/or security hazards and reducing the probability and quantity of hazardous material releases. In addition, the railroad safety regulations are designed to be a comprehensive set of regulations governing the safety of all facets of freight and passenger railroad operations.

For example, courts have held that a railroad carrier cannot refuse to transport materials which meet the applicable Federal regulatory standards, but the carrier “may seek approval of a stricter practice which is shown to be just and reasonable.” Akron, Canton & Youngstown R.R. v. ICC, 611 F.2d 1162, 1169 (6th Cir. 1979) (citation omitted). See also Consolidated Rail Corp. v. ICC, 646 F.2d 642, 650 (D.C. Cir. 1981). Further, courts have held that the burden is on the carrier to prove the reasonableness of additional safety measures and that existing Federal regulations are unsatisfactory or inadequate in particular circumstances. Consolidated Rail, 646 F.2d at 650. As a matter of stewardship, these requirements mean that AAR-proposed safety standards over and above Federal safety standards must pass a reasonable economic benefit/cost test.

**Stewardship over Ideas and Processes:**

The history of railroad tank cars pre-dates both the formation of the Department of Transportation in 1967 and the merger of several specialized railroad organizations into the Association of American Railroads in 1934. Throughout that history, cars have been conceived, designed, developed, and approved by a mutually beneficial melding of diverse interests. Historically, the Interstate Commerce Act required common carriers to furnish transportation services “upon reasonable request therefore.” The furnishing of transportation services included the furnishing of equipment and the ICC even established charges for the use of equipment not owned by the hauling railroad. Because tank cars are a very specialized kind of railcar and because their use is often cyclic, in 1888 the Interstate Commerce Commission agreed

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6 Promulgated by PHMSA at 49 CFR Parts 171-180.

7 Promulgated by FRA at 49 CFR Parts 200-244.

with a petition filed by the railroads and, thus, the securing of tank car equipment became a shipper’s worry. Today, over 99 percent of tank cars are owned by shippers and car leasing companies.

Just as this ICC decision did not grant license to the railroads to impose unreasonable requirements on non-owned cars, so too, it did not grant car owners unfettered authority to design and build anything they wanted. Because the railroads were required to interchange equipment, they needed to set standards for such things as coupler height, wheel size, and brake compatibility and to be able to charge the owner of a “foreign road” car for repairs that became necessary at a location remote from the owner’s repair shop. This eventually led to the development of Rules for Interchange, establishing the universal standards for equipment compatibility and for determining when repairs made on one railroad could be billed against another.

The problem with tank cars was that, because the railroads did not own them, carrier mechanical officers were not as familiar with them as they were with box cars or gondolas. The 1888 ICC decision made it virtually certain that non-railroaders would be an essential part of the decisions made about the cars used for bulk liquids and fluids, including chemicals and petroleum products. This dichotomy has shaped both tank car development and the Federal government’s relationship to it.

By 1927, the ICC and the American Railway Association Committee on Tank cars had collaborated on a set of seven tank car specifications and, effective July 1, 1927, they were adopted as ICC regulations. Except for the ICC 108\(^9\) car, the specifications adopted then are certainly not foreign to tank cars in use today with both pressure and non-pressure cars, rubber lined or not, with a safety valve or a safety vent, and insulated or not. In terms which foretell the current procedures, the ICC regulations required a builder to secure approval of all designs from the ARA Committee on Tank Cars before beginning construction. A proponent seeking a change in the tank car specifications was required to submit the proposal to the ARA Committee on Tank Cars for review. The Committee then transmitted its approval or rejection, with reasons, to the Commission. After review there, the ICC would take final action, adopting or rejecting the proposal.

In 1934, the ARA and other railroad organizations became the Association of American Railroads and, in 1967, the authority to regulate the safety of the

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\(^{9}\) The ICC 108 was a wooden barrel, intended for acetic acid, wine, and similar commodities.
transportation of hazardous materials was transferred from the ICC to the newly formed Department of Transportation. The Tank Car Committee, formed within the Mechanical Division of the Association of American Railroads, includes membership from railroads, shippers, and tank car builders—echoing the 1903 formation of the Master Car Builders Association Tank Car Committee that consisted of railroad mechanical officers and a representative of Union Tank Line. The reasons now are as valid as they were under earlier organizational schemes: Because railroads were absolved from the common carrier duty to own tank cars, expertise over the issues surrounding construction and design required the participation of non-railroad entities, including both builders/fleet managers and shippers.

This cooperative process has made remarkable progress towards ever safer tank cars. Such improvements include shelf couplers, head shields, thermal insulation, and bottom discontinuity protection. Not all "improvements" result in a change to the specifications. Some develop as clarifications to existing standards and others as enhanced engineering practices built on the existing codes.\textsuperscript{10} Taken together, the featured improvements have resulted in a tank car that is significantly safer than the cars used in the era between World War II and the mid-1970's. The fact that some of these tank car improvements are mandated by regulation and others through incorporation by reference of the Tank Car Manual illustrates the best concepts of stewardship at work. The differences in the means of adoption are trivial compared with the decrease in danger to the public from the shipment of dangerous chemicals.

At the July, 2006, meeting of the Association of American Railroads Tank Car Committee, the consensus process was vitiated and votes were taken on proposals to amend the requirements for tank cars used to transport anhydrous ammonia and chlorine. In both cases staff proposals from AAR passed 13 - 8 and alternative proposals from, primarily, The Chlorine Institute and The Fertilizer Institute failed by a reverse of the same vote count. All of the railroad members and Trinity Industries\textsuperscript{11} voted in the majority and all of the shipper associations and builders/fleet managers, except Trinity, voted in the minority. The proposals under consideration had been the subject of intense and, often, acrimonious discussion beginning in January, 2006. Part of what

\textsuperscript{10} One such significant engineering practice is the adoption of normalized steel for tank car shells. In theory, this seems to be an improvement, but FRA is now conducting research on tank car steels to determine whether or not the predicted benefits of increased ductility are actually realized.

\textsuperscript{11} Trinity Industries recently proposed a new, thicker tank car for chlorine. That company's engineering analysis of the new chlorine tank car formed much of the early, initial basis for what became the proposals reflected in CPC-1175.
can only be seen as a desperate push by railroad and AAR employees to meet an unrealistic deadline imposed by railroad executives, this action by the Tank Car Committee is a total abrogation of the stewardship process for considering improvements to tank cars since before the formation of either the Association of American Railroads or the Department of Transportation. The delegation of authority to approve tank car construction and to consider changes in tank car specifications is premised on the coming-together of expertise from rail carriers, car builders, and tank car users. The Department believes that this failure of consensus, this failure to exercise stewardship over a safety trust that has existed since before either AAR or DOT existed, must be corrected.

Bluntly put, lives are at stake. DOT will not fail in its dual mission to make railroading safe and to provide for the safe transportation of hazardous materials. The ministerial powers exercised by the AAR Tank Car Committee must be carried out with the stewardship of this cardinal principle foremost.
July 21, 2015

Edward Hamberger
President and CEO
Association of American Railroads (AAR)

Dear Mr. Hamberger:

As defined in U.S. Department of Transportation (DOT) regulations (49 CFR 179) and referenced in the AAR Tank Car Committee (TCC) charter, the TCC is authorized under the Hazardous Materials Transportation Act to review proposed changes in or additions to specifications and make recommendations to DOT for consideration. This authorization is commonly referred to as AAR’s “delegated authority.” The TCC does not have the authority to establish tank car specifications. As stated unequivocally by DOT, “final policy judgments lie with the Department.” DOT has made its final policy judgments on tank car standards for flammable liquids, and the TCC has no authority to override them. Furthermore, the pending petitions for judicial review and for administrative appeal must be resolved before further action can take place.

Accordingly, the undersigned shipper organizations represented on the TCC ask you to withdraw the proposed Requirements for Tank Cars Used for the Transportation of Class 3 Flammable Liquids from consideration during the July 22-23 TCC meeting. The shipper organizations instead suggest that the TCC comply with federal regulations by limiting any action that may be taken on this matter to recommending changes to the DOT that satisfy the concerns of all stakeholders regarding the recent rulemaking (HM-251), as authorized by federal regulations. Our members comprise a large segment of the customers that are served by the railroads and who own or lease a majority of the rail tank cars. We strongly oppose any attempt by the TCC to exceed its delegated authority by making inappropriate use of the interchange standards to impose requirements that were either considered and rejected by DOT or are expressly outside of the scope of DOT’s recent rulemaking.

The interchange standard would:

- Require top-fittings protection that DOT expressly rejected in its rulemaking.
- Mandate a layer of thermal protection that DOT did not impose.
- Phase-out the use of an approximate additional 40,000 tank cars on the same timeline that DOT established. While we agree that such a phase-out may be a natural consequence of the recent rulemaking, that is why it is the subject of challenge in both the pending petitions for judicial review and for administrative appeal, given that such a phase-out would render an already impossible timeline even more incapable of fulfillment.

The relationship between DOT and the TCC has been described by DOT “as a relationship between a policymaker and a counselor.” To unilaterally impose these requirements within

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1 Delegations of Authority: Concepts of Stewardship; DOT White Paper (2006); Pheminster, Thomas A.
2 Ibid
weeks of DOT’s final rule conflicts with the TCC’s charter and is contrary to the role the DOT has defined for the TCC.

Not only are the proposed requirements outside of the TCC’s authority, but there is no consensus among key stakeholders for this action. AAR’s delegation of authority (by way of the TCC) is premised on bringing together expertise from rail carriers, car builders, lessors and tank car users. If any one industry attempted to ignore the lack of consensus among the other stakeholders and make a unilateral decision that usurps the authority of the regulator, such action would seriously undermine the ability of the TCC to continue its essential, collaborative work and would call into question the legitimacy of the current TCC.

We believe that the best course of action is for the TCC to comply with federal regulations by limiting any action it may take on this matter to making recommendations to DOT and Transport Canada to amend their respective regulations.

Sincerely,

Cal Dooley
President and CEO
American Chemistry Council

Chris Jahn
President
The Fertilizer Institute

Jack Gerard
President and CEO
American Petroleum Institute

Michael Richardson
President
U.S. Clay Producers Traffic Association, Inc.

Robert W. McBride
President and CEO
The Sulphur Institute