

North American Model Standard

A White Paper on Standard-Related Measures

The North American Free Trade Agreement (NAFTA) requires Canada, Mexico, and the United States to make compatible their standard-related measures with respect to the transportation of dangerous goods (hazardous materials). The agreement requires that the countries use as a basis the United Nations Recommendations on the Transport of Dangerous Goods (UN recommendations), or any other standard that the countries may agree to. Development of the compatible standards is the responsibility of the Hazardous Materials Working Group of the NAFTA Land Transportation Subcommittee.

Chapter 9 of NAFTA establishes the Committee on Standards-Related Measures. It also establishes a number of subcommittees including the Land Transportation Subcommittee (LTSS), the Automotive Standards Council, the Telecommunications Subcommittee and so on. The Committee has the power to establish "such other subcommittees or working groups as it considers appropriate to address any topic." In specific, NAFTA mentions the transport of dangerous goods as a working group activity under the LTSS. Since 1994, the dangerous goods working group, known as Working Group 5 of the LTSS, has progressed the harmonization of its dangerous goods standard-related activities. Although considerable progress has been made since 1994, it is evident that there must be continued cross-border cooperation in dangerous goods transport activities. Under this Working Group, the countries have agreed to promote a North American Model Standard for Dangerous Goods Transport, similar in many respects to the UN recommendations. The model standard would serve as a guideline for each country to make compatible their safety-related measures to facilitate trade and promote the safe transport of dangerous goods across international borders.

This paper presents an overview of the current system, recent regulatory developments, and challenges in making compatible the standard-related measures of Canada, Mexico, and the United States.

1. Current System

The regulatory structure of North America requires that each of the three governments' work closely together to make compatible their safety-related measures for the transport of dangerous goods. There is no guarantee that any regulation in any of three countries will be compatible or when compatible placed into effect at the same time, since each country operates under separate executive, legislative, and judicial branch requirements. Influencing the government legislative process is the impact of interest groups and public opinion. Often these groups and public opinion alter regulatory outcomes that are unique to a particular country or geographic area. The compatibility of the current regulatory scheme is a direct result of all three governments and the regulated industry participating in open-dialogue and formal and informal rulemaking proceedings.

Under the current structure, each government enacts its own regulations through its political process. As a guideline, all three countries benchmark their respective regulations for the transport of dangerous goods against the UN recommendations. The UN recommendations address

classification, documentation, marking, labeling, placarding, and packaging. There are no construction requirements within the UN recommendations for multi-unit tank car tanks, highway cargo tanks, or railroad tank cars (transport tanks).¹ The UN recommendations do include, through necessity, the construction requirements for intermodal (IM) portable tanks. For packagings not addressed by the UN recommendations, such as tank cars, each government has established its own packaging requirements. As a result of individual efforts, the construction requirements for these tanks have evolved into unique modal-and national-specific standards.

Within Canada, the development of transport tank requirements evolves from a joint government and industry board that regularly meets to address needed changes. These changes are published by an approved board or association as an industry technical standard and then made effective through incorporation by reference into the Transport of Dangerous Goods regulations by a formal rulemaking proceeding. In the United States, the development of transport tank requirements evolves from a formal notice and comment government proceeding. The regulations are made part of the Code of Federal Regulations (CFR). The government may incorporate by reference an industry technical standard into the CFR. At the current time, Mexico does not have any published transport tank requirements. As a result of these individual efforts, the construction requirements for transport tanks vary among the modes and country of origin.

2. Standard-Related Measures

Since about 1994, the governments of Canada, Mexico, and the United States have agreed to make compatible their safety-related measures for the transport of dangerous goods. To accomplish this objective, the countries have met to discuss the development of a North American Model Standard. Near a reality, the model standard will use as a basis the UN recommendations. To promote compatibility, the model standard will incorporate by reference internationally recognized technical standards. This approach not only simplifies the Federal regulations but also allows direct, informal, industry involvement in technical standard writing and regulation development. The governments' vision then follows an accepted North American Model Standard that may incorporate by reference a nationally recognized industry technical standard.

For tank cars, agreement was made by the three governments in July 1999, to use as a basis for the North American Model Standard the proposed Canadian General Standard Board's document CGSB-43-147-99: *Construction and Maintenance of Tank Car Tanks and Selection and Use of Tank Car Tanks, Portable Tanks and Rail Cars for the Transportation of Dangerous Goods by Rail*. This document includes an editorial revision of the current tank car specifications and reformatting to simplify its use. A contracted legal professional, the governments of Canada and the United States, and several industry representatives have provided valuable insight into the development of the CGSB proposed standard. Copies of the proposed standard are available from both Transport Canada and the Federal Railroad Administration.

¹ Construction means the design, fabrication, assembly, inspection, testing, maintenance, repair, and qualification of a tank car, service equipment, including welded attachment and structure.

In December of 1999, the governments agreed to consider advancing the proposed CGSB standard as an industry technical document and then to incorporate it by reference into the North American Model Code.² In addition, agreement was made to populate the technical standard with the construction requirements now found in the Association of American Railroads Specifications for Tank Cars. This approach would create a single technical standard that includes all of the construction requirements for tank cars. Administrative requirements, such as registration of tank car facilities, inspectors, and approvals would remain or become a Federal regulation.

3. Transport Tank Standards

Since as early as 1964, the governments of Canada and the United States have consistently reviewed the legality of the so-called “delegated authority” functions to the Association of American Railroads. Under this authority, the AAR approves the requirements for tank car and service equipment designs, materials and construction, and conversion or alteration. The AAR also has in place a structure for the approval of tank car facilities, welders, nondestructive examination personnel, and quality assurance procedures that are incorporated by reference into the Federal regulation. The Federal government oversees the program by attending Committee meetings and conducting audits at tank car facilities.

With respect to the other modes of transport, the government has taken on the role of approving third-party certification and approval agencies. For example, persons engaged in the manufacture, assembly, inspection and testing, certification, or repair of cargo tanks or a cargo tank motor vehicle must register with the Federal government. As part of the registration, persons who manufacture or repair cargo tanks must submit a current copy of the ASME Certificate of Authorization and for repairs a National Board or ASME Certificate of Authorization. For IM portable tanks, an owner or manufacturer must apply for approval to any agency approved by the Federal government to approve such tanks. Prior to any modification of an IM portable tank, each person must request approval from the initial approval agency. Also, an approval agency must witness each hydrostatic test of an IM portable tank. The design and construction of IM portable tanks within the United States must conform to ASME Section VIII Division 1; although there is no need to use the ASME certification or stamp.

As noted above, the construction scheme for transport tanks differ substantially by mode, and it is against this background that the governments of Canada, Mexico, and the United States have opted to make compatible and to harmonize the transport tank requirements. From a government viewpoint, it makes sense to harmonize certain approval, registration, and construction requirements for all transport tanks regardless of the mode of transport or country of origin. Construction standards would only differ with respect to the environmental loads such a tank would encounter for its particular mode of transport. In addition, public policy, suggests that the packaging specifications for the shipment of a unique and particular hazardous material should not differ substantially by mode; that is, packaging by mode should be harmonized and performance based.

² US Government Executive Order XXXXX requires Federal agencies to adopt industry technical standards into their respective regulations.

4. Transport of Dangerous Goods Standard Council

To accomplish the objectives of NAFTA, the LTSS should consider the creation of a Transport of Dangerous Goods Standards Council. The Council's mission is to harmonize dangerous goods transport between North American communities. The Council would consist of three groups:

- Regulatory content, such as safety requirements during transport, loading, and unloading;
- Compliance assessment content, such as accreditation and enforcement procedures, including the consideration of third-party inspection agencies; and
- Technical content, such as requirements and specifications for the construction of transport tanks.

The North American Dangerous Goods Recommendations must include elements of all three categories. As recommendations become more specific, dangerous goods transport requirements become less a barrier to trade—the declared goal of NAFTA and the World Trade Organization (WTO). Regulatory and compliance assessment content are traditionally the responsibility of government, but the development of technical content has included considerable industry participation.

Technical committees are generally composed of government and industry representatives and other interested parties. Meetings are based on consensus standards, such as those used by the International Standards Organization. Regulatory and compliance committees are composed of government representatives and such meetings proceed under consensus standards.

With respect to technical committees, the regulatory and compliance committees of the government may incorporate by reference any existing technical standard, such as the Association of American Railroad's Specification for Tank Cars, the Canadian Standards Association's Cargo Tank Standards, the American Society of Mechanical Engineers International Pressure Vessel Specifications, or any other industry standards maintenance organization. These groups may have to modify their membership and procedures to accommodate all three country's representatives and the consensus standard requirements of the ISO.

5. Challenges

To accomplish the mandates imposed by NAFTA, to facilitate trade, and to make compatible the standard-related measures of Canada, Mexico, and the United States, government and industry must work together. In working together, we must strive to make compatible the transport tank standard-related measures applicable to (1) approvals, certifications, and registrations, and (2) construction to the maximum extent practicable. The NAFTA Working Group will address many of these issues; however, modal support from the rail industry is greatly needed. Transitioning to a North American Model Standard scheme will require coordination and creativity.