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## Reed Smith's "Crude by Rail" Series: DOT Publishes Amended Regulations for Rail Transport

As part of a 19-month initiative to improve the safety of hazardous rail traffic, on Friday, May 8, 2015, the U.S. Department of Transportation ("DOT") published<sup>2</sup> new regulations and standards for the bulk transport of Class 3 flammable liquids—including crude oil and ethanol<sup>3</sup>—via the nation's railroads, amending the existing Hazardous Materials Regulations ("HMR"). See 49 CFR parts 171-180.

The amended regulations, which go into effect on **July 7, 2015**, are explained in the DOT's extensive summary of the "Final Rule," titled "Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains." The Final Rule was jointly developed by DOT's Pipeline and Hazardous Materials Safety Administration ("PHMSA") and the Federal Railroad Administration ("FRA")—and in coordination with Transport Canada.<sup>4</sup> According to DOT, the amended regulations are "designed to prevent accidents, mitigate consequences in the event of an accident, and support emergency response."

This client alert is intended to give those impacted by the Hazardous Materials Regulations a high-level overview of the new requirements and the contents of the Final Rule. Specifically, this Alert answers the following questions:

1. Does the Final Rule Impact the Oil Industry?
2. What Should You Know about the Final Rule?
3. Is the DOT's Final Rule Harmonized with Transport Canada's Rules?

*Please look for your invitation to Reed Smith's upcoming May 27, 2015 webinar discussing these issues in more detail.* To register now for the webinar, please [click here](#).

**I. Does the Final Rule Impact the Oil Industry?** It is apparent from the title that the Final Rule affects the rail industry, but does it affect the oil industry too? Yes, the Final Rule contains new requirements for offerors and shippers, including mandating a sampling and testing program for unrefined petroleum-based products. And, the requirements placed on the rail industry are likely to have economic implications on the oil industry.

*Offerors and Shippers in the Oil Industry* The HMR impacts offerors and shippers of crude oil and other petroleum products. “Offeror” is defined by the HMR as one who does either or both of the following: (i) performs, or is responsible for performing, any pre-transportation function required under the HMR for transporting hazardous material in commerce; or (ii) tenders or makes the hazardous material available to a carrier for transportation in commerce. See 49 C.F.R § 171.8. “Shipper” is defined in the Federal Railroad Safety Act (“FRSA”) as a person contracting with one or more railroads for freight transportation. See 49 C.F.R § 200.3.

The Final Rule does not amend these definitions or otherwise broaden those subject to the HMR. Indeed, the DOT specifically declined to amend or broaden the definition of offeror or shipper, instead amending the HMR by placing additional obligations on offerors regarding proper classification. Accordingly, companies in the oil industry that buy or sell crude oil or ethanol that could be transported by rail should familiarize themselves with the Final Rule and its requirements before the new regulations go into effect on July 7, 2015.

*Economic Implications on Oil Industry* Although many of the Final Rule’s new requirements place the onus on rail car manufacturers, owners, and carriers, these requirements will have an indirect effect on oil companies who rely on rail to transport their crude. As common carriers, rail companies are required to transport materials offered, but the rail companies can adjust their rates, fees, and contracting terms.

How exactly the Final Rule’s resulting economic burdens will be distributed and shared amongst the rail, shipping, and oil industry is not currently known. At a minimum, rail carriers are likely to amend their tariffs and attempt to shift the Final’s Rule’s financial burden to their customers. Similarly, the cost to lease or purchase new rail cars for Class 3 flammable liquids is likely to increase.

**II. What Should You Know About The Final Rule?** *Does the Final Rule follow the NPRM?* In most respects, the Final Rule closely follows the notice of proposed rulemaking (“NPRM”) PHMSA issued on August 1, 2014,<sup>5</sup> notwithstanding the 3,200 public comments and recommendations DOT received in response. The most noteworthy differences between the NPRM and the Final Rule are the narrowing of the trains to which the amended regulations will apply and the adopting of a risk-based schedule for retrofitting older rail cars (based not just on the car type but also the packing group).

*What trains are subject to the Final Rule?* The Final Rule, aimed at addressing potential hazards with the *bulk* transport of Class 3 flammable liquids, applies to the following two categories of trains:

- **High-Hazard Flammable Train (“HHFT”)** is defined as trains with “a continuous block of 20 or more tank cars loaded with a flammable liquid or 35 or more tank cars loaded with a flammable liquid dispersed through a train.”
- **High-Hazard Flammable Unit Train (“HHFUT”)** is a “train comprised of 70 or more loaded tank cars containing Class 3 flammable liquids traveling at greater than 30 mph.”

Although these definitions, added to Section 171.8, closely follow FRA Emergency Order Nos. 28 and 30, issued August 17, 2013 and May 7, 2014 respectively, they are narrower than the definitions contained in the NPRM.

*What are the new requirements in the Final Rule?* The amended regulations impose requirements on HHFT and HHFUT in four key areas:

- A. New Cars and Retrofitting Schedule for Tank Cars;
- B. New Braking Standards;
- C. New Operational Protocols; and
- D. Classification – Sampling and Testing Programs.

Below you will find an overview of these four areas.

*A. New Cars and Retrofitting Schedule for Tank Cars* Of importance to railcar manufacturers and owners, as well as rail carriers and shippers of petroleum products, is the Final Rule’s Part 179, which imposes enhanced tank car standards. In adopting these new standards, DOT followed Option 2 from the NPRM, despite opposition from the majority of the industry. According to the standards adopted by DOT, new tank cars are required to meet enhanced design and performance specifications for use in an HHFT in accordance with DOT Specification 117. See 49 C.F.R §§ 179.200 and 179.202. For existing DOT-111 and CPC-1232 tank cars used in HHFT, DOT has issued an aggressive schedule for meeting retrofit requirements. After considering the commentary submitted, the DOT’s retrofit schedule is based on the type of car, DOT-111 vs. CPC-1232, as well as the packing group.

**New Cars.** All cars constructed after October 1, 2015 shall meet the new DOT Specification 117. The DOT-117 requirements are summarized in the table below:

Feature	DOT Decision
Capacity	increased from 263,000 lbs. to 286,000 lbs.
Thickness	increased from 7/16 inch to 9/16 inch steel
Thermal Protection	required, <i>see</i> 179.18, 13.31(b)(2)
Jacketing	minimum 11-gauge steel and weather-tight
Head Shield	full-height, 1/2 inch thick
Bottom Outlet	moved or designed to prevent unintended actuation
Top Fittings	required, <i>see</i> AAR Spec. Tank Cars, Ap. E, p. 10.2.1

Except the increase in capacity, each of these changes is intended to reduce the loss of containment in the event of a derailment. The increase in capacity was adjusted to address industry concern that these design changes would reduce the amount of product that could be transported by a DOT-117 tank car.

**Retrofit Cars.** Tank cars made to DOT Specification 111 and CPC-1232 shall be retired or retrofitted in accordance with a specified schedule. The first deadline, January 1, 2017, triggers a reporting requirement at which time shippers must identify the number of non-jacketed DOT-111 tank cars (owned or leased) that have or have not been retrofitted. A full timeline of the required retrofit schedule for U.S. and Canada may be found at the following link: <http://www.dot.gov/mission/safety/rail-rule-summary>. The table below shows deadlines for transporting Packing Group I liquids only:<sup>6</sup>

Tank Car Type	Packing Group	Retrofit Deadline
Non Jacketed DOT-111	I	1/1/2018
Jacketed DOT-111	I	3/1/2018
Non Jacketed CPC-1232	I	4/1/2020

As shown in this table, DOT-111 or CPC-1232 tank cars that have not been retrofitted cannot be used for transporting Packing Group I liquids after April 1, 2020. Additionally, by May 1, 2025, DOT-111 and CPC-1232 tank cars must be phased out or repurposed according to the designated scheduled for carrying materials in Packing Group II and III.

The retrofitting must be in line with DOT Specification 117R, which is slightly modified from DOT Specification 117, applicable to new cars.<sup>7</sup>

**B. Braking Standards** The Final Rule also includes new braking standards for certain trains, intended to reduce the severity of accidents and the so-called “pile-up effect.” See 49 C.F.R § 174.310(1) and §179.102-10. Under these standards, HHFT must have a functioning two-way end-of-train (“EOT”) device *or* a distributive power (“DP”) braking system in place. More significantly, however, by January 2021, any train qualifying as an HHFUT must be operated with an electronically controlled pneumatic (“ECP”) braking system if it is transporting at least one tank car of PG I, Class 3 flammable liquid. All other HHFUTs must be operated with an ECP braking system by May 1, 2023. See *id.*

**C. Operational Protocols** The Final Rule also imposes new operational protocols for trains transporting large volumes of flammable liquids, including routing requirements, speed restrictions, and notifications for local government agencies.

**Routing Requirements.** Prior to selecting a route, railroads that operate HHFTs must perform a routing analysis that includes consideration of at least 27 safety and security factors, including track type and maintenance schedule. See 49 C.F.R §§ 172.820 and 174.310. All routing and planning requirements shall be maintained by the railroads and shared with the FRA or PHMSA upon request. A point of contact with state, local and tribal officials in each jurisdiction that may be affected by a rail carrier's routing decision shall be designated. *Id.*

**Speed Restrictions.** The Final Rule restricts all HHFTs to 50 mph in all areas and requires HHFTs that contain any tank cars not meeting the enhanced tank car standards under the Final Rule to operate at a 40 mph speed restriction in high-threat urban areas ("HTUA").<sup>8</sup> See 49 C.F.R §174.310(2). The 40 mph restriction for HHFTs without new or retrofitted tank cars is currently mandated under FRA's Emergency Order No. 30; the Final Rule replaces Emergency Order 30 as of July 7, 2015.

**Notifications.** The DOT declined to adopt the notification requirement proposed in the NPRM under § 174.310(a)(2). Instead the DOT relied on: (1) the expanded route analysis and consultation requirements in §172.820; and (2) the existing rules and requirements, such as the Emergency Planning and Community Right-to-Know Act of 1986. The DOT agreed with a majority of commentators that the notification rules should apply to all HHFTs rather than limiting the rules to trains transporting one million gallons or more of Bakken crude as provided in the May 7, 2014 Emergency Order. The DOT concluded that because the amendments to §172.820(a) include reporting requirements for all HHFT, the Final Rule supersedes the May 7, 2014 Emergency Order.

**D. Classification – Sampling and Testing Programs** Building on the DOT's March 6, 2014 Amended Emergency Order No. DOT-OST-2014-0025,<sup>9</sup> the Final Rule mandates that offerors establish a sampling and testing program to ensure proper classification, while clarifying the materials to which the new program requirement applies. See 49 C.F.R §173.41. Declining to require a sampling and testing program for all hazardous material, as some proposed, the Final Rule obligates offerors to develop and implement a comprehensive program to sample and test unrefined petroleum-based products. Those programs must use certain criteria and sampling frequency to improve the accuracy of classifications, and the programs must account for "any appreciable variability of the material" over time. Offerors have the flexibility to identify the factors contributing to variability in their specific operation, and are allowed to conduct the sampling before the crude oil has been loaded into a transport vehicle. Offerors must certify that hazardous

materials subject to the program are packaged in accordance with the test results, document the testing and sampling program outcomes, and make that information available to DOT personnel upon request.

The Final Rule makes clear that ANSI/API Recommended Practice (RP) 3000,<sup>10</sup> though not adopted by DOT, does provide guidance for compliance with the DOT's provisions. Enforcement will continue to include unannounced inspections, data collection, and sampling by PHMSA investigators at various points along the crude oil transportation chain—from cargo tanks that deliver crude oil to rail loading facilities, from storage tanks at the facilities, and from pipelines connecting storage tanks to rail cars.

### **III. Is the DOT's Final Rule Harmonized with Transport Canada's Rules?**

Explicitly recognizing that rail transport is a cross-border issue, DOT collaborated with Transport Canada on the initiatives reflected in the Final Rule, reaching harmony on most issues. Like DOT, Transport Canada is issuing new tank car standards.<sup>11</sup> However, harmonization has yet to be reached as to the new braking requirements, as well as the cars to which the respective standards will apply:

1. **Scope:** Canada's standards apply to any single tank car, while the Final Rule applies only to tank cars used on an HHFT.
2. **Brakes:** Canada requires a two-way EOT whereas DOT requires a two-way EOR or a DP braking system. Both Transport Canada and DOT will continue to work towards a harmonized approach to braking.

All other issues are either fully harmonized, harmonized to the extent needed, or harmonization is not required.

**IV. Conclusion** DOT's recent rulemaking adopts several recommendations made by the National Transportation Safety Board and is part of a wider and increasingly active federal initiative to improve safety for hazardous material rail traffic. While federal agencies, from the EPA to the Department of Homeland Security, are currently exploring additional strategies to make transporting flammable liquids safer, many lawmakers in Congress are dissatisfied with the extent of the new safety measures and the pace of their implementation. Just days after the Final Rule was issued, eight senators signed a letter to DOT Secretary Anthony Foxx asking that first responders and the public receive more information about trains carrying oil from the Bakken Shale into their communities. Similarly, senators in states with a high volume of hazardous traffic have proposed legislation (S. 859) that would go much further than DOT's Final Rule. And, in criticizing the new regulations, Senators Maria Cantwell (D-Wash.) and Tammy Baldwin (D-Wisc.) signaled that proposals to accelerate the phase-out of existing tank cars may be forthcoming. At a minimum, it is highly likely, if not inevitable, that federal authorities will continue to expand regulations in the crude-by-rail context.



We look forward to providing a more in-depth review of these issues in our upcoming webinar on **May 27, 2015**. If you have any questions about the regulations or the effect on your company's business, please reach out to one of the authors.

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  - <sup>2</sup> The DOT first issued the Final Rule on May 1, 2015 and officially published the Final Rule in the *Federal Register* on May 8, 2015.
  - <sup>3</sup> According to DOT, "this rule primarily impacts trains transporting large quantities of ethanol and crude oil, because ethanol and crude oil are most frequently transported in high-volume shipments..." See *Executive Summary of Final Rule*.
  - <sup>4</sup> Transport Canada is the Canadian federal department responsible for the majority of the Government of Canada's transportation policies and programs.
  - <sup>5</sup> See 79 *F.R.* 45015.
  - <sup>6</sup> A timeline of the required retrofit schedule for U.S. and Canada may be found at the following link: <http://www.dot.gov/mission/safety/rail-rule-summary>
  - <sup>7</sup> Recognizing it would be impossible to "add steel" to DOT-111 and CPC-1232 tank cars, the DOT-117R allows use of 7/16th steel.
  - <sup>8</sup> "High Threat Urban Area (HTUA) means an area comprising one or more cities and surrounding areas including a 10-mile buffer zone...." 49 C.F.R. 1580.3
  - <sup>9</sup> This Emergency Order remains in effect until March 31, 2016.
  - <sup>10</sup> "API RP 3000 provides guidance on the material characterization, transport classification, and quantity measurement for overfill prevention of petroleum crude oil for the loading of rail tank cars." API RP 3000 may be found at: <http://www.api.org/oil-and-natural-gas-overview/transporting-oil-and-natural-gas/rail-transportation/api-rp-3000>.
  - <sup>11</sup> Information about Transport Canada's initiatives can be found at: <https://www.tc.gc.ca/eng/tdg/clear-modifications-adopted-90.htm>.

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