



RESPONSE TO PETITION

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Response by the Minister of Transport

SIGNATURE

Minister or Parliamentary Secretary

SUBJECT

Rail transportation

ORIGINAL TEXT

REPLY

Set the standard (maximum vapour pressure) for volatility of crude oil and require industry to invest in technologies available in order to reduce the volatility of crude oil transported by rail:

Transport Canada is currently participating in an international crude oil sampling and testing project, in coordination with the US Department of Transport (US DOT), US Department of Energy (US DOE) and Sandia National Laboratories, to further evaluate crude oil sampling and analysis methods. This campaign includes inter-lab comparisons of established crude oil analysis methods and will help Transport Canada determine the most appropriate tests for assessing the hazards of crude oil in transport, including vapour pressure and volatility. Data collected from all these studies will be used to inform policy and regulatory discussions on the management of hazards of crude oil as well as associated classification, sampling, testing and means of containment requirements. Setting standards and requirements may form part of these discussions.

Transport Canada will use all previous, ongoing and planned research on crude oil properties to continue to address the safe and efficient transportation of crude oil.

Past research includes a crude oil sampling and testing campaign led by TC in 2014-2015 to assess 68 crude oil samples collected in British Columbia and the Prairie Northern Region. A summary of the findings can be found on TC's website at <http://www.tc.gc.ca/eng/tdg/safety-menu-1242.html>. For a copy of the report on its Crude Oil Sampling and Analysis study, please send a request to TDG-RD-TMD@tc.gc.ca. In addition, Transport Canada has worked with the Canadian Crude Quality Technical Association (CCQTA) on two important test methods for the accurate classification of crude oil.

2) Increase the rail safety transport budget to strengthen government oversight of the Rail Safety Management System and increase the number of rail inspectors

Improving rail safety is the Minister of Transport's top priority. The Government is fully committed to making significant improvements to ensure that Canada's railway system remains among the safest in the world. A number of concrete steps have been taken to strengthen railway safety and the transportation of dangerous goods since 2013.

Budget 2016 allocated \$143 million over the next three years to sustain existing efforts and support new actions to strengthen rail safety in Canada.

These new measures will include the following: increased inspection capacity and improved training for stronger and more consistent oversight across the country; enhanced systems for testing, classifying, registering and mapping dangerous goods and their movements, to support better risk management; increased federal contributions for local investments in safer railway crossings to help prevent accidents; and additional support for first responders to provide better tools and the information required to better protect communities.

Transport Canada has increased the number of Railway Safety inspectors from 101 to 129 since the Lac-Mégantic tragedy. Railway Safety inspectors promote railway safety through education and awareness, conduct audits and inspections of equipment, operations, track, bridges, crossings, signals, and safety management systems. They also respond to safety threats and take enforcement action, as required. Every year, Transport Canada conducts approximately 30,000 audits and inspections of grade crossings, locomotives, freight and passenger cars, tracks, and train crews.

As well, Transport Canada developed the *Railway Safety Management Systems Regulations, 2015*, which came into force on April 1, 2015.

The department has committed to conducting thorough Safety Management System (SMS) audits of every SMS component for all railways under its jurisdiction on a three-to-five year cycle or more frequently as required. Comprehensive audits began in 2016-17 and were preceded by initial and targeted inspections of all federal and local railways during 2015-16, which ensured that the requirements of the SMS Regulations were understood and in place by October 1, 2015.

3) Require unlimited liability for industry, and require industry to carry sufficient insurance to cover the true costs of a catastrophic derailment in a densely populated area.

Montreal, Maine & Atlantic Railway (MMA), the railway involved in the July 2013 derailment in Lac-Mégantic, had inadequate insurance to cover the scope of damages, and subsequently went bankrupt. While MMA held \$25 million in insurance, accident costs have been estimated in the media at between \$750 million and \$1.2 billion.

Following the tragedy, amendments were made to the *Canada Transportation Act* to ensure that sufficient funds are available to adequately compensate potential victims, pay for clean-up costs and protect public funds. They ensure that, in the event of an accident, the polluter, and not the taxpayer, pays for rail accidents, including spills and derailments. Liability is now shared between railways and shippers through enhanced insurance requirements and a supplementary compensation fund financed by shippers of crude oil. This significantly increases the resources available to pay for damages related to people, property and the environment.

The levels of insurance mandated by the enhanced legislation and the establishment of a supplemental fund for accidents involving crude oil take into account the potential severity of accidents anywhere in Canada, including in densely populated neighbourhoods.

Under the new regime, federally regulated railways transporting small amounts of dangerous goods are required to hold \$25 million in insurance. For railways transporting larger quantities of dangerous goods, there is an initial requirement to hold either \$50 million or \$125 million in insurance, depending on the volume and type of goods carried. On June 18, 2017, those requirements will increase to \$100 million and \$250 million, respectively. This approach provides short line railways with sufficient time to adjust to these new requirements. Railways transporting substantial volumes of specified dangerous goods, namely the Canadian National Railway and the Canadian Pacific Railway, are required to hold \$1 billion in insurance.

In the unlikely event that the cost of a railway accident involving crude oil exceeds a railway's insurance level, the supplementary, shipper-financed fund will cover damages. The focus on crude oil responds directly to the Lac-Mégantic tragedy and to concerns about the growing volumes of oil being transported by rail across long distances and through many communities. However, as other dangerous goods have the potential to cause damage in an accident, flexibility is provided in the legislation to scope in other goods to the fund in the future.

All damages that result from an accident involving crude oil will be fully compensated. In the event that damages exceed the amount available in the fund, the difference will be loaned from the Consolidated Revenue Fund and recouped through levies on shippers.

4) Require railways to share real-time data on dangerous goods with first responders and historical data with residents:

The Government must continue support first responders in incident prevention and emergency preparedness. That is why the department has been working with industry, first responders, municipalities and First Nation communities to make sure jurisdictions have access to dangerous goods information to enable proper risk assessments, emergency planning and enable appropriate training for first responders.

Furthermore, on April 28, 2016, the Minister of Transport issued Protective Direction 36, which requires Canadian Class I railways to provide jurisdictions and first responders with additional dangerous goods information to enhance risk assessment, emergency planning, and training activities in a jurisdiction twice per year. Within two years, this information will be provided quarterly. It also expanded the information provided to jurisdictions to include number of unit trains in a jurisdiction as well as the total percentage of dangerous goods transported by a Canadian Class I railway operator during the report period.

In addition, it requires all railways operating in Canada to provide a top ten list of the dangerous goods transported through the jurisdiction to each jurisdiction so that they can share the information directly with the Canadian public at

the jurisdictions' discretion. Further, Canadian Class I railway operators are required to provide a top ten list of dangerous goods presented by province on their website.

The department also supports first responders following an incident involving dangerous goods. CANUTEC, Transport Canada's 24-hour emergency response centre, is staffed by professional bilingual scientists specialized in emergency response and experienced in interpreting technical information and providing advice to first responders. CANUTEC is well known (and used) in the first responder community and has been in operations since 1979.

During an incident, railways are required by regulation to provide immediately to Transport Canada (via CANUTEC) a copy of train consists. The train consist outlines the type of dangerous goods and their location on the train. First responders have access to the consist immediately by contacting CANUTEC. The consist is also available in the locomotive.

Transport Canada also produces an Emergency Response Guidebook to support first responders. The Emergency Response Guidebook is an informative and comprehensive guide designed for use at a dangerous goods incident occurring on a highway, aircraft, ship or railroad. It enables first responders to quickly identify the specific or generic hazards of the material(s) involved in an incident. For example, it provides a list of dangerous goods in numerical order by identification number or in alphabetical order of material name. The Guidebook also assists first responders in making initial decisions upon arriving at the scene of a dangerous goods incident. For example, it provides recommended evacuation distances, describes potential hazards of a dangerous good, supplies relevant public safety information including first aid, as well as recommended type of protective clothing and respiratory protection.

Finally, railway operators have produced a railway application called "Ask Rail". "Ask Rail" enables a first responder to look up on a smart phone or portable device the dangerous good being transported in each rail tank car in real time.

5) Provide the public with railway route analyses and risk assessments

As previously mentioned, rail safety is the Minister of Transport's top priority. That is why he put forward the *Rules Respecting Key Trains and Key Routes*, which came into force on February 19, 2016. This rule further strengthens railway safety and reduces the risks and the consequences of rail accidents involving dangerous goods. As such, in addition to imposing speed limitations, the rule puts emphasis on track maintenance, risk assessment and mitigation.

The rule requires railway companies to conduct risk assessments for each Key Route over which Key Trains are operated by the company. The risk assessments must identify, evaluate and compare alternative routes, over which the company has the authority to operate. In addition, these risk assessments must consider, at a minimum, 28 safety and security factors including environmental and emergency response capacity considerations.

The rule also provides a process for companies to incorporate input from municipalities and other levels of local government into Key Route risk assessments. Railway companies are required in turn to respond to municipalities and other levels of local government regarding how risks in their areas are being mitigated.

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In addition, the Direction requires all railways operating in Canada to provide a top ten list of the dangerous goods transported through the jurisdiction to each jurisdiction. This allows the jurisdictions to then share the information directly with the Canadian public at their discretion. Further, Canadian Class I railway operators are required to provide a top ten list of dangerous goods presented by province on their website.

6) Require industry to implement safety technology, including; Positive Train Control (PTC), Automated Rail Car Monitoring and Automated Track Inspection Program

Positive Train Control (PTC) describes technology designed to automatically stop or slow a train before certain accidents occur. The term PTC encompasses a broad spectrum of technologies which can be applied to different levels of automation.

The Transportation Safety Board (TSB) recommended that Transport Canada require major Canadian passenger and freight railways implement physical fail-safe controls, beginning with Canada's high speed rail corridors. In response, the Advisory Council on Railway Safety (ACRS) established a working group with representatives from the railways, labour and Transport Canada to study the issue of fail-safe train control systems for Canada's railways, with a special focus on the high-speed rail corridors. The working group is finalising its report which examined different technology options to address the TSB recommendation. The TSB has not recommended that Transport Canada implement PTC specifically.

In the U.S., the *Rail Safety Improvement Act* of 2008 mandated the widespread installation of PTC systems by December 2015. The deadline proved unworkable for most railroads, given technical and legal complexities. In response, the U.S. Congress passed legislation in late 2015, providing a three year extension to the deadline. Under the new law, railroads will have until December 31, 2018 to fully implement PTC, with the possibility of an additional extension of two years, if warranted.

While PTC is not being used in Canada, Canadian National Railway and Canadian Pacific Railway will need to comply with U.S. requirements for their cross-border operations.

Railways in Canada currently have technologies in place throughout their networks to remotely monitor rail cars. These devices include wayside defective bearing detectors, wheel impact load detectors, and truck hunting detectors for monitoring wheel placement. In addition, the *Rules Respecting Key Trains and Key Routes* require railways to install wayside defective bearing detectors on key routes and prescribe inspections that must be performed of any bearing of a Key Train reported defective by a wayside defective bearing detector.

Railway companies are responsible for the safety of their rail line infrastructure, railway equipment and operations while respecting regulatory requirements. Transport Canada's *Rules Respecting Track Safety* (Track Safety Rules) establish the safety requirements for federally regulated railway track, specify the maintenance and inspection requirements, as well as maximum train speeds for each class of track.

Transport Canada inspectors monitor railway companies for compliance through audits and inspections using various tools, such as a Track Assessment Vehicle which verifies whether measurements comply with the limits prescribed in the Rules.

7) Establish effective tank car improvements:

The phasing out of DOT-111 tank cars is a crucial step towards strengthening our rail safety system by making sure that crude oil will no longer be permitted to travel in the least crash-resistant tank cars. The last day to use DOT-111 non-jacketed tank cars was previously April 30, 2017 and for DOT-111 jacketed tank cars February 28, 2018 for the transport of crude oil. However, on July 13, 2016, the Minister of Transport issued Protective Direction 38, which further accelerated the phase-out of both jacketed and non-jacketed legacy DOT-111 tank cars being used for crude oil service in Canada to November 1, 2016.

8) Implement Independent risk analysis of the transportation of dangerous goods by rail:

Transport Canada is currently conducting research and risks analysis associated with the transportation of dangerous goods by rail. Through different research projects, our experts study the composition and properties of crude oil and other flammable liquids in order to evaluate the risks during the transportation. They also study the behaviour of these dangerous goods during a fire and when they are within a means of containment exposed to fire. Finally, Transport Canada collects information on the key routes of dangerous goods transported by rail and locations and abilities of first responders to decrease any impact of an incident if one were to occur. This research and analysis will allow Transport Canada to better identify the risks associated to the transportation of dangerous goods by rail and establish targeted emergency responses for those dangerous goods.

9) Monitor and enforce train speeds

Transport Canada monitors compliance to the *Rules Respecting Track Safety*, which prescribe the minimum safety requirements for federally regulated railway track, and maximum train speeds per the class of track. All five classes of track and their respective maximum speeds are defined in the Rules, ranging from 10 miles per hour (16 km/hr) for Class 1 freight trains to 80 miles per hour (128 km/hr) for Class 5 freight trains. The rules also specify maintenance and inspection requirements for each class of track. In order to travel at the maximum allowable speed, a railway company must regularly inspect its track to ensure it continues to meet the rules and remains safe for all train movements at the authorized speed.

In addition, the *Rules Respecting Key Trains and Key Routes* impose speed restrictions for trains carrying dangerous goods. Railway companies must limit the speed of trains carrying dangerous goods to a maximum of 50 miles per hour (80 km/h) in all areas, and to a maximum of 40 miles per hour (64 km/h) in the most densely populated areas and where dangerous good are being transported in older tank cars in higher risk areas.

During an inspection, Transport Canada does not hesitate to take appropriate enforcement action should a non-compliance with the rules and regulations or a threat to safe railway operations be identified.