



To: Community Safety Committee

Date: October 7, 2014

From: John McGowan
Fire Chief

File: 09-5125-01/2014-Vol
01

Re: Update on the Transportation of Dangerous Goods by Railways

Staff Recommendation

That the proposed Council Resolution titled “Reporting on the Transportation of Dangerous Goods by Railway” be submitted to the Federation of Canadian Municipalities requesting that the Federal government issue an amendment to Protective Direction 32 requiring rail companies to provide to municipalities the nature, exact volume and frequency of dangerous goods being transported.

John McGowan
Fire Chief
(604-303-2734)

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO 	

Staff Report

Origin

On June 23, 2014, Council considered a report on the transportation of dangerous goods by railway, updating Council on the effect of Protective Direction 32 of the *Transportation of Dangerous Goods Act* (1992) directing rail companies to share yearly aggregate information on the nature and amount of dangerous goods the company transports by railway vehicle through the municipality, presented by quarter. Council adopted the following resolution:

1. That a letter be sent to the Federal Minister of Transport requesting Protective Direction 32 be amended to require rail companies to report the nature, exact volume and frequency of dangerous goods transported through municipalities, so that an assessment of the risk to the municipality can be made.
2. That a Council Resolution be submitted to the Federation of Canadian Municipalities, requesting that the federal government issue an amendment to Protective Direction 32 requiring rail companies to provide to municipalities the nature, exact volume and frequency of dangerous goods transported.

This report provides an update on the transportation of dangerous goods by railway in Canada and addresses (2) above. It supports Council's Term Goal #1 Community Safety:

To ensure Richmond remains a safe and desirable community to live, work and play in, through the delivery of effective public safety services that are targeted to the City's specific needs and priorities.

Analysis

On August 19, 2014, the Transportation Safety Board of Canada (TSB) released its final report of the investigation into the derailment of a Montreal, Maine & Atlantic Railway train on July 6, 2013, in Lac-Mégantic, Québec. The TSB report identified 18 causes and contributing factors that can be summarized by:

- A non-standard engine repair failure, ultimately causing a fire in the locomotive.
- The locomotive engineer set an inadequate number of hand brakes and tested their effectiveness with the air brakes on, thus creating a false sense of the effectiveness of the hand brakes. In response to the fire on the locomotive, the firefighters shut off the locomotive fuel supply and turned the electric breakers off, in keeping with railway instructions. With the locomotive off, the compressor no longer supplied air to the air brakes and they gradually lost their effectiveness in providing braking force, leaving the too few set hand brakes alone to stop the train from moving down the incline towards Lac-Mégantic.
- Class 111 tank cars are constructed to an older standard and almost every car was breached in the derailment spilling petroleum crude oil that fueled the fire.

- Montreal, Maine and Atlantic Railway did not have a strong safety culture and this contributed to continued unsafe conditions and practices.
- Transport Canada regionally had identified Montreal, Maine and Atlantic Railway as having an elevated level of risk that required more frequent inspections; however, the regional office did not always follow up on problems identified in their inspections to ensure the root causes were identified and rectified.
- While the Transportation Safety Board did not conclude that the single person crew was a contributing factor, it did identify that railways need to examine and mitigate all risks of having single person crews and Transport Canada should consider a process to approve and monitor the railways' plans so as to assure safety.
- The petroleum crude oil in the tank cars was more volatile than described in the shipping documents as a result of inadequate testing and monitoring and created an increased risk in its transportation.

The Transportation Safety Board issued a further 16 findings as to risk that did not directly contribute to the accident but were related to safety issues. Some of these included:

- The risk of leaving trains unattended.
- The risk of single person train operations.
- The risk of not systematically testing petroleum crude oil.
- The risk of not planning and analyzing routes on which dangerous goods are carried.
- The risk of not having emergency response assistance plans in place.
- The risk of Transport Canada not ensuring that safety management systems work effectively.

While the Transportation Safety Board was investigating the accident, they issued three recommendations in January 2014:

1. Rail companies to create emergency response assistance plans when shipping large volumes of liquid hydrocarbons to ensure emergency responders have access to the required resources and assistance in the event of an accident.
2. Rail companies to conduct strategic route planning and analysis for all trains carrying dangerous goods for safer train operations.
3. Class 111 tank cars used to transport flammable liquids must meet enhanced protection standards.

The Transportation Safety Board issued a further two recommendations in August 2014:

1. Transport Canada must take a more active role when it comes to railways' safety management systems in making sure that they not only exist but that they are working and effective.
2. Canadian railways must put in place additional physical defences to prevent runaway trains.

Protective Direction 32 of the *Transportation of Dangerous Goods Act* (1992) directs rail companies to provide yearly aggregate information on the nature and amount of dangerous goods being transported through the municipality, presented by quarter. This is a step in the right direction in providing municipalities with some level of information on the dangerous goods being transported by railway through the City.

The first report was received by the City of Richmond in May 2014, however, the aggregated information provides no insight into the actual quantity or timing of hazardous products moving through the City, making it difficult for effective emergency planning and response training. Greater detail on the nature, exact volume and frequency of transportation is required for this purpose.

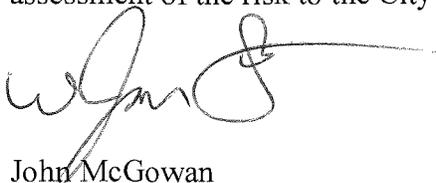
Financial Impact

None.

Conclusion

Numerous factors contributed to the train derailment in Lac-Mégantic and a concerted effort by regulators, railways, shippers, tank car manufacturers, and refineries will be required to address the safety issues identified in the Transportation Safety Board report.

Protective Direction 32 provides local authorities with base information for emergency planning purposes but does not provide enough detail to formulate a comprehensive emergency plan for mitigation of potential incidents. A greater level of detailed information would assist in emergency planning and emergency response training. This would also enable a better assessment of the risk to the City of the transportation of dangerous goods by railway.



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Deborah Procter
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DP:dp

- Att. 1: FCM Resolution – Reporting on the Transportation of Dangerous Goods by Railway
- 2: Protective Direction No. 32

**FCM Resolution
Reporting on the Transportation of Dangerous Goods by Railway**

Resolution

Reporting on the Transportation of Dangerous Goods by Railways

WHEREAS, Canada's rail system plays an important role in our economy in the transporting of goods; and

WHEREAS, recent rail incidents in Canada have highlighted the importance of rail safety in Canada; and

WHEREAS, rail companies share yearly aggregate information with municipalities on the nature and volume of dangerous goods the company transports by railway vehicle through the municipality and the aggregated information is after the fact and provides insufficient information for emergency planning purposes and emergency response training by emergency responder stakeholders; and,

WHEREAS rail incidents can have significant impacts on local public safety, the economy and the environment; therefore be it

RESOLVED that the Federation of Canadian Municipalities request that the Federal Government issue an amendment to Protective Direction 32 of the Transportation of Dangerous Goods Act (1992) requiring rail companies to provide to municipalities the nature, exact volume and frequency of dangerous goods transported so that municipalities can undertake comprehensive emergency planning and emergency response training to respond to the risk posed by the rail companies.

Prepared by:
City of Richmond
Province of British Columbia

Government
of CanadaGouvernement
du Canada

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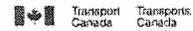
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Backgrounder

**Protective Direction No. 32**

I, Marie-France Dagenais, Director General of the Transport Dangerous Goods Directorate, being a person designated by the Minister of Transport to issue Protective Directions under section 32 of the *Transportation of Dangerous Goods Act, 1992*, and considering it necessary to deal with an emergency that involves a danger to public safety, do hereby direct that

- 1) Any Canadian Class 1 railway company that transports dangerous goods must provide the designated Emergency Planning Official of each municipality through which dangerous goods are transported by rail, with yearly aggregate information on the nature and volume of dangerous goods the company transports by railway vehicle through the municipality, presented by quarter;
- 2) Any person who transports dangerous goods by railway vehicle, who is not a Canadian Class 1 railway company, must provide the designated Emergency Planning Official of each municipality through which dangerous goods are transported by railway vehicle with:
 - a) yearly aggregate information on the nature and volume of dangerous goods the person transports by railway vehicle through the municipality; and
 - b) any significant change to the information provided in (a) as soon as practicable after the change occurs;
- 3) A Canadian Class 1 railway company that transports dangerous goods and a person who transports dangerous goods by railway vehicle are not required to provide an Emergency Planning Official(s) with the information in items 1 or 2 of this Protective Direction if:
 - (a) the Emergency Planning Official is not listed on the list of Emergency Planning Officials maintained by Transport Canada, through CANUTEC, that is provided to the railway company or the person;
 - (b) the Emergency Planning Official or the Chief Administrative Officer of a municipality, by request made in writing to CANUTEC, informs CANUTEC that it no longer wants to be provided with the information; or
 - (c) the Emergency Planning Official has not undertaken or agreed to:
 - (i) use the information only for emergency planning or response;
 - (ii) disclose the information only to those persons who need to know for the purposes referred to in (i); and
 - (iii) keep the information confidential and ensure any person to whom the Emergency Planning Official(s) has disclosed the information keeps it confidential, to the maximum extent permitted by law.
- 4) A Canadian Class 1 railway company who transports dangerous goods and a person who transports dangerous goods by railway vehicle must provide in writing to Transport Canada, through CANUTEC, contact information including the name, title, address, e-mail address, fax

number, telephone number and cell phone number, of the person(s) who will be liaising with a municipality's Emergency Planning Official, and must immediately notify CANUTEC in writing of any changes to the contact information;

5) A Canadian Class 1 railway company who transports dangerous goods and a person who transports dangerous goods by railway vehicle must provide any information shared under items 1 and 2 to Transport Canada, through CANUTEC.

6) A Chief Administrative Officer of a municipality may request Transport Canada, through CANUTEC, that the name of its designated Emergency Planning Official be added to the list of Emergency Planning Officials referred to in item 3(a) by providing the following information: the name, title, organization, address, e-mail address fax number, telephone number and cell phone number of the Emergency Planning Official that he or she designated. This contact information will be shared with any Canadian Class 1 railway company who transports dangerous goods and any person who transports dangerous goods by railway vehicle.

For the purposes of this Protective Direction, information to be provided to CANUTEC is to be provided to the following address:

Canadian Transport Emergency Centre (CANUTEC)
Place de Ville, Tower C
330 Sparks Street, 14th Floor,
Ottawa, Ontario, K1A 0N5
Attention: Mr. Angelo Boccanfuso, Director of CANUTEC
Or by email to CANUTEC@tc.gc.ca

This Protective Direction No. 32 takes effect immediately upon signing. It remains in effect for three years from the date of signing or until cancelled in writing by the Director General of the Transport Dangerous Goods Directorate, Transport Canada.

SIGNED AT OTTAWA, ONTARIO, this 20th day of November 2013.

Marie-France Dagenais
Director General, Transport Dangerous Goods Directorate

Explanatory note

For the purposes of this Protective Direction

- *"Chief Administrative Officer" means the person holding the most senior staff position within a municipal organisational structure or band council, whether that office bears that title or an equivalent one.*
- *"Emergency Planning Official" means the person who coordinates emergency response planning for a municipality, who may also be a First Responder for that community*
- *"municipality" means a corporate body constituted under the applicable provincial or territorial legislation, in each province or territory, relating to the creation of municipal administrations, be they designated as cities, towns, villages, counties or by other names and includes aboriginal communities with their own First Responders. In cases where a territory is governed by two tiers of municipal administrations, the expression refers to the tier which has the primary responsibility for emergency planning, meaning either to the lower tier or the upper tier administrations but not*

both. The decision as to which tier is to receive the information provided under this Direction is to be made locally and the name of the appropriate designate is to be communicated in accordance with this Direction.

- *"nature" means class, UN number and name of the dangerous good.*
- *"volume" means the number of car loads of a dangerous good.*

The parties will agree between themselves prior to the exchange of information on the standard provisions governing the extent to which the information received under items 1 or 2 may be disseminated.