



2 March 2016

Transmission by Email:

The Honourable Marc Garneau, Minister of Transport
The Honourable James Gordon Carr, Minister of Natural Resources
The Honourable Catherine McKenna, Minister of Environment
Kathy Fox, Appointed Chair, Transportation Safety Board

Re: Railroad Safety and Environmental Risk Reduction Strategy

Dear Minister Garneau, Minister Carr and Minister McKenna:

The Greater Sudbury Watershed Alliance (GSWA) is an association of Lake, Creek and River Stewardship Groups that have come together to work on common goals within the City of Greater Sudbury.

The GSWA is concerned with the number of rail accidents that have taken place in Northern Ontario over the past few years. The current rolling stock of tanker cars carrying hazardous materials is aging, and even a retrofitted version of the tanker cars carrying bitumen caught on fire in the Gogama rail accident on March 7, 2015.

Manufacturers of the new tanker cars which meet stricter standards will not be available to replace the existing older tankers until 2023. This leaves the safety of our lakes and rivers, and especially the source of our drinking water in Ramsey Lake and other waterways, precariously reliant on railroad safety. Consequently, the purpose of this letter is to ensure that the risk of railroad accidents is minimized.

With the goal of ensuring rail safety measures, we are calling for an Environmental Risk Reduction Strategy to be developed as a framework for ensuring that crucial safety measures are put in place to protect our watershed and others across the Country.

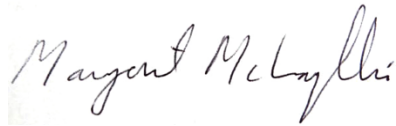
The Transportation Safety Board of Canada (TSB) provides analyses of rail accidents, makes safety recommendations to parliament, and is knowledgeable about the weakness in the railroad system. Even so, companies have wide latitude in making internal company decisions that are not open to public scrutiny.

It might be helpful to have a public information session with members of the TSB to review rail safety measures and potential solutions to the many challenges and concerns. This information would assist in determining where greater transparency is necessary and where citizens might have constructive input into the safe operation of the railroads.

We have appended our GSWA Railroad Safety and Risk Reduction Strategy which summarizes the information we have been able to gather, along with our analysis and recommendations. In this report, we indicate areas of concern that require immediate attention if we are to avoid contamination of our waterways and/or placing our community at unnecessary risk through railroad accidents.

We look forward to your response.

Sincerely,

A handwritten signature in black ink that reads "Margaret McLaughlin". The signature is written in a cursive style.

Margaret McLaughlin
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Enclosure

Cc: CP Rail, Connect Community
CN Rail, Derek Basso, Engineering
Mayor Brian Bigger
Sudbury City Council
Paul LeFebvre, MP
Marc Serre', MP
Glenn Thibeault, MPP
France Gelin, MPP



RAILROAD SAFETY AND RISK REDUCTION STRATEGY

ENVIRONMENTAL RISK REDUCTION STRATEGY

A number of significant railway incidents have recently occurred in Northern Ontario. Within close proximity to the Sudbury area there were several accidents:

- 2 June 2013 – CP Rail – Wanup - wheel bearing failure, bridge collapsed sending several cars into the Wanapitei River
- April 2014 – Huron Central Railway – Nairn Centre - track structure collapsed at a culvert and spilled diesel fuel into a creek which flows into the Spanish River, near Nairn Centre
- 15 February 2015 – CN Rail - Gogama – A broken wheel and track derailed 21 cars which sustained significant damage and fire – over a million litres of crude oil spilled – performed similarly to the one in Lac-Mégantic, Quebec
- 7 March 2015 – CN Rail - Gogama – 38 cars derailed spilling crude oil into the Makami River with significant environmental damage and fire
- 13 June 2015 – Huron Central Railway – Worthington - locomotive derailed near Fairbanks Lake Provincial Park (no hazardous goods spilled).
- 1 November 2015 – Huron Central Railway – Spanish - 13 tanker cars and 3 locomotives derailed (no hazardous goods spilled)

Tragic and costly train derailments such as the one at Lac-Mégantic, coupled with the smaller accidents involving crude oil, and those that have not spilled toxic wastes, are all evidence of problems with railway safety, monitoring and maintenance.

Concerns over the proximity of the railroads to Greater Sudbury lakes and rivers, and the occurrence of the above incidents so close to home, have prompted the Greater Sudbury Watershed Alliance (GSWA) to explore ways to reduce the potential for railroad accidents.

The federal government has responded to train derailments by requiring railroad companies to increase their insurance coverage, and city emergency response teams have been provided with some information (although not enough) about the nature of hazardous materials on trains travelling through our watersheds. An overall strategy aimed at preventing train derailments would include the enhancement of emergency response capabilities, and we encourage the City of Sudbury to continue to improve the process already in place.

The GSWA recommends that an Environmental Risk Reduction Strategy (Strategy) be developed and implemented as an action framework to reduce the risks to our watersheds and communities across Canada.

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FOCUS OF STRATEGY

This Strategy is focused on preventing rail accidents and reducing the risks to our environment and communities. Consequently, this report addresses the safety of railroad tanker cars which carry hazardous materials, and the integrity of the rail lines on which they run. Since clean-up and removal of contaminated material from rail accident sites is a costly and arduous process, we are placing emphasis on more stringent standards, practices and procedures.

The GSWA recommendations below are aimed at reducing the risk of damage through the development of legislation and policies in the long-term, as well as putting into place interim measures that would ensure safety in the short-term. While we advocate for these longer term changes, we are cognizant of the urgency to pay attention to current railroad policy and practice to avoid accidents at the present time and in the near future.

LEGISLATION, POLICY AND OVERSIGHT

The federal government currently has jurisdiction to oversee railroad safety through the Transportation Safety Board of Canada (TSB), but the Canadian National (CNR) and Canadian Pacific Rail Lines (CP), the two principal railroad lines in Canada, are given wide latitude to set and implement their own internal safety standards. Currently, the municipalities have little control over these standards and are not privy to safety decision-making by railroad companies.

The policies and procedures needed to make changes will involve consultation and work at many different levels of government. These will take time to put into place and so we urge that the necessary framework for these changes be started now. GSWA recommends the following:

1. **Safety standards development and oversight** by an expert arms-length independent 3rd party panel from both government and companies.
2. **Federal legislation and policy to strengthen the regulatory measures** of the TSB, and ensure heavy financial penalties for non-compliance.
3. **Enhancement of the Source Water Protection Plans** to specifically include railroads and extend some protection zones. This would involve the identification of areas which are environmentally fragile as well as those adjacent to drinking water sources. Although current policy recognizes the threats to drinking water by the hazardous wastes carried by the railways, its remedy only pertains to emergency clean-up in the case of derailment close to the lake. Re-routing of tankers onto other tracks might be one solution to be considered.
4. **Municipal-level input**, with consultation from concerned public-interest groups such as the GSWA, into rail safety measures, including consideration of the re-routing of railroad tracks where these might significantly jeopardize drinking water sources.
5. **Railroads be given the right of refusal to carry hazardous materials** until the government can ensure greater safety standards and compliance. Currently, it is the federal government that requires railroad companies to carry hazardous materials. The CP chief executive is on record stating that the CP board would like the right to refuse to carry

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such material (Atkins, Globe & Mail, March 4, 2015) because of insurance and clean-up costs. (Meanwhile, companies still retain much control over internal standards and monitoring, which need to be reconsidered and reviewed by the TSB.) Whether dilbit is classified as a hazardous product is not clear.

6. **Trains with tanker cars be required to significantly reduce their speed (and have that reduction verified)** when passing near communities, bridges, waterways or sensitive areas. Although there is a current speed limit imposed on all cars, the speed limit is highly variable depending on a number of parameters such as 'track curvature, grade and road(rail) bed conditions' (email communication, Land, Nov. 19, 2015). The TSB has suggested that all locomotives have voice recorders on them; it is possible that these could record the speeds at certain points along the way. Currently, according to Land (Nov. 19, 2015), 'The operating parameters of trains, including speed, are retained on Data Event Recorders and this recorded information is used on an on-going basis to ensure rules compliance.' The bases for the limits and how train length figures into such calculations as well as compliance data should be made available to the public with special attention to tanker cars carrying toxic materials.
7. **Review and oversight is required to ensure compliance, as well as limitations on the number of tanker cars that can be linked together.** There should also be a review of the operational policy.
8. **Information must be made readily available to the public in real-time**, of the types of hazardous material transported through their communities. In this way, any emergency response team can be better prepared to respond to any threats to lives and/or drinking water sources if the type of spill is identified beforehand. Currently, this type of information is only available to the emergency response group through cumulative, after-the-fact reporting. It may be possible to reroute tankers carrying hazardous wastes to another track to lessen risks to more vulnerable areas such as a community or water body, especially where this is a municipal water source.
9. **In addition to a review of existing legislation, additional research should be performed** to advance our understanding of system failure and to develop enhanced standards and practices. Municipal groups and public-interest groups such as GSWA can provide information about the sites of vulnerable areas within the watershed and suggest ways of reducing risk.
10. **In the event of an accident, the careful and effective removal of hazardous material from the railroad spill site is essential.** If contaminated soil and sediment needs to be removed, it should not be done in such a way that it will contaminate other sites or watersheds.

Where removal of contaminated soil is done thoroughly and safely, it is a costly procedure. It is important that the costs of a rigorous clean-up not be borne by Ontario taxpayers. If expenses are paid by the owner of hazardous goods or the rail operator, then the rail carrier has incentives to ensure safety in the transportation of hazardous goods.

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SAFETY, MONITORING AND INSPECTION STANDARDS

The need to monitor and modify existing railroad practices is underlined by the recent accidents in which tanker cars caught fire in Lac-Mégantic (older tanker cars) and Gogama (retrofitted older tanker cars). Older tanker cars that can catch fire will still be allowed until 2023, and it is estimated that there are 80,000 of these older tankers in use in North America. Even if new regulations are enacted, the sole manufacturer of better railcars in Dallas, TX will not be able to manufacture new cars at upgraded standards for several years. The danger posed by aging tanker cars, and the increased flammability and toxins present in Dilbit, make it vital for companies to comply with safety practice and operational procedures.

1. **Dilbit Classification Reviewed:** Rail cars carry a mixture of thick tar sands bitumen mixed with a natural gas condensate diluent to create a substance known as Dilbit. Dilbit, according to Alberta Innovates, has a very low flashpoint (-35 degrees Celsius) compared to conventional crude, making it highly flammable and potentially explosive during the first 72 hours after a spill.

Additionally, Dilbit sinks when spilled near waterways instead of floating like conventional crude, making cleanup difficult (Kalamazoo spill), and carries hazardous chemicals such as cancer-causing [benzene](#) and toxic heavy metals such as [arsenic](#). Therefore, Dilbit's classification should be upgraded accordingly by Transport Canada (Bennett, March 11, 2015).

2. **Training & Oversight:** It is imperative that all railroad operations personnel have the appropriate training and oversight. All levels of operations and training personnel must be subject to deterrent levels of fines for non-compliance with existing railroad regulations. Otherwise, railroad companies are simply able to absorb the costs of accidents in their ongoing cost structure.
 - **Review of safety training for rail personnel** is required to ensure that only suitably trained personnel operate equipment, and adequate supervision and management are provided. Even if not sufficient to ensure safety, it is necessary to provide proper training and refreshment courses.
 - **Monitoring of the crew compliance to enhanced safety procedures** is required. Enhanced inspection of actual operations can assess where potential problems might occur. Railway unions such as the Teamsters Union can apply pressure to the railroad companies to provide a safe work environment that will set the preconditions for compliance and ensure proper training.
3. **Safety requirements for train personnel are in need of review.** This is an area of dispute where rail companies such as CP claim that the problem is not a lack of rules, but in having employees follow them (Atkins, June 11, 2015). It is important, however, to understand how the company practices can lead to non-compliance. Among other safety procedures, there are requirements that the crew members receive adequate periods of rest and sleep but, if there are not enough crew members present, this procedure may be violated.
4. **Rolling Stock Safety and Monitoring needs review and stronger oversight.** The condition of the railroad rolling stock that travels near communities, waterways, aquifers and bridges, needs to be reviewed and given greater priority.

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The existing rolling stock requires rigorous safety standards and inspection as it is, susceptible to leakage and catching on fire in derailment accidents. Thus, it is important to have strict safety standards and oversight in place to ensure trains and tracks are in optimal condition to prevent accidents. According to the TSB reports, current visual inspection procedures in place have not been shown to reveal all of the problems. According to Atkins (February 17, 2015), there has been a cut in the budget for inspectors.

5. **Track Safety:** For adequate railroad track safety, a thorough review of the inspection schedule of railroad tracks is required, especially near communities, at stress points such as curves, and where tracks are near or cross bridges and waterways.
6. **Data Review:** Data from the existing review process and any reporting systems in place, needs to be analyzed by the TSB. Any repair required needs to be acted upon immediately and trains should be rerouted around sensitive areas (such as municipal drinking water sources) until adequate repairs have been made, especially if they carry such hazardous material as Dilbit. Additional safety measures such as providing berms on especially steep hills might also be considered in these areas.

CONCLUSION

An Environmental Risk Reduction Strategy for railroads needs to be developed and implemented to act as an action framework for reduction of risks to our watersheds and communities across Canada. An effective accident prevention approach would involve all levels of government, public and aboriginal stakeholders, and railroad companies. GSWA recommends that such oversight bodies as the TSB be linked with citizen groups so that data on railroad safety issues can be shared, and a collaborative policy developed with the aim of greater transparency and citizen participation.

REFERENCES:

- Atkins, E. (2015, February 17). Oil train derailments reignite debate over railway safety rules. *The Globe and Mail*.
- Atkins, E. (2015, March 4). Canadian Pacific wants to limit shipments of dangerous goods. *The Globe and Mail*. Retrieved from www.globeandmail.com.
- Atkins, E. (2015, June 15). CP Rail denies responsibility in Lac-Mégantic tragedy. *The Globe and Mail*. Retrieved from www.globeandmail.com.
- Bennett, M-J. (2015, March 11). Federal regulators need to recognize the danger in transporting Alberta crude oil. *Special to Financial Post*. Retrieved from <http://business.financialpost.com>
- Email communication from Brenda Land, Community Connect Coordinator, Canadian Pacific Rail Lines, November 19, 2015.