

TRACK B: DETECTING NONCOMPLIANCE

OFF THE RAILS: THE ENVIRONMENTAL ENFORCEMENT CHALLENGE OF CANADA'S RAILWAY INDUSTRY

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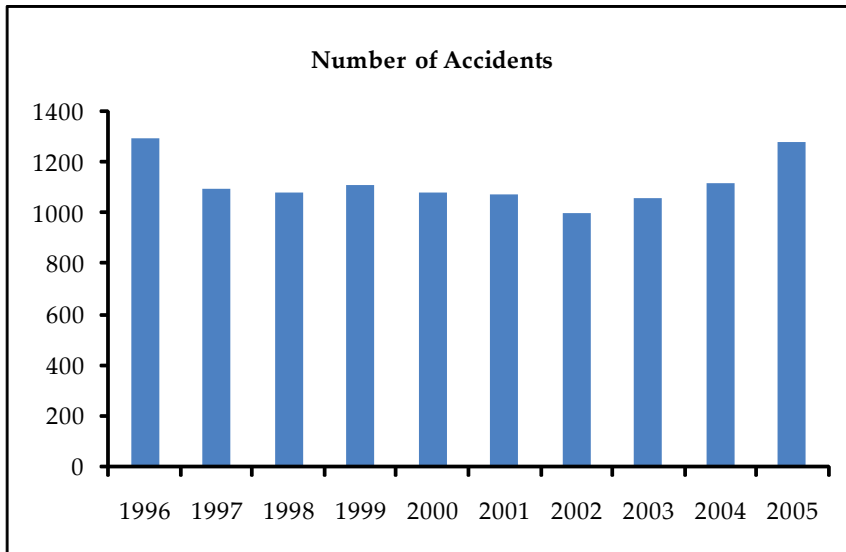
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SUMMARY

Consistent and effective enforcement of Canadian environmental laws related to rail transportation and dangerous spills is currently a major issue and will become even more pressing in the future given the enforcement challenges posed by projected increased rail traffic in dangerous materials. Key barriers to more effective and cooperative enforcement of overlapping laws regulating environmental and health risks associated with Canadian railways include: a jurisdictional morass around rail regulation; an emphasis on fast-tracking transboundary shipments of goods across provincial and international boundaries, including servicing the growing North American-Asia trade; existing challenges faced by inspection and enforcement officers in tracking and responding to transboundary movement of goods; a trend towards self-inspection and-reporting and voluntary compliance for all industry sectors, but particularly evident in the rail industry; and inconsistent enforcement policies/enforcement responses occurring across regions of Canada and also across the US/Canada borders.

1 THE ENVIRONMENTAL ENFORCEMENT CHALLENGE OF CANADA'S RAILWAY INDUSTRY

The Canadian rail industry poses significant challenges for local enforcement officials confronted with dramatic increases in derailments and spills damaging sensitive waters in recent years. In 2005, 1248 rail accidents were reported, a 10% increase from a 2004 total of 1138 and an 18% increase from the 2000-2004 average of 1055. A reported 17% of accidents in 2005 involved toxic or dangerous freight.¹

Figure 1: Rail Accidents in Canada, 1996-2005

Source: Transportation Safety Board of Canada

A 2006 investigative report by the Toronto Star, one of Canada's largest newspapers, examined a decade's worth of accident reports filed by the federal Transportation Safety Board and found that "Canadian freight trains are running off the rails in near record numbers and spilling toxic fluids at an alarming rate, but only a tiny fraction of the accidents are ever investigated."² That same year, Canadian National Railroad Company experienced a 36% increase in main-track derailments. These statistics, coupled with the investigation reports on two recent major train derailments indicate serious problems with the Canadian rail safety regulatory and enforcement regime. Absent action to address these deficiencies, environmental and health risks posed by this transboundary sector appear slated to increase.

Railroads were the driving force behind Canada's Confederation. Railways historically relied on coal driven engines that required water, resulting in the construction of railroad lines along rivers and lakes. Canada today has 73,047 kilometers of railway tracks across the country posing a significant potential environmental risk from derailments and spills.

Consistent and effective enforcement of Canadian rail transport and spill laws can be anticipated to face increasing challenges into the future given the many barriers and constraints including:

1. the jurisdictional morass around rail regulation including the jurisdictional split between the federally regulated railroad industry and the shared responsibility for environmental enforcement and emergency response;

2. the limited powers of environmental enforcers to address rail accidents;
3. strong policy support for fast-tracking transboundary shipments of goods across provincial and international boundaries, to service the growing North American and Asia-Pacific trade markets;³
4. already documented challenges faced by inspection and enforcement officers in tracking and responding to transboundary movement of goods;⁴
5. a growing trend towards self-inspection and-reporting and voluntary compliance for all industry sectors, particularly evident in the North American rail industry;⁵ and
6. inconsistent enforcement policies/enforcement responses occurring across regions of Canada and also across the US/Canada borders.

Taken together, these factors significantly diminish the ability of federal and provincial environmental enforcers to take effective action to prevent derailments and spills and to ensure timely emergency response action thus increasing the probability of continued environmental degradation from rail spills.

This paper outlines the enforcement challenges experienced by Canadian enforcement officials during two recent derailments and spills in two bordering provinces mere days apart. These incidents reveal not only wide discrepancies in enforcement responses across regions, but provide concrete evidence of the major challenges facing the regulators and enforcers by this growing North American transboundary industry.

1.1 Two Environmental Disaster Derailments, Two Responses

Despite the existence of a Canadian federal regulatory regime for rail safety and federal and provincial emergency and spill response laws, protocols and environmental compliance and enforcement policies, the failed response by industry and government alike to two separate Canadian National Railroad Company freight train derailments resulted in spills of hundreds of thousands of litres of toxic chemicals causing significant environmental damage. The failure to prevent such incidents or contain environmental damage has drawn attention to deep founded institutional problems with rail safety in Canada. The following two cases taken alone demonstrate significant variability in actual on-the-ground enforcement practices and cross- jurisdictional failures to effectively regulate and enforce this transboundary sector.

Lake Wabamun Spill, Alberta

On August 3, 2005, 43 cars of a Canadian National Railroad Company freight train derailed and spilled 730,000 litres of Bunker C oil and 88,000 litres of pole treating oil into Lake Wabamun, a major recreational area near the province of Alberta's capital city, Edmonton. The lake also provides cooling water for the provinces major electricity generating plants. About a third of the Bunker C oil has not been recovered from the lake. More than 530 migratory birds were oiled, including

loons, geese, and osprey and nesting ground for the Western Grebe, a provincially listed endangered species.

Health advisories issued against swimming, boating or use of the lake water remained in place for more than a year. The Alberta Government issued a number of Environmental Protection Orders⁶ directing spill containment, remediation and monitoring actions. Provincial authorities have filed one charge against Canadian National Railroad Company under the provincial *Environmental Protection and Enhancement Act* for failure to take all reasonable measures to remedy and confine a spill. The maximum penalty on conviction is \$500,000. No charges have been brought by federal agencies despite clear evidence of violations under federal laws including the *Migratory Birds Convention Act* and the federal *Fisheries Act*. The limitation date for charging for summary conviction offences expired August 2007.

Cheakamus River Spill, British Columbia

On August 5 2005, a Canadian National Railroad Company freight train derailed about 30 kilometers north of Squamish, British Columbia, dumping 41,000 liters of sodium hydroxide, commonly known as caustic soda or lye into the Cheakamus River Canyon, instantly killing more than 500,000 adult and young salmon, steelhead, trout, lamprey and other species. Prior to the spill a fish recovery program had just succeeded in restoring a threatened salmon population. Two days before the two-year limitation period expired in August 2007, two charges were filed by Justice Canada against Canadian National Railroad Company under the federal *Fisheries Act* and three charges under the B.C. *Environment Management Act*. An expensive restoration effort is still underway by the Canadian National Railroad Company. The Company could pay up to \$5 million in fines if convicted. In November 2007, Transport Canada finally ordered Canadian National Railroad Company to reduce train lengths along this mountainous corridor.

Aboriginal and environmental groups say it will take millions to restore fish wiped out by the spill. Canadian National Railroad Company has reportedly committed about \$3.5 million toward clean-up efforts for this spill to date. Less than two weeks after the Cheakamus River derailment, Canadian National Railroad Company donated \$250,000 to the Pacific Salmon Foundation for a local watershed salmon-recovery program.

2 CONSTRAINTS TO EFFECTIVE ENVIRONMENTAL ENFORCEMENT FOR RAILWAYS IN CANADA

2.1 Jurisdictional Morass

In Canada, jurisdiction over rail traffic, accident response and clean up is spread over numerous agencies within the federal and provincial governments. While the construction and safe operation of railroads is an area of federal responsibility, federal and provincial governments share jurisdiction over transportation of dangerous goods and emergency response and clean up. Regardless of legal

powers, emergency response is viewed by the governments as primarily a provincial responsibility.⁷

The fact that provincial environmental enforcement agencies can't even require the federally regulated railroad companies to have an emergency response plan in place means that the onus falls to the federal government to ensure that consistent strict requirements are imposed, regularly updated and recalcitrant operators punished.⁸ The dilemma lies partly in the balance of power: Transport Canada regulates the industry and the Transportation Safety Board investigates accidents, while the relatively powerless provincial (and federal) environment agencies mandate is limited to responding to spills and laying charges for environmental damage. The latter is made more challenging by the decision to preclude use of Transportation Safety Board reports as evidence.

The credibility of Transportation Safety Board reports have been challenged due to their policy of circulating their draft investigation reports to the rail companies before publicly releasing final reports. As rail condition monitoring is done for the most part by the railroads, investigators rely on these self monitoring reports.

While they provide far greater penalties, federal laws, including rail laws and environmental protection laws, are rarely used as a basis for prosecution. With a few exceptions in some regions, the federal government takes a back seat to the provinces in bringing charges. The Toronto Star found that Transport Canada "is either unable or unwilling to prosecute the railways, with five convictions from seven prosecutions since 1999 under the Railway Safety Act, a span that includes 7,658 accidents. The penalties have totaled \$168,000 in fines, according to Transport Canada."⁹

2.2 Fast Tracking Transboundary Transport of Goods

Significantly increased rail traffic is projected across Canada and the United States east to west to serve the burgeoning North American trade with Asia. The Pacific Gateway Strategy calls for strengthened support to trade in the Asia-Pacific market.¹⁰ More rail service is planned to service the expanding west coast ports, including the expanded port in Prince Rupert, BC. The Canadian National Railroad Company also touts rail transport routes between US the eastern seaboard and Asia via Alberta and British Columbia as more cost efficient options. Another prominent factor is the planned increase in rail traffic which will serve the massive tar sands and bitumen upgrader developments in northern Alberta. Two major rail yards and expanded rail lines are in the works.

2.3 Embracing Self-Reporting and Voluntary Action

Increased reliance on industry self-reporting and voluntary compliance is a growing trend across Canadian enforcement agencies, often with detrimental results for the environment.¹¹ Consistent with this trend, the federal *Railway*

*Safety Act*¹² was amended in 1999 giving railways the power to implement Safety Management Systems to integrate safety into day-to-day operations, a move condemned by rail workers and others concerned about this apparent conflict of interest whereby the railways themselves would decide if they were in compliance.

Under this system, railways prepare safety reports which are audited by Transport Canada. Fewer inspections and spot checks are performed. The Toronto Star's investigation found that since this new safety protocol was introduced in 2001, Transport Canada has performed only one audit each of Canada's major rail companies Canadian National Railroad Company and Canadian Pacific Railway. The Canada Safety Council has blamed deregulation for the increase in spills, identifying the Safety Management Systems policy change as an end to the oversight role of Transport Canada.¹³ Labour organizations have also been vocal in their opposition to this policy.¹⁴ Environmental organizations also decry Canadian National Railroad Company's 'blasé' attitude towards spill prevention and call for stricter enforcement.¹⁵ Consistent with this philosophy, and to the chagrin of affected public, Canadian National Railroad Company was made the designated lead and point of contact for the Wabamun spill.

2.4 Inconsistent and Half-hearted Enforcement

Possibly the most important barrier to effective enforcement of rail safety and spill laws is lack of consistent enforcement policies across provincial and international borders.

The compliance and enforcement policy for the federal *Fisheries Act*, arguably Canada's strongest environmental law, "sets out principles of fair, predictable, and consistent enforcement that govern application of the law, and responses by enforcement personnel to alleged violations. This Policy also tells everyone who shares a responsibility for protection of fish and fish habitat—including governments, industry, organized labour and individuals—what is expected of them."¹⁶ Yet as the Alberta and BC derailment cases demonstrate, enforcement responses are inconsistent in the two adjacent western regions.

While federal officers in B.C. have a history of bringing charges, this response contrasts sharply with neighbouring-province Alberta where Environment Canada has limited its role to providing scientific and technical support to first responders. In the mid 1990s the department cut its emergency response budget by 40% (www.ec.gc.ca/ee-ue/respond/response_e.asp). The Transportation Safety Board investigation report on the Wabamun spill was not issued until two months past the limitation date for summary charges. While the Transportation Safety Board reports are not admissible in court proceedings, the rail inspection expertise is housed in the Transportation Safety Board and their findings are therefore critical to environmental enforcement authorities.

Harmonization talks surrounding import and exports have tended to focus on ports, rather than rail transport. A North American Commission on Environmental Cooperation study on environmentally sound management of hazardous waste which sought to improve the tracking of the imports and exports of hazardous waste between the NAFTA countries, failed to address the cross border rail industry.¹⁷

3 ACTION NEEDED TO ADDRESS THE CANADIAN RAILWAY ENFORCEMENT CHALLENGE

Prompted by repeated calls for public review of what critics dubbed “the ticking time bomb” of rail safety, two separate federal bodies and one provincial body were mandated to study the issue: an expert panel appointed by the Minister of Transport is due to report on its review of the *Railway Safety Act* in Feb 2008,¹⁸ and a Parliamentary Committee is also poised to issue a report following its study of rail safety.¹⁹

Post the disastrous Wabamun spill, the Government of Alberta convened a special Commission tasked to review the province’s ability to respond to environmental incidents.²⁰ The Commission identified significant shortcomings in the government capacity, including the need to take decisive steps to improve jurisdictional collaboration, coordination and cooperation, in particular as risks to health and the environment have to be minimized as an ever-increasing volume and diversity of goods are transported across the province. The Commission identified the need for a stronger role in the Alberta government to provide oversight and response capacity. Most profoundly it advised that “government cannot privatize public safety.” Yet despite widespread recognition of the need to clarify and coordinate overlapping jurisdiction and responsibility for railroads and emergency response, even these reviews proceeded independently, not as joint initiatives.

The Transportation Safety Board ²¹ investigation reports, released two years after the Wabamun and Squamish spills, identify similar serious and continuing operating and regulatory and enforcement deficiencies: over reliance on outdated and ineffective inspection technologies; lack of funds to explore improved detection equipment; a discrepancy in standards for exiting and maintenance rails increasing the risk of defects and derailments; inadequate labeling and reporting of potentially hazardous loads; and, inadequate emergency response planning, training and supervision. Many of the same problems were reported by the Transportation Safety Board twelve years earlier.

It is also noteworthy that the derailment occurred despite the fact that the Canadian National Railroad Company conducted inspections for the Wabamun area track were five times more frequent than the *Rail Track Safety Rules* require—reportedly only one inspection per year for internal defects. None of the inspections conducted by Canadian National Railroad Company in the year of the derailment identified any problem with the track. The Transportation Safety Board

recommends that due to known limitations of monitoring technology, reduced accidents can best be achieved through stricter requirements for replacement rails. No rule changes have yet been made and the train traffic continues past Lake Wabamun and the Cheakamus River.

As early as 2002, Transport Canada issued a Notice and Order to Canadian National Railroad Company rail citing recurring reports of unsafe practices-inaccurate car counts, car sequences, train lengths and tonnages. Commitment by Transport Canada to stronger enforcement measures could prevent derailments and reduce the need for costly interventions by emergency response and environmental enforcement officers.

In summary, post incident analyses of these two incidents reveal significant challenges faced by environmental enforcers in effectively responding to the growing incidence of environmental violations associated with derailments. Equal commitment by governments on both sides of the border to stricter enforcement would significantly improve compliance with transport laws and reduce response costs of derailments and spills. The upcoming reports from Transport Canada's independent expert review panel and the Parliamentary Transport Committee again have the opportunity to recommend changes to railway enforcement procedures, and more importantly to require a response on when and how enhanced enforcement procedures will be implemented.

4 REFERENCES

¹ Statistics from accident reports filed by the federal Transportation Safety Board, obtained through access to information requests by the Toronto Star, "Freight Trains accidents soar", Toronto Star March 06, 2006.

² "Only 1.3 per cent of all accidents are investigated by the Transportation Safety Board, with the rest filed under "data collection." David Cooper, "Freight train accidents soar " Toronto Star ,March 06, 2006 , <http://www.thestar.com/printArticle/202496>.

³ The recent purchase by Bill Gates of a major interest in Canadian National Railroad Company is an indication of the growing value of the sector.

⁴ Tracking and Enforcement of Transborder Hazardous Waste Shipments in North America; A Needs Assessment, Report of the law and Enforcement Cooperation program of the Commission for Environmental Cooperation (CEC, 1999, Montreal).

⁵ Supra n. iv.

⁶ EPO-2005/12-CR.

⁷ The Harmonization Accord of the Canadian Council of Environment Ministers provides that the "best situated" authority is responsible for inspection and enforcement. In practice the decision on who responds varies considerably across the regions.

⁸ A significant reason for the extent of damage to Lake Wabamun is the complete lack of preparedness to contain Bunker C oil either on the part of the company and the governments and no system in place to rescue wildlife.

⁹ David Cooper, "Freight train accidents soar " Toronto Star, March 6, 2006.

¹⁰ Transport Canada Media Advisory, November 4, 2005.

¹¹ Mark S Winfield (2007). Governance and the Environment in Canada From Regulatory Renaissance to "Smart Regulation". *Journal of Environmental Law and Practice*, 17(2), 69-83 and Jerry V DeMarco, Toby Vigod. (2007). Smarter Regulation: The Case for Enforcement and Transparency. *Journal of Environmental Law and Practice*, 17(2), 85-113. Conversely, strong regulations and effective enforcement have been shown to reduce pollution: Peter K. Krahn, "Enforcement versus Voluntary Compliance: An Examination of the Strategic Enforcement Initiatives Implemented by the Pacific and Yukon Regional Office of Environment Canada 1983 to 1988" In Fifth International Conference on Environmental Compliance and Enforcement proceedings, Volume 1 (Monterey, US, US, 1998).

¹² S.C. 1985, c. 32 (4th Supp.)

¹³ Letter from Safety Council to the Railway Safety Review Panel, May 28, 2007: "..., The Safety Management System (Safety Management Systems) introduced to the railways eight years ago entailed a reduction in regulatory oversight. The years since Safety Management Systems was put into place have seen an alarming increase in serious rail incidents involving fatalities, injuries, damage to the environment and economic losses...." <http://www.safety-council.org/news/media/letters/2007/May28-railway.html>.

¹⁴ For example, the submission from the Teamsters Canada Rail Conference, Provincial Legislative Board of Ontario to the Railway Safety Act Review Panel, August 2007, states " It is felt that the majority of railway employees in Ontario as well as management in some cases, are at a loss as to how safety management systems work." http://www.tc.gc.ca/tcss/RSA_Review-Examen_LSF/Submissions-Soumissions/TCRC-ON.pdf

¹⁵ "Federal Environment Minister Stéphane Dion must state clearly that Canadian National Railroad Company – a federally regulated corporation – will be prosecuted to the full extent of the law. Perhaps then Canadian National Railroad Company will not be so blasé about its responsibilities to clean up these water bodies and prevent future spills." Sierra Club of Canada News Release, Tuesday, August 9, 2005.

¹⁶ Compliance and Enforcement Policy for the Habitat Protection and Pollution Provisions of the Federal Fisheries Act <http://www.ec.gc.ca/ele-ale/default.asp?lang=En&n=D6765D33-1>.

¹⁷ CEC *Crossing the Border: Opportunities to Improve Tracking of Transboundary Hazardous Waste Shipments in North America* OCTOBER 2005 The objective of this report is to describe the current hazardous waste information tracking procedures and systems used by each of the North American Free Trade Agreement (NAFTA) countries for transboundary hazardous waste shipments and to recommend ways to improve cooperation within North America on the trans- boundary tracking of these wastes.

¹⁸ In December 2006, the Minister of Transport announced the Railway Safety Act Review. undertaken by an independent four-member panel that does not include any rail union representative: http://www.tc.gc.ca/tcss/RSA_Review-Examen_LSF/toc_e.htm.

¹⁹ The Parliamentary Standing Committee on Transport, Infrastructure and Communities (TRAN) began its study of Rail safety in Canada in October 2006, two months before the Minister of Transport's panel was appointed. There has been little coordination of these two parallel investigations. The chair of the TRAN Committee expressed his view that: "I would be hopeful that before the minister takes final action on the panel's recommendations, he would come before this committee so that we can complete our report and make any comments that we wish to make." http://cmte.parl.gc.ca/cmte/CommitteeHome.aspx?Lang=1&PARLES=392&JNT=0&SELID=e22_1&COM=13202&STAC=2238700.

²⁰ *A review of Alberta's Environmental and Emergency Response Capacity, Learning the Lessons and Building Change, Report of the Alberta Environmental Protection Commission*, (Alberta Environment, 2006, Edmonton) www.environment.gov.ab.ca

²¹ Transportation Safety Board of Canada Railway Investigation Report RO5E0059 Derailment Canadian National Freight Train M303351-03, Mile 49.4 Edson Subdivision, Wabamun, Alberta 03 August 2005, <http://www.TransportationSafetyBoard.gc.ca/en/reports/rail/2005/r05e0059/r05e0059.index.asp>; Transportation Safety Board of Canada Railway Investigation Report Number R05V014105 August 2005 — Derailment, Canadian National Freight Train No. A47151-05, Mile 56.6, Squamish Subdivision, Garibaldi, British Columbia, <http://www.TransportationSafetyBoard.gc.ca/en/reports/rail/2005/r05v0141/r05v0141.asp>.

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