



**Crude-by-Rail:
*Regulatory Developments in Canada***

Presentation to the



November 4, 2014

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Was it all because of Lac-Mégantic?

- Pipeline capacity shortage was pushing crude to rail
- Regulatory environment was in throes of change
- Rail carriers were pushing back on cc obligation to carry Dangerous Goods (HazMat)
- DG (esp. TIH/PIH) often captive to rail
 - other modes untenable for public and infeasible for shippers

Context

Total Canadian production crude oil

- 2013 = 3,478 mbd
- 2014 = 3,763 mbd (H1/14)

Total Exports to USA (Q1/14)

- 2,692 mbd or 71% of 2014 (H1/14) production

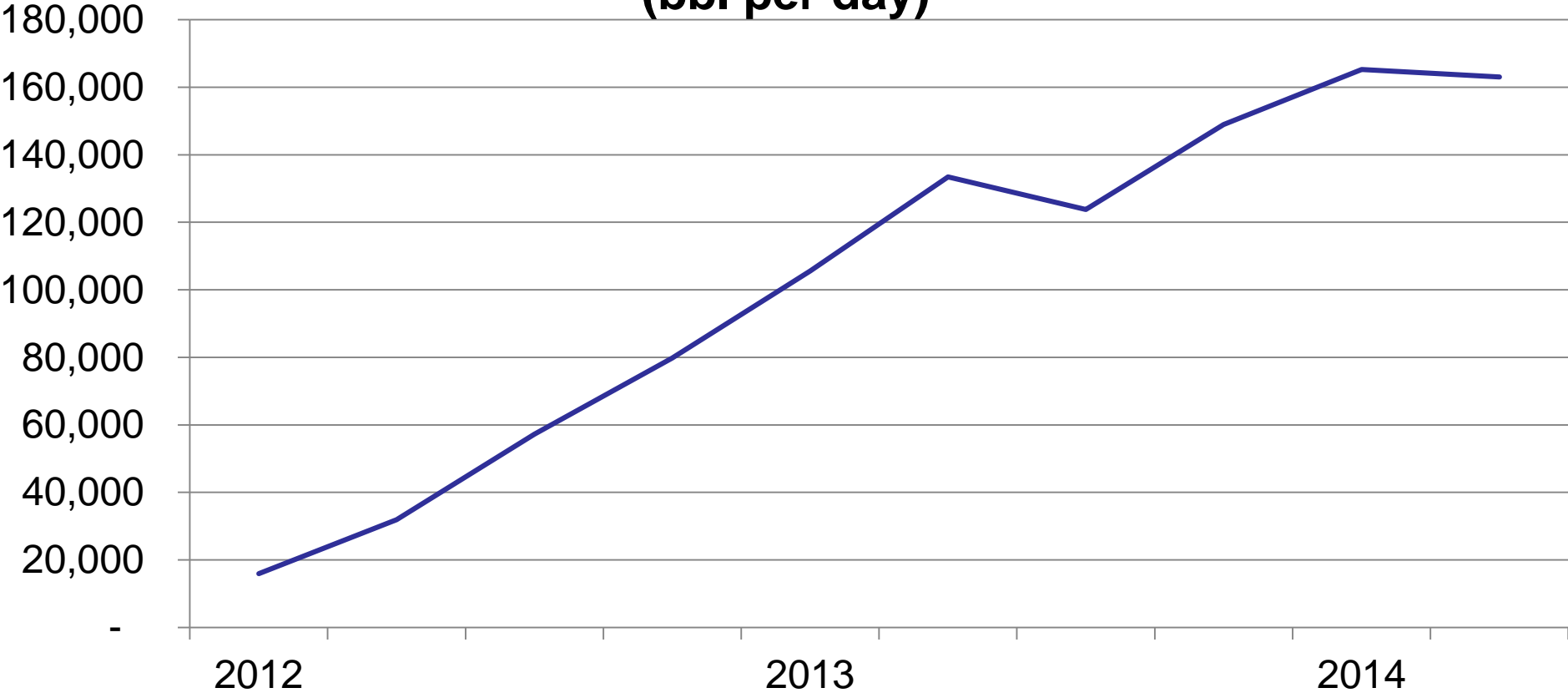
Canadian rail exports to USA in Q1/14

- 0,165 mbd or 6.13% of exports

But, rail volumes on the rise...

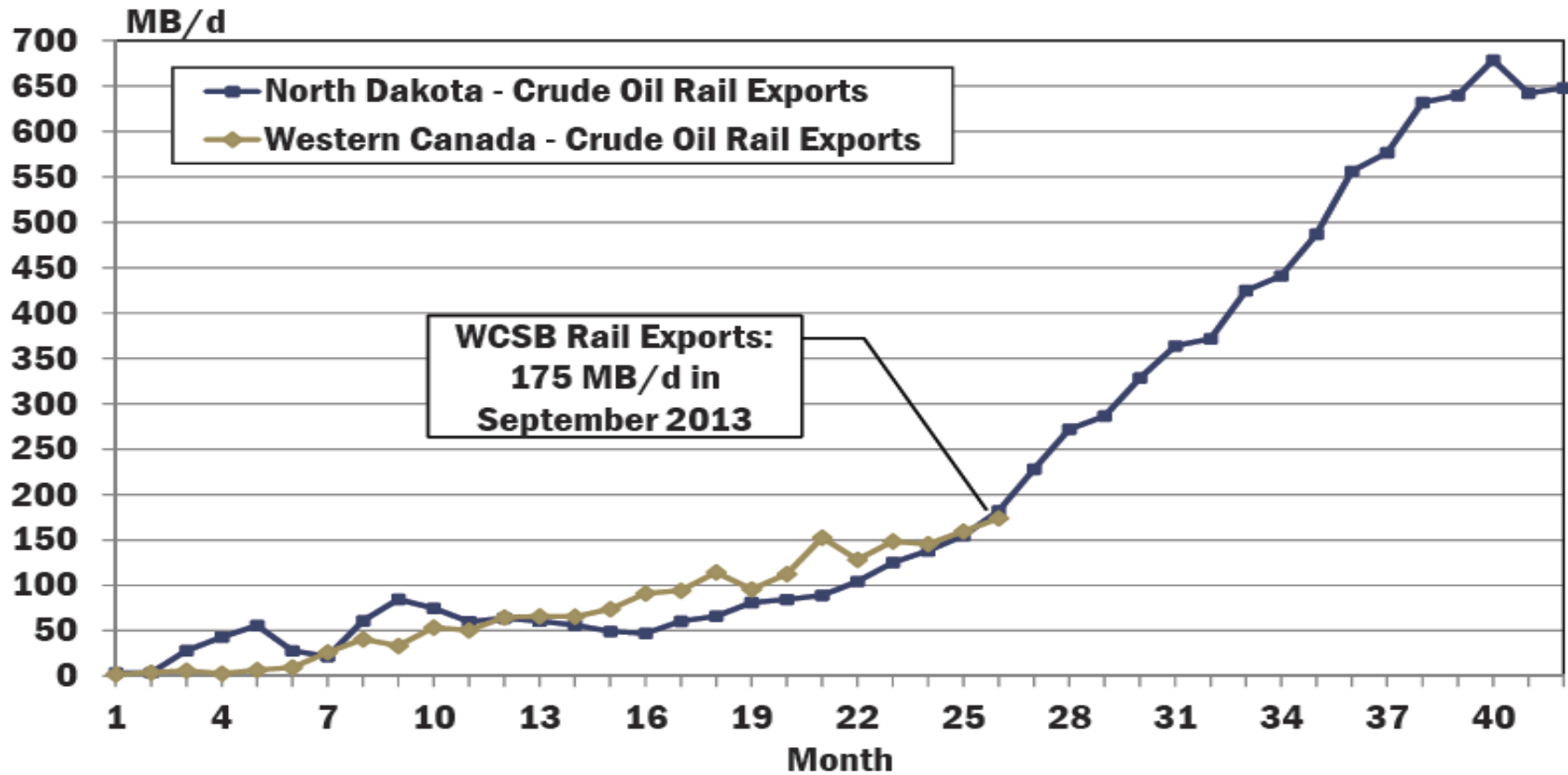
Canadian Crude Oil Exports by Rail

Volume
(bbl per day)



WCS v Bakken Rail Exports

Western Canada vs North Dakota Crude Oil Rail Exports



Sources: Stats Canada, North Dakota Pipeline Authority, North Dakota Industrial Commission, and Peters & Co. Limited estimates. Month 1 for North Dakota data is January 2010, and for Western Canadian data is August 2011.

Rail Regulatory Environment: B-M

1. CP and UP tariffs shift TIH/PIH risk

- Carrier and Customer each liable for own negligence and willful misconduct
- Customer must indemnify, defend and hold Carrier harmless for all other liabilities
 - third parties
 - FM-type events
- Contested in Canada and USA
- Concern over application to other commodities

2. TC satisfies TSB on safety recommendations 31 Mar 2013

City of Lac-Mégantic: B-M



Lac-Mégantic Inferno – July 6, 2013



Downtown Lac-Mégantic: P-M



Crude by Rail Accidents

Other notable “fireball” rail incidents:

- Wadena, Saskatchewan – Oct 7, 2014
- Lynchburg, Virginia – Apr 30, 2014
- Plaster Rock, New Brunswick – Jan 8, 2014
- Casselton, North Dakota – Dec 30, 2013
- Aliceville, Alabama – Nov 8, 2013

TSB (Canada):

- 2013 = 12 main-track derailments involving DG
- 2012 = 6
- 5-year average = 15
- Four of 12 (2013) resulted in release (all crude)

From Mégantic to Ottawa

“Our Government has already amended the Railway Safety Act to further enhance the safety of rail transportation.

As efforts to clean up and rebuild Lac-Mégantic demonstrate, railway companies must be able to bear the cost of their actions. Our Government will require shippers and railways to carry additional insurance so they are held accountable.

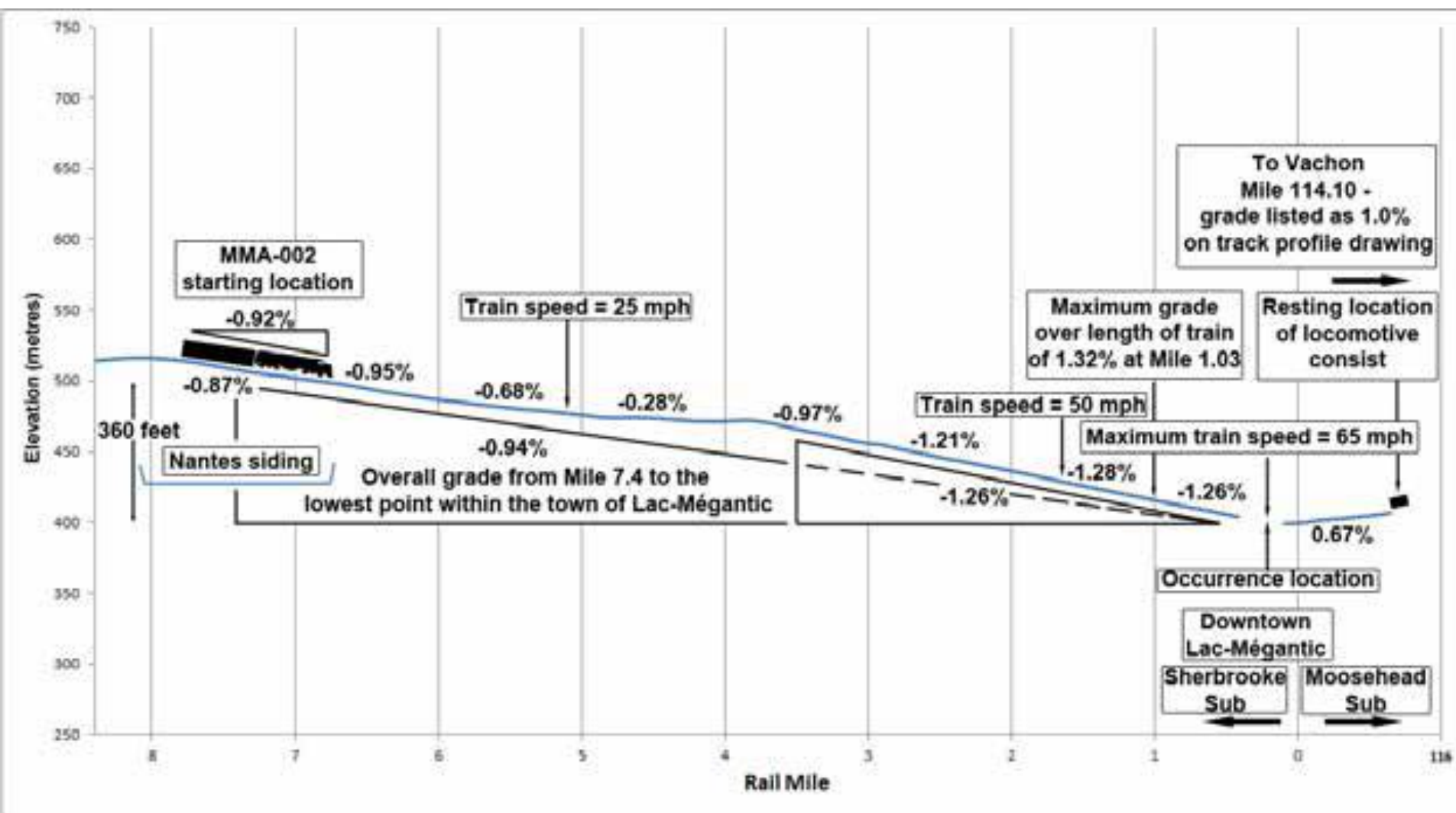
And we will take targeted action to increase the safety of the transportation of dangerous goods.”

Speech from the Throne, Oct 16, 2013

Locomotive Black Box – significant events

Time	mph	Event
05 July 2013 22:49:37	0	MMA-002 was stopped using a 13-psi automatic brake application; the independent brakes were fully applied
23:03:48	0	Automatic brakes released; independent brakes remain fully applied
23:58:42	0	Lead locomotive MMA 5017 shut down (following fire)
00:13:55		Independent brake cylinder pressure begins to decrease
00:58:21	1	MMA-002 begins to run away
01:15:30	65	Derailment begins

Grades/elevation: Nantes to Mégantic



Insolvency of MMA

US bankruptcy

Canadian CCAA protection

Value: how to think about a 587-mile railway interrupted by the biggest rail disaster since the 19th century

Proceedings Related to Lac-Mégantic

Action	Claims
<u>Canada</u>	
CCCA – Québec Superior Court (Sherbrooke)	Insolvency of MMAC
Class action – Québec Superior Court (Sherbrooke)	Wrongful death, property damage, emotional distress
SQ investigation – Criminal & Penal Chamber (Lac-Mégantic)	Criminal Code offences (criminal negligence) – MMA/employees
Civil proceedings – Québec Court of Appeal (Montréal)	Passenger train services contract
Regulatory proceedings – CTA (Gatineau)	MMA/MMAC’s COF suspended, CMQ granted a COF
Accident Review – TSB (Ottawa)	Derailment causation and recommendations
Inquest – Coroner’s Bureau (Québec)	Cause of death findings and recommendations
<u>United States</u>	
Chapter 11 proceedings (Bangor)	Insolvency of MMA
Civil lawsuits in Illinois/Maine - multiple	Wrongful death, emotional distress

Canadian Claims v MMA

Montreal Maine & Atlantic Canada Co. &

Montreal, Maine and Atlantic Railway Ltd.

Summary of Claims Register

(in millions)

Type of Claim	Annex	Filed in CCAA		Filed in Chapter 11 ¹		Adjustments ²		Total Combined	
		# claims	Total (CAD)	# claims	Total (USD)	# claims	Total (CAD)	# claims	Total (CAD) ³
Wrongful Death Victims ⁴	1	442	\$ 226.9	242	\$ 1,210.0	(292)	\$ (87.2)	392	\$ 1,391.8
Bodily Injury	2	19	3.3	29	11.5	-	-	48	15.2
Economic, Material or Other Damages - Personal ⁵	3A	4,508	882.1	55	47.5	(564)	(196.7)	3,999	734.6
Economic, Material or Other Damages - Business ⁵	3B	195	38.3	-	-	-	-	195	38.3
Subrogated Insurers	4	8	33.7	-	-	-	-	8	33.7
Government or Municipality	5	4	708.5	-	-	-	-	4	708.5
Contribution or Indemnity	6	37	unliquidated	47	unliquidated	-	-	84	unliquidated
Claims other than Derailment Claims	7	41	39.0	118	39.4	(14)	(10.2)	145	69.5
		5,254	\$ 1,932	491	\$ 1,308	(870)	\$ (294.1)	4,875	\$ 2,992
Less: Adjustment for claims with more than one annex		(357)	NA					(357)	NA
Preliminary Total		4,897	\$ 1,932	491	\$ 1,308	(870)	\$ (294.1)	4,518	\$ 2,992

Sale and Purchase of MMA Railway

- Public and government relations
- Formation of Central Maine & Québec Railway
- Regulatory Review
 - Environmental
 - Insurance Adequacy and Fitness Test
 - Safety and Operational

Key TSB Findings – Direct Causes

13.5 months later...

- Brakes
 - Hand brakes
 - Air brakes
 - Locomotive fire
- Slope and speed

Key TSB Findings – Indirect Causes

- Carrier faults:
 - ineffective training, oversight, risk management
 - weak safety culture
- Transport Canada faults:
 - inadequate regulatory oversight and follow-up
 - SMS flaws
- Shipper fault:
 - labeling

TSB Recommendations

- Enhanced standards for Class 111 tank cars
- Improved operating criteria and route planning/analysis for DG trains
- ERAPs for large volumes of liquid hydrocarbons
- Add'l physical defences to prevent runaway equipment
- TC increase its depth and frequency of SMS audits

New Tank Car Requirements

TSB Recommendation #1 (Jan. 2014)

- TC should require all Class 111 tank cars used to transport flammable liquids meet enhanced protection standards that significantly reduce risk

New Tank Car Requirements (cont'd)

TC response:

- prohibit carriage of crude in highest-risk group of Class 111 tank cars
- three year phase out or retrofit of all pre-CPC-1232/TP 14877 tank cars used for crude
- proposed revised tank car standards specifically designed for flammable liquids (including crude oil)

Route Planning/Risk Assessment

TSB Recommendation #2 (Jan. 2014)

- TC should
 - set stringent criteria for operation of DG trains, and
 - require railway companies to conduct route planning, analysis and periodic risk assessments

Route Planning/Risk Assessment (cont'd)

TC response

- issued temporary emergency directive (expired Oct 23/14) for DG trains requiring minimum critical operating practices (speed restrictions, risk assessment of key routes*)
- railways that transport DG required to formulate new rules and submit for approval by October 2014

Expanded ERAP Requirements

TSB Recommendation #3:

- ERAPS for transportation of large volumes of liquid hydrocarbons

TC Response (Jan/14, PD No. 33):

- shippers/importers to have an approved ERAP for railcars containing high-risk flammable liquids (crude oil, ethanol)

Railway Operating Rule Changes

- TC Emergency Directive (Jul 23/13): Two operators required for DG trains*

TSB Recommendation #4 (Aug. 2014)

- TC should require use of additional physical defences to prevent runaway equipment
 - TSB concerns with revised CROR 112 **
 - Rule 112 does not prohibit leaving DG trains unattended on main track

TC response (Oct. 29/14)

- standardized requirements for hand brake application

Deficiencies in TC's SMS Processes

- SMS: self-regulation^{Lite}?

TSB Recommendation #5 (Aug. 2014)

- TC conduct SMS audits “in sufficient depth and frequency to confirm that required processes are effective and corrective actions are implemented”
 - TSB report acknowledges new SMS Regs and TC intention to improve processes

Deficiencies in TC's SMS Processes (cont'd)

TC response (Oct. 29/14)

- TC will
 - increase oversight by recruiting additional staff to conduct more frequent audits
 - revise its audit and follow-up processes
 - impose AMPs for non-compliance

Crude Oil Testing

- TDG Regs for crude oil require
 - detailed proof of classification
 - record of classification method
 - made available to TC on request
- Consignors required to certify compliance with TDG Regs on shipping documents
 - intended to make contact person more readily identifiable and accessible
 - effective July 15, 2015

ROC Regulations

- TC has proposed new Railway Operating Certificate Regulations
 - require a ROC issued by TC
 - applicable to local railway companies
 - not yet in force

DG Information to Municipalities

- TC now requires railways to provide certain DG traffic information to municipalities
 - Retrospective
 - Railways must notify municipalities of significant changes

Further TC Initiatives

- Further research on crude oil properties, behaviour and hazards (announced Oct. 29/14)
 - recruitment of experts
 - targeted inspections
- Certain railways, primarily shortlines, required to submit (TC Order - Oct. 29/14)
 - employee training plans
 - rules testing processes
 - other documentation

TC Third Party Liability Regime

TC proposal

- Strict railway liability up to threshold
 - Threshold depends on volumes of crude oil/TIH
 - Max. threshold = \$1 billion
- Railway insurance reduced to threshold
- All liabilities above threshold: shipper fund
 - Financed by levy on crude oil shippers*
 - Currently no plan to account for distance, railcar type, type of DG, volume/car

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Questions?

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