



**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

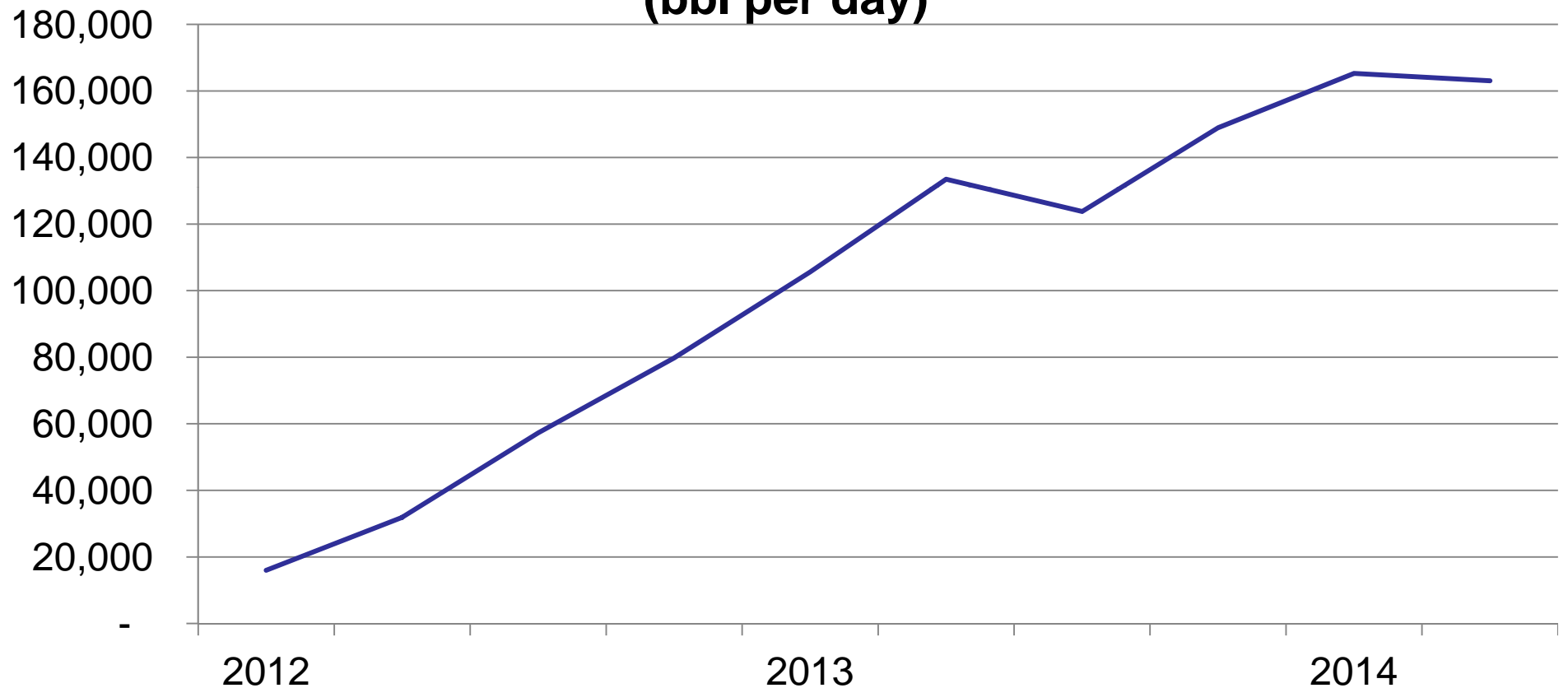
Canadian rail exports to USA in Q1/14

- 0,165 mbd or 6.13% of exports

***But, rail volumes on the rise...***

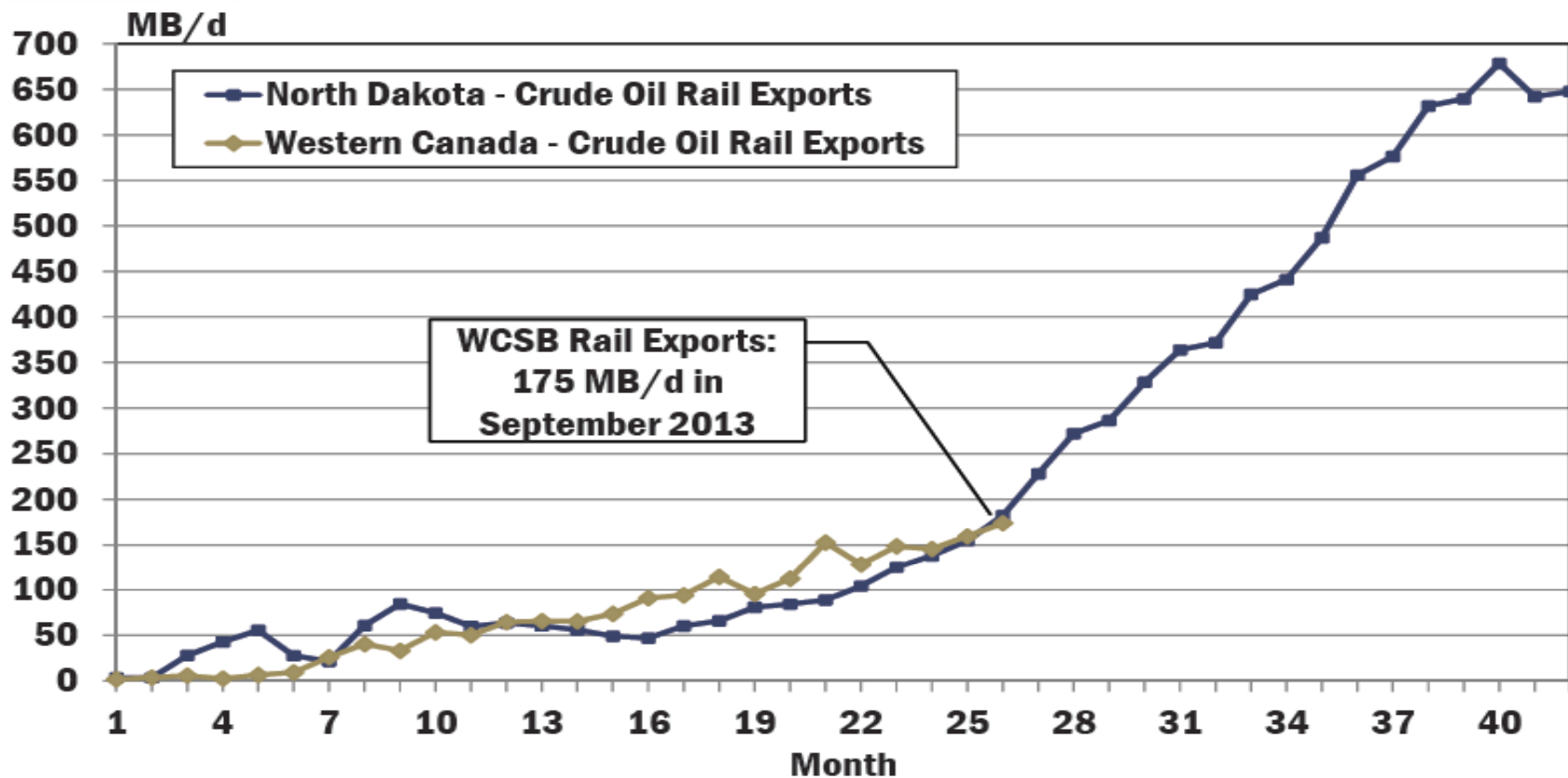
# Canadian Crude Oil Exports by Rail

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. Review of SMS Regulations – July 5, 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.*

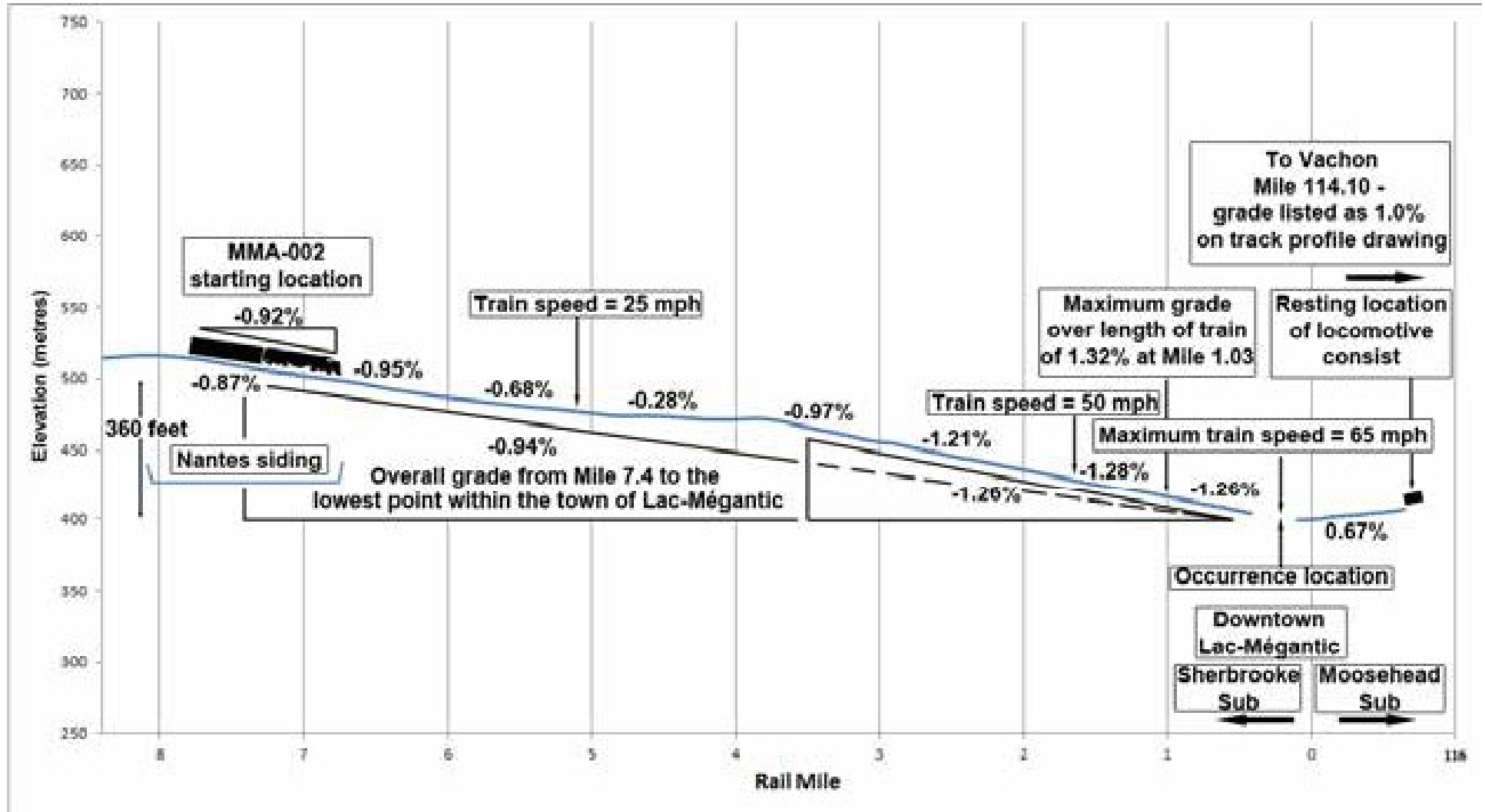
*And we will take targeted action to increase the safety of the transportation of dangerous goods.”*

**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 19<sup>th</sup> 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 <sup>1</sup>		Adjustments <sup>2</sup>		Total Combined	
		# claims	Total (CAD)	# claims	Total (USD)	# claims	Total (CAD)	# claims	Total (CAD) <sup>3</sup>
Wrongful Death Victims <sup>4</sup>	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 <sup>5</sup>	3A	4,508	882.1	55	47.5	(564)	(196.7)	3,999	734.6
Economic, Material or Other Damages - Business <sup>5</sup>	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		<b>4,897</b>	<b>\$ 1,932</b>	<b>491</b>	<b>\$ 1,308</b>	<b>(870)</b>	<b>\$ (294.1)</b>	<b>4,518</b>	<b>\$ 2,992</b>



# 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<sup>Lite</sup>?

*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

# mcmillan

Questions?

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