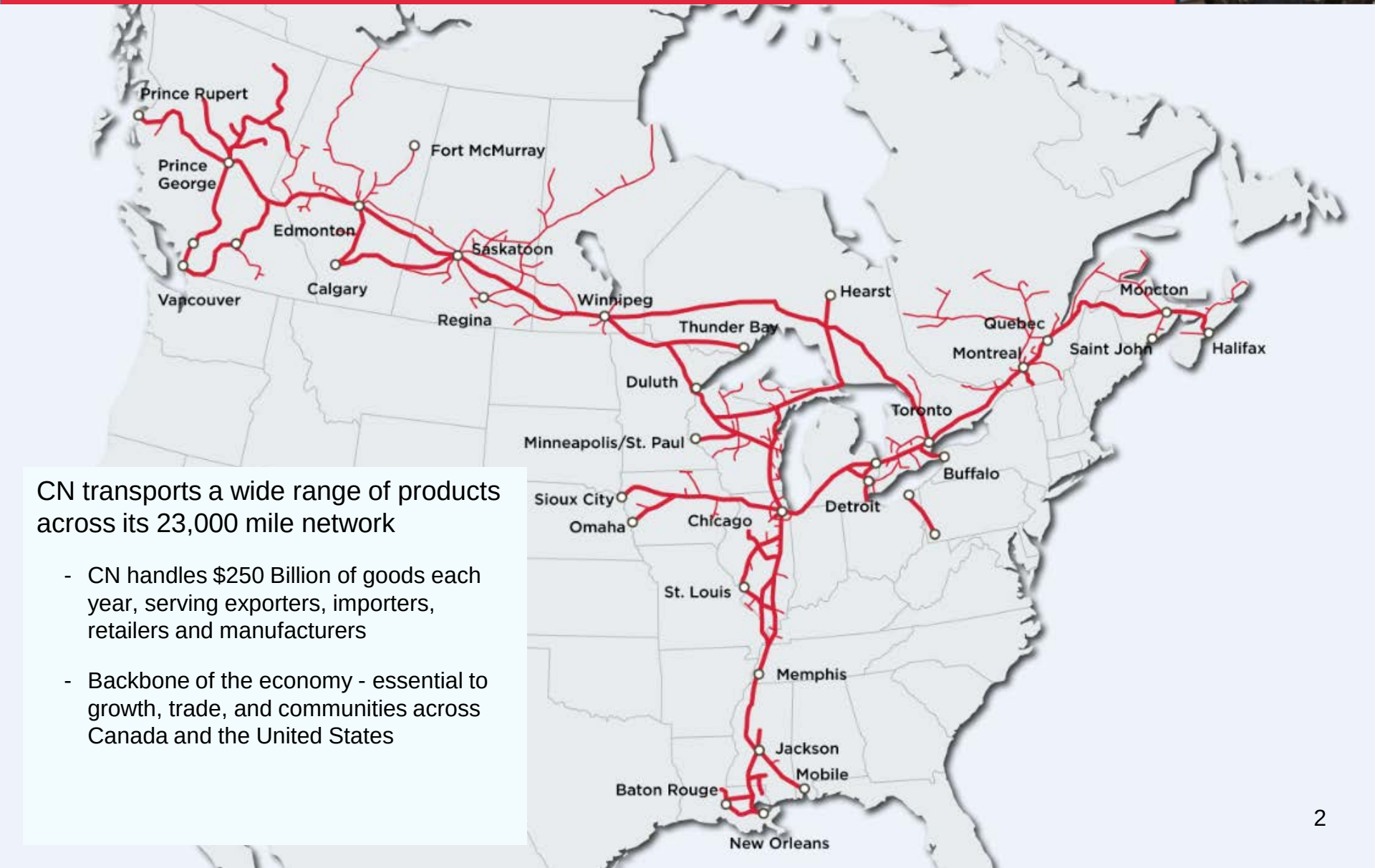
Delivering Safely and Responsibly

Sarnia- June 18th 2015

CN Overview



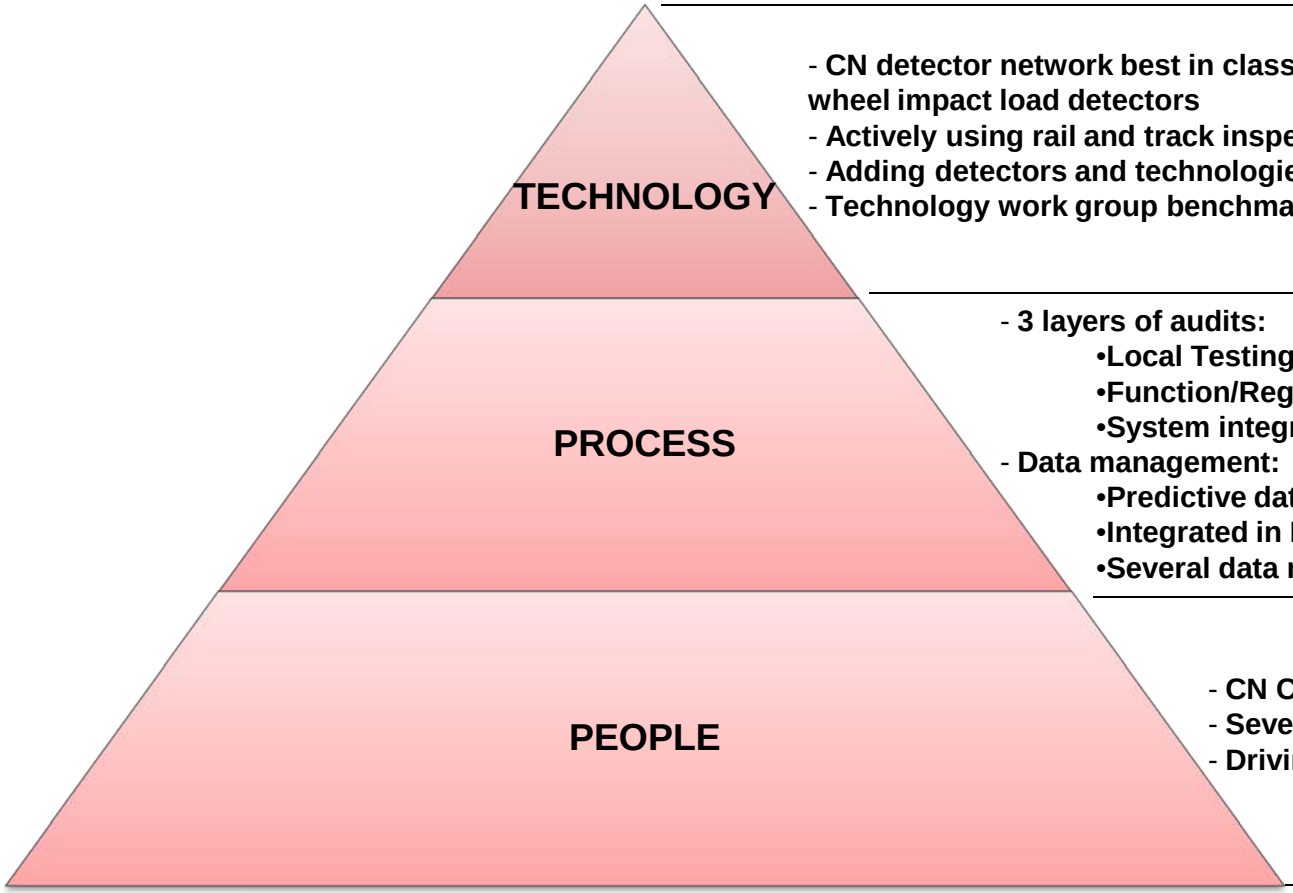
CN transports a wide range of products across its 23,000 mile network

- CN handles $250 Billion of goods each year, serving exporters, importers, retailers and manufacturers
- Backbone of the economy - essential to growth, trade, and communities across Canada and the United States

Safety Culture

- 5 dimensions of safety culture identified by work group
- CN developed process to measure safety culture - both objectively and subjectively
- Engaged labour participation through Policy and local H&S Committees

Preventing MT Accidents – Lines of Defense



- CN detector network best in class for wayside detectors on core MT and wheel impact load detectors
- Actively using rail and track inspection technologies
- Adding detectors and technologies through special capital fund
- Technology work group benchmarking to identify further opportunities

- 3 layers of audits:
  - •Local Testing
  - •Function/Region audits
  - •System integrated audits
- Data management:
  - •Predictive data management for bearings etc.
  - •Integrated in North America for WILD, Hunting
  - •Several data management initiatives in process

- CN Campus training program - state of the art
- Several initiatives to strengthen inspections
- Driving compliance and culture

➢ **Multiple lines of defence - mitigating risk of main track accidents**

Safety Processes and Planning

Comprehensive safety plans based on:

- Safety analysis – understanding local root causes and contributing factors
- Comprehensive plans – consistent with SMS Regulations
- Risk Assessment
- Audit plan
- Safety culture and employee engagement

Compliance assessed through Integrated Audits

Integrating safety into daily operations – SMS is a platform for exceeding regulatory requirements

Driving Train & Track Reliability with Technology

Track

- Rail integrity
- Rail structure/geometry
- Ties
- Natural hazards

- Rail Flaw Detection (RFD)
- Track Evaluation System (TEST)
- Rock and snow slide fences
- Extreme weather / earthquake alerts
- Implementing new technologies
- Major increase in investments 2015

Rolling Stock

- Wheels, bearing, brakes
- Hose and brake rigging
- Over or imbalance loading

- Wayside Inspection System (WIS)
  - Hot bearing detectors
  - Hot wheel detectors
  - Dragging equipment detectors
- Wheel Impact Load Detectors
- Hunting detectors
- Machine vision technology

In-Train Forces

- Train handling
- Train marshalling rules

- Distributed power
- Marshalling rules
- Witronix
- LEPP – train handling

Safe train movements depend on multiple components all working together reliably

DGs in our Society

Indispensable to our Way of Life

Chlorine

- To purify our water
- To make PVC, into a diverse range of products

Propane

- Barbecues
- Heating

Propylene

- Eyeglasses
- Water cooler bottles

Butadiene and Styrene

- Tires
- Shoes

Sodium Hydroxide

- In paper production
- In soaps
- In paint

The Need for Community Outreach

- Lac-Mégantic has created concern about dangerous goods on rail – our objectives:
  - Communicate CN's commitment to safety and strong safety performance coupled with the rail industry having a solid success rate for transporting DG carloads in North America
  - Demystify the importance and value of dangerous goods to the economy and Canadians' daily lives
  - Establish/continue relationships with community leaders and provide an opportunity to discuss dangerous goods movements through and for their communities
  - Review opportunities of "mutual aid" (between CN and municipalities and between municipalities) and resources available within the community
  - Communicate our structured approach to emergency response
  - Offer training for community emergency response personnel to assist them in the event of a DG incident involving rail

Outreach Programs

- Railway Emergency Response Course
- TransCAER® / Training Car or Training Trailer
- **Structured Community Engagement Program**
- CN Sponsored Tank Car Specialist Week for Fire Departments in Pueblo, CO
- CN Sponsored Crude-By-Rail course for Fire Departments in Pueblo, CO
- CN Sponsored Advanced Tank Car Specialist for ER Contractors in Pueblo, CO

Since 1988, CN has participated in 3,670 TransCAER ® events, reaching 83,019 first responders

Scope of Outreach

1,098 municipalities along our right of way in Canada

	BC	AB	SK	MB	ON	QC	NS	NB	NWT	Total
Category 1	1	7	1	3	35	12	0	3	0	62
Category 2	18	26	6	6	35	19	1	6	0	117
Category 3	62	55	41	26	62	156	10	44	1	457
Category 4	70	47	196	23	25	68	1	29	3	462
Total	152	135	244	58	157	254	12	82	4	1,098

Information for “S.C.E.P.” Meetings

Subjects discussed:

1. CN Safety, Company Overview and CN in Your Community
2. DGs in our society
3. Emergency Preparedness
    - DG movements specific to community
    - CN Emergency Response Plan
    - TRANSCAER® and suggested training

Prevention Initiatives

- Speed restriction of 50 mph for all “Key Trains” in Canada (later became regulatory requirement)
- **Speed restriction of 35 mph for all “High Hazard Flammable Trains” (Key Trains)** through all population centers over 100,000 (later became regulatory requirement at 40 mph)
- Conducted Route Risk Assessments on all key routes and important feeder lines (later became regulatory requirement)
- Implemented handbrake table based on grade and tonnage to provide increased securement of equipment (later became regulatory requirement)
- Accelerated removal of CN owned DOT111 tank car fleet

Your Community

Percentage of rail cars loaded with dangerous goods versus the total of rail traffic transported by CN in the municipality of NAME: 25% (25 cars on a typical 100 car train could be a dangerous good)

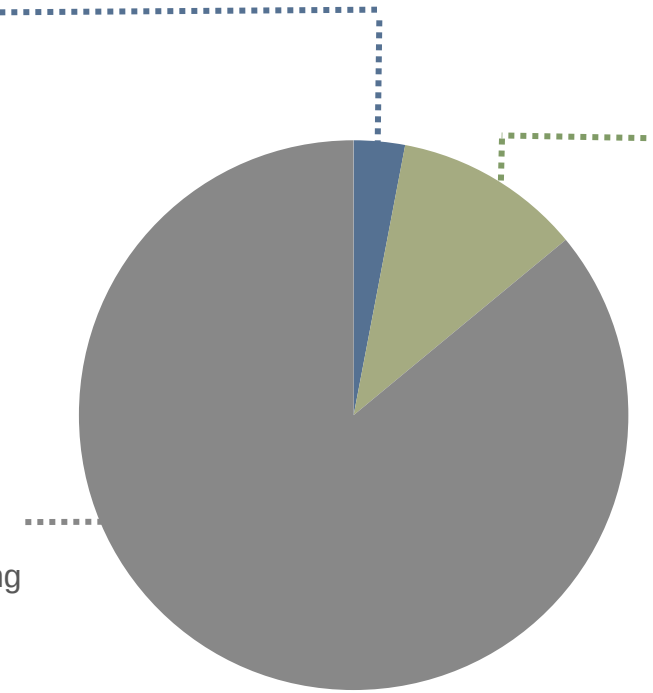
Types of dangerous commodities

Poisonous Materials: 3%

- Chlorine used to purify water supply and in household products such as bleach and disinfectant
- Anhydrous Ammonia used for fertilizer, refrigerants and in household cleaning products

Flammable Materials: 86%

- Propane used for home heating and BBQ bottles
- Gasoline and Diesel Fuel as well as Crude Oil for refineries



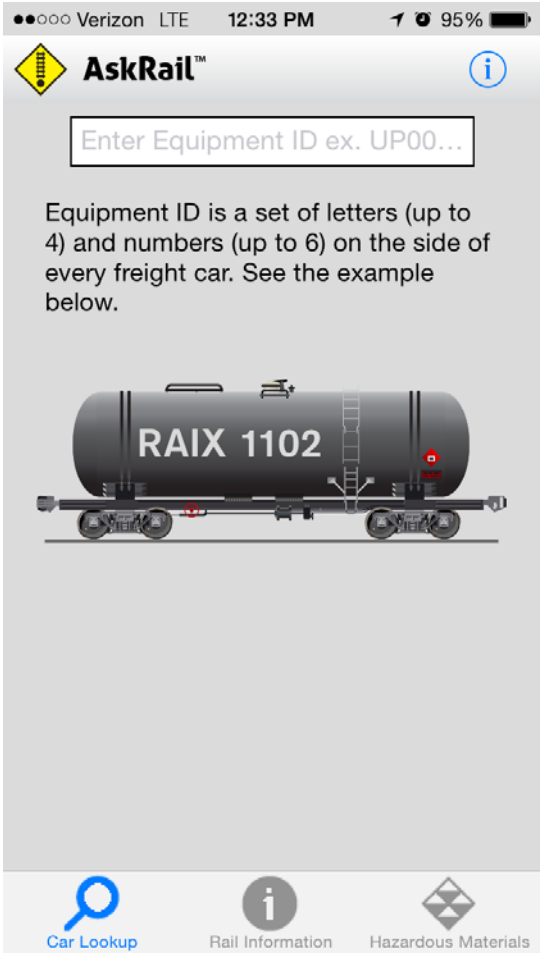
Other Dangerous Goods: 11%

- Asphalt used for roads and construction
- Ammonium nitrate used in agriculture as a fertilizer

Corrosives: 0%

- Sodium Hydroxide used in soap manufacturing, pharmaceutical, mining and soft drink industries
- Batteries for vehicles
- Acetic acid used for vinegar, food preservative as well as industrial applications

AskRail App


Verizon LTE 12:33 PM 95%
AskRail™
Enter Equipment ID ex. UP00…
Equipment ID is a set of letters (up to 4) and numbers (up to 6) on the side of every freight car. See the example below.
RAIX 1102
Car Lookup
Rail Information
Hazardous Materials

Individual Car Number Display

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AskRail™

UTLX202713

Equipment Details View Train

ID: UTLX 202713

LD/MTY: RESIDUE

HAZARDOUS Launch FiRST

UN/NA ID: UN1170

PSN: ETHANOL

Hazard Class: 3

Railroad: CN

Railroad Phone: (800) 465-9239

Car Lookup | Rail Information | Hazardous Materials

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AskRail™ Done

Train Details 138 Cars

>	50	ETTX 909384	LOADED
>	51	SP 517423	LOADED
>	52	CHTT 101274	LOADED
>	53	UP 961529	LOADED
>	54	GATX 212028	LOADED
>	55	NYC 221137	LOADED
>	56	NKCR 65424	LOADED
>	57	AOK 19207	LOADED
>	58	MP 269821	LOADED
>	59	CHTT 101297	LOADED
>	60	TEIX 7810	EMPTY

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AskRail™ Done

Train Details 138 Cars

v	32	UTLX 202713	RESIDUE

HAZARDOUS Launch FiRST

UN/NA ID: UN1170

PSN: ETHANOL

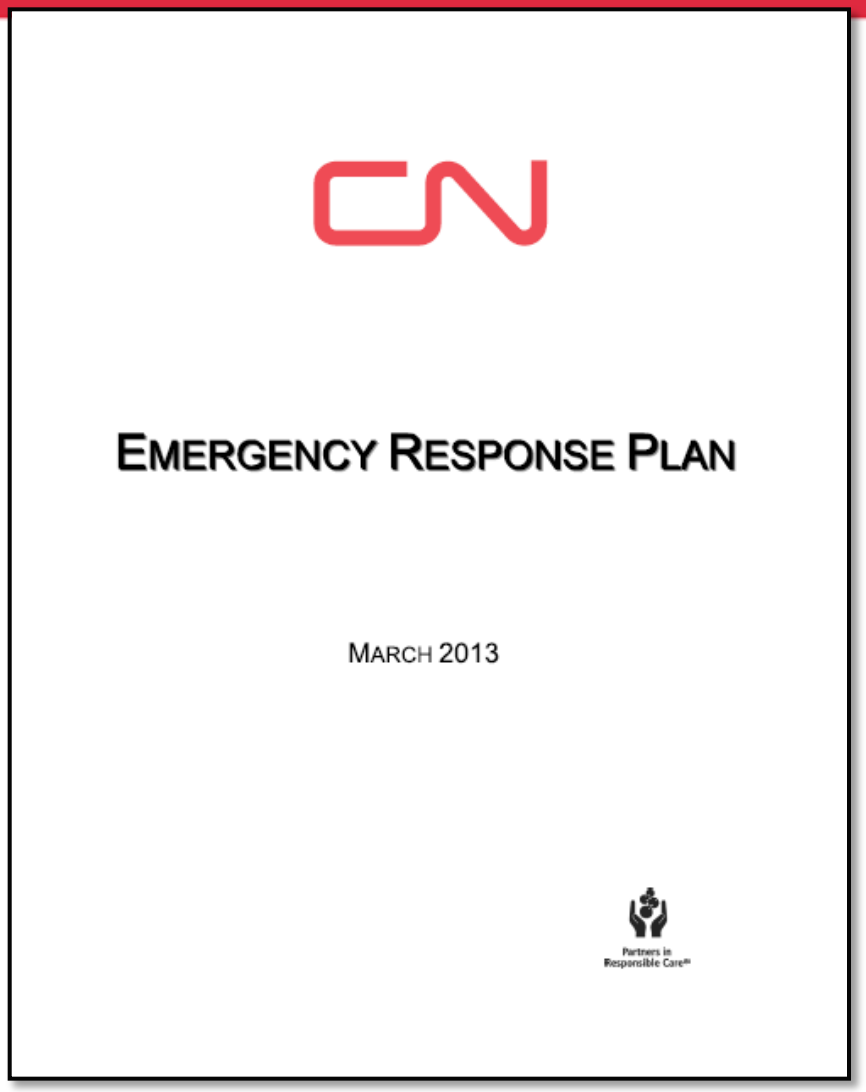
Hazard Class: 3

Railroad: CN

Railroad Phone: (800) 465-9239

>	33	TTGX 941789	LOADED
>	34	TTGX 700766	LOADED
>	35	TTGX 986723	LOADED
>	36	TTGX 981746	LOADED
>	37	TTGX 979100	LOADED

CN Emergency Response Plan



- Emergency Notification
- Plan Activation
- Assessment
- Joint Resource Allocation
- Access Control
- Unified Incident Command

Active on a Number of Fronts

- TC Minister's Emergency Response Task Force
  - Incident Management
  - Emergency Response Process
  - ERAP Activation
  - Emergency Responder Training
- Industry Working Groups
  - TransCAER
- Stake Holder Engagement

Delivering Safely & Responsibly

People

Investing in training and embedding a safety culture

Process

Risk assessment and mitigation, root cause analysis

Investment

$2.25 billion capital spending in 2014
$2.6 planned in 2015

Technology

Employing a wide range of inspection and detection technologies