



EMERGENCY PREPAREDNESS COMMITTEE *for* CIVIL TRANSPORTATION

# Transport Canada - ERAP Program Response for Flammable Liquids

Presentation to Emergency Preparedness Committee for  
Civil Transportation (EPCCT) – October 28 - 29, 2015



U.S. Department of Transportation



Transport  
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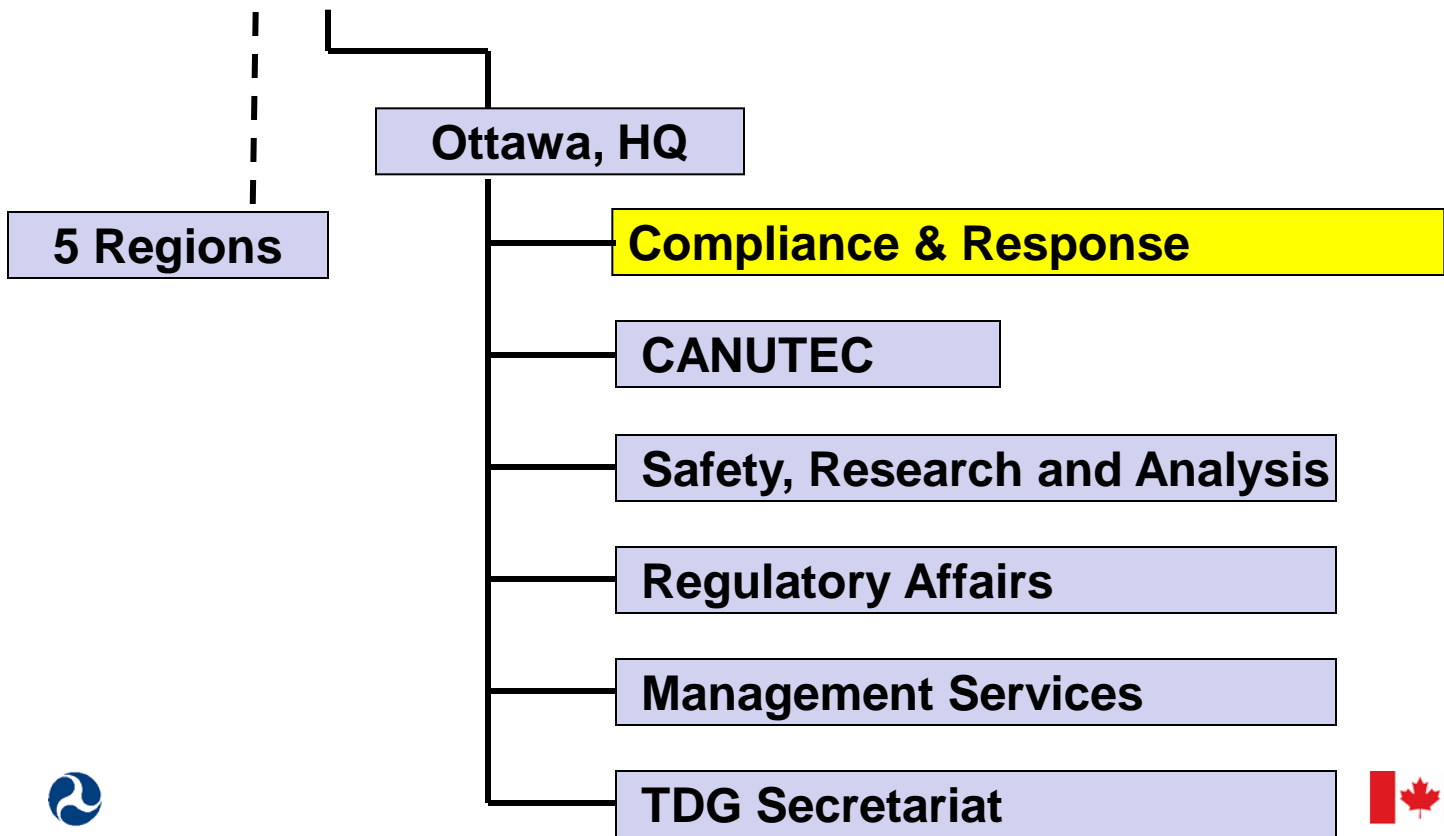
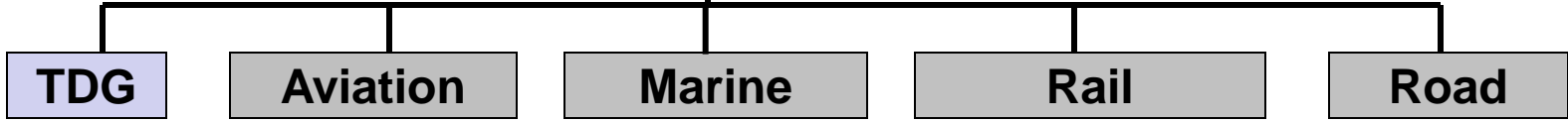
- Introduction
- Background about Transport Canada and Transport of Dangerous Goods Directorate
- Emergency Response Assistance Plans (ERAP)





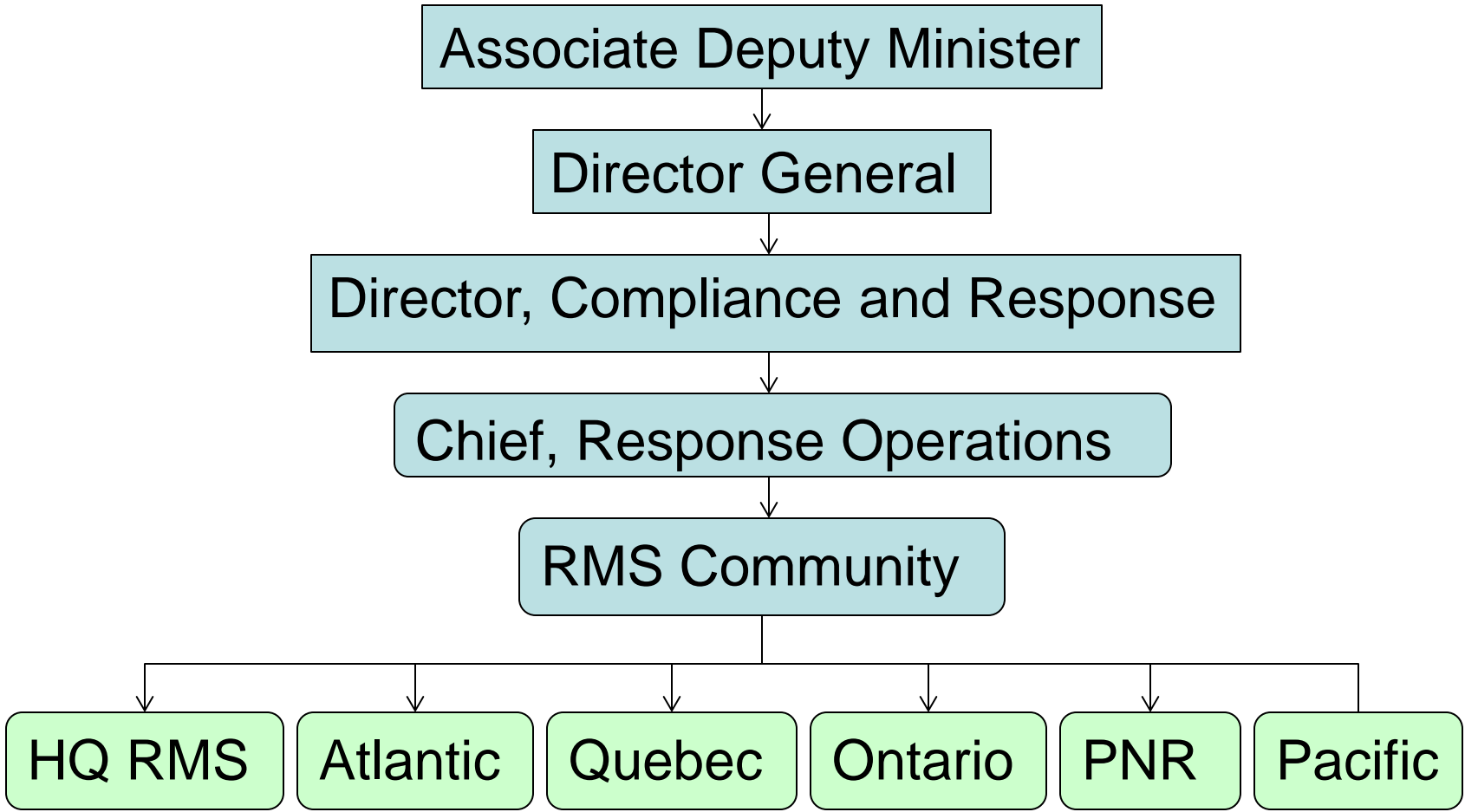
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## Safety & Security





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## What is an Emergency Response Assistance Plan (ERAP)?

- Recommended in the Grange report written after the 1979 Mississauga derailment (major derailment involving evacuation of over 200,000 persons);
  - Requirement of Transport of Dangerous Goods (TDG) Act, for certain dangerous goods specified in the Regulations;
  - Describes specialized assistance from industry to assist first responders dealing with an accident involving dangerous goods in transport;
    - Technical advice;
  - Assistance includes:
    - Response personnel and equipment;
    - Additional resources e.g. MOCs, neutralizing agents, links to other agencies;



## Content of an ERAP

- Hazard Identification and Analysis
- Roles and Responsibilities
- Resources & mobilization
- Third Party Agreements
- Emergency Response Procedures
- Contact Lists
- Equipment availability and Maintenance
- Plan Activation Flowchart
- Situation Assessment
- Damage Assessment
- Training and Exercises





## The ERAP Program – TDG Role

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- ERAP applications: evaluate content and determine risk ranking (low, medium, high);
- Evaluate ERAP responses when ERAP is activated (real situations and exercises);



## Derailment at Lac Mégantic

- At approx. 01:16 EDT on 06 Jul 2013, 63 of the 72 tank cars of a runaway train derailed and many were breached in Lac-Mégantic, QC.;
- Lac-Mégantic population approximately 6,000 and located approx. 18 km west of the Canada–U.S. border;
- 150 firefighters battled the blaze. Difficult to approach the fire due to heat and risk of vessel failure. Over 2,000 people were evacuated;
- 47 fatalities. Significant damages to buildings, infrastructure and the environment. Blocks of the town destroyed;





## Derailment at Lac Mégantic - continued

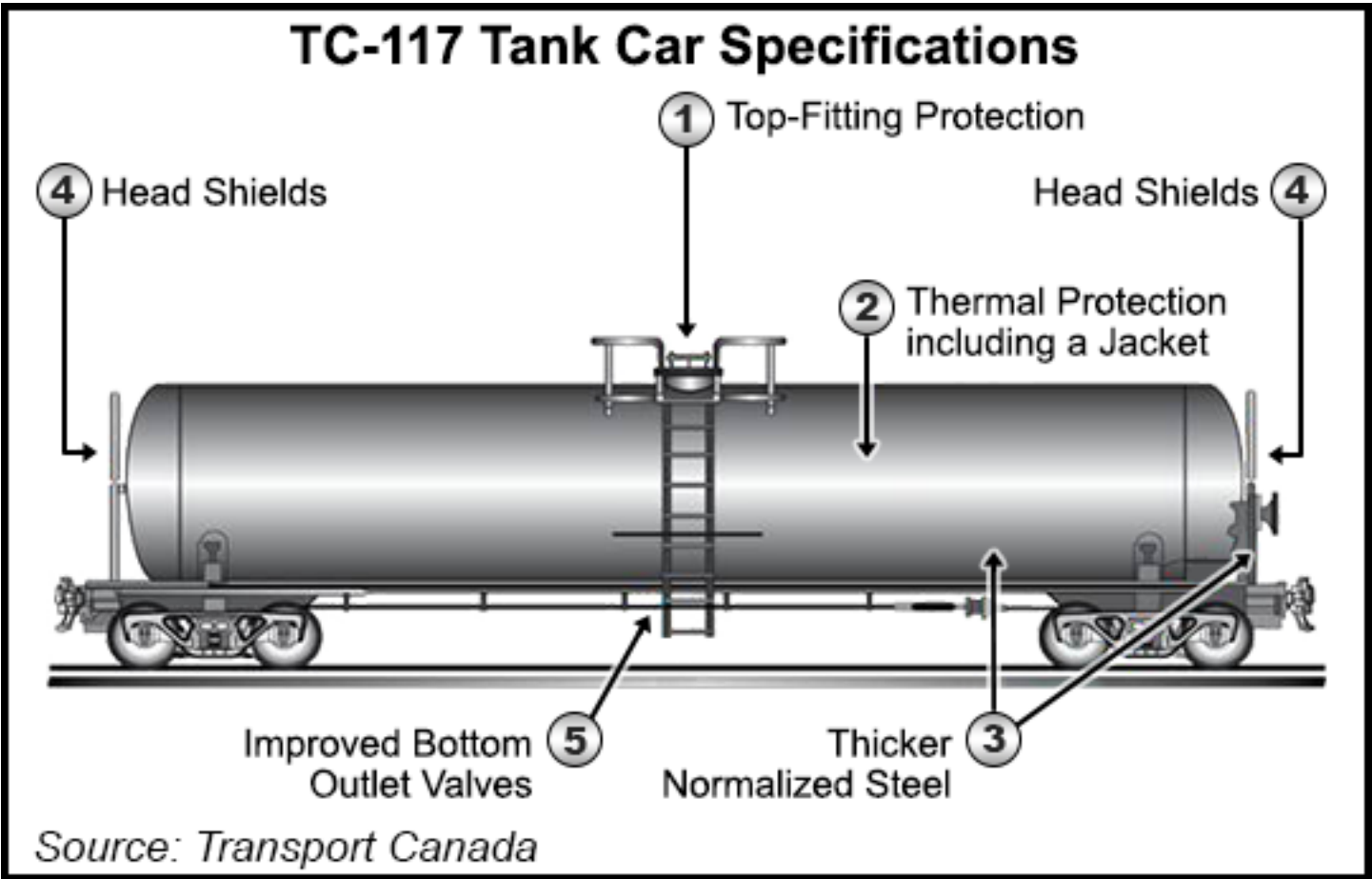
- Incident challenges
  - Communication and response structure of First Responders
  - Lack of knowledge on high volume oil-fire
  - Finding foam and the compatibility of equipment for application
  - Scale of the incident
- Post-Incident
  - Municipalities demanded access to data
  - Concerns over classification
  - Not a ‘railway’ issue but a ‘national’ issue



## Response to Derailment at Lac Mégantic

- New Tank Car Standard;
- New speed restrictions for rail through communities;
- Classification – retention of proof of classification / methods and procedures:
  - Studies to investigate properties of crude oil, proper classification, hazards due to toxicity and corrosivity to metals;
  - New sampling techniques – sampling both vapour space and liquid;
- Protective Directions







On April 23, 2014, the Minister issued Protective Direction 33 (PD33) requiring ERAPs for five Class 3 flammable liquids.

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## Protective Directions

### October 17, 2013 – Protective Direction 31 (PD31)

Test the classification of crude oil and to provide the test results to Transport Canada upon request. This requirements has been included in the Transportation of Dangerous Goods Regulations.

### November 20, 2013 – Protective Direction 32 (PD32)

Railway companies to provide information on nature and volume of dangerous goods transported through municipalities to designated municipal representatives and TC through CANUTEC.

### April 23, 2014 - Protective Direction 33 (PD33)

ERAPs for certain Class 3 flammable liquids shipped by rail tank car (crude oil, gasoline, ethanol and others). This requirements has been included in the Transportation of Dangerous Goods Regulations.

### April 23, 2014 – Protective Direction 34 (PD34)

DOT 111, CTC 111 and AAR 211 specification tank cars removed from dangerous goods service.



## TDG Emergency Response Task Force (ERTF)

- Mandate: conduct further research, assess, evaluate and make recommendations to advance, and make improvements to the ERAP program; Include high level participation i.e. stakeholders from industry etc.,
- Participants include representatives from government, first responder community (fire services), industry associations, railways;
- ERTF members have proposed several recommendations to date. Topics relate to Outreach and ICS, ERAP for other flammable liquids, ERAP Program improvement and effectiveness and First Responder training





## ERTF Themes of Discussion

### Outreach and ICS

- Identify jurisdictional issues and conflicting priorities;
- Define TC's role (CANUTEC & RMS);
- Clarify roles & responsibilities of stakeholders;
- Develop outreach solutions;
- Compare ICS models
- Develop ICS protocols for TDG Response Model and Protocols;
- Identify expertise & equip to support 1<sup>st</sup> responders;



## ERTF Themes of Discussion

### **ERAP for other flammable liquids**

- Assess options for expanding ERAP requirement to other Class 3 FL beyond PD 33 list
- Classify FL, identify those transported by rail;
- Identification of volumes and transportation corridors



## ERTF Themes of Discussion

### ERAP Program improvement and effectiveness

- Identify data needs & criteria for continued effectiveness monitoring;
- Clarify activation authorities for ERAP
- ERAP content & involvement of municipalities
- Local capacity: identify communities at risk, assess response capacity, FL firefighting & resources by geographic areas;
- Identify expertise, equipment required to support First Responders and communities
- Timely access to real-time train consist



## ERTF Themes of Discussion

### **First Responder training**

- Information sharing & outreach strategy
- Improve First Responders Training



## Flammable Liquids - Risk

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- Large volumes transported at same time (100 car trains);
- Derailments will probably affect smaller communities or remote locations;
- Expertise and resources to deal with flammable liquids fires may not be readily available;
- Fires involving flowing flammable liquids difficult to extinguish (foam application ineffective);
- Risk of sudden heat-induced tears – danger for first responders;







## Future steps

- ERTF Mandate extended one year;
- Development of a Standard on **Competencies for Responders to Incidents of Flammable Liquids in Transport – High-Hazard Flammable Trains (HHFT)** . NFPA has agreed to consider this request;
- Development of a curriculum and identify facility(s) in Canada able to provide flammable liquids fire training;





## Questions?

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ERTF website: <https://www.tc.gc.ca/eng/tdg/safety-menu-1186.html>

