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NUCLEAR WASTE
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SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES



Used Nuclear Fuel Transportation Framework, Plan and Overview

Presented at: ROMA

January 21, 2025

Presented by: Ulf Stahmer, Senior Transportation Engineer
Used Fuel Transportation

Introducing the NWMO

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Our mandate is to develop and implement collaboratively with Canadians, a management approach for the long-term care of Canada's used nuclear fuel that is socially acceptable, technically sound, environmentally responsible, and economically feasible.



What is used nuclear fuel?



How much used fuel is there?

- 4 Tractor-trailer loads produced each year (approx. 85,000 bundles)
- Current inventory: 1 soccer field, 1 shipping container high (3.3 million fuel bundles)
- Projected inventory: 1 soccer field, 1 tractor-trailer high (5.9 million bundles)

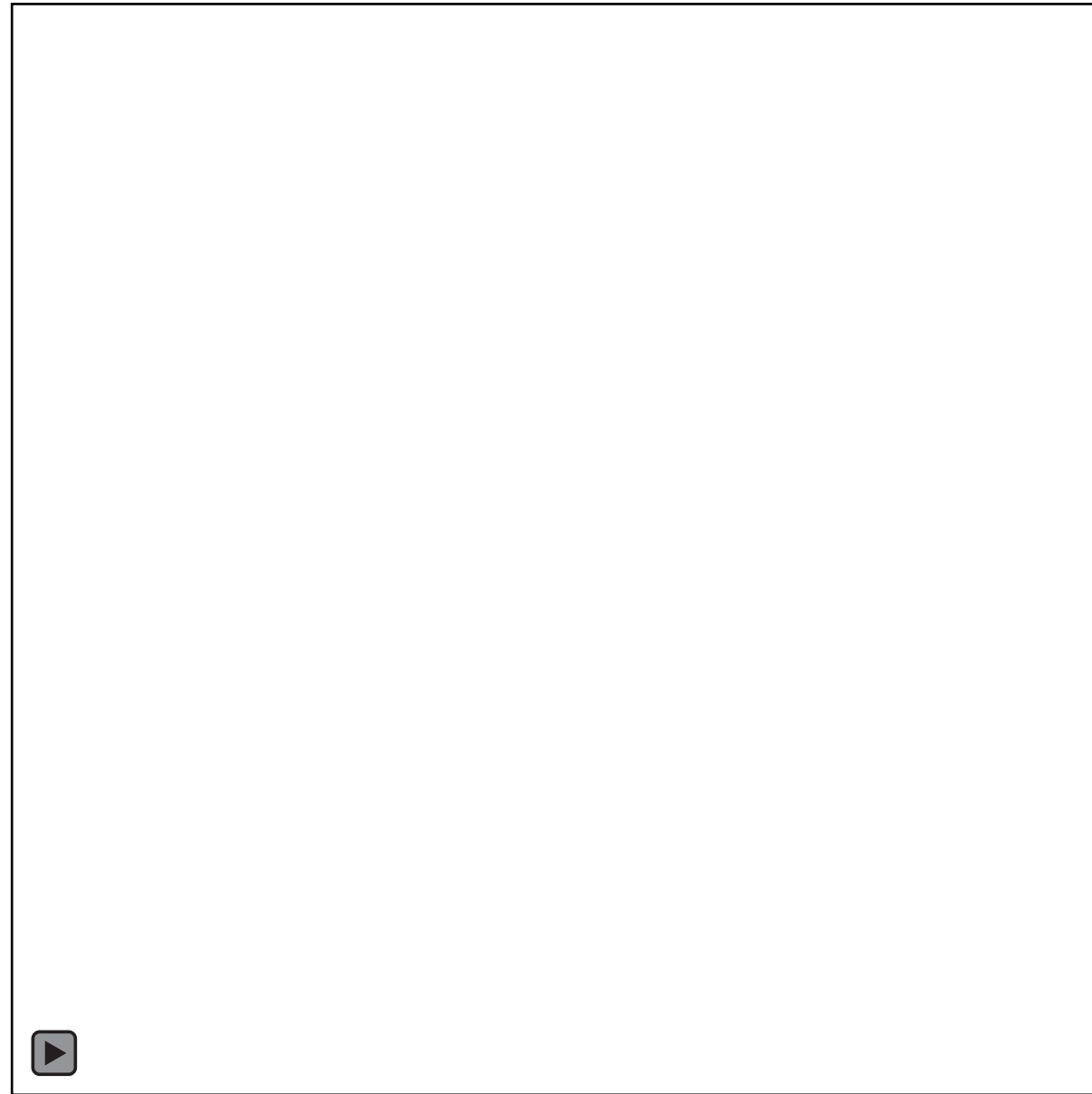


Approach to Transportation

- The primary consideration is **safety** – to protect people and the environment during all aspects of used nuclear fuel handling, transport and delivery to the repository
- All transportation equipment, packages and transportation activities **must meet regulatory requirements**

Transportation is a key component of Canada's plan for the long-term management of used nuclear fuel

Transportation Planning Framework



Proposed approach to implementing framework

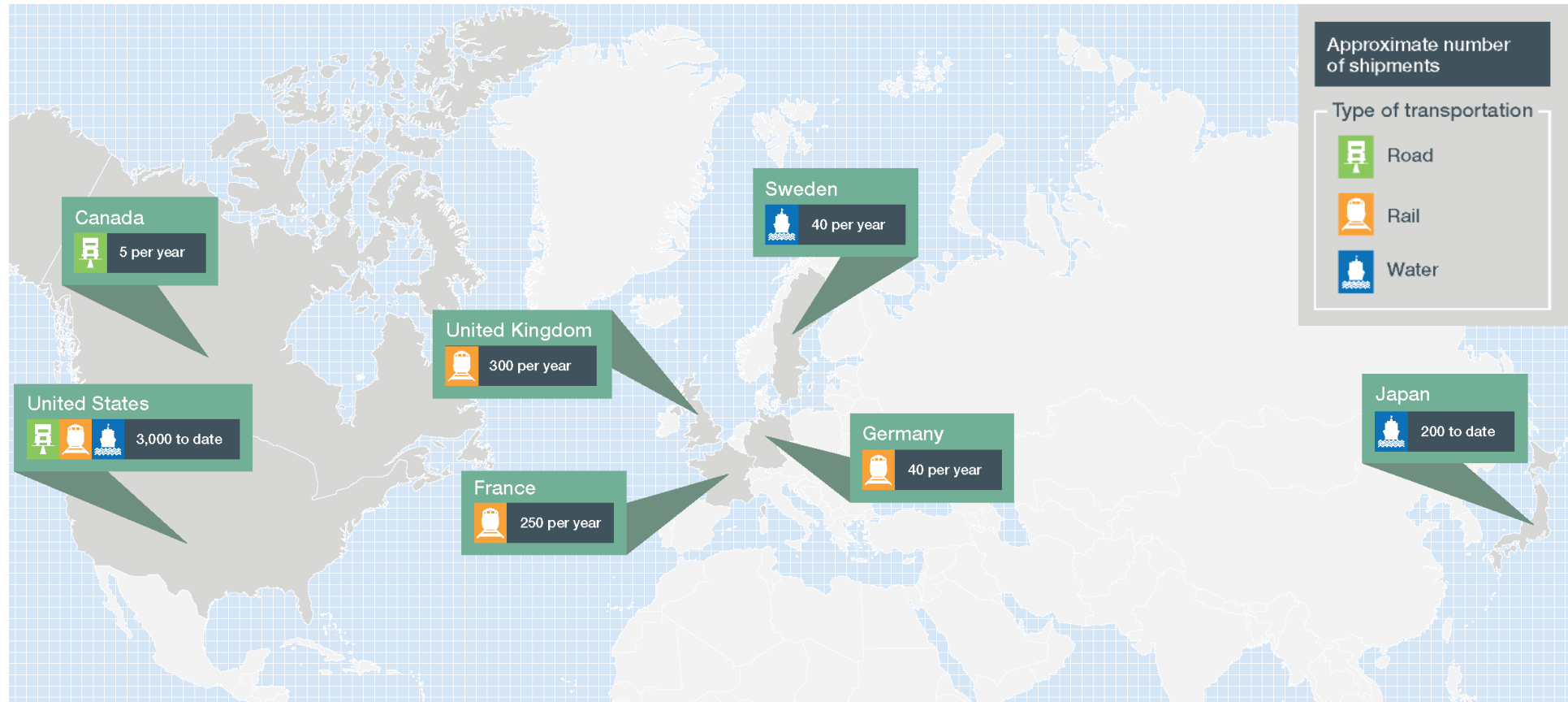
The approach will be flexible and adaptive, and continue to involve people at key milestones along the way



Transportation is Safe and Secure



Used Nuclear Fuel Transportation Experience



60 years of safe transport internationally and in Canada: no serious injuries, health impacts, fatalities or environmental consequences attributable to the radiological nature of used nuclear fuel shipments

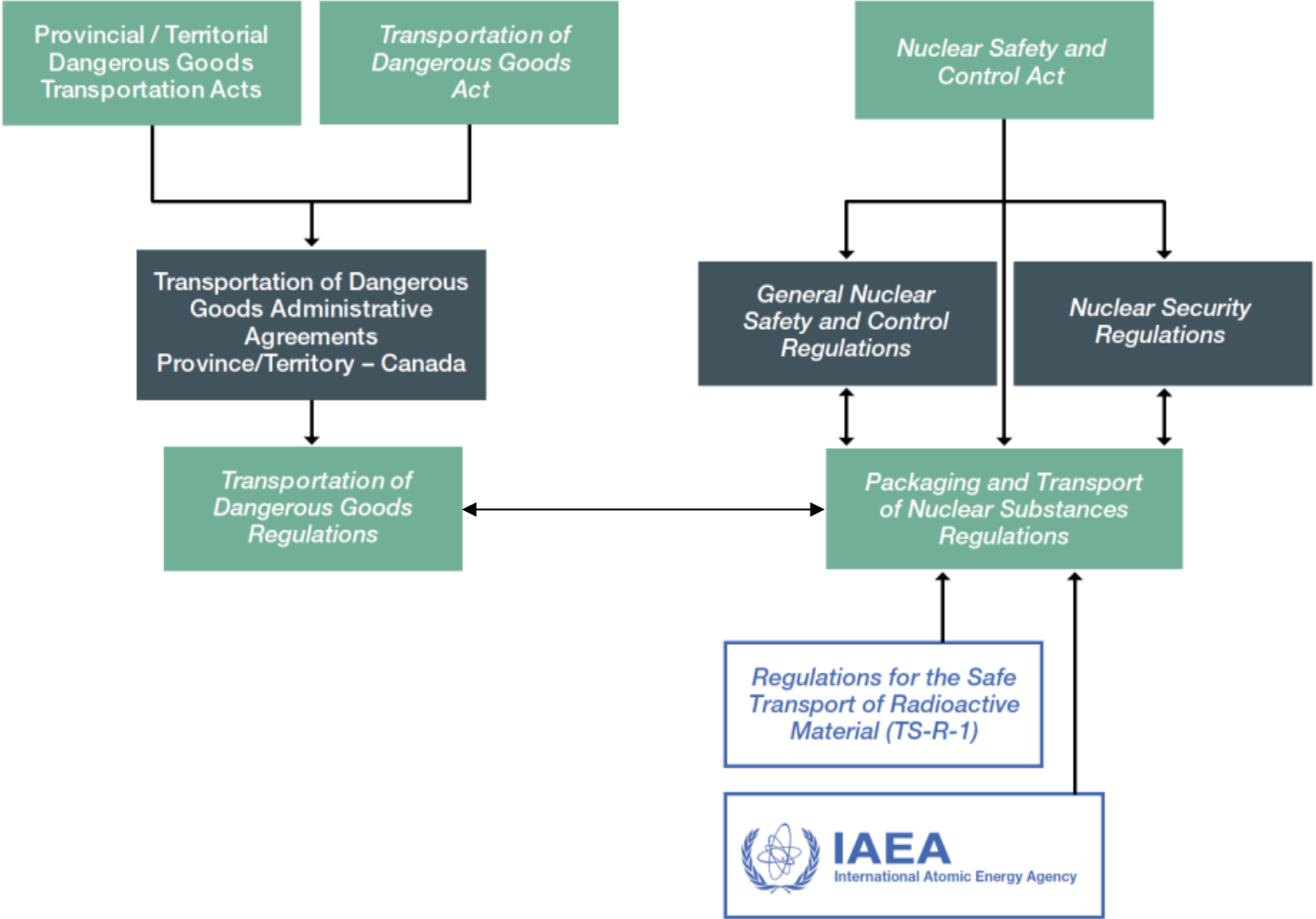
Regulations



Transport Canada
Transports Canada



Canadian Nuclear Safety Commission
Commission canadienne de surete nucleaire



The NWMO's multi-layered safety program

Management system and compliance assurance

Security and emergency management

Operational controls

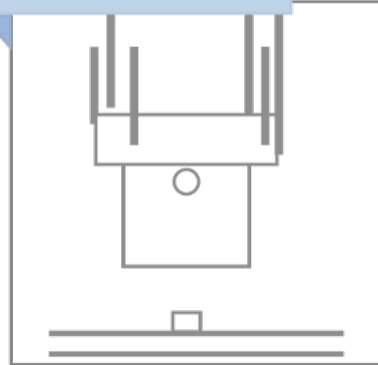
Certified and registered packages

Transportation package testing

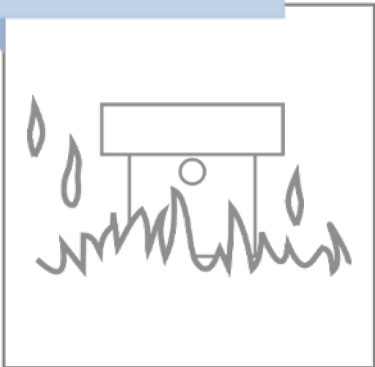
Impact test



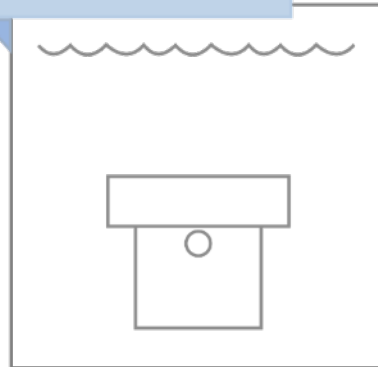
Puncture test



Thermal test



Immersion test



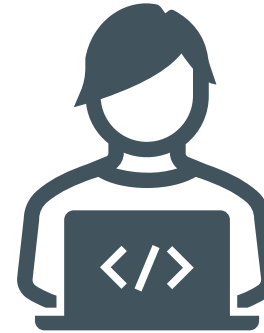
Emergency management and security



Route selection



Communications



Real-time tracking
and monitoring



● **Interim Storage Facilities**

1. Whiteshell Laboratories, Manitoba
2. Bruce Nuclear Generating Station, Ontario
3. Pickering Nuclear Generating Station, Ontario
4. Darlington Nuclear Generating Station, Ontario
5. Chalk River Laboratories, Ontario
6. Gentilly Nuclear Generating Station, Quebec
7. Point Lepreau Nuclear Generating Station, New Brunswick

■ **Selected Host Area**

Wabigoon Lake Ojibway Nation /
Township of Ignace

Thank you

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Questions?

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