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**Supplementary Information
Oral Statement**

**Presentation from
Peter Ottensmeyer**

In the Matter of

Ontario Power Generation Inc.

Proposed Environmental Impact Statement
for OPG's Deep Geological Repository
(DGR) Project for Low and Intermediate
Level Waste

Joint Review Panel

September 16 to October 12, 2013

**Renseignements supplémentaires
Présentation orale**

**Présentation par
Peter Ottensmeyer**

À l'égard de

Ontario Power Generation Inc.

Étude proposée pour l'énoncé des incidences
environnementales pour l'Installation de
stockage de déchets radioactifs à faible et
moyenne activité dans des couches géologiques
profondes

Commission d'examen conjoint

16 septembre au 12 octobre 2013

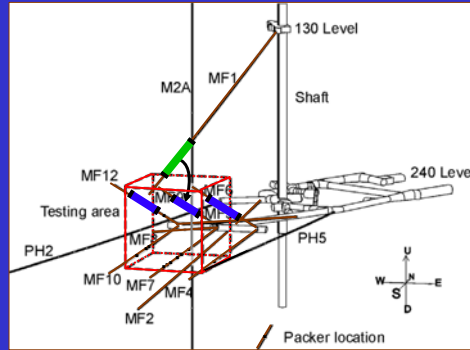
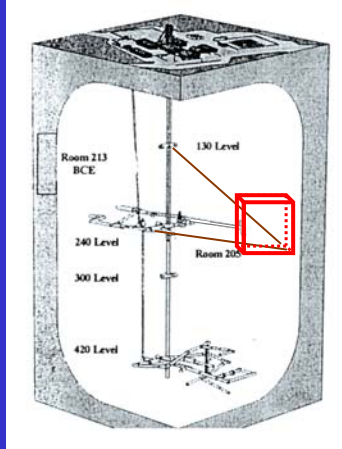
The Moderately Fractured Rock Experiment: Background and overview

M R Jensen

Ontario Power Generation

Nuclear Waste Management Division Report 06819-REP-01200-0041-R00, pp. 137-49
(2000)

Underground Research Laboratory
Lac du Bonnet pluton (White Shell, Man.)



Boreholes MF1 to MF12

The Moderately Fractured Rock Experiment: Background and overview

M R Jensen

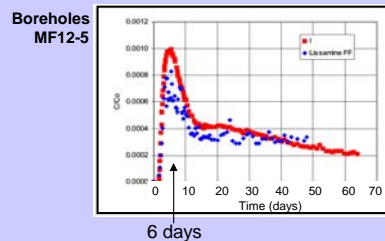
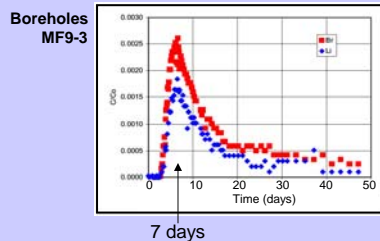
Ontario Power Generation

Nuclear Waste Management Division Report 06819-REP-01200-0041-R00, pp. 137-49
(2000)

Transit times at unit pressure gradient or less
between sections of two boreholes 13 to 50 m apart and 30-50 m long

Lithium Bromide

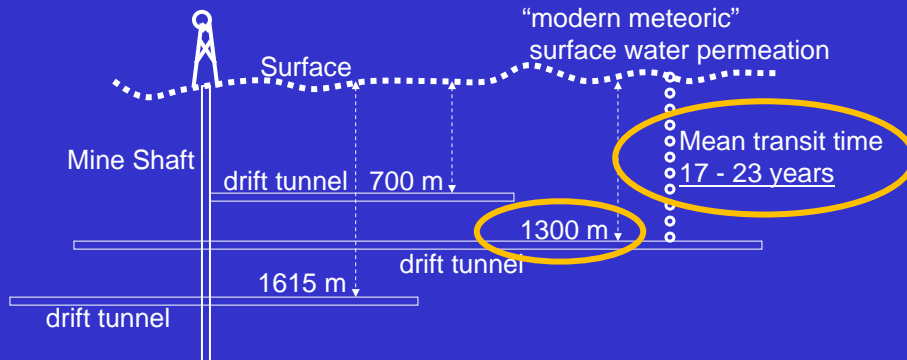
Rubidium Iodide and Lissamine FF



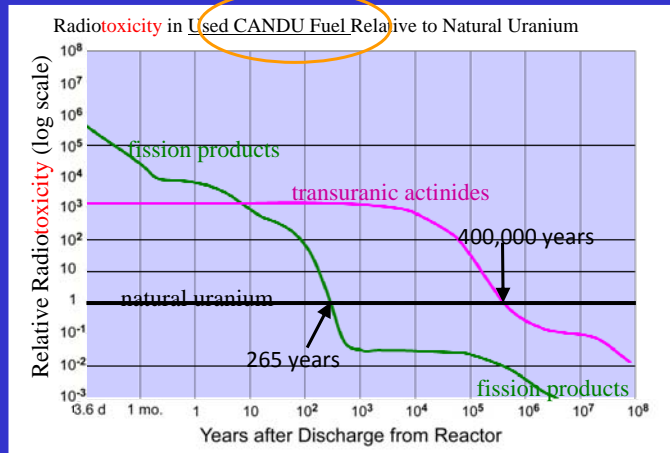
“Groundwater mixing dynamics at a Canadian Shield mine”

Douglas et al., *Journal of Hydrology*, 235, 2000, pp. 88-103

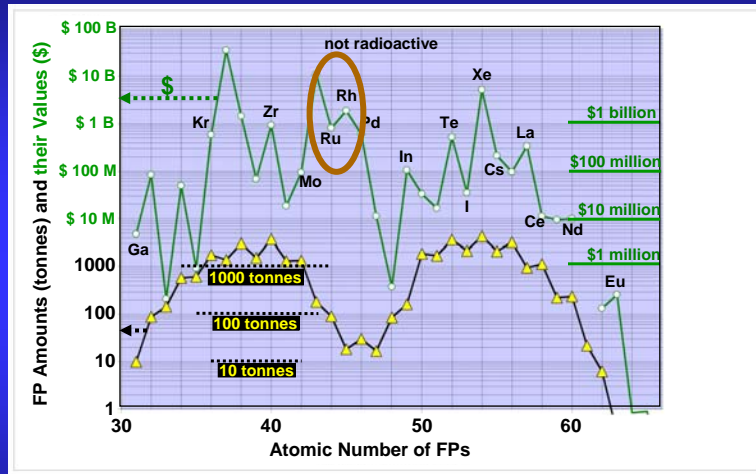
Con Mine, Yellowknife, NWT



Nuclear Waste Radiotoxicity



Fission Products from 40,000 tons Spent CANDU Fuel
Amounts and Values



fission products (~atomic elements $^{31}\text{Ga} - ^{65}\text{Tb}$)
would fetch about **\$ 2.5 million / ton**

Partial Intermediate Waste Inventory*
Amounts and Values

	<u>Carbon</u> <u>Steel</u> (tons)	<u>Stainless</u> <u>Steel</u> (tons)	<u>Inconel</u> <u>600</u> (tons)	<u>Zirconium</u> (tons)	
Pressure Tubes				440	
End Fittings		2,300			
Calandria Tubes				170	
Inserts		21			
Steam Generators		8,200	2,800		
Containment	8,400				
Rebar	770				
Int. W. Bulk	910	92			
Int. W. Contain'rs	620	2,100			
Rebar	680				
Total (tonnes)	11,380	12,793	2,800	610	
Value/tonne (\$)	\$2,000	\$3,000	\$30,000	\$150,000	
Indiv. Value (\$)	\$22.8M	\$38.4M	\$84.0M	\$91.5M	\$236.6M

* OPG Reference Low and Intermediate Level Waste Inventory for the Deep Geologic Repository December 2010, 00216-REP-03902-00003-R003