



## **Supplementary Information**

### **Presentation from the Port Hope Community Health Concerns Committee**

In the Matter of the

#### **Canadian Nuclear Laboratories**

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Application to renew its waste nuclear  
substance licence for the Port Hope Project

#### **Commission Public Hearing**

**November 22, 2022**

## **Renseignements supplémentaires**

### **Présentation du Port Hope Community Health Concerns Committee**

À l'égard de

#### **Laboratoires Nucléaires Canadiens**

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Demande concernant le renouvellement du  
permis de déchets de substances nucléaires  
pour le projet de Port Hope

#### **Audience publique de la Commission**

**22 novembre 2022**

Presentation from the Port Hope Community Health Concerns Committee,  
filed by Faye More, Chair



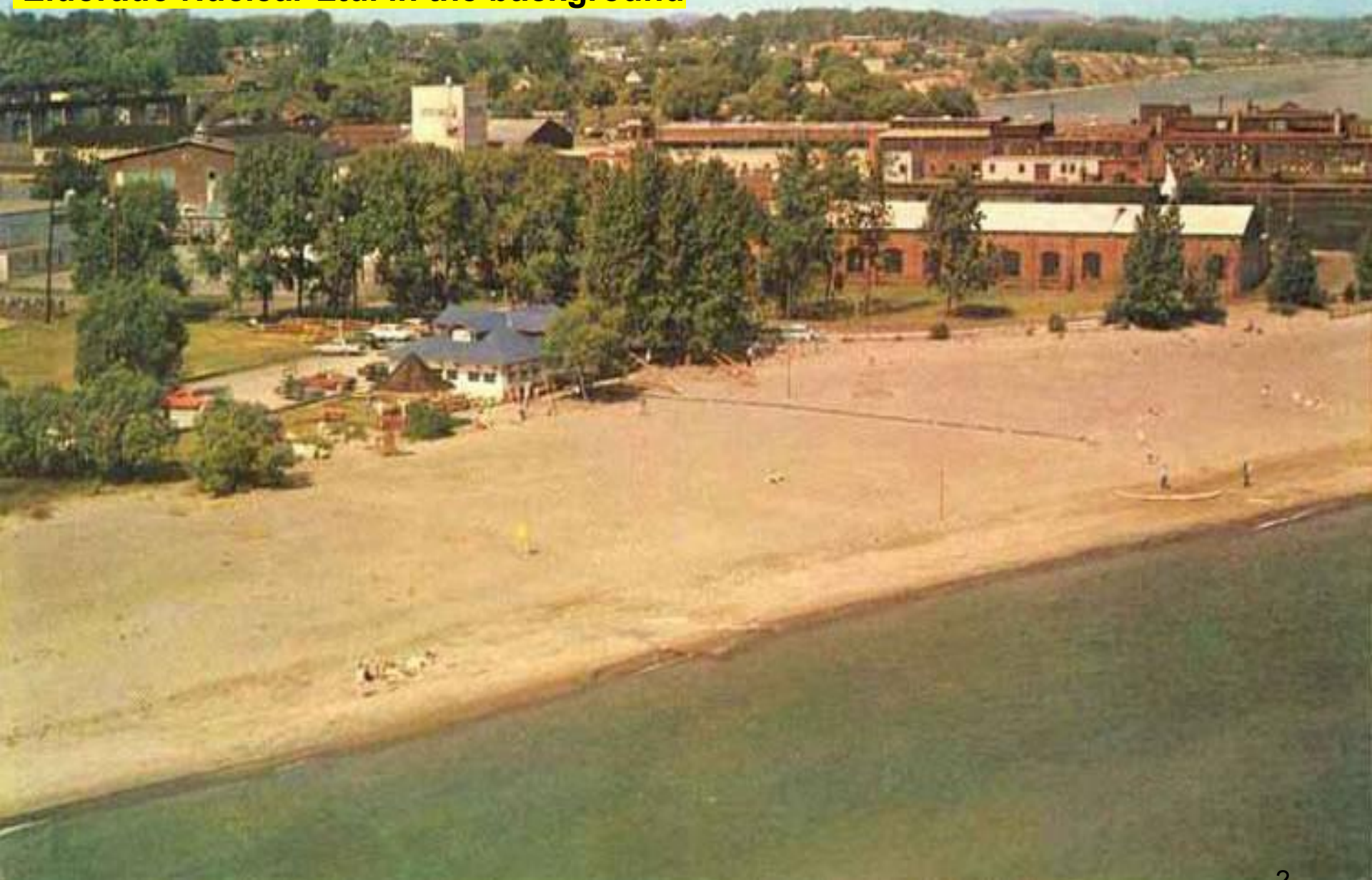
# **Intervention to CNSC for AECL/CNL/PHAI Licensing Hearing**

**November 22, 2022**

**Supplementary material from the  
Port Hope Community Health Concerns Committee**



**Tourism postcard of Port Hope west beach area circa 1955.  
Eldorado Nuclear Ltd. in the background**





***“For a given uranium intake, the inhalation pathway gives doses 200 times greater than ingestion”***

- ***Ontario MOE Rationale Document, Draft Uranium in Air Standard, 2010***

**Living in the buffer zone of licensed Cameco Conversion Facility with daily emissions located on Lake Ontario. A neighbourhood further south beside the former Eldorado was dismantled in late 1970's.**





**Licensed Cameco Fuel Manufacturing facility with daily emissions beside homes, shops, main highway #2.**





**Third CNSC licensed site in residential area. Radioactive waste cylinders emitting gamma radiation beside public roads, parking lot when not completely empty (no heels left).**





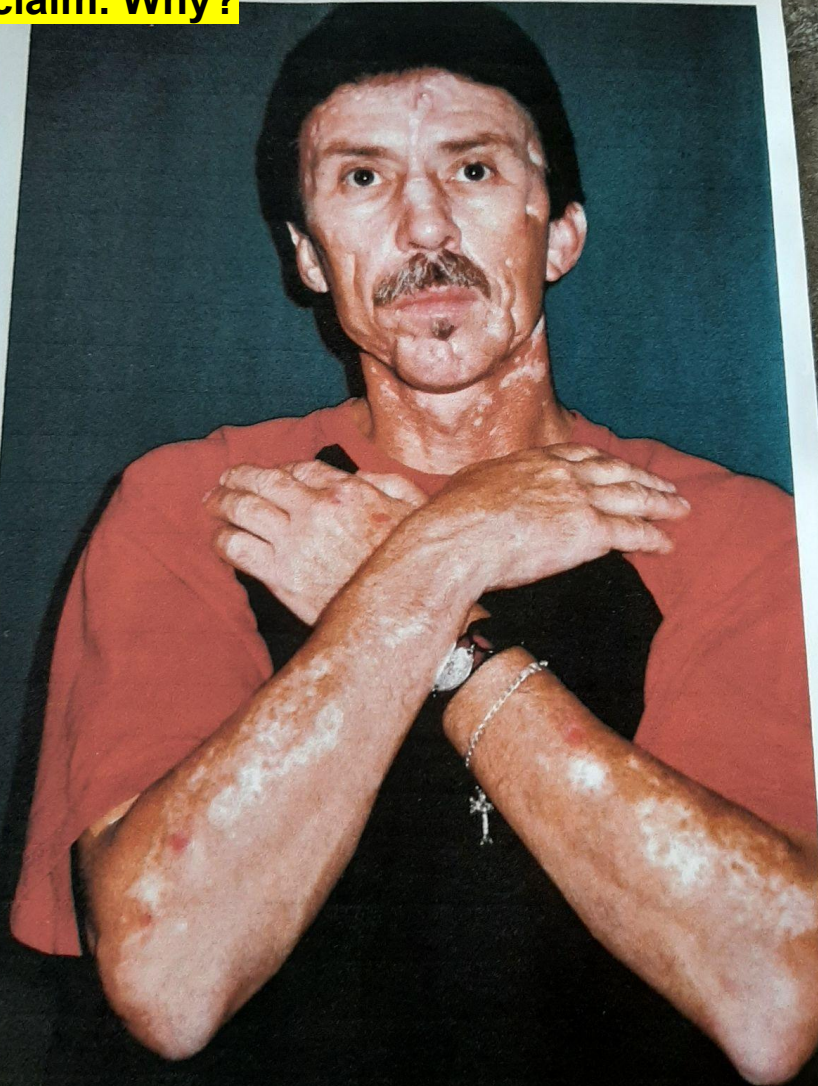
**U.S. Dept. of Justice recognizes harm to military, nuclear industry personnel from radiation exposures. Has paid out over \$17B compensation. Canada needs laws to recognize harm based on preponderance of evidence similar to Ontario firefighters.**

**Conditions recognized by the U.S. Dept. of Justice statute or regulation as associated with radiation exposure and for which compensation is available to eligible applicants (2007 list):**

- |  |  |
|--|--|
| 1. leukemia, lymphoid<br>(except chronic lymphatic leukemia) |  |
| 2. leukemia, myeloid   |  |
| 3. leukemia, monocytic                                       | 19. salivary gland cancer                                    |
| 4. leukemia, hairy cell                                      | 20. multiple myeloma   |
| 5. leukemia, other   | 21. posterior subcapsular cataracts                          |
| 6. leukemia, unspecified cell type                           | 22. non-malignant thyroid nodular disease                    |
| 7. thyroid cancer  | 23. ovarian cancer   |
| 8. breast cancer   | 24. parathyroid adenoma                                      |
| 9. lung cancer (trachea, bronchus and lung)                  | 25. malignant tumours, brain and central nervous system      |
| 10. bone cancer  | 26. lymphomas other than hodgkins disease                    |
| 11. liver cancer, primary                                    | 27. cancer, rectum   |
| 12. skin cancer  | 28. cancer, small intestine                                  |
| 13. esophageal cancer  | 29. cancer, pharynx  |
| 14. stomach cancer   | 30. cancer, bile duct  |
| 15. colon cancer   | 31. cancer, gall bladder                                     |
| 16. pancreatic cancer  | 32. cancer, renal pelves, ureters, urethra                   |
| 17. kidney cancer  | 33. cancer, prostate   |
| 18. urinary bladder cancer                                   | 34. brochio-alveolar carcinoma                               |
|  | 35. benign neoplasms, brain and central nervous system       |
|  | 36. other malignancies not listed in the preceding diagnoses |

D. RUDKA  
'2000'  
ZIRCATEC / CFM

**Dan Rudka, PHCHCC board member, former employee of Zircatec/CFM suffering from documented uranium poisoning with  $^{234}\text{U}$  and  $^{236}\text{U}$  resulting in a double lung transplant. Still bravely fighting for WSIB, Cameco opposing claim. Why?**







Scale: 1" = 355.7 Meters

ANNUAL VALUES FOR GROUP: ALL  
Canco Port Hope Conversion Facility - Model Run April 10, 2005

Max = 0.05523 (717014.3, 4600872)

Figure 2. Annual Uranium Point-of-Impingement Model





# Gamma Ray Spectrometer Survey

Port Hope, Ontario - 2001

Equivalent Thorium (ppm)  
Sideward-Looking Detectors

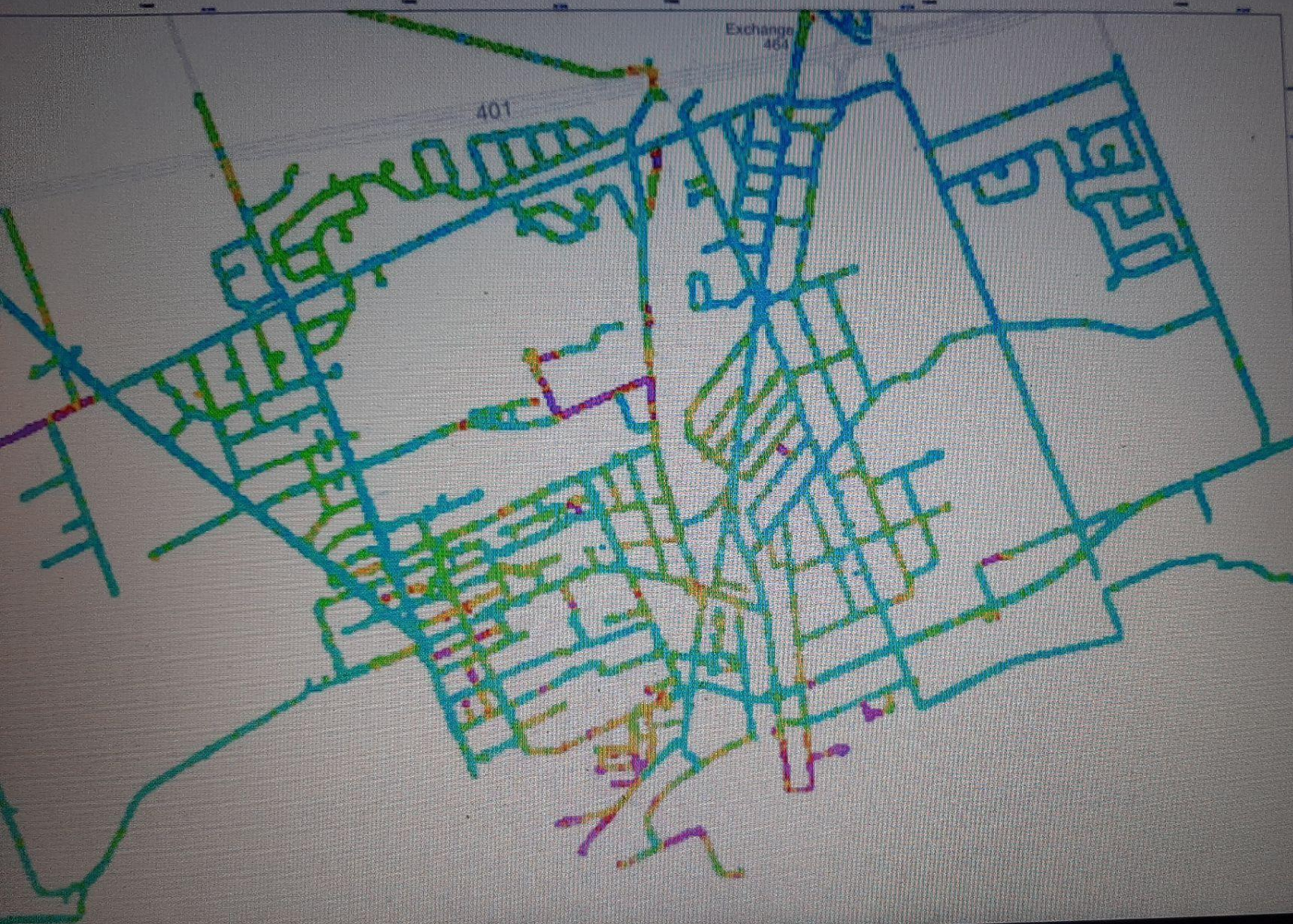




Gamma Ray  
Spectrometer Survey

Port Hope, Ontario - 200

Equivalent Uranium (ppm)  
Downward-Looking Detector







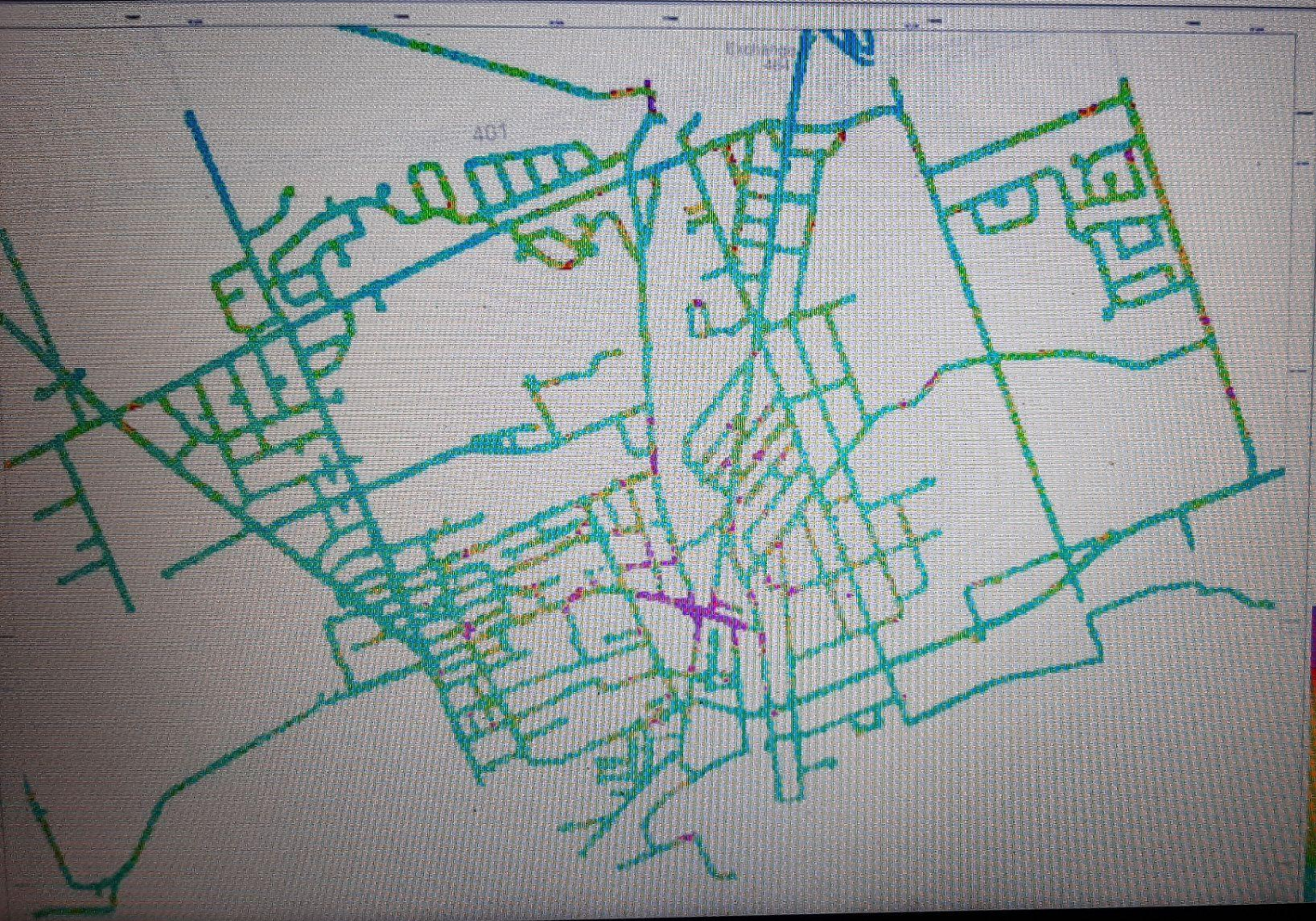
125%



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# Gamma Ray Spectrometer Survey

Port Hope, Ontario - 2001

Equivalent Thorium (ppm)  
Sideward-Looking Detectors



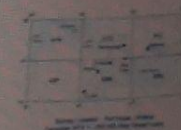
Equivalent Thorium (ppm)	Color
0 - 10	Blue
10 - 20	Green
20 - 30	Yellow
30 - 40	Orange
40 - 50	Red



Gamma Ray  
Spectrometer Survey

Port Hope, Ontario - 2001

Air Absorbed Dose Rate (mGy/h)  
Sideward-Looking Detectors



Survey Date	Survey Time	Survey Location	Survey Results
2001-01-10	10:00	Port Hope, Ontario	1000
2001-01-10	11:00	Port Hope, Ontario	1000
2001-01-10	12:00	Port Hope, Ontario	1000
2001-01-10	13:00	Port Hope, Ontario	1000
2001-01-10	14:00	Port Hope, Ontario	1000
2001-01-10	15:00	Port Hope, Ontario	1000
2001-01-10	16:00	Port Hope, Ontario	1000
2001-01-10	17:00	Port Hope, Ontario	1000
2001-01-10	18:00	Port Hope, Ontario	1000
2001-01-10	19:00	Port Hope, Ontario	1000
2001-01-10	20:00	Port Hope, Ontario	1000
2001-01-10	21:00	Port Hope, Ontario	1000
2001-01-10	22:00	Port Hope, Ontario	1000
2001-01-10	23:00	Port Hope, Ontario	1000
2001-01-10	24:00	Port Hope, Ontario	1000

Scale: 1:1000











Fanny Down the Ganny. Approaching the bridge at Clayton's Crossing, April 5, 2012

Photo: Port Hope History.ca





Remediation underway on Shuter Street around occupied contaminated properties



## Remediation underway of contaminated areas around occupied homes on Shuter Street





Trucks in publicly accessible areas, travel through town, onto highways with radioactive products and wastes emitting gamma and neutron radiation.





**A temporary storage site near high school, at former town landfill site.**





**Port Hope east beach playground beside harbour, several waste remediation areas, in zone of highest Cameco air emissions.**





## Remediation underway in open occupied contaminated area on Alexander Street





**Open area waste remediation site with uncovered dirt mounds across from school beside busy highway, homes, sidewalk. Trucks and staff move in and out of site.**





**Mill Street South open area remediation, former site of Canadian Firefighters Museum, beside Ganaraska River, homes, sidewalk, restaurant, fishing at harbour.**





# **Dismissed Port Hope elevated rates of diseases (Health Canada report 1998)**

**Great Lakes Health Effects Program Health Study on the Population around  
Port Hope Harbour (1998): Selected Causes of Death 1986-92  
Significantly higher than Ontario – Port Hope harbour area**

- hereditary diseases and degenerative diseases of the central nervous system
- multiple sclerosis
- parkinson's disease
- diseases of pulmonary circulation
- other forms of heart disease
- diseases of arteries, arterioles and capillaries
- acute respiratory infections
- atherosclerosis
- other diseases of upper respiratory tract
- pneumonia and influenza
- emphysema
- chronic obstructive pulmonary disease and allied conditions
- cancer, lip and oral cavity
- cancer, pharynx
- cancer, gallbladder and extrahepatic bile ducts
- cancer, respiratory and intrathoracic organs
- cancer, trachea, bronchus, lung
- cancer, other and unspecified sites
- cancer, bone , connective tissue,
- cancer, skin



## **Dismissed Port Hope elevated rates of diseases (Health Canada reports 1998, 2000, 2002)**

- Port Hope elevated for selected periods and cohorts for: Overall death rate, circulatory disease, leukemia, non-Hodgkins lymphoma, cancers including childhood cancer deaths, and cancers of the lung, brain, nasal/sinus, esophageal, lip, bone, and colorectal.

**2000, 2002 Health Canada/CNSC Data for Port Hope (Reassessed by Mintz, 2004)**

- Causes of death 1986-92 significantly higher than Ontario include: hereditary, neurological, cardiovascular, respiratory diseases; cancers, including lip and oral cavity, pharynx, gallbladder, lung, trachea, bronchus, bone.

**1998 Health Canada Great Lakes Health Effects Program Health Study on the Population Around Port Hope Harbour**



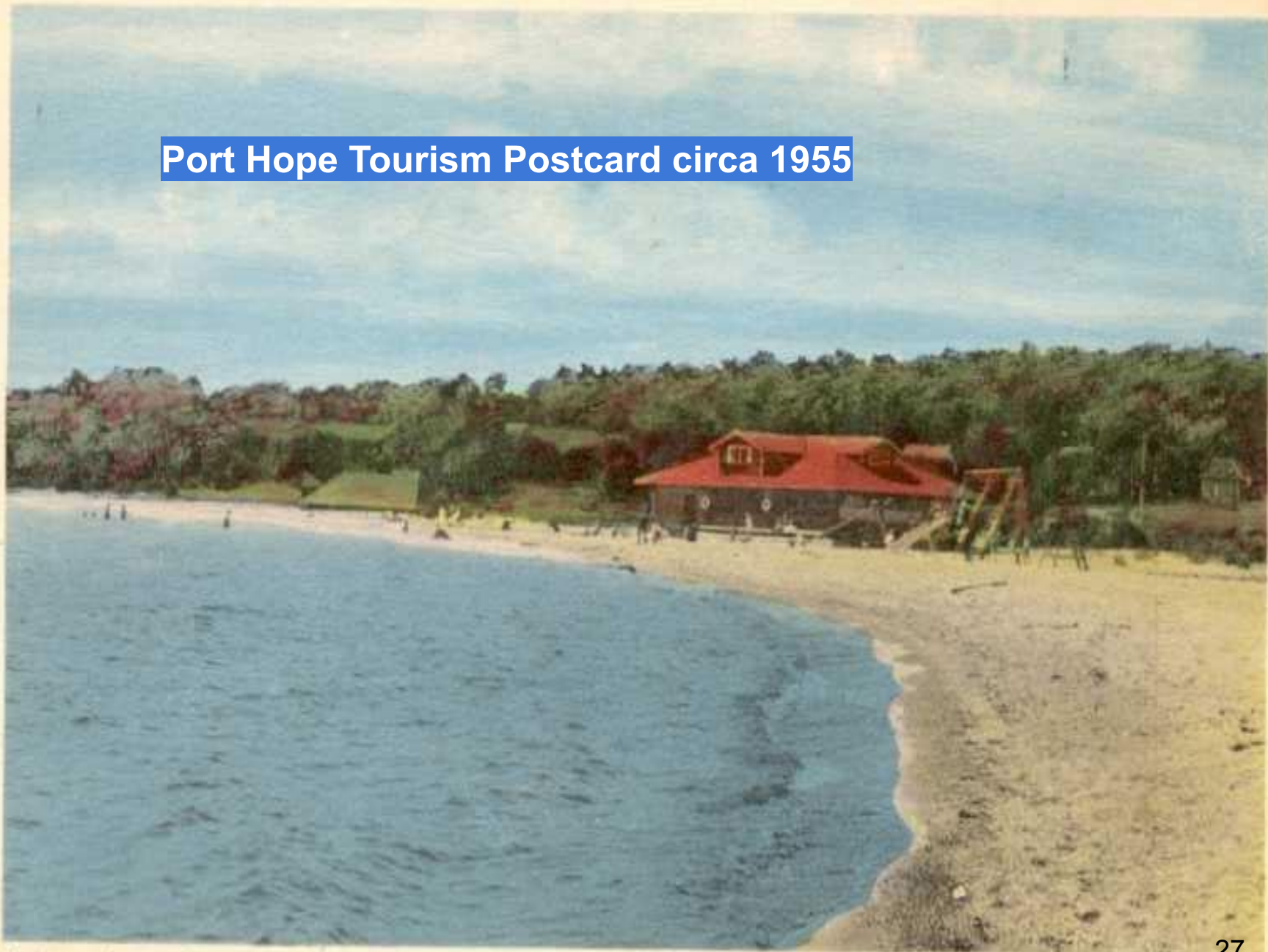
## Excerpts of independent analysis by Dr. Eric Mintz, Epidemiologist, of two federal Port Hope health outcome reports

- ...the patterns of several cancer rates show cause for concern in that the patterns are consistent with environmental contamination.
- Certainly the raised leukemia rates, which were even higher before remediation are not reassuring.
- 100 more female deaths than expected in the 1986-97 period due to circulatory disease...surprise finding requires further scrutiny.
- Findings suggest children experienced high cancer rates, particularly before 1986.
- The findings taken together show a pattern that is quite suggestive of an excess of brain cancer in Port Hope.
- Along with the brain cancer, colon cancer and some of the rare cancer results, the available evidence points to there being problems in Port Hope.

.... Reviews by **Dr. Eric Mintz**, 2000, 2002



**Port Hope Tourism Postcard circa 1955**



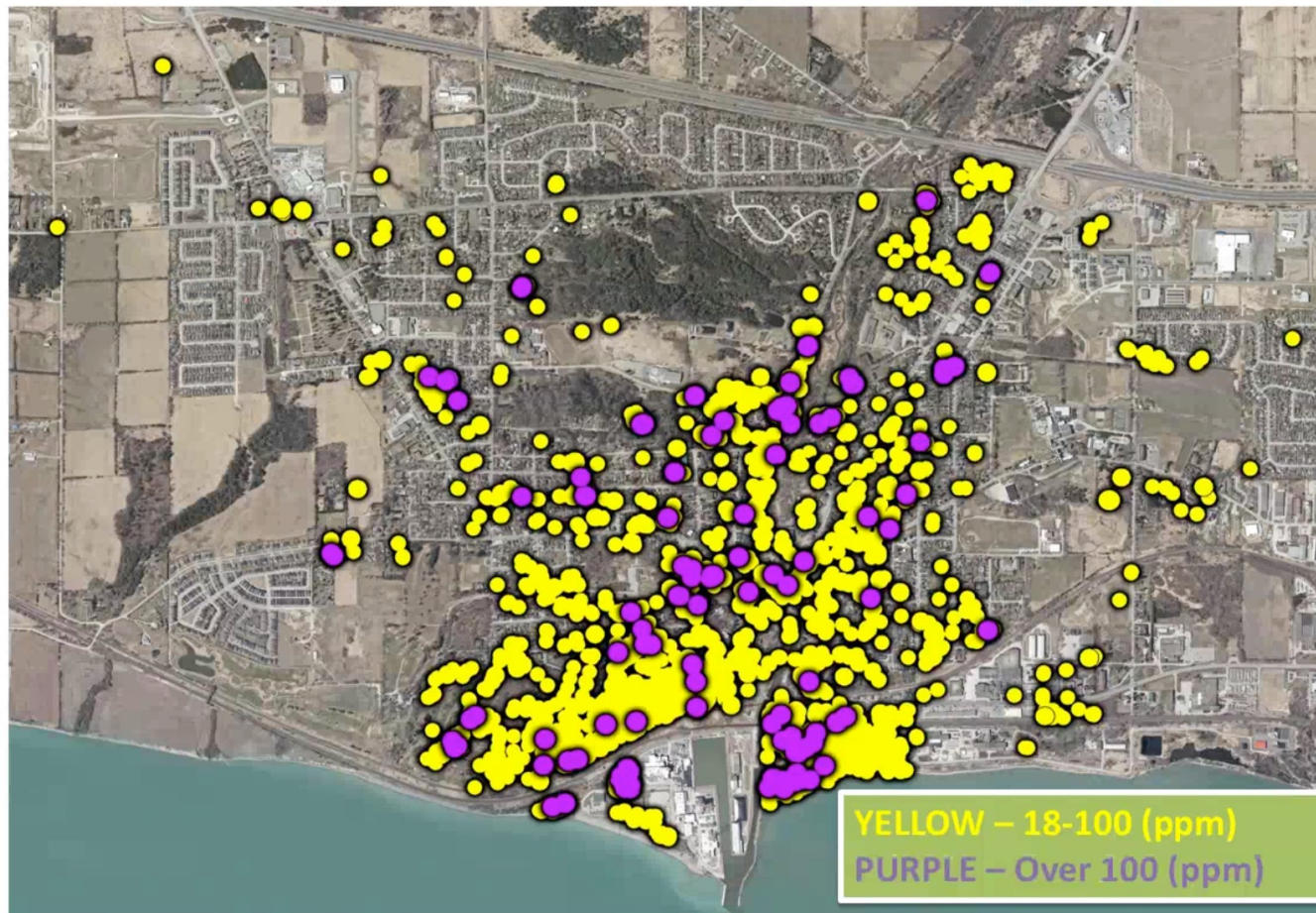
Bathing Beach, Port Hope, Ontario.—2.



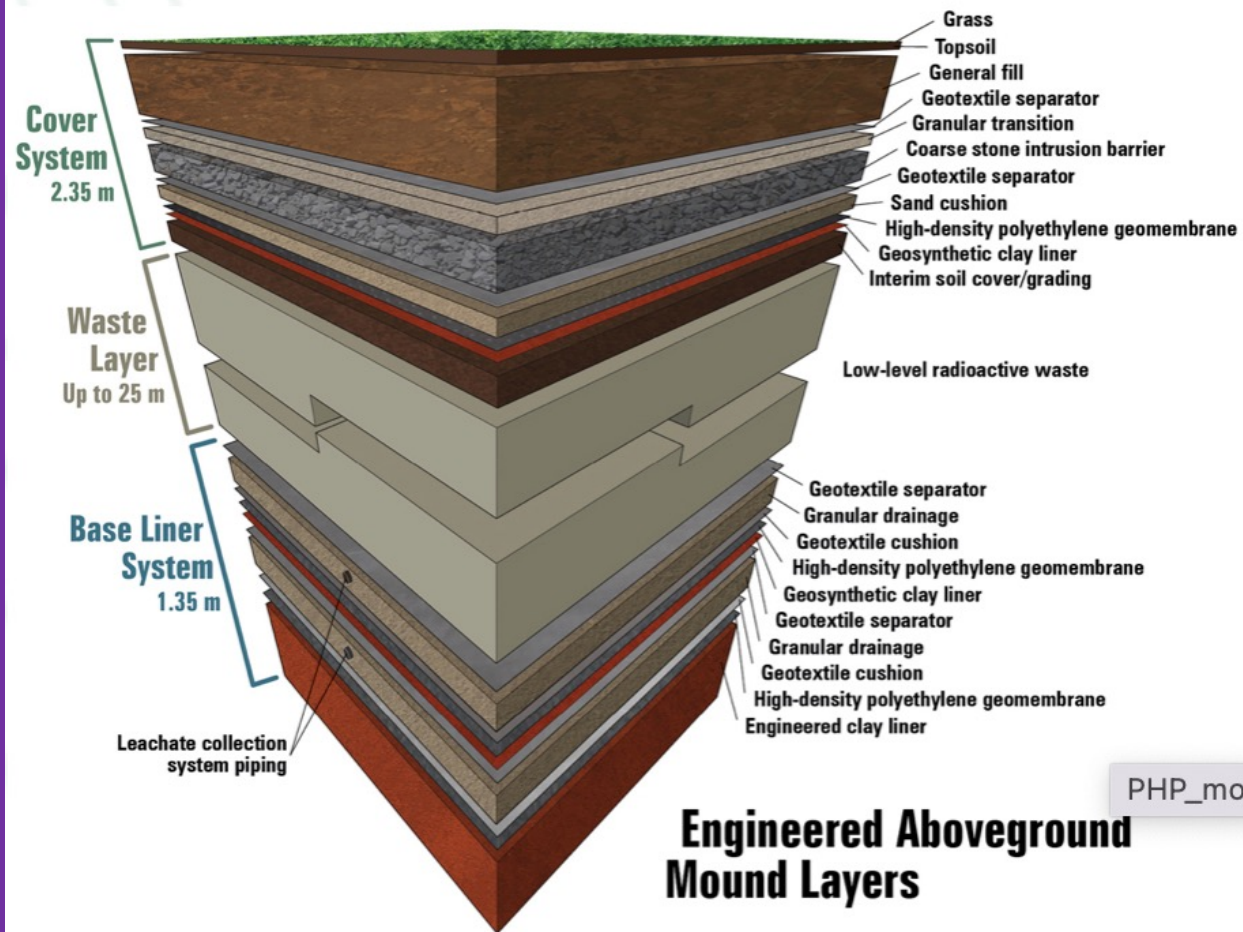
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filed by Dr. Gordon Edwards



## Arsenic by Boreholes (Soil Samples)



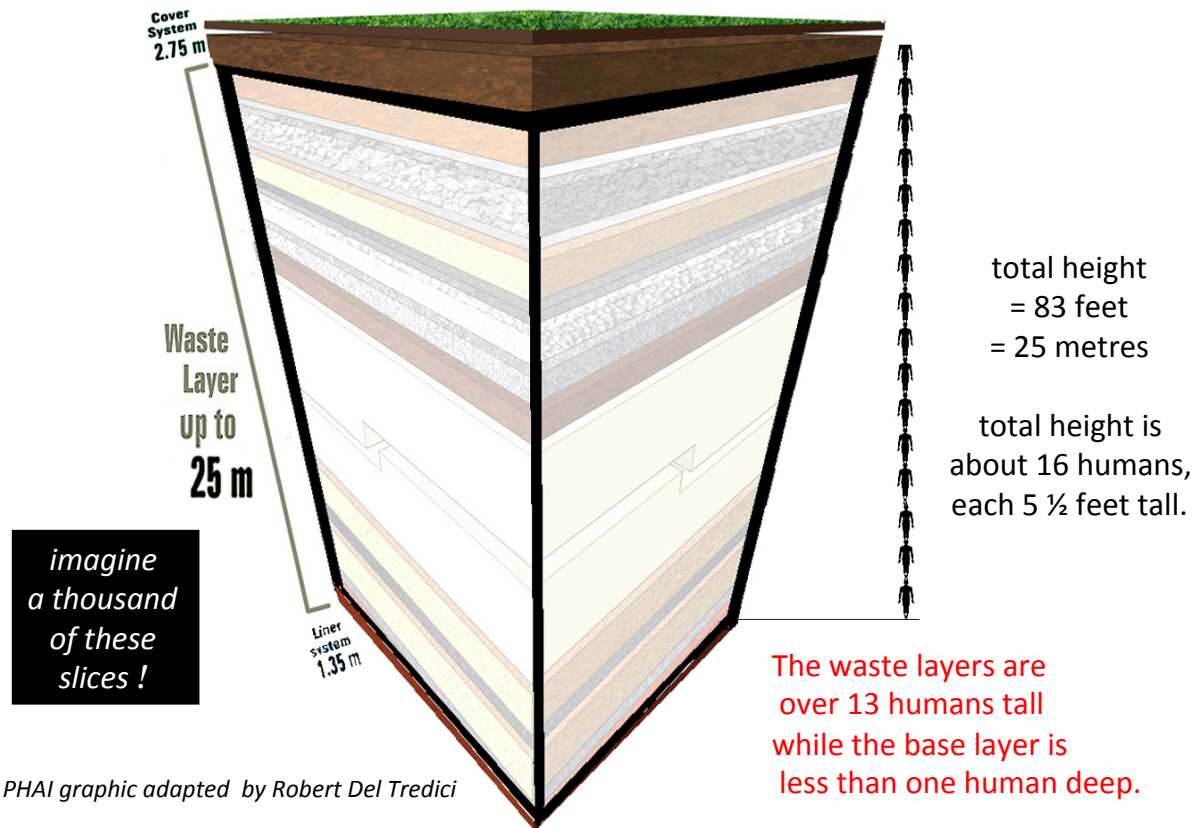




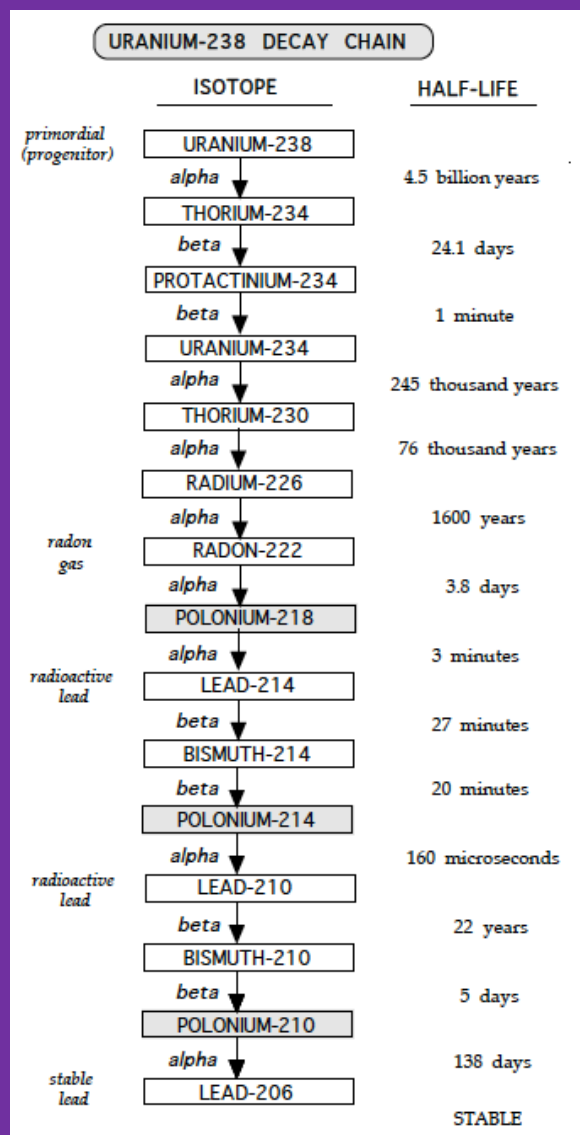
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“Low level” radioactive waste mound proposed for Port Hope, Ontario.  
A surface dump, 5-7 stories tall, with a base = 70 hockey rinks, close to Lake Ontario.









# THORIUM-232 DECAY CHAIN

