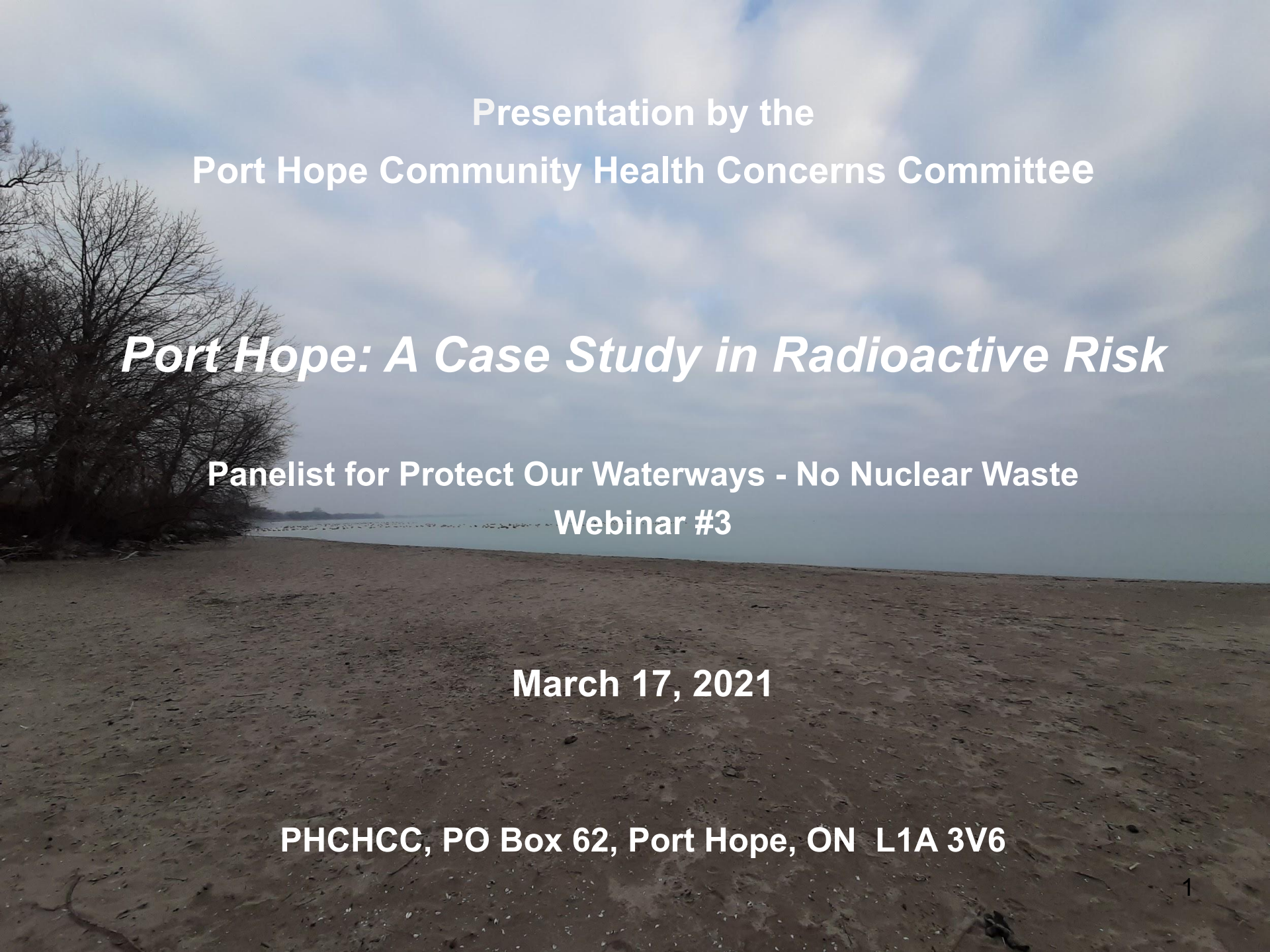


Presentation by the

Port Hope Community Health Concerns Committee

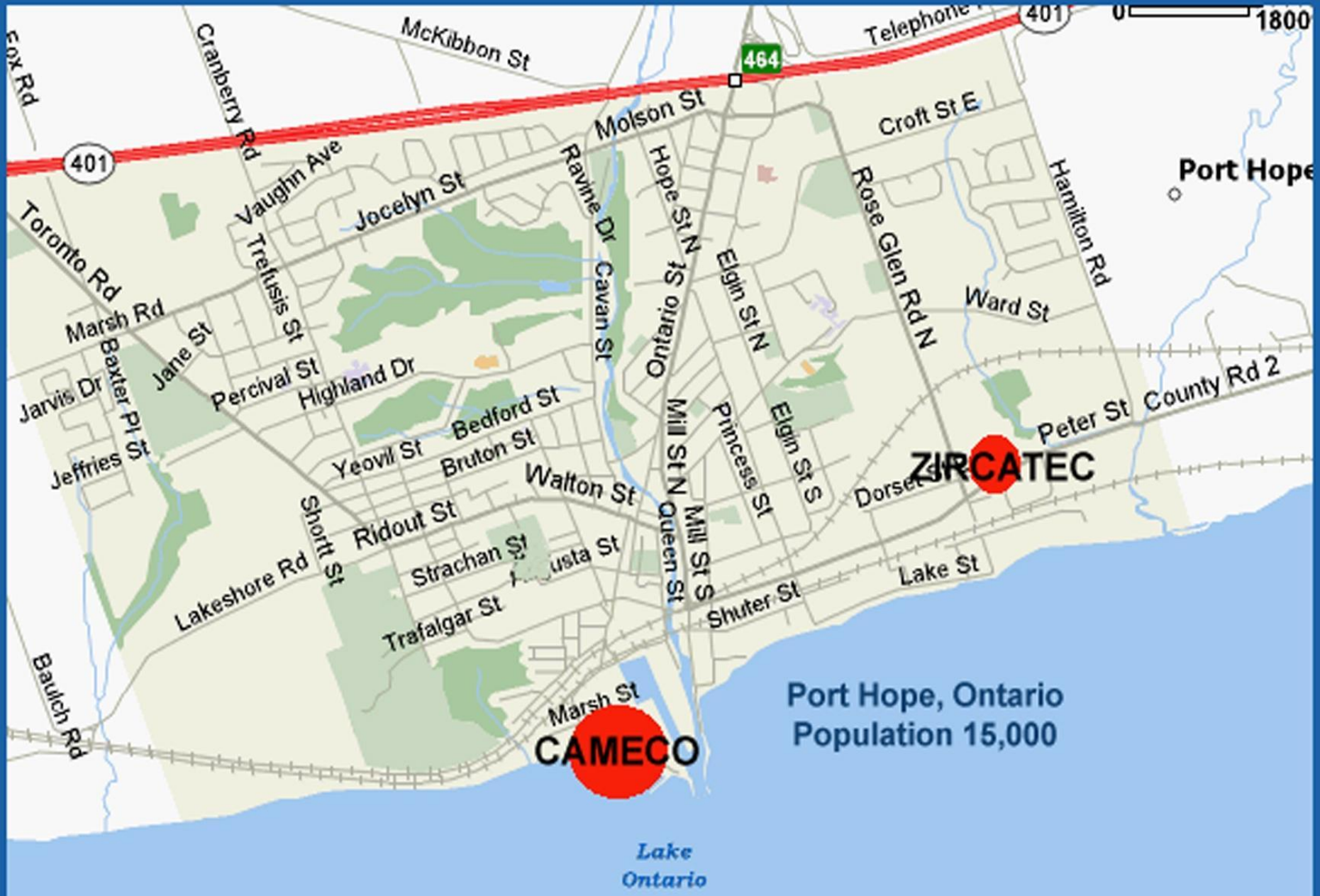
Port Hope: A Case Study in Radioactive Risk

Panelist for Protect Our Waterways - No Nuclear Waste

Webinar #3

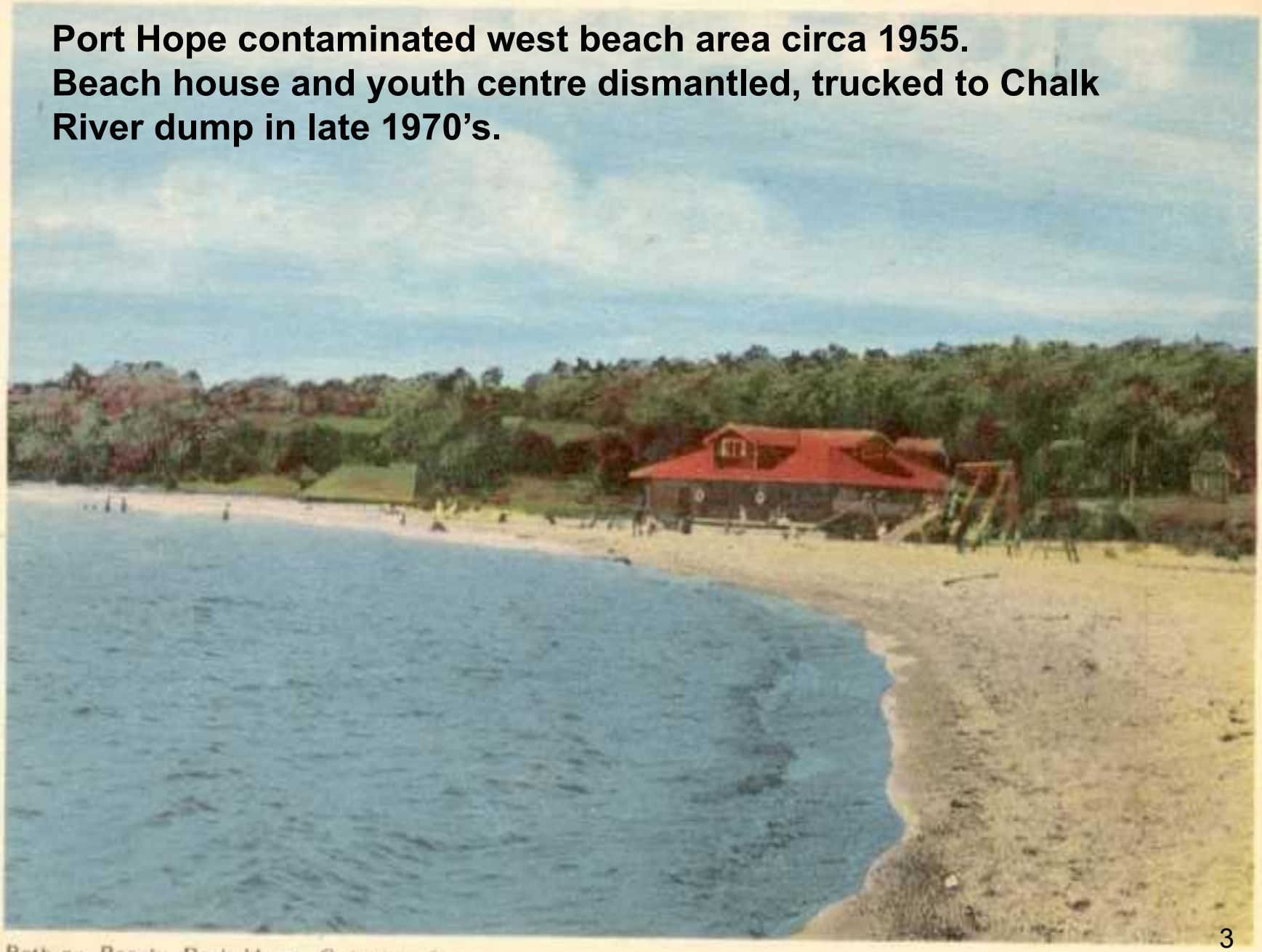
March 17, 2021

PHCHCC, PO Box 62, Port Hope, ON L1A 3V6

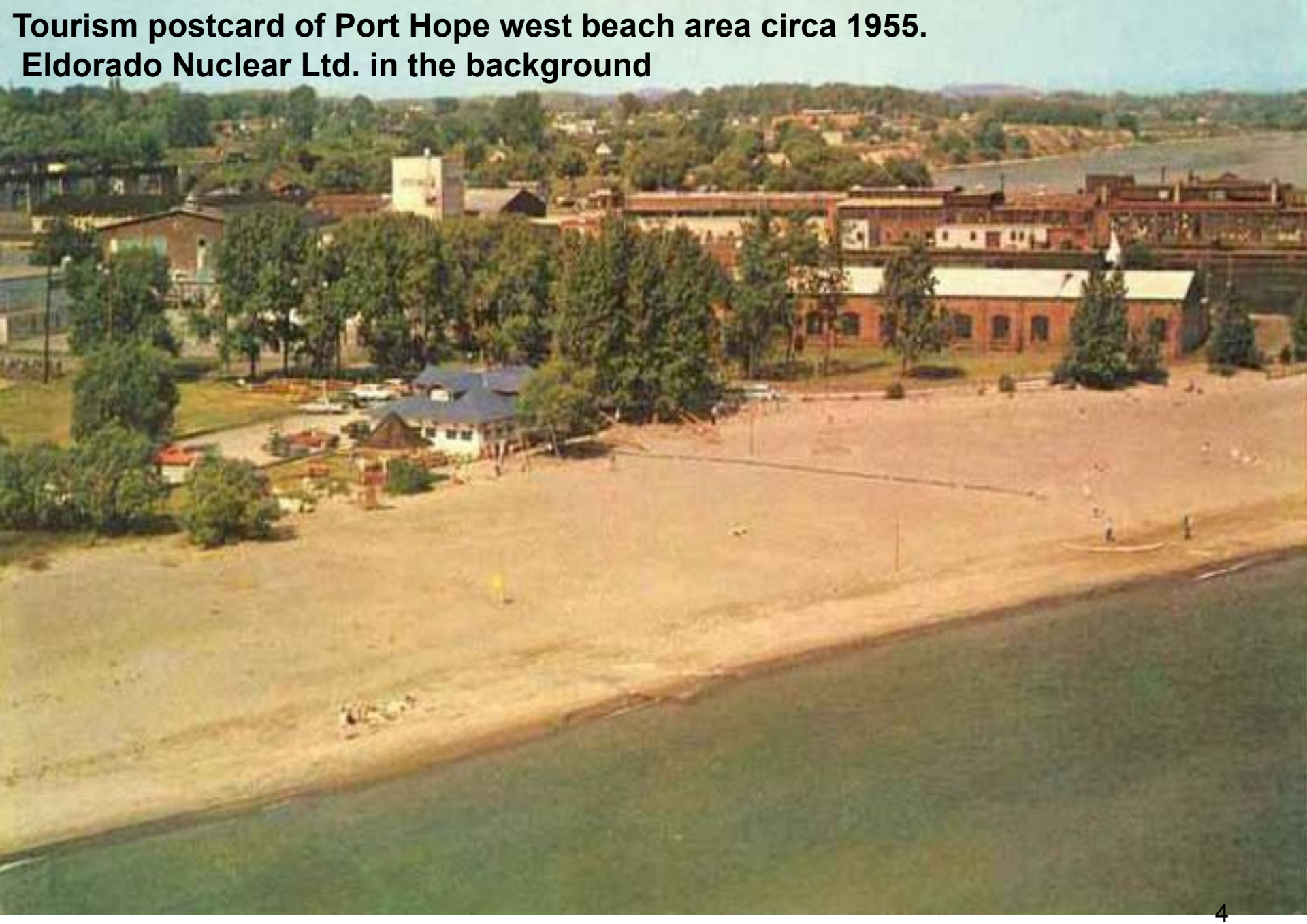


Cameco's conversion and fuel fabrication facilities.

Port Hope contaminated west beach area circa 1955. Beach house and youth centre dismantled, trucked to Chalk River dump in late 1970's.



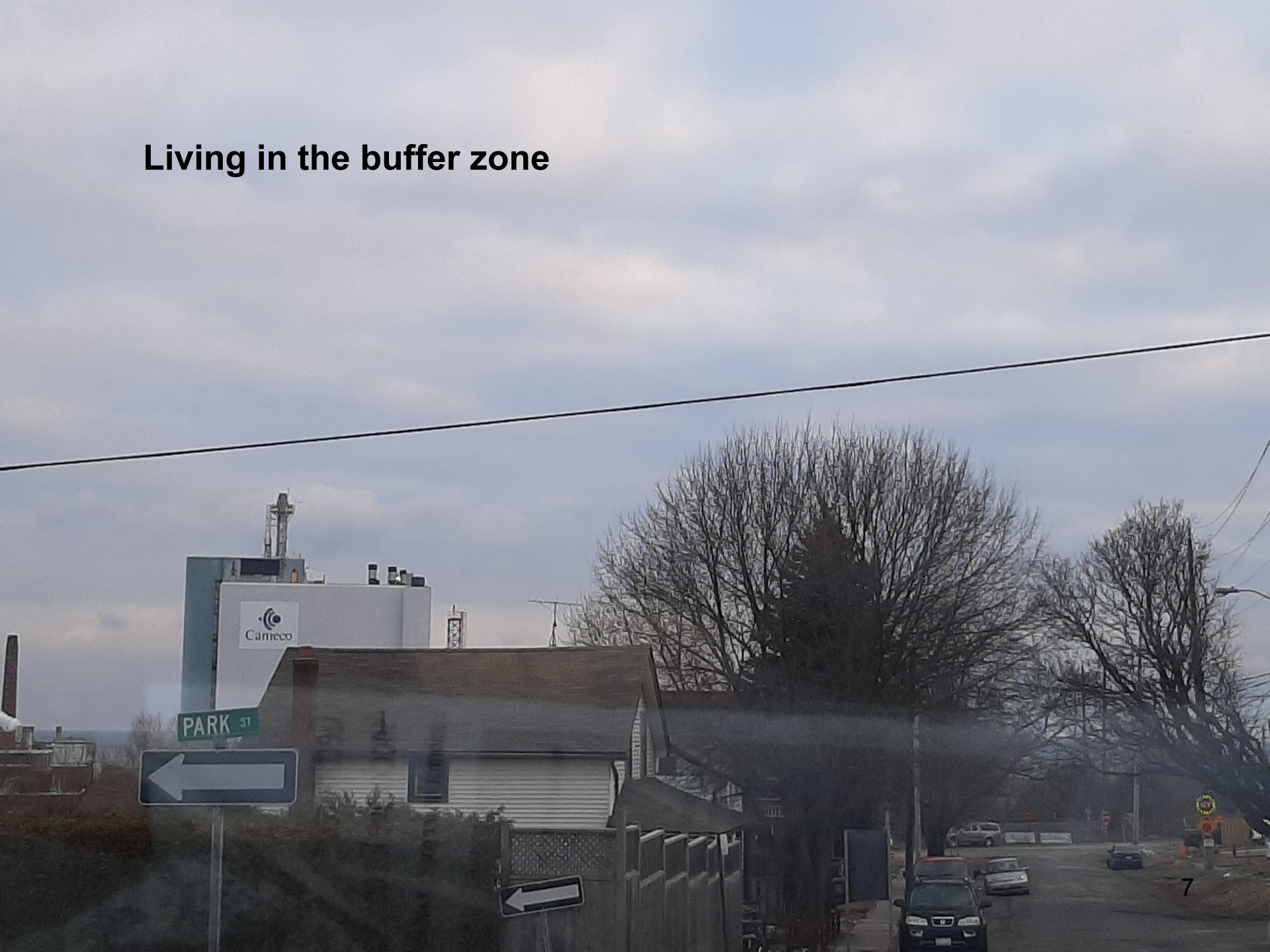
Tourism postcard of Port Hope west beach area circa 1955.
Eldorado Nuclear Ltd. in the background




Cameco uranium fuel manufacturing facility beside homes, shops, main highway.


Third CNSC licensed site in residential area. Radioactive waste cylinders emitting gamma radiation beside public roads, parking lot.

Living in the buffer zone



Port Hope Evening Guide

Cloudy and rain tomorrow.

VOL. 98 NO. 34 PORT HOPE, ONTARIO WEDNESDAY FEBRUARY 18, 1976 10 C

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Concerned citizens wait patiently for their turn to address the panel.

Residents, experts confront Ministry

By Susan Rhind

Ministry of Health officials came under heavy attack from Port Hope and outside concerned citizens at last night's radiation meeting. Faye More, Port Hope resident, accused the government "of imposing a so-called acceptable risk on the people of Port Hope. We were never asked what an acceptable risk would be to us. I think there should be a mandate from the people to get their opinions on this imposed risk. There also appears to me to be a conflict of interest here." Mrs. More pointed out that all the information the people are receiving is coming from a government body, yet the problem seems to have originated with the government. Eldorado Nuclear Ltd., a crown corporation, has been blamed for the presence of contaminated fill in Port Hope.

Dr. Fred Knelman, professor of science and human affairs at Concordia University, Montreal stated: "I

Politicians Back Public Inquiry, 1976

VOL. 98 NO. 34

Politicians back public inquiry

Russell Rowe, Conservative MPP for Northumberland and Speaker of the House said Tuesday night at the public meeting at Port Hope High School that he, his party, and Health Minister Frank Miller were all very much in favor of a public inquiry into the radiation problem in Port Hope.

Mr. Rowe said that Frank Miller had already stated that he was in favor of such an investigation.

David Stewart, Liberal MPP for London Centre, said that his party also endorsed a public inquiry. He said that he had been following the Port Hope situation and he offered his complete support to get the facts out into the open.

Douglas Moffatt, MPP for Durham East said that he and NDP leader Stephen Lewis had already called for such an inquiry three times and as yet, no action had been taken.

Mayor Cyril (Bus) Hewson said in his concluding remarks that town council would also like to see such inquiry.

Mr. Mofdfatt said that there was no need to wait for federal government to take action. He said that Ontario has its own act to permit the investigation.

Good luck needed

Nuclear Physicist: Scientists' Warnings, 1976

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Present problems tip of the iceberg

Sam Nargawalls, a nuclear physicist formerly with the ministry of health, said that the problems experienced so far in Port Hope are only the tip of the iceberg. He said that he calculated how much radiation is in dump sites and it is about 8000 Curies of radiation potential.

He said that he had tried unsuccessfully to get the figures from Eldorado, the ministry of health and the Atomic Energy Control Board.

The 8000 curie potential would be based on the equivalent of about 8000 grams of radium being dumped from Eldorado refining operations over the years.

A curie is one trillion times a picoCurie. A picoCurie is the level used in talking of radon problems in Port Hope. If the international standard is one picoCurie, the potential radon hazard buried in dumps around Port Hope is 8000 trillion times that of the normal dosage recommended for the public, according to Mr. Nargwalls. The figure looks like this: 8,000,000-000,000,000 times the level of one.

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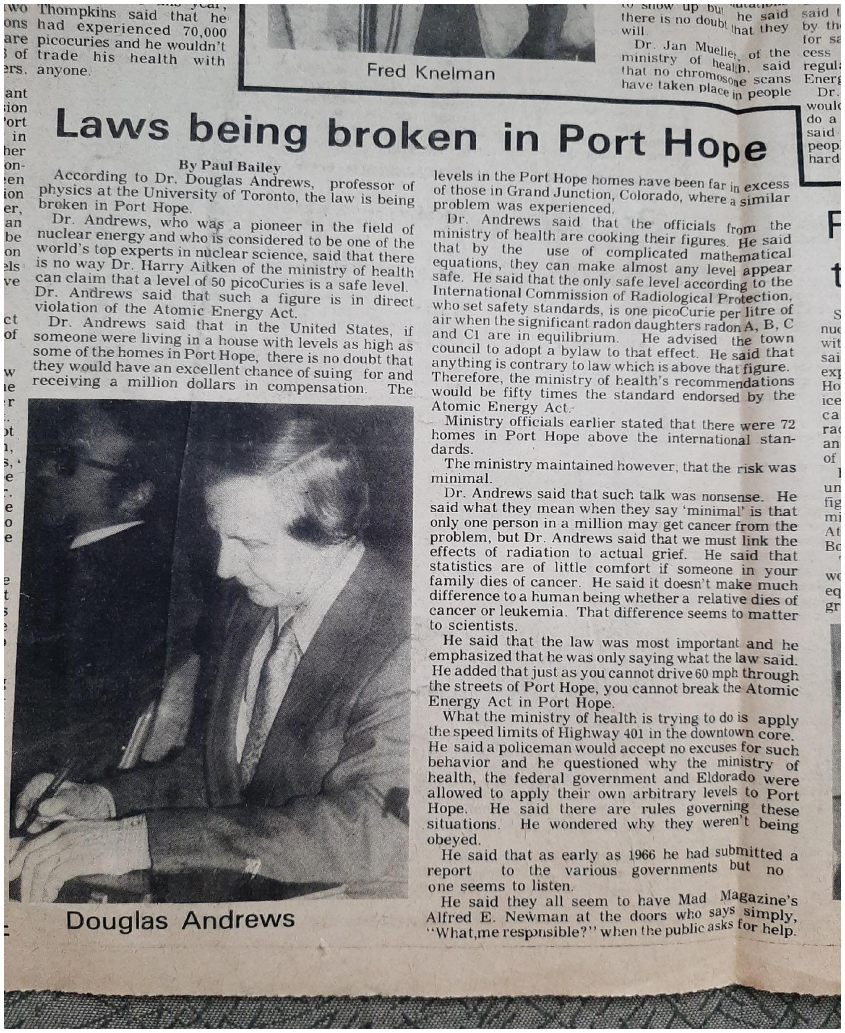
Nuclear Engineer Dr. Douglas Andrews, 1976 (warned government of contamination from 1966)



Thompkins said that he had experienced 70,000 picocuries and he wouldn't trade his health with anyone.

Fred Knelman

there is no doubt that they will.

Dr. Jan Mueller of the ministry of health, said that no chromosome scans have taken place in people

Laws being broken in Port Hope

By Paul Bailey

According to Dr. Douglas Andrews, professor of physics at the University of Toronto, the law is being broken in Port Hope.

Dr. Andrews, who was a pioneer in the field of nuclear energy and who is considered to be one of the world's top experts in nuclear science, said that there is no way Dr. Harry Aitken of the ministry of health can claim that a level of 50 picoCuries is a safe level.

Dr. Andrews said that such a figure is in direct violation of the Atomic Energy Act.

Dr. Andrews said that in the United States, if someone were living in a house with levels as high as some of the homes in Port Hope, there is no doubt that they would have an excellent chance of suing for and receiving a million dollars in compensation. The levels in the Port Hope homes have been far in excess of those in Grand Junction, Colorado, where a similar problem was experienced.

Dr. Andrews said that the officials from the ministry of health are cooking their figures. He said that by the use of complicated mathematical equations, they can make almost any level appear safe. He said that the only safe level according to the International Commission of Radiological Protection, who set safety standards, is one picoCurie per litre of air when the significant radon daughters radon A, B, C and C1 are in equilibrium. He advised the town council to adopt a bylaw to that effect. He said that anything is contrary to law which is above that figure. Therefore, the ministry of health's recommendations would be fifty times the standard endorsed by the Atomic Energy Act.

Ministry officials earlier stated that there were 72 homes in Port Hope above the international standards.

The ministry maintained however, that the risk was minimal.

Dr. Andrews said that such talk was nonsense. He said what they mean when they say 'minimal' is that only one person in a million may get cancer from the problem, but Dr. Andrews said that we must link the effects of radiation to actual grief. He said that statistics are of little comfort if someone in your family dies of cancer. He said it doesn't make much difference to a human being whether a relative dies of cancer or leukemia. That difference seems to matter to scientists.

He said that the law was most important and he emphasized that he was only saying what the law said. He added that just as you cannot drive 60 mph through the streets of Port Hope, you cannot break the Atomic Energy Act in Port Hope.

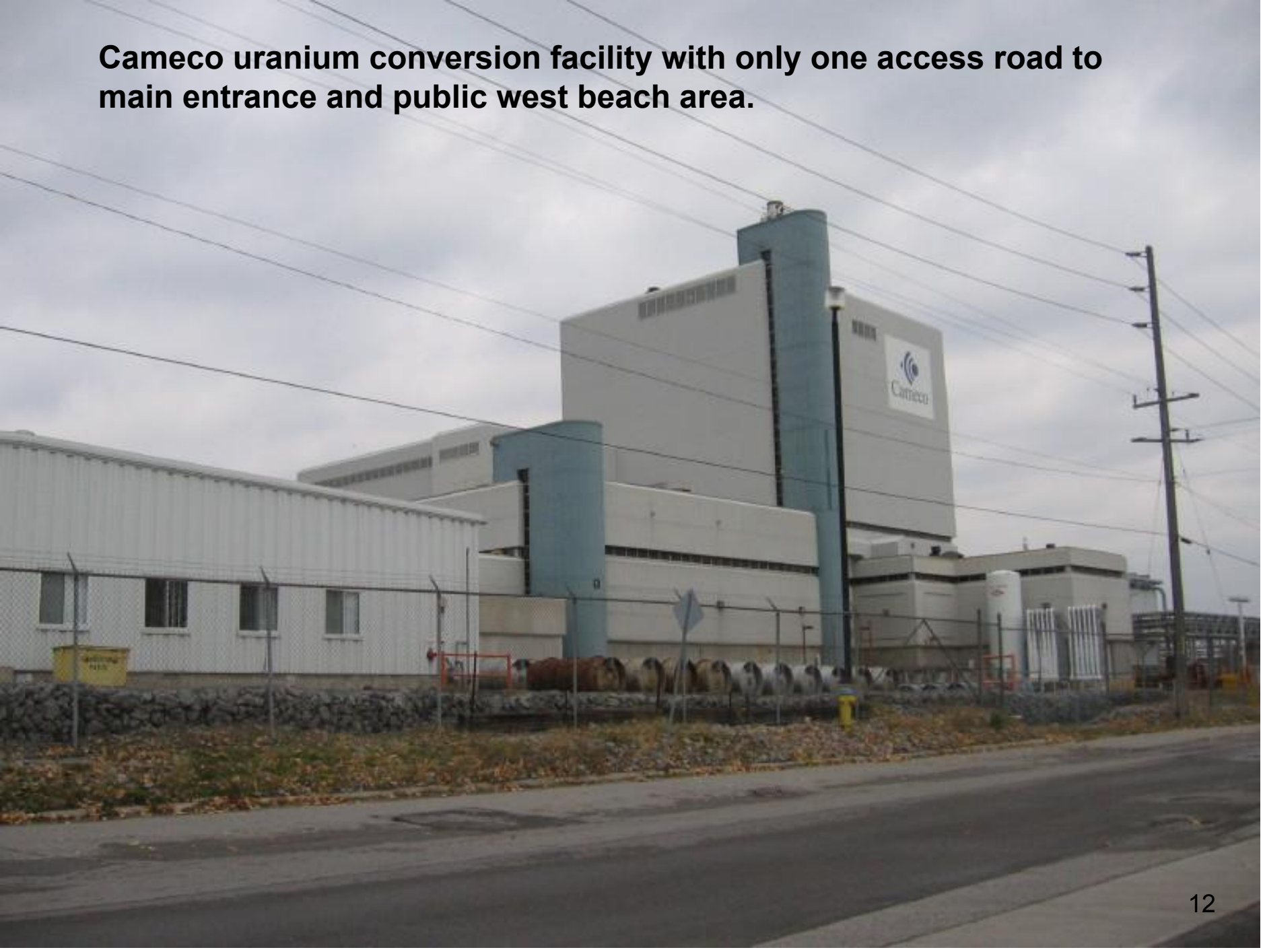
What the ministry of health is trying to do is apply the speed limits of Highway 401 in the downtown core. He said a policeman would accept no excuses for such behavior and he questioned why the ministry of health, the federal government and Eldorado were allowed to apply their own arbitrary levels to Port Hope. He said there are rules governing these situations. He wondered why they weren't being obeyed.

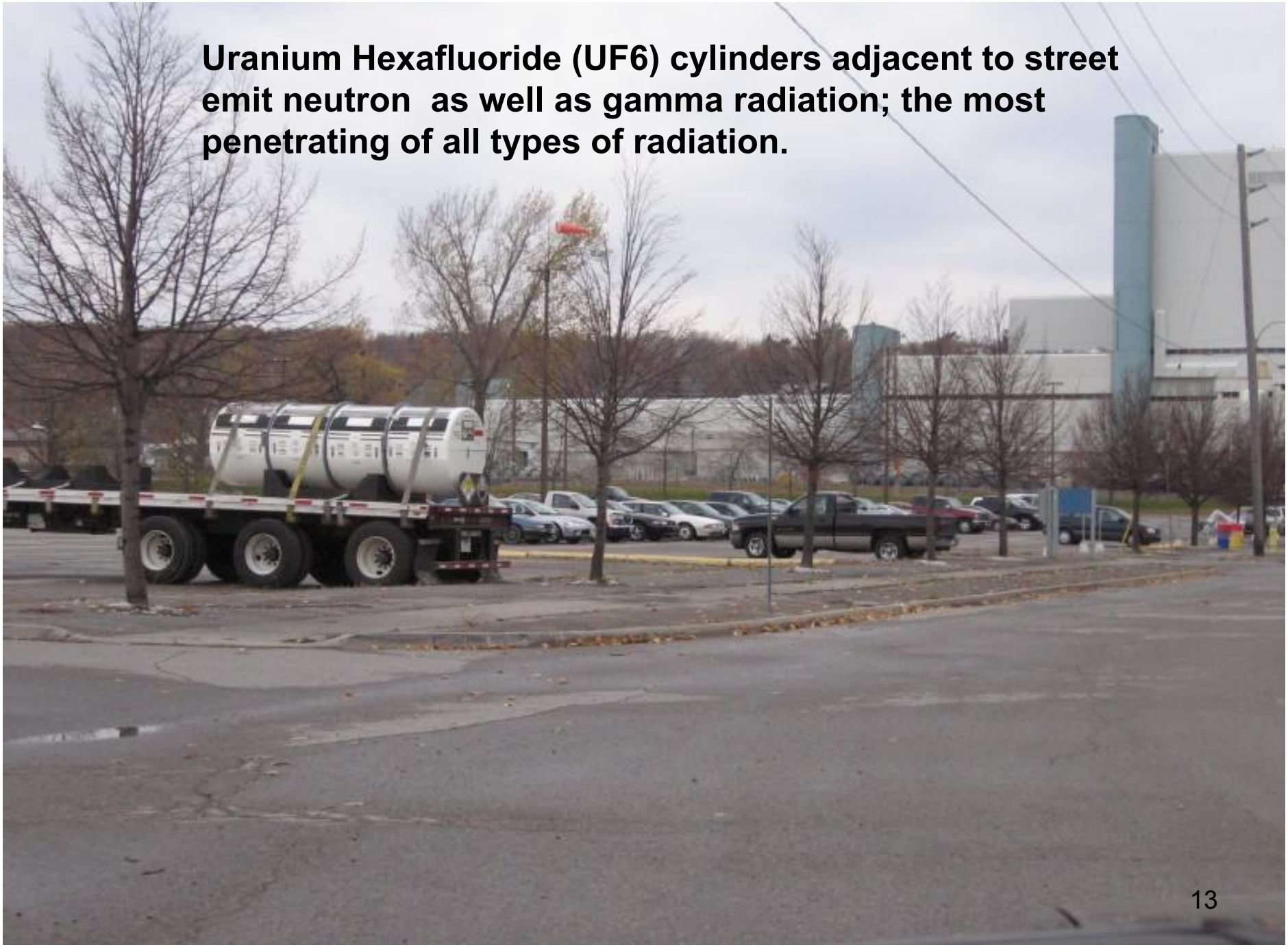
He said that as early as 1966 he had submitted a report to the various governments but no one seems to listen.

He said they all seem to have Mad Magazine's Alfred E. Newman at the doors who says simply, "What,me responsible?" when the public asks for help.

Douglas Andrews

Cameco uranium conversion facility with only one access road to main entrance and public west beach area.




Uranium Hexafluoride (UF6) cylinders adjacent to street emit neutron as well as gamma radiation; the most penetrating of all types of radiation.


Trucks in publicly accessible areas, travel through town, onto highways with radioactive products and wastes emitting gamma and neutron radiation.
PERMISSIBLE
GROSS MASS
15450kg
UN 2978
2978
CORROSIVE
8
RTRI 0033
LODE KING
RSB LOGISTIC

Radioactive material parked in public roadway beside restaurant. Port Hope, March 2018. Source of truck not known. Emissions. No security.

Doses from UO2 Transportation

transport of natural UO2 also adds to the annual gamma radiation dose, not only to the driver but also to others on the road, and residents in the vicinity. The Environmental Review (SENES 2007) estimates an annual dose of 170 μSv/yr for a driver exposed to incoming material for 44 hours (asThe transport of natural UO2 also adds to the annual gamma radiation dose, not only to the driver but also to others on the road, and residents in the vicinity.
The
The Environmental Review (SENES 2007) estimates an annual dose of 170 μSv/yr for a driver exposed to incoming material for 44 hours (assuming 66 trips of approximately 40 minutes each with a 20' or 40' truck). The dose to a member of the public from incoming material (assuming 33 hours of exposure) is estimated to be 1.7 μSv/yr to 3.2 μSv/yr (for 20' and 40' trucks respectively). The dose to a driver exposed to outgoing material is estimated at 400 μSv/yr, assuming 125 hours of exposure over 25 trips.

The dose to a member of the public from incoming material (assuming 33 hours of exposure) is estimated to be 1.7 μSv/yr to 3.2 μSv/yr (for 20' and 40' trucks respectively). The dose to a driver exposed to outgoing material is estimated at 400 μSv/yr, assuming 125 hours of exposure over 25 trips.

Zircatec Environmental Review 2007

Table 4-4 Analyses of UO_3 Produced In/After 1984 at Hanford

Lot No.	Date	Pu ppb	Np * ppb	Tc ppm	^{103}Ru + $^{106}RuRh$ uCi/lb U	$^{95}ZrNb$ uCi/lb U	$^{234}Th/Pa$ uCi/lb U	^{234}U wt %	^{235}U wt %	^{236}U wt%	^{238}U wt %
84-08	6/11/84	2	N/A	N/A	<5	<3	<10	0.008	0.884	0.060	99.088
85-11	6/21/85	<0.5			<8	<6	<10	0.008	0.845	0.065	99.082
85-12	6/25/85	<5			<6	<8	<10	0.010	0.849	0.068	99.073
85-13	6/26/85	<5			<6	<8	<10	0.011	0.852	0.070	99.067
85-14	7/16/85	<5			<6	<8	<10	0.009	0.846	0.068	99.077
85-15	7/16/85	<5			<6	<8	<10	0.009	0.849	0.071	99.071
85-16	7/19/85	<5			<4	<6	<10	0.008	0.848	0.066	99.078
85-17	7/19/85	<5			<4	<6	<10	0.009	0.848	0.067	99.076
85-18	9/30/85	<5	<1000	7	<8	<6	<1	0.009	0.924	0.076	98.991
85-19	9/30/85	<5	<1000	7	<8	<6	<1	0.010	0.942	0.074	98.974
85-20	9/30/85	<5	<1000	7	<8	<6	<2	0.010	0.940	0.072	98.978
86-05	5/6/86	<2	490	12	<6	<4	<31	0.011	0.807	0.080	99.102
86-16	9/22/86	1	400	10	<6	<4	6	0.010	0.873	0.073	99.044
86-23	11/17/86	1	300	8	<6	<4	6	0.011	0.957	0.075	98.957
88-1	3/17/88	2	40	4	<6	<4	9	0.008	0.819	0.074	99.099
88-2	3/17/88	2	120	4	<6	<4	8	0.008	0.950	0.074	99.068
88-3	3/17/88	<1	160	3	<6	<4	10	0.009	0.818	0.073	99.100

Data retrieved from Analytical Data Sheets

* Limited additional ^{237}Np data preceding 1985 are provided in Section 4.5.4, 4.5.5, and Table 4-7.

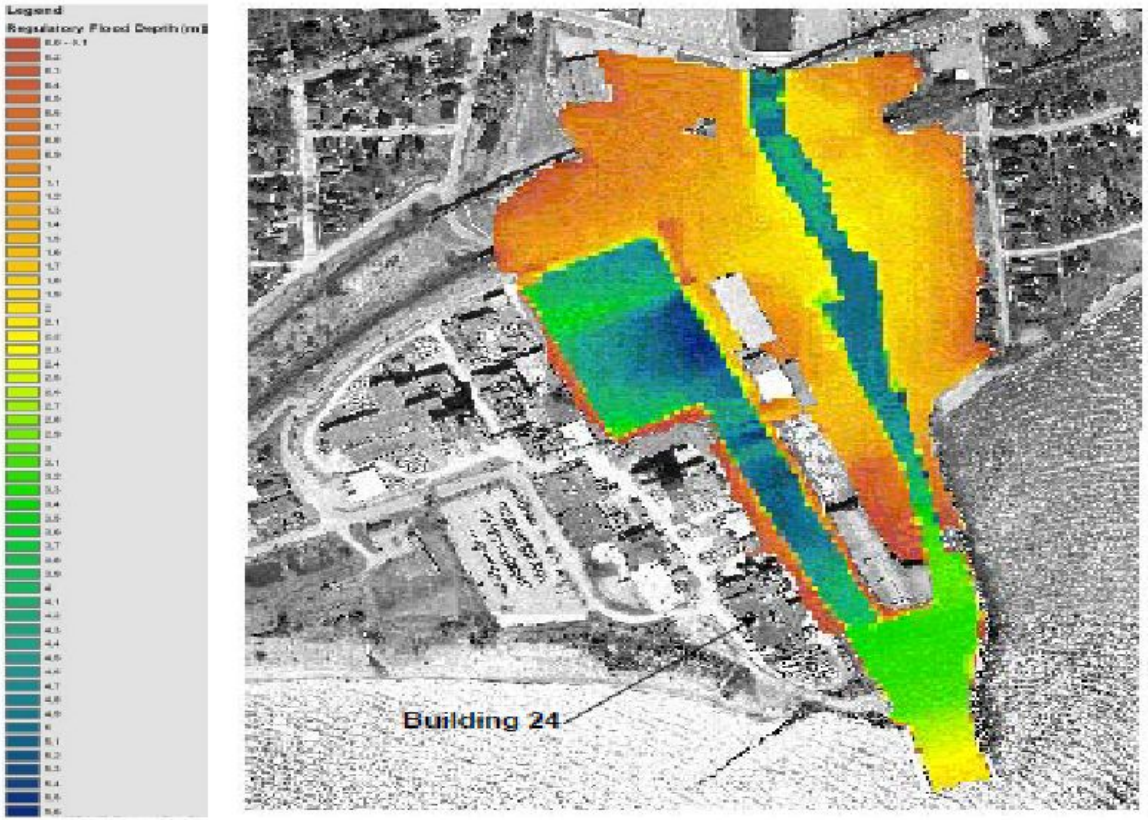
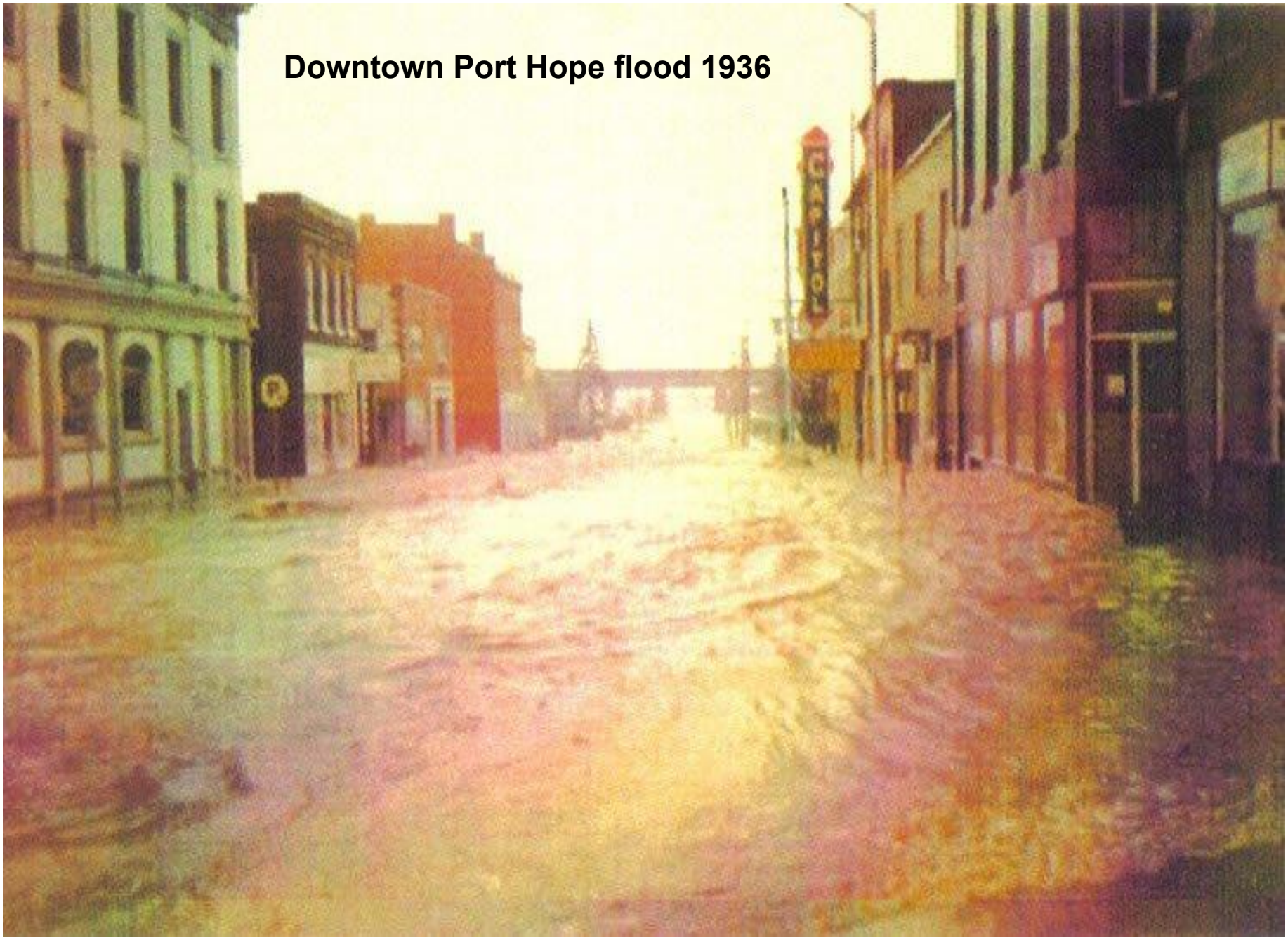


Figure 3-9
Regulatory Flood Depths in the Study Reach


Downtown Port Hope flood 1936

From Northumberland News, Feb. 2019 Ganaraska River flooding in harbour Cameco area

"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***

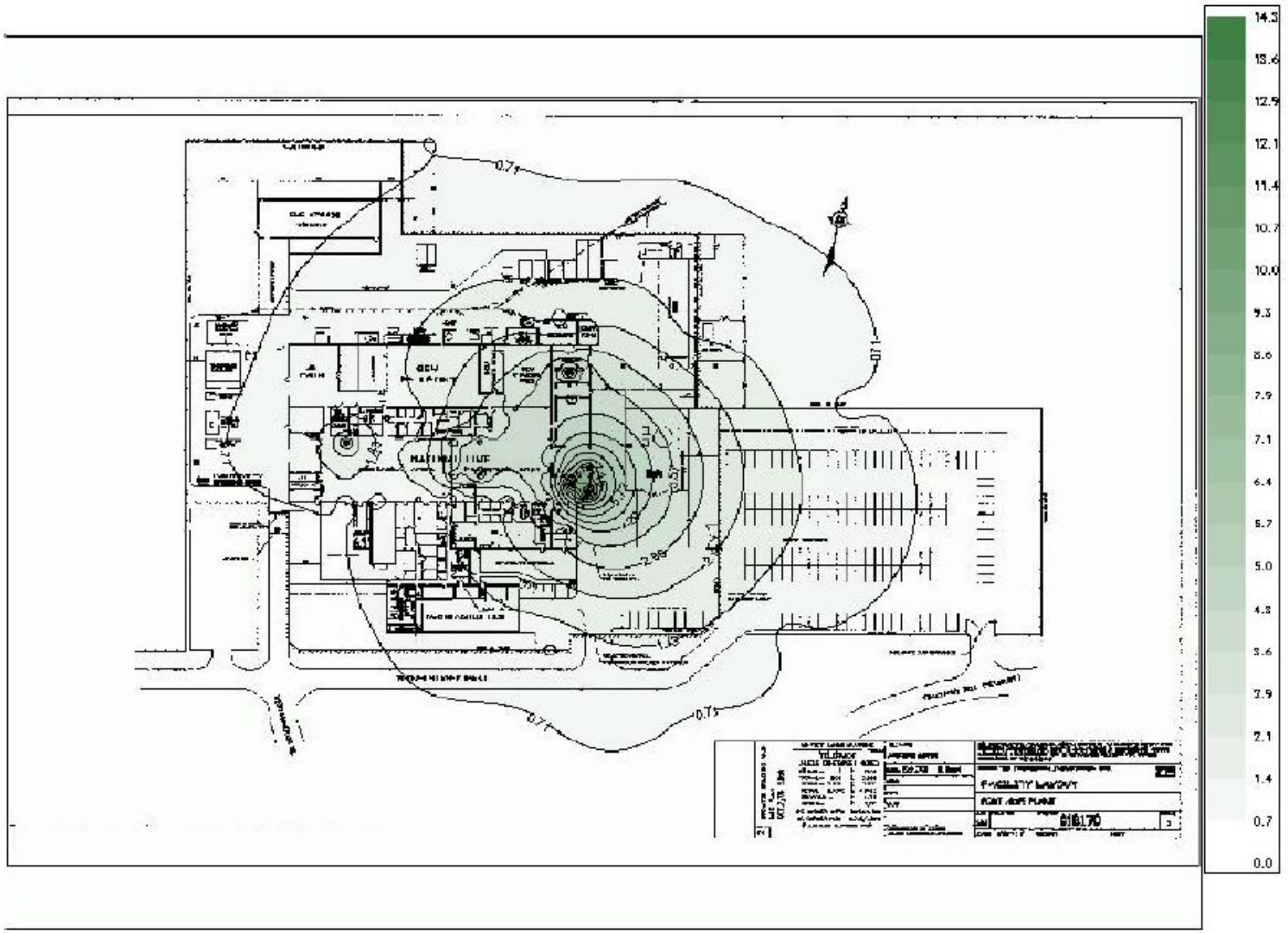
Figure 2. Annual Uranium Point-of-Impingement Model

9. APPENDIX A

Ambient Gamma Fields

1st Quarter 2009

mSv



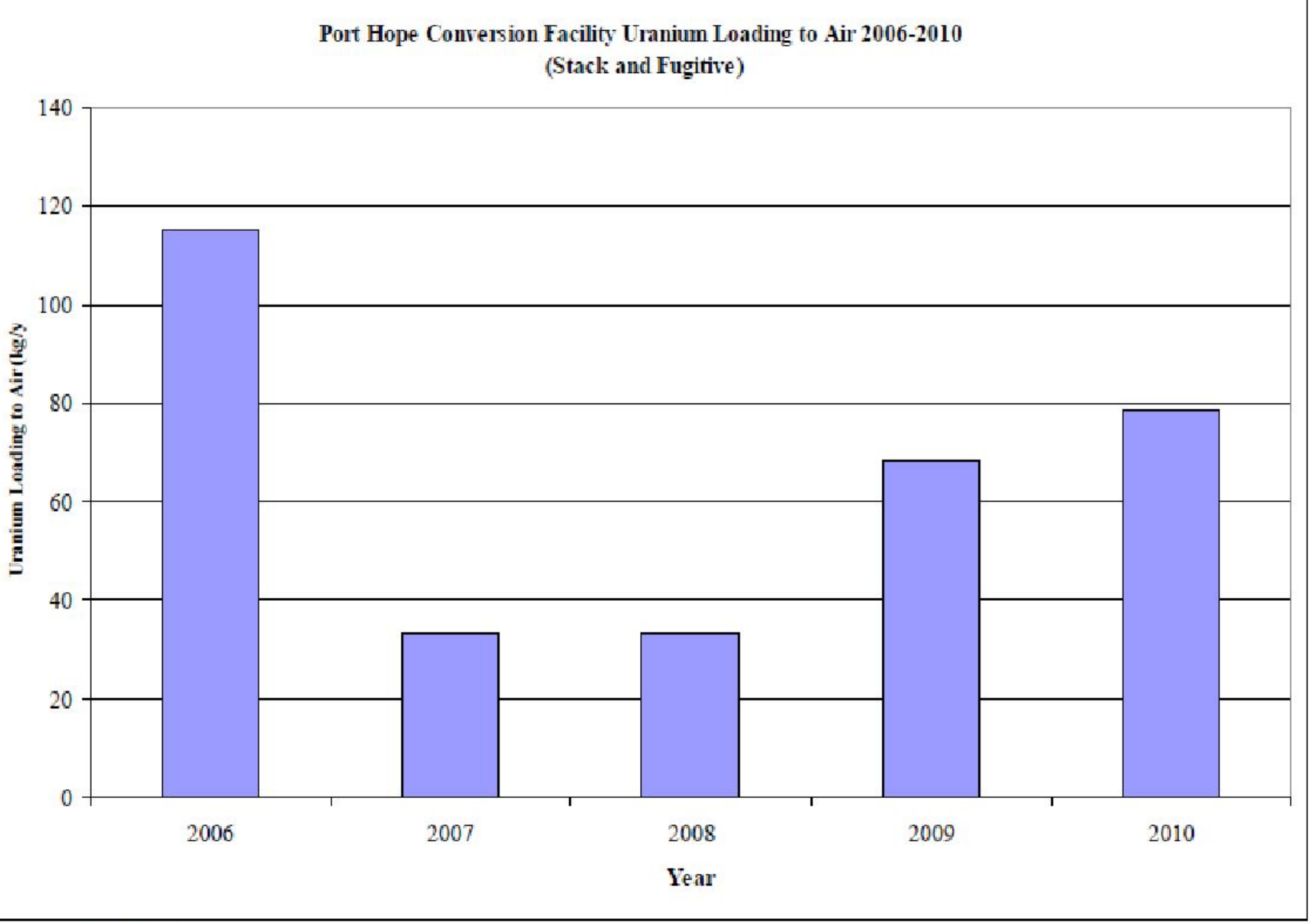
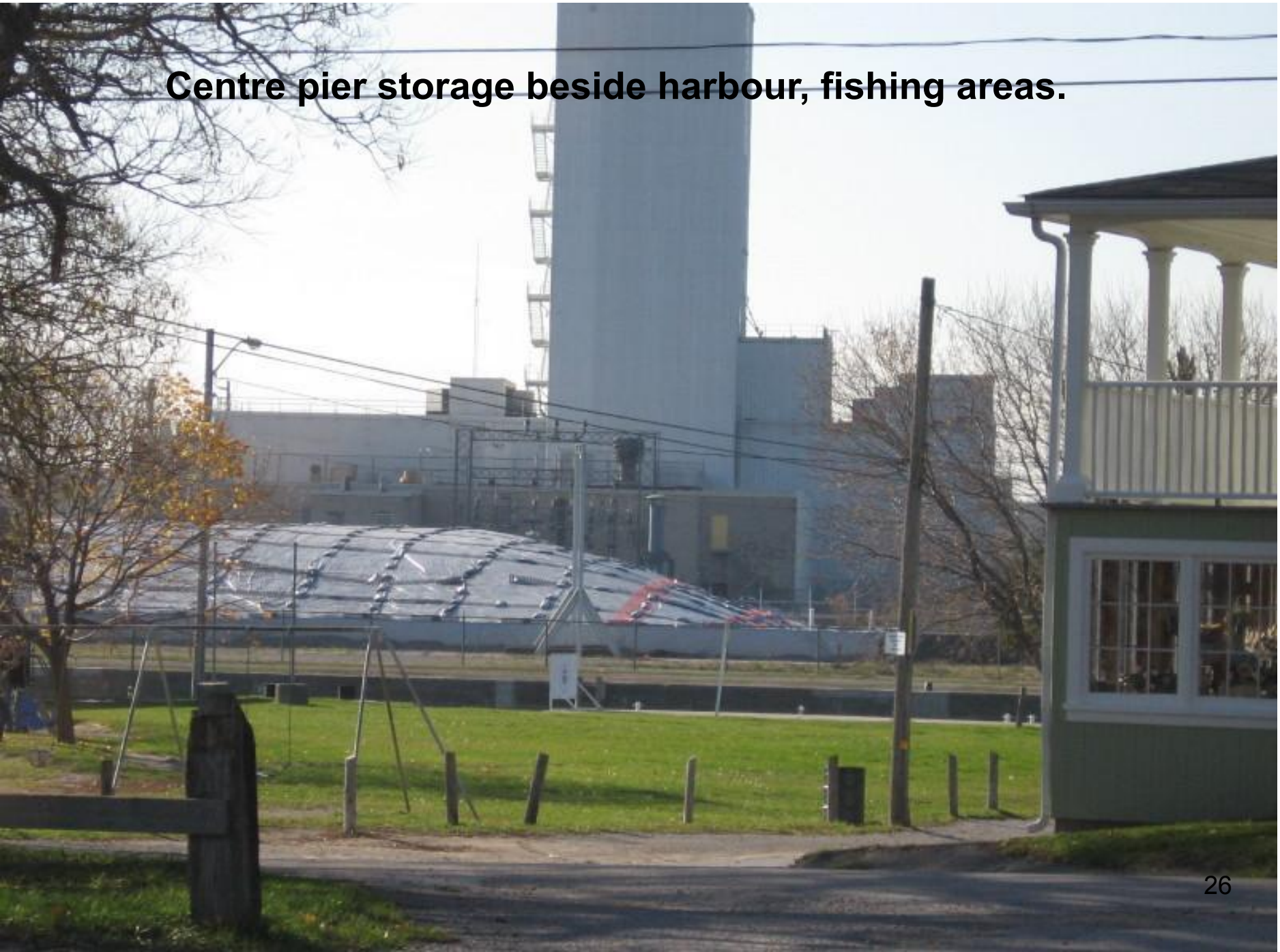

Port Hope Conversion Facility Uranium Loading to Air 2006-2010
(Stack and Fugitive)
Uranium Loading to Air (kg/y
140
120
100
80
60
40
20
0
2006
2007
2008
2009
2010
Year

Figure 7.2.12

Radioactive waste from west beach under tarps on centre pier beside Cameco until 2019.


Centre pier storage beside harbour, fishing areas.

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.


Trucking radioactive waste on hwy #2 in Port Hope - March 2021

Open area waste remediation site in a neighbourhood.

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.

MillStreet South open area waste remediation site, former site of Canadian Firefighters Museum, beside homes, restaurant, fishing at harbour.

Disturbing Port Hope health data required follow-up

- Port Hope elevated rates 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.

  Cancer Incidence Study 2000, Cancer and General Morbidity and Mortality, 2002 Health Canada/CNSC (Peer reviewed by Dr. Eric Mintz, Epidemiologist, 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 Area of Concern for the IJC (included Alderville community for certain data)

Port Hope health data: Independent analysis of two Health Canada/CNSC studies (2000, 2002) by Dr. Eric Mintz

- …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.

No Federal Health Follow-up

- Federal commitments to Port Hope dating from 1979 public announcements for $5 million health investigations - not done
- The Lees Study (Queen's University, 1983) – showed association of radon and lung cancer in very small Port Hope study – no follow-up
- Health Canada PH Harbour Area of Concern Report (1997) – elevated rates of diseases such as: cancers, neurological, cardiovascular, respiratory – no follow-up
- Community Health Survey Design by Dr. Trevor Hancock – promise of funding by AECB, not implemented
- Pilot Tracking Study – promised by AECB, not implemented
- Childhood Kidney Function Bio-testing –promised by AECB in 1999, not implemented
- UMRC-PHCHCC human radiobiological testing results – no follow up investigations, not included in CNSC's health study synthesis
- CNSC and Health Canada concluded no health studies are necessary just before the community is to go through a $1.2B cleanup and still has Cameco operating in its midst.

The U.S. recognizes diseases caused by exposure to radiation in the nuclear industry

- U.S. Dept. of Justice recognizes in law 35 diseases as associated with ionizing radiation exposure; compensation is paid to the military, nuclear workers, community down-winders (Radiation Exposure Compensation Act ends in 2022).

- Energy Employees Occupational Illness Compensation Program Act recognizes harm to nuclear energy workers and pays compensation.

- As of 2019 almost **$17 billion** has been paid in medical costs and compensation in the US. No such recognition of harm in Canada for workers or community members.

Port Hope remediation concerns ongoing

From 2012 PHCHCC Intervention to CNSC re AECL Application:

- Recommended denial pending public hearing, testing of wastes to provide evidence to verify the foundational assumption in CNSC staff report that wastes meet legal criteria:

"The Port Hope Project qualifies as WNSL because the total inventory of nuclear substances contained in the waste is less than 1015 Bq. For this low risk type of facility, the key requirements come directly from the *General Nuclear Safety and Control Regulations and Nuclear Substances and Radiation Devices Regulations."*

Q: What is in the wastes?

Port Hope remediation concerns ongoing

- Investigation and monitoring practices starting in 1976 failed to properly investigate, remediate and disclose the truth to the public about the contamination at Dr. Power's School, municipal roads and frontages, parks, beach, private properties. Lack of disclosure to property owners.

- Insufficient testing of the wastes to determine isotopic content, transuranic content and levels of radiation during cleanup to ensure safe, proper storage. Cameco admits to contaminated feed material.

- The LLRWMO in 2012 said that it is only dealing with natural uranium and that is its mandate. Cleanup criteria are based on natural U,

- No health monitoring of residents is occurring.

- Facility is too small for true volume of wastes

Port Hope remediation concerns ongoing

March 2021 -
Objecting to CNL pessure to amend Port Hope legal agreement , PHCHCC sent letter to Prime Minister and political leadership

- CNL proposal to weaken cleanup criteria.for uranium (to 35 ppm from 23) and arsenic (to 100 ppm from 18) - NO

- CNLproposal to transfer contaminated sludge from now closed Port Granby site to Port Hope site with 300+ truckloads over 5 years - why? and what is in the sludge? NO

- CNL allowing property owners to choose to remediate or not - NO

- Pressure on Port Hope from CNL to accept shortcuts to save CNL money and time- what happened to the $1.2B? NO

Demonstrated need for a comprehensive audit and renewed budget for full mandatory Port Hope remediation to include indpendent health monitoring of the people.

Concerns with Cameco operations ongoing

- Emissions of uranium, fluoride, chemicals to air, water
- 50 emission points, aging building has fugitive emissions
- 90% of emissions fall within 1 km which is people
- Single access road to west beach places public at risk
- Single access road hazard for emergencies
- Enriched uranium up to 93% weapons grade was used for research purposes
- Human evidence of uranium contaminated with spent reactor material and transuranics through our independent testing (236U in bioassays of three former workers)
- Isotopes of U feed material complex with contaminants
- Particle size, composition, isotopic ratio unknown

Concerns with Cameco operations ongoing

- No buffer zone
- No security perimeter
- Dangerous transportation through town
- Facilities are leaking, fugitive emissions, 60+ years old
- Sites cannot be restored until decommissioning
- Is decommissioning plan adequate
- 10 year licenses prevent meaningful public accountability
- Liability insurance limitations for industry, public financial risks
- Community stigma impacts economy
- Significant public desire for use of a clean attractive waterfront
- Contradiction of federal government has committed $1.2B to cleanup historic radioactive wastes while Cameco continues to pollute.

PHCHCC recommendation to CNSC from 2012 to present

- A 2 year license be issued to Cameco Corporation conditional that within this two year time period, Cameco Corporation will prepare and submit a plan to the CNSC, the municipality and the public to fully decommission all of its sites within the boundaries of the community of Port Hope within the following 2 year period.

The time is now to fully cleanup, restore this community and full public use of the waterfront through relocation of Cameco out of our town

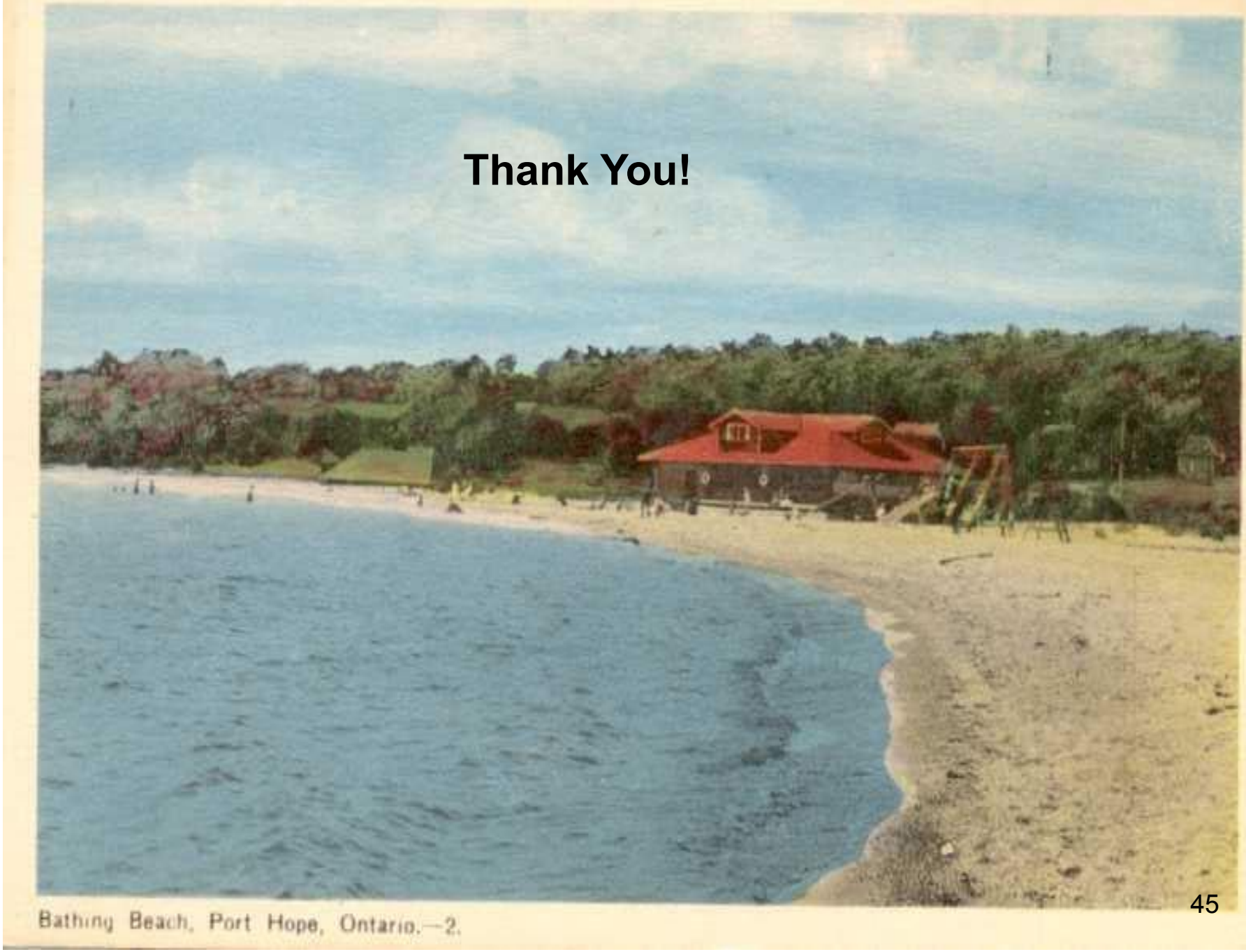
Ongoing concerns with CNSC Actions

- Authorizes significant changes to industries' operations through letters from Ottawa mid-license. Not public. Allowed 93% enriched in the past with a letter (not seen)
- Hearings are sometimes held by Chair alone on serious matters e.g. 2016 GE Hitachi license transfer to BWXT.
- Staff decide risk, safety without public input before preparing recommendations to Commissioners
- EA decisions yes or no controlled by CNSC lacks independence, external or public accountability.
- 10 year licenses severely limit public participation
- CNSC track record shows it operates to enable nuclear industry not putting public interest first.

Ongoing concerns with CNSC mandate and actions

- Ongoing licensing of Eldorado Nuclear then Cameco with lack of meaningful investigations and oversight has resulted in more than 70 years of radioactive contamination throughout Port Hope (conservatively estimated at 1.7 M cubic metres.
- So far Canadian taxpayers are committed to a further $1.2B cleanup of the town underway after 50 years of inaction.
- Still, license after license by CNSC ignores facts that these operations should not be in the middle of communities and would absolutely NOT be approved in today's world nor should they be "grandfathered" simply because of history.
- In 2020 CNSC said it has no jurisdiction over facility locations which allows industry to simply carry on, mistakes perpetuated.
- On CNSC's watch Port Hope's cleanup is delayed with little oversight. ;
-

There must be a new nuclear regulatory process that is independent of the industry, one that is accountable with a real focus on the health and empowerment of communities.


Thank You!
Bathing Beach, Port Hope, Ontario.—2.

Appendix A: Brief outline of nuclear industry in Port Hope

- In 1930 Gilbert LaBine discovers pitchblende ore while prospecting for gold in NWT.
- Analysed in Ottawa, discovered to contain 60% uranium.
- Government of Canada supported LaBine brothers to get a mine operational in 2 years.
- In Port Hope a warehouse was converted to a refinery to produce radium from the ore.
- Marcel Pochon, former associate of the Curies, became manager-chemist of Port Hope operations called Eldorado Gold Mines.
- Pochon found it took 25 tons of concentrate to produce.
  1 gram of radium, and 7 tons of chemicals to process 1 ton of ore, creating significant volumes of wastes.

Appendix A: Brief outline of nuclear industry in Port Hope

- In 1941 the US government ordered 8 tons of uranium oxide from Eldorado Gold Mines operation.
- By July 1942 the closed NWT mine at Port Radium had been re-opened and Eldorado adapted its processes from radium to uranium.
- It expanded facilities to meet a contract from the US Army for 700 tons of uranium and changed its name to Eldorado Mining and Refining. This material was used for the Manhattan Project.
- In 1944 amid war-time security concerns the federal government took over the private company and made it a Crown Corp. subsequently regulated by the Atomic Energy Control Board.
- In the late 1940's and 1950's Eldorado played a central role in establishing a Canadian uranium industry, requiring significant financial support from the federal government during the 1960's and 70's when US contracts ended.

Appendix A: Brief outline of nuclear industry in Port Hope

- After 1955 feed to the plant was mainly yellowcake
- Production of uranium dioxide began around 1958
- In 1969 Eldorado diversified and built a uranium hexafluoride plant (UF6) to sell material abroad for light water reactors.
- In 1983 AECB approved construction of a much larger facility on the parking lot of the plant which was relocated to beach area public recreation areas.
- Eldorado's uranium trioxide operation (UO3) went to Blind River.
- After 1984 feed was refined material from Blind River.
- In October 1988 Eldorado Nuclear Ltd. merged with Saskatchewan Mining Development Corp. to form Cameco Corporation.
- Cameco conversion facility operations primarily focus on production of UO2 and UF6 in Port Hope. There has also been metals production using depleted uranium.
- In 2006 Cameco purchased 100% interest in Zircatec Precision Industries in Port Hope (formerly Westinghouse), a uranium fuel fabricating facility for nuclear reactors.

Appendix B: Radioactive wastes in Port Hope

- In early 1960's Canadian army conducted instrument tests in Port Hope.
- In 1966 Dr. Douglas Andrews, U of T nuclear engineer, was asked by the RCMP to conduct investigative measurements in Port Hope to determine how much uranium was publicly available due to concern re illegal weapons production.
- Dr. Andrews reported that in 1967 he conveyed his data and concerns of potentially damaging effects to the municipal leadership and the AECB.
- Detailed data were also taken by Dr. Geoffrey Knight, Atomic Energy Control Board from 1966-1976.
- In 1975 the first information on wastes around town became available - a primary school closed due to high levels of radon gas, many sites were discovered throughout the town.
- In February 1976 the first public meeting was held with federal, provincial officials, independent experts including Dr. Andrews who was severely criticized by municipal council for his efforts.
- Concerned local residents began advocacy for full remediation which has continued for the next 45 years to today, 2021.

Appendix B: Radioactive wastes in Port Hope

- In 1976 the AECB established the Federal-Provincial Task Force on Radioactivity to conduct preliminary surveys and some cleanups.
- From 1976 to 1981 approx. 100,000 tons of soil was transported to AECL waste site at Chalk River until it was full and some local dumps. Larger volumes and harbour sediments were left for later cleanup and more waste has been discovered each year since.
- As the federal government was failing to properly contain or remove the many public and private waste locations, a group of 129 concerned Port Hope residents applied for intervention to the United Nations Human Rights Committee in April, 1980.
- The UN decision of October 1982 was to find the citizen petition inadmissible as Canadian court action had not been undertaken therefore all domestic remedies were not exhausted.
- The Canadian government had won their argument to the UN against local residents.

Appendix B: Radioactive wastes in Port Hope

- The Low Level Radioactive Waste Management Office (LLRWMO) was created in 1982 by the federal government to manage the historic wastes,now licensed by AECB.
- In 1986 the federal government established a Siting Task Force which recommended a cooperative process to find a volunteer host community. Possibilities such as Deep River did not proceed.
- In the late 1990's the municipalities (Port Hope, Hope Township, Clarington) where the Eldorado wastes are located agreed to support a local solution, each preparing a long-term management proposal for waste storage within their boundaries.
- In March, 2001 a legal agreement of all parties was signed which lead to creation of the Port Hope Area Initiative (PHAI) under AECL management for implementation of new local storage sites.The federal government committed $238M for the process.
- The federal financial commitment increased to $1.2B in 2012 for phase 2 over 10 years, to deal with estimated 1.7M cubic metres of radioactive wastes in the areas.

Appendix B: Radioactive wastes in Port Hope

- In 2017 a consortium of multinational corporations, including SNL-Lavalin, Fluor and Jacobs, was established by the federal government to manage all of Canada's federally owned nuclear facilities and radioactive wastes, including the Port Hope Area wastes. The consortium operates under the name Canadian Nuclear Laboratories (CNL). It derives all of its funding from AECL, which has shrunk in size from 3600 to 60 employees. Approximately one billion dollars of taxpayers' money goes to AECL each year since CNL was founded (that's twice as much as was previously the case), and most of that money is transferred directly to CNL.(G. Edwards)

- In 2020 CNL has proposed amendments to the Port Hope legal agreement to 1) weaken the cleanup criteria 2) permit more than 300 truckloads of contaminated sludge to be brought from Port Granby to the Port Hope storage facility. These are strongly opposed by PHCHCC who have written in March 2021 to Prime Minister Trudeau and political leaders with objections.