Environment, Transportation Public Safety Standing Committee Meeting Held June 28, 2017

Report No. 96 of the Windsor Essex County Environment Committee - Windsor and Essex County in close proximity to U.S. based Fermi and Davis-Besse Nuclear Stations

Moved by: Councillor Francis Seconded by: Councillor Borrelli

Decision Number: ETPS 509

THAT Report No. 96 of the Windsor Essex County Environment Committee indicating

that:

WHEREAS the Government of Ontario has asked for the public and municipalities to provide recommendations on how it should update the province's Provincial Nuclear Emergency Response Plan (PNERP) before July 15, 2017; and,

WHEREAS Essex County and the City of Windsor are in close proximity to the Michigan-based Fermi nuclear station and Ohio-based Davis-Besse nuclear station; and,

WHEREAS over forty civil society organizations, including the Registered Nurses' Association of Ontario (RNAO) and the Canadian Association of Physicians for the Environment (CAPE), have called on the provincial government to address gaps in current emergency plans by strengthening transparency, protecting vulnerable communities, meeting best practices and protecting drinking water;

THEREFORE BE IT RESOLVED that City of Windsor and County of Essex Council submit the following recommendations to the Government of Ontario to ensure communities living in proximity to the Fermi and the Davis-Besse nuclear stations be accorded the same level of public safety as communities living near the Ontario-based Bruce, Darlington and Pickering nuclear stations.

Recommendations to the Government of Ontario regarding the Provincial Nuclear Emergency Response Plan (PNERP): Include requirements for the pre-distribution and availability of potassium iodide (KI) pills for communities living in proximity to the Fermi and Davis-Besse nuclear stations equivalent to requirements for Ontario-based nuclear stations:

- 1) Recognize public expectations for public safety by ensuring plans are in place to address Fukushima-scale accident;
- 2) Adopt a policy of meeting or exceeding international best practices in nuclear emergency response measures wherever feasible;
- 3)&Require provincial and municipal authorities to regularly identify vulnerable communities within provincial nuclear response zones and prepare emergency measures adapted to the needs of such vulnerable communities;
- 4) Include new requirements for transparency and regular public review, especially with affected communities:
- 5) Ensure awareness campaigns are in place to inform the residents of Southwestern Ontario on how to prepare for a nuclear emergency; and
- 6) Ensure adequate measures are in place to protect drinking water in the event an accident at a Canadian or American-based reactor contaminates the Great Lakes

And further, that a copy of this resolution BE SENT to:

The municipalities of Essex, Amherstburg, Lakeshore, LaSalle, Leamington, Kingsville, Tecumseh, Windsor, Chatham-Kent;

Windsor Essex County Health Unit

City of Toronto

City of Toronto Office of Emergency Management

Hon. Kathleen Wynne, Premier of Ontario

Minister of Community Safety and Correctional Services

Minister of Health and Long-Term Care

Members of Provincial Parliament

Lisa Gretzky

Percy Hatfield

Taras Natyshak

BE APPROVED as presented.

Carried.

Report No.: SCM 117 /2017 Clerk's File No: MB2017 (Administrative Report attached which was previously distributed as part of the Standing Committee Agenda)

Clerk's Note: The recommendation of both the Standing Committee and the Advisory Committee are the same.



COMMITTEE MATTERS ETPS Standing Committee June 28, 2017

Subject: & Report No. 96 of the Windsor Essex County Environment Committee - Windsor and Essex County in close proximity to U.S. based Fermi and Davis-Besse Nuclear Stations

REPORT NO. 96

of the

WINDSOR-ESSEX COUNTY ENVIRONMENT COMMITTEE (WECEC)

of its meeting held
June 8, 2017
at 5:30 o'clock p.m.
Oiibway Nature Centre

Members present at the June 8, 2017 meeting:

Councillor Paul Borrelli, Chair
Councillor Fred Francis
Aldo DiCarlo, Mayor, Town of Amherstburg
Derek Coronado
Debby Grant
Mike Nelson
Joe Passa
Dr. Edwin Tam
Radwan Tamr

Regrets received from:

Nelson Santos, Mayor, Town of Kingsville

Your Committee submits the following recommendations:

WHEREAS the Government of Ontario has asked for the public and municipalities to provide recommendations on how it should update the province's Provincial Nuclear Emergency Response Plan (PNERP) before July 15, 2017; and

WHEREAS Essex County and the City of Windsor are in close proximity to the Michigan-based Fermi nuclear station and Ohio-based Davis-Besse nuclear station; and

WHEREAS over forty civil society organizations, including the Registered Nurses' Association of Ontario (RNAO) and the Canadian Association of Physicians for the Environment (CAPE), have called on the provincial government to address gaps in current emergency plans by strengthening transparency, protecting vulnerable communities, meeting best practices and protecting drinking water;

THEREFORE BE IT RESOLVED that City of Windsor and County of Essex Council submit the following recommendations to the Government of Ontario to ensure communities living in proximity to the Fermi and the Davis-Besse nuclear stations be accorded the same level of public safety as communities living near the Ontario-based Bruce, Darlington and Pickering nuclear stations.

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Report No. 96 of the Windsor Essex County Environment Committee

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- Require provincial and municipal authorities to regularly identify vulnerable communities within provincial nuclear response zones and prepare emergency measures adapted to the needs of such vulnerable communities;
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- 5) Ensure awareness campaigns are in place to inform the residents of Southwestern Ontario on how to prepare for a nuclear emergency; and
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And further, that a copy of this resolution be sent to:

The municipalities of Essex, Amherstburg, Lakeshore, LaSalle, Leamington, Kingsville, Tecumseh, Windsor, Chatham-Kent; Windsor Essex County Health Unit
City of Toronto
City of Toronto Office of Emergency Management
Hon. Kathleen Wynne, Premier of Ontario
Minister of Community Safety and Correctional Services
Minister of Health and Long-Term Care
Members of Provincial Parliament
Lisa Gretzky
Percy Hatfield
Taras Natyshak)

| NOTE: Background | I information | is | attached. |
|-------------------------|---------------|----|-----------|
|-------------------------|---------------|----|-----------|

| CHAIF | ₹ |
|---------------------------|---|
| | |
| COMMITTEE COORDINATOR | ₹ |

Report No. 96 of the Windsor Essex County Environment Committee

| NOTIFICATION | CONTACT INFORMATION | |
|---|--|--|
| WECEC Committee including resource | On file | |
| Mary Brennan, Director of Council | mbrennan@countyofessex.on.ca | |
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| Mary Masse, Town Clerk, Town of | mmasse@lakeshore.ca | |
| Lakeshore | | |
| Brenda Andreatta, Clerk, Town of Lasalle | bandreat@town.lasalle.on.ca | |
| Jennifer Alexander, Deputy Clerk, Town of | jalexander@kingsville.ca | |
| Kingsville | | |
| Laura Moy, Clerk, Town of Tecumseh | Imoy@tecumseh.ca | |
| | | |
| Paula Parker, Town of Amherstburg | pparker@amherstburg.ca | |
| Town of Learnington | 111 Frie Ctroot North | |
| Town of Leamington | 111 Erie Street North, Leamington, ON N8H 2Z9 | |
| Chatham-Kent | ckinfo@chatham-kent.ca | |
| Chatham-Rent | CKITIO(@CITALITATIT-KETIL.Ca | |
| Windsor Essex County Health Unit | pwong@wechu.org | |
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| City of Toronto | 311@toronto.ca | |
| | | |
| Honourable Kathleen Wynne, Premier of | Kathleen Wynne, Premier | |
| Ontario | Legislative Building, Queen's Park | |
| | Toronto, ON M7A 1A1 | |
| Minister of Community Safety | Community Safety & Correctional Services | |
| Correctional Services | George Drew Building, 18 th floor | |
| | 25 Grosvenor Street, | |
| | Toronto, ON M7A 1Y6 | |
| Minister of Health & Long Term Care | Health & Long Term Care | |
| | Hepburn Block, 10 th floor | |
| | 80 Grosvenor Street, | |
| Line Out I MDD Window Med | Toronto, ON M7A 2C4 | |
| Lisa Gretzky, MPP Windsor West | LGretzky-QP@ndp.on.ca | |
| Percy Hatfield, MPP Windsor Tecumseh | PHatfield-QP@ndp.on.ca | |
| Taras Natyshak, MPP Essex | TNatyshak-QP@ndp.on.ca | |







June 5,12017

Windsor Essex County Environment Committee Council Services Department 350 City Hal Square Room 203 Windsor, Ontario N9A 6S1 l

Re: Advocating for public safety in Windsor and Essex County

Dear members of the Windsor Essex County Environment Committee,

Welwritelto ask you to urge the provincelto put in place the world-class emergency response plans residents of Windsor and EssexlCounty expectland deserve whenlitl comes to nuclear safety.

On May 15th the province releasedla Discussion Paper on updating the province's nuclear emergency response plans post Fukushima. The Province has requested public comment by July 14th

Windsor and Essex County are in close proximity to the American-based Fermi and Davis-Besse nuclear stations andlwould likely be impacted in the event of a nuclear emergency. That said, we fear Windsor and Essex County may receive less attention on nuclear safety matters from provincial authorities than communities withlOntario-based reactors.

Attached to this letter you'l find policy suggestions on how the Province could strengthen nuclear emergency response measures and the transparency and accountability of provincial emergency planning. *A Call for Public Safety: Addressing Nuclear Risks on the Great Lakes* has been endorsed by over forty organizations, including Registered Nurses Association of Ontario (RNAO), the David Suzuki Foundation and Canadian Association of Physicians for the Environment.

Based on our review of international best practices and lessons from Fukushima, we recommend strengthening the public safety of Ontarians by:

- Upgrading emergency measures to provide for worst-case accidents;l
- Strengthening the protections of vulnerable communities in such accidents; l

- Protecting drinking water;I
- Ensuring transparency and lpublic participation in planning nuclear emergency measures; and,
- Meeting International best practices as to nuclear emergency planning and preparedness.

t islourlhope the attached policy recommendations can assist and inform municipal advocacy on behalflof public safety in Southwestern Ontario.

Thanklyou for your attention.

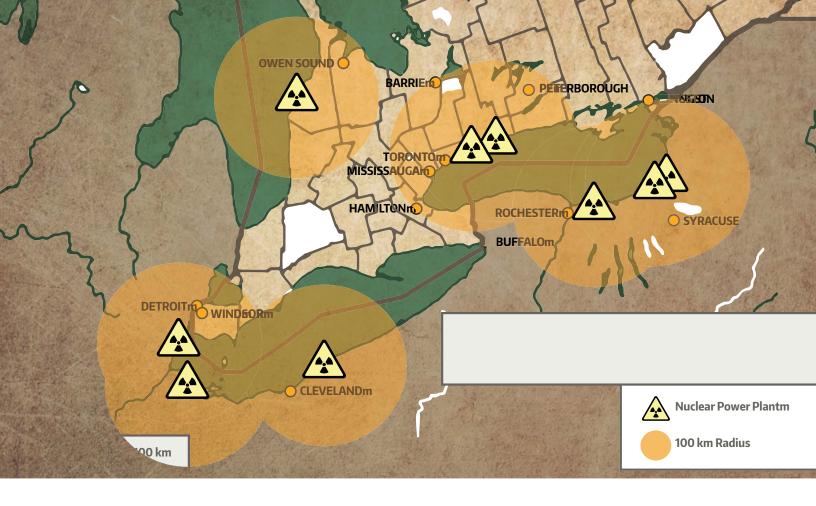
Truly,l

DereklCoronado Coordinator Citizens Environment Al iance of l Southwestern Ontariol

Aloronado

Theresa McClenaghan Executive Director Canadian Environmental Law Association 1

Shawn-Patrick Stensi Senior Energy Analyst Greenpeace Canadal



MOST PEOPLE IN SOUTHERN ONTARIO LIVE NEAR AN AGING NUCLEAR REACTOR OPERATING ON EITHER THE CANADIAN OR AMERICAN SHORES OF THE GREAT LAKES.

Historical y, Ontario has put in place detailed nuclear emergency response plans to address only I a relatively smal accidental radiation release. I

This must change in light of Fukushima.l

We cal on the provincial government to ensure nuclear emergency response plans are in I place to:

- · I Protect people from Fukushima-scale accidents;
- · I Protect vulnerable communities;
- · I Protect drinking water;
- · I Ensure transparency and public participation;
- I eet or exceed international best practices.

The Ontario government recently committed to run eighteen aging reactors at the Darlington, I Bruce and Pickering stations wel beyond their original operational lives. Ten of these agingl reactors are in the Greater Toronto Area (GTA) – creating risks for mil ions of nearby residents.

Aging reactors in the United States at the Fermi, Davis-Besse, Perry, Ginna, Fitzpatrick and Ninel ile P oint nuclear stations also put Ontarians and our drinking water at risk. I

In light of these risks, the Ontario government should protect public safety and preventl needless risks to health and society by making Ontario's nuclear emergency plans the mostl robust in the world. I



TO PROTECT PEOPLE THE ONTARIO GOVERNMENT SHOULD:

- " Use a Fukushima-scale radioactive release as the baseline "reference accident" for j determining offsite protective measures, such as alerts, evacuation, and potassium iodide j (KI) pre-distribution.¹
- " Regularly publish modelling on Fukushima-scale accidents at the Bruce, Pickering, j Darlington nuclear stations to confirm the adequacy of offsite emergency response. j
- " Expand emergency planning areas to align with the impacts of Fukushima, including at least j a 20 km evacuation zone. j
- " Ensure all municipalities within 100 km of a nuclear station, including American reactors, j develop and maintain nuclear emergency response plans. j

- · To create a nuclear emergency plan, the first public safety decision is selecting the **scale** of reactor accident. jThe scale of accident chosen is referred to as the "planning basis" or a j "reference accident." i
- " ntario 's current "planning basis" was effectively established before the 1986 Chernobyl j accident. ilt assumes delayed radioactive releases that are significantly smaller than i Fukushima or Chernobyl.21
- " Following selection of a reference accident, the second public safety decision involves j determining what **protective measures** should be in place. Protective measures protect j people from radiation exposure. ¡Examples include evacuation or ingesting potassium iodide j (KI), which reduces your thyroid's exposure to radioactive iodine. i
- " ntario 's current emergency measures are geographically limited to areas close to j nuclear stations due to the current small-scale "reference accident". This includes a 10 km j evacuation zone also known as the "Primary Zone" and a "Secondary Zone" i that varies in i size between 50 – 80 km. j
- ccording to a joint committee of European nuclear regulators and radiation protection j authorities struck following Fukushima: "...an accident comparable to Fukushima would j require protective actions such as evacuation to around 20 km and sheltering to around 100 j km. These actions would be combined with the intake of stable iodine."3j

¹The Fukushima accident released approximately 520 Peta Becquerels of radioactivity. A Bequerel is equivalent to t one nuclear decay per second. The radioactive releases from Fukushima were approximately ten times larger than the highest level (level seven) accident on the International Atomic Energy Agency's (IAEA) International Nuclear t Event Scale (INES), t

² Following the Three Mile Island accident the province began considering how to prepare for a nuclear emer-t gency. In 1985, the Working Group # 3 report recommended the technical basis and reference accident that still t effectively serves as the basis for offsite emergency plans.

³ Heads of the European Radiological protection Competent Authorities (HERCA) and Western European Nuclear t Regulators' Association (WENRA), Ad hoc High-Level Task Force on Emergencies (AtHLET), Position paper, 22 t October 2014 t

- "Belgium's Superior Health Council recommended in 2016 that the government adopt a t "precautionary approach" to emergency planning and consider large, previously ignored t radiation release scenarios. It also recommended that "based on the experience of past t accidents, the areas covered by the plan for sheltering, the distribution of stable iodine and t evacuation [should] be extended to cover realistic distances."5t
- odelling of a Fukushima-scale radioactive release by the German Commission on t Radiological Protection (SSK) recommended expanding evacuation zones around German t reactors from 10 to 20 km; preparing radiation monitoring programs out to 100 km to t determine in the event of an accident whether additional evacuations, sheltering or t KI consumption is required; and, preparations for KI consumption for children and pregnant t women living beyond 100 km.^{6t}
- "Following the Fukushima disaster, Japan's nuclear regulator observed: "A general lesson t learned from the Fukushima accident, as well as the accidents at Three Mile Island and t Chernobyl, is that there was an implicit assumption that such severe accidents could not t happen, and thus sufficient a tention had not been paid to preparedness for the accidents t by the operators and the regulatory authorities."

⁶ German Commission on Radiological Protection (§SK), Planning areas for emergency response near nuclear power plants, 2014. p

⁴ Conseil Supérieur de la Santé, Conseil Supérieur de la Santé, Accidents nucléaires, environnement et santé après p Fukushima. Planification d'urgence, AVIS DU CONSEIL SUPERIEUR DE LA SANTE N° 9235, février 2016, pgs 88.

⁵ Conseil Supérieur de la Santé, 2016, pg 83.

⁷p. Homma et al., "Radiation protection issues on preparedness and response for a severe nuclear accident: expepriences of the Fukushima accident," ICRP 2013 Proceedings, pgs 347- 356.



TO PROTECT VULNERABLE COMMUNITIES, ONTARIO'S NUCLEAR EMERGENCY PLANS SHOULD:

- " Identify vulnerable groups, such as people with disabilities, babies, children, pregnant k women, people residing in retirement homes, and hospital patients who may need to be k evacuated in the event of a Fukushima-scale accident. k
- " Require clear plans to assist vulnerable groups before and after evacuation, including k support from health care practitioners. k
- " Acknowledge that operating reactors in densely populated areas like the Greater Toronto k Area (GTA) will complicate emergency response in the event of a major reactor accident and k require detailed plans for large-scale evacuation in the short-term and the accommodation k of large populations in the long-term. k
- " At a minimum, pre-stock potassium iodide (KI) pills in all schools within 100 km of all nuclear k stations in or near Ontario. k

- " Deaths in vulnerable communities, particularly the elderly, during evacuations following k the Fukushima disaster have largely been attributed to the lack of pre-planned health care k provision including evacuation logistics.8k
- "Belgium's Superior Health Council concluded that siting reactors near densely populated k areas would significantly complicate emergency response, compared to the sparsely k populated area around Fukushima. To address this vulnerability, the Council recommended k that plans be in place for the evacuation and long-term displacement of large populations.9k
- " A committee charged with investigating the Fukushima disaster by the lapanese k government concluded: "An accident at a nuclear power station has risks to bring about k damage in vast areas. Nuclear operators on one hand, nuclear regulators on the other, k should establish a systematic activity to identify all risk potentials from the "disaster k victims' standpoint" when designing, constructing and operating such nuclear systems, for k ensuring credible nuclear safety including evacuation." 10 k
- " The German Commission on Radiological Protection recommended in 2014 that authorities k have in place "concrete plans" to provide k I pills to "children and young people up to the age k of 18 and to pregnant women" over the entire territory of Germany. 11 k
- "Belgium's Superior Health Council also recommended having plans in place to distribute k1 k pills to vulnerable communities, including children as well as pregnant and breastfeeding k women up to 100 km from any nuclear station. It also recommended that the effectiveness k of large-scale distribution strategies should be regularly and carefully evaluated. 12 k

⁸ A. Hasegawa et al., "Emergency Responses and Health Consequences after the Fukushima Accident; Evacuation and Relocation," Clinical Oncology, 28 (2016) 237

Conseil Supérieur de la Santé, 2016, pq 85.

¹⁰ International Investigation Committee on the 9ccident at Fukushima Nuclear, July 23, 2012, pg 490. Power 9 Stations of Tokyo Electric Power Company, July 23, 2012 9

¹¹ German Commission on Radiological Protection (SSK), 2014, pg 21. 9

¹² Conseil Supérieur de la Santé, 2016, pg 69.



TO PROTECT DRINKING WATER, ONTARIO'S NUCLEAR EMERGENCY PLANS SHOULD:

- LI Provide alternative sources of drinking water for residents whose drinking water is sourced I from any of the Great Lakes on which a nuclear power plant is located.
- LI Ensure alternative drinking water sources are identified, and that logistical plans to supply I the impacted population with these alternative sources are in place to last indefinitely.
- I Model and publish Fukushima-scale accidents at nuclear stations on the Canadian and I American sides of the Great Lakes to assess impacts on drinking water supplies and I aquatic ecosystems.l

- LI The Fukushima accident caused significant and ongoing radioactive emissions to the I Pacific Ocean, contaminating aquatic ecosystems and food supplies.
- LI The Great Lakes provide drinking water for approximately 40 million Canadians I and Americans.l
- LI There are ten reactors at the Pickering and Darlington nuclear stations operating on the I Canadian side of Lake Ontario.l
- LI There are eight reactors operating on the Canadian side of Lake Huron at the Bruce I nuclear station. I
- LI There are three reactors operating at the Fermi, Davis-Besse and Perry nuclear stations on I the US side of Lake Erie. I
- LI There are four reactors operating on the US side of Lake Ontario at the Fitzpatrick, Nine Mile I Point and Ginna nuclear stations. I
- LI Belgium's Superior Health Council recommended the government pay special attention I to the circulation of radioactivity in water following a major accident, noting the short I term risk to drinking water and the long-term risk of contamination of agriculture and the I environment.¹³¹



TO PREVENT COMPLACENCY AND ENABLE PUBLIC PARTICIPATION, THE ONTARIO GOVERNMENT SHOULD:

- " Apply the government's Open Government policy to nuclear emergency planning and I require detailed government information on nuclear emergency planning be available by I default, including accident modelling. I
- Require regular five-year reviews and detailed consultations with the public and affected I communities as to continuous improvement of both the planning basis and emergency I response measures. I

- " Premier Kathleen Wynne has stated her government's goal is to become "the most open and I transparent government in Canada." I
- There are currently no legal requirements for the Ontario government to regularly review I
 and consult communities on the adequacy and acceptability of offsite nuclear I
 emergency planning. I
- " International Commission on Radiological Protection (ICRP) recommends: "During planning, I it is essential that the plan is discussed, to the extent practicable, with relevant stakehold-I ers, including other authorities, responders, the public, etc. Otherwise, it wil be difficult to I implement the plan effectively during the response." 14 |
- " In its recommendation that "vulnerability analysis" be the basis of nuclear emergency I planning, Belgium's Superior Health Council noted that such an analysis requires the KI participation of all affected stakeholders, including citizens.^{15 KI}
- " The lapanese government's investigation into the Fukushima disaster found that people I responsible for and involved in responding to the accident were unfamiliar with protective I measures and that emergency plans had not been recently updated and were incomplete.¹⁶¹
- " In November 2015 Durham Region, the host community for the Pickering and Darlington I nuclear stations, passed a motion asking the government of Ontario to "provide all non-l confidential data and studies used in considering changes to Ontario's off-site nuclear I emergency plans." ⁷⁷

¹⁴ Commission on Radiological Protection, Publication 109: Applic' tion of the Commission's Recommendations for 'the Protection of People in Emergency Exposure Situations, Approved by the Commission in October 2008. '
¹⁵ Conseil Supérieur de la Santé, 2016, pg. 17.

¹⁶ The National Diet of Japan, The Official Report of the Fukushima Nuclear Accident Independent Investigation Commission, Executive Summary, 2012. '

¹⁷ Durham Regional Council – Minutes, November 4, 2015, pg. 29.



TO ENSURE ONTARIANS A LEVEL OF PUBLIC SAFETY ON PAR WITH OTHER JURISDICTIONS AND REFLECTING THE EXTREMELY HIGH POPULATION DENS TY IN THE VICINITY OF 10 OF THE OPERATING REACTORS IN THE GREATER TORONTO AREA, THE GOVERNMENT SHOULD:

- "Require nuclear emergency response measures meet or exceed international best practices. p
- Regularly review and publicly report on international developments and best practices in p
 offsite nuclear emergency planning as well as on plans to adjust and improve Ontario's plan p
 to meet or exceed the best practices in other OECD jurisdictions. p

- " sing international best practices as a decision-making principle will drive Ontario policy p toward excellence and prioritizes public safety. p
- "Reporting on international best practices will enable public scrutiny and debate by providing p Ontarians with tangible examples of how Ontario's emergency protective measures compare p to other jurisdictions. p
- " Establishing emergency protective measures using a best-practice approach is a means of p addressing the inherent uncertainties in nuclear risks and building trust with the public. p
- " Regularly reporting on international best practices will discourage complacency among p government agencies responsible for nuclear emergency response. p
- " International Atomic Energy Agency safety guidance is in many respects a "lowest common p denominator" standard. p uch standards should only be considered as a safety baseline. p













Association EQUITY JUSTICE HEALTH



Concerned Citizens of Renfrew County



Toronto Chapter Windsor Essex Chapter Peterborough & Kawarthas Chapter

































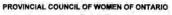


















Science for Peace













