

Nuclear notes

Newsletter on Nuclear Waste in Northern Ontario - Issue One, Volume One - November 2002

Nuclear Fuel Waste Act Comes into Force

Feds Launch Web Site, Canadian Nuclear Industry Creates Nuclear Waste Management Organization

The federal government's Nuclear Fuel Waste Act came into force on November 15th, signaling the start of a new era in nuclear fuel waste "management", and potentially the kick start of the search for a disposal site for a million bundles of highly radioactive nuclear fuel waste. The Nuclear Fuel Waste Act places the nuclear industry in the driver's seat, as controlling interest in the new Nuclear Waste Management Organization, reportedly launched on the same day.

It was a quiet start for the new multi-million dollar agency. In late October, a Natural Resources Canada news release announced the new organization to "manage" the highly radioactive nuclear fuel waste would be launched on November 15th, coincident with the enabling legislation coming into force. In announcing the new organization and a new Natural Resources Canada web site, the federal government weakly described the status of the new organization: "Efforts are being made to ensure that this entity is ready to take on these responsibilities upon the coming into force of the legislation."

Late in the day of November 15th, the Natural Resources Canada new web site, the "Nuclear Fuel Waste Bureau" came on-line, displaying some background information on the Nuclear Fuel Waste Act and describing the newly created Nuclear Fuel Waste Bureau's mandate in support of the Minister of Natural Resources in the Minister's discharging of his responsibilities under the Nuclear Fuel Waste Act. The opening page of the web site proclaims itself to be "dedicated to informing all stakeholders, particularly the public, on planned and current nuclear fuel waste management activities ... in accordance with the principles of openness and transparency". However, none of the actual programs are described, no description of planned activities provided, and no timeline included.

The newly created Nuclear Waste Management Organization is even more elusive. Aside from two news releases posted on a commercial news service - with links provided from the Nuclear Fuel Waste Bureau - the new organization has no discernable presence, in either the physical or virtual worlds. Internet searches yield nothing in terms of the new organization's intentions or planned activities, and to date they are operating with an unlisted number and an unidentified board of directors. The media contact phone number rings through to an office in Ontario Power Generation (formerly Ontario Hydro). Despite the current invisibility, the new Nuclear Waste Management Organization has managed to appoint a president, name members to an advisory council, recruit members to its board, and perhaps more.

According to the NWMO news releases, "among the first activities for the organization will be a study of long-term management approaches for used nuclear fuel, including the design of an innovative and wide-ranging program of public consultation Within three years of the legislation coming into force, the NWMO is to submit to the Minister of Natural Resources proposed approaches for the management of used nuclear fuel." The Nuclear Fuel Waste Act allows the federal cabinet to decide on which approach will be adopted, and cabinet's choice will then be implemented by the Nuclear Waste Management Organization.

Nuclear fuel waste is the used uranium fuel from nuclear reactors. It consists of hundreds of different by-products, including very hazardous radioactive substances which must be isolated for millions of years to protect all living things.



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Nuclear Notes is published by Northwatch, a public interest group in Northeastern Ontario concerned about proposals to bury highly radioactive nuclear fuel waste in the Canadian Shield of northern Ontario

Box 282 • North Bay • P1B 8H2 • tel 705 497 0373 • fax 705 476 7060 • nukes@onlink.net • www.northwatch.org

David Crombie to chair Nuclear Waste Management Organization Advisory Council

Befitting an agency comprised solely of the nuclear industry, the advisory council announced by the Nuclear Fuel Waste Management Organization on November 7th includes some individuals of seeming independence and good reputation, placed in a mix with several long-term advocates and promoters of the nuclear industry.

“The Advisory Council has been appointed to provide independent and arms-length guidance and advice to the Nuclear Waste Management Organization concerning its study of approaches for the long-term management of nuclear waste”, said Ontario Power Generation Vice-President Richard Dicerni as he made the announcement.

Advisory members include:

- C David Crombie, President and CEO of the Canadian Urban Institute, past mayor for the City of Toronto and former Member of Parliament and Cabinet Minister, and currently a member of an advisory committee to ITER Canada
- C David Cameron, Professor of Political Science at the University of Toronto, former Deputy Minister in Ontario and special advisor to former Premier David Peterson, and a member of the Royal Society of Canada
- C Helen Cooper, former mayor of Kingston
- C Gordon Cressy, Vice President of Ryerson University
- C Frederick Gilbert, President of Lakehead University, currently a board member of Ontario's Living Legacy Trust and the Northwestern Ontario Technology Centre
- C Dr. Derek Lister, holds Chair in Nuclear Engineering, University of New Brunswick, member of the Canadian Nuclear Society and Atomic Energy of Canada Limited's Research and Development Advisory Panel
- C Donald Obonsawin, former Deputy Minister of several Ontario Ministries
- C Daniel Rozon, Department Head, Engineering Physics at Ecole Polytechnique de Montréal and holder of the Hydro-Quebec Chair in Nuclear Engineering at the Polytechnique, member of the Canadian Nuclear Society and Atomic Energy of Canada Limited's Research and Development Advisory Panel

Several of the Advisory Committee members views are well known on the subject of nuclear waste or the expansion of nuclear power. Dr. Derek Lister distinguished himself during the federal environmental assessment hearing on Atomic Energy of Canada Limited's proposal to bury nuclear waste in the Canadian shield by arguing that he was not concerned about the long term durability of containers that might be used for the burial of nuclear waste, given his view that “the toxicity of spent fuel becomes less than that of natural uranium ore after 600 to 1,000 years”, a calculation which AECL at a later session indicated was underestimated by a fact of 16, ie. AECL's calculation was 10,000 years during the hearing, and 1 million years in their environmental impact statement, compared to Dr. Lister's 600. In addition to his confidence in container durability, Dr. Lister expressed enthusiasm for the AECL burial scheme, urging the panel to “approve the concept proposed by AECL and ... recommend proceeding to the siting phase.”

Daniel Rozon, one of Dr. Lister's colleagues in both the Canadian Nuclear Society and an AECL advisory committee, more recently took upon himself to make his commitment to nuclear power known to the general public, holding a news conference to promote the “unique advantages” of nuclear power and calling for the dismantling of the “myths” that currently surround nuclear technology, and in particular nuclear waste.

Even some of those with the appearance of being new to the nuclear debate seem to have developed a ready opinion, and one remarkably similar to the industry that had just appointed them to the advisory council. Zoologist, biologist and president of Thunder Bay's Lakehead University Fred Gilbert comments to the local press on his appointment to the Advisory Committee: “Burying used fuel bundles from nuclear reactors in the Canadian Shield should be considered as much as any other option being put forward to deal with nuclear waste. I think it would be negligent not to explore something that has been shown to be technically feasible.”

Dowdeswell Named President of NWMO

Elizabeth Dowdeswell was appointed President of the newly-created Nuclear Waste Management Organization October 24th in an announcement by Richard Dicerni, Executive Vice President of Ontario Power Generation and Chair of the Board of Directors of the NWMO. Mr. Dicerni described Ms. Dowdeswell's role as President as being to “oversee an extensive public consultation process and a thorough study of long-term waste management approaches”.

Ms. Dowdeswell has held a number of senior posts within government, and was former Under Secretary General of the United Nations and Executive Director of the United Nations Environment Program.



Her appointment as president of the Nuclear Fuel Waste Management Organization is not Ms. Dowdeswell's first appointment by the nuclear industry. In February 2000 she joined the Board of Directors of ITER Canada (International Thermonuclear Experimental Reactor). Ms. Dowdeswell has been an advocate of fusion power for many years, and in 2000 was also ITER Canada's delegate to international fusion events. The ITER fusion test reactor is being proposed for Durham Region. Fusion reactors share the very worst characteristics of nuclear fission reactors (the ones that have generated the nuclear fuel waste which is at the centre of the NFWMO's mandate), in that they are expensive, dangerous, and create radioactive pollution as part of their daily operations.

In 2001, Ms. Dowdeswell was also appointed to the Export Development Corporation's new advisory committee, named to the board of the Technical Standards and Safety Association, and named as one of “several hundred” Commissioners in Commission on Globalization, which was formally launched at its Inaugural Meeting at the London Business School in December 2001.

Nuclear Fuel Waste Act Bill C-27 Becomes Law

On April 25, 2001, Bill C-27 "An Act respecting the long-term management of nuclear fuel waste" was introduced into the House of Commons, almost three years after the final report was issued by a federal environmental

"Before the Seaborn panel delivered its recommendations in 1998, Natural Resources in 1996, two years earlier, was conducting its own consultations with a group of selected stakeholders and in essence doing an end run around the panel."

Senator Lois Wilson, Panel Member

assessment hearing panel which had conducted a 10 year hearing on the subject matter. What had transpired in the intervening three years was no more than could have been predicted based on the interventions of Natural Resources Canada even during the hearing, or the leaked Cabinet documents in which the same bureaucrats provided advice to the elected government on how to respond to the Panel's pro-active report. With Bill C-27, Natural Resources Canada had crafted the legislative tool to move the debate on nuclear waste back almost a decade. In brief, the federal government transformed the Panel's recommended plan of action into a strategy which in some instances is the mirror opposite. The Bill's progress through the Parliamentary process itself was the antithesis of the Panel's vision of an open, transparent and public process. Hearings on the Bill were short, with limited notice and very few witnesses - particularly from outside government and the nuclear industry - and the debate was controlled by both time and turf, as the Government members filled all available seats to maintain majority and eliminate all but one of the hundred-plus amendments that were proposed during either Parliamentary or Senate Committee reviews. C-27 made its final passage on June 13th, 2002, the last day of the Senate before the summer break. Had the Senate Standing Committee not allowed the Bill to be rushed through the final session - a session for which the transcripts read like chaos was truly the order of the day - Bill C-27 would have died on the order table.

Bill C-27, the "Nuclear Fuel Waste Act" establishes a nuclear industry-controlled Waste Management Organization (WMO), with a mandate to review nuclear fuel waste management options. The WMO

will have a three year schedule to select its preferred option for long-term management of nuclear fuel waste and recommend that option to the Federal Cabinet. Cabinet will then decide whether to approve the WMO's recommendation. The only amendment allowed during the Bill's review means that there will now be an annual report provided to Parliament, but with the exception of those

It is particularly regrettable that there is not a requirement for parliamentary consideration of the preferred approach nor, indeed, for periodic parliamentary consideration of the work of the WMO.

Blair Seaborn, Chair
Federal Environmental Assessment
Review Panel on Nuclear Fuel Waste.

annual reports - whose content is unknown, and for which there is no prescribed process for providing it to Parliament or making it known to the public - there is no opportunity for even Parliament to participate in the final decision, let alone members of the public.

The proposed Act fails to implement the many important recommendations of the Seaborn Panel, which undertook a 10 year environmental assessment of Atomic Energy of Canada Limited's (AECL's) concept for burial of nuclear fuel waste in the Canadian Shield. The EA Panel concluded that the AECL concept was not acceptable, and identified many technical problems with the proposal. The Panel recommended that an independent agency be formed at arms length from AECL and the nuclear utilities, in order to manage the programs related

to long-term nuclear fuel waste management, including detailed comparison of waste management options, and that it be subject to "multiple oversights", meaning that there be a variety of means for the public and government to monitor and oversee the Agency's activities and programs. The Panel also concluded that there should be an Aboriginal participation process designed by Aboriginal people, and that a comprehensive public participation program and an ethical and social assessment framework each be developed.

Bill C-27 - now the Nuclear Fuel Waste Act - has been criticized by aboriginal, community, environmental and church groups, as well as by former members of the Seaborn Panel, parliamentarians and Senators. Key criticisms focus on the lack of transparency and accountability, the potentially secretive nature of

the WMO's activities, the control by the nuclear industry of both the Waste Management Organization and its advisory council, the absence of any role for parliament or any assurance of public

participation, and the failure to implement many of the Seaborn Panel findings.

There is a grave concern where a seemingly independent, but effectively self-interested body is charged with the proposal, implementation, and management of some of the most lethal man-made material on earth... The federal government, by proceeding in this manner, is abdicating its responsibility for protecting the public good, as well as compromising its fiduciary responsibility to First Nations.

Grand Chief Matthew Coon Come,
National Chief, Assembly of First Nations

"A key part of the Seaborn recommendations was to ensure that the waste management organization is independent and at arm's length from the industry, including AECL there is zero trust in the industry to carry this out with integrity, and this will fail utterly if that alteration is not made."

Irene Kock, Sierra Club of Canada

Nuclear Waste and Northern Ontario - Coming Soon?

With the launching of the new Nuclear Waste Management Organization, Northwatch has publicly expressed concerns about what may lay ahead for communities across northern Ontario, and has cautioned municipalities and others to be wary of "nuclear waste salesmen" which Northwatch fears may soon be peddling nuclear waste disposal as a get-rich-quick scheme for cash strapped municipalities.

The new Nuclear Waste Management Organization has three years to study three options: continued storage of the waste at each of the nuclear stations where it was created, moving all of the waste to some form of centralized storage, or a scheme called "geological disposal", ie burying the extremely hazardous materials in the rocky northern bush.

Since the 1970's, Atomic Energy of Canada Limited has been researching and promoting a "concept" of disposing of nuclear fuel waste by burying it in the Canadian Shield. In the late 1970's and early '80's they investigated a number of northern Ontario communities - Massey, Atikokan, Kirkland Lake, Bancroft - as possible disposal sites, and did "research" near Atikokan and Massey, drilling the rock formations, with uncertain results. What was certain was that AECL's efforts were not welcomed by local residents. In Massey, a referendum was held, and 88% expressed opposition to AECL's "research" efforts.

The AECL burial concept was the subject of an 10 year federal environmental assessment review and a 13 month hearing. The review ended in March 1998 with the Panel concluding that the AECL concept had not been demonstrated to be safe, and that the Canadian public did not support the concept of burying nuclear waste.

When the federal review began in 1988, AECL was undecided about many aspects of their proposal. The wastes will be buried in caverns 500 to 1,000 feet below the surface; in titanium or copper cylinders; in the containers used to transport the waste from the reactor to the site or in a specialized container; and with or without reprocessing before burial.

You could dig a deep geological pit, I presume, store it underneath there, and that could provide protection.

Hon. Herb Dhaliwal, Minister of Natural Resources

By the end of the eight year public process, they were still undecided. The most consistent description given has the waste put in titanium cylinders which are placed in drill holes in the floor of an underground chamber - there would be a series of underground chambers - with the chambers being backfilled before closure. AECL also produced a case study for putting the waste in copper cylinders placed directly in an underground chamber, with the backfill around the copper container.

The nuclear industry has consistently identified northern Ontario as their intended location for a nuclear waste disposal facility, including AECL and Ontario Hydro. Now known as Ontario Power Generation, Ontario's provincial power utility has generated more than 90% of the nuclear fuel waste in Canada, and did the research and presentations related to transportation and much of the research and presentation related to siting during the federal review, as well as funding parts of the AECL research program. In the opening days of the hearing, Ontario Hydro proposed that they become the "implementing organization" for the AECL concept. With Ontario Hydro now occupying four of the six seats in the new industry controlled nuclear waste management organization, it appears that their wishes have come true.

Canada Vs OECD on Nuclear Waste

Canada uses nuclear reactors to produce approximately 12% of this country's energy. An inevitable byproduct of the process is spent fuel, the most common form of nuclear waste. Radioactive waste is also generated by uranium mining and milling, fuel enrichment, decontamination and decommissioning of nuclear facilities and other activities using isotopes, such as scientific research.

Nuclear waste is a major threat to human health and the environment, and poses a difficult disposal problem. As of 1992, Canada had accumulated over 200 million tonnes of low-level radioactive tailings from uranium mining, over one million cubic metres of contaminated soil and 900,000 bundles of nuclear fuel wastes.

The dilemma about how to properly dispose of nuclear waste continues to plague Canada's nuclear industry. According to Environment Canada, "true walkaway disposal methods are unlikely to be possible, given the long time periods (a minimum of 250,000 years) for which the longer-lived radionuclides would have to be isolated from the soil, air, and water."

Canada generates far more nuclear waste than any other OECD nation on a per capita basis, placing us 28th out of 28. Canada generates 49.3 kg of nuclear waste per 1000 inhabitants. The total amount of nuclear waste generated in Canada in 1998 was 1,510 tonnes, almost seven times the OECD average, and second only to the United States. Annual production of nuclear waste in Canada grew 76% between 1982 and 1998. Although the United States currently generates a greater total of nuclear waste, Canada is expected to surpass the U.S. in terms of total nuclear waste by 2010.

From OECD Indicators Project at www.environmentalindicators.com

What can you do?

- C contact Northwatch to learn more about nuclear waste
- C organize a workshop or meeting to help others learn
- C write a letter to the editor and to your Member of Parliament, express your concerns about proposals to bury nuclear waste
- C get in touch with local church organization - many are already involved in this issue & can get help from their national office
- C let Northwatch know if you hear about proposals to consider a nuclear waste dump near your community - or anywhere!

Where can you learn more about this issue?

- C ask for an information kit from Northwatch
- C ask your Member of Parliament to find you information
- C Visit these web sites:
 - www.northwatch.org
 - www.nfwbureau.gc.ca
 - www.nrdc.org
- www.ceaa-acee.gc.ca/0009/0001/0001/0012/index_e.htm
- www.sierraclub.ca/national/nuclear/reactors/index.html