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Oral Presentation

Exposé oral

**Written submission from
Jenny Carter**

**Mémoire de
Jenny Carter**

In the Matter of the

À l'égard de

**BWXT Nuclear Energy Canada Inc.,
Toronto and Peterborough Facilities**

**BWXT Nuclear Energy Canada Inc.,
installations de Toronto et Peterborough**

Application for the renewal of the licence for
Toronto and Peterborough facilities

Demande de renouvellement du permis pour les
installations de Toronto et Peterborough

Commission Public Hearing

Audience publique de la Commission

March 2 to 6, 2020

Du 2 au 6 mars 2020

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An Intervention for CNSC hearing, March 2020.

This hearing is meant to apply only to the re-licensing of the BWXT plant in Peterborough, and most opposition is based on the possibility of uranium pellets being manufactured here. This mandate is too narrow, and does not amount to an adequate assessment of the true situation. I also understand that the chances of this hearing leading to the licence being withheld are virtually zero. Changes on the site are already being made. This is not good enough. In this presentation I shall look at the whole question of nuclear energy. It is an immense task, but I will do my best.

Firstly, a personal note. I am very old, which means that, as a child I was not exposed to the extra radiation we all now have to bear. It also means that I have been able to follow the nuclear question throughout its history.

I remember the relief when the war in Europe ended, in 1945. On the sixth of August, that year, I came down to breakfast and heard the radio announcer telling how the USA had dropped an atomic bomb on Hiroshima, Japan. The announcer was exultant, as were all the US. news media, but I wept. I have been weeping inwardly ever since.

In 1953 I married a man who earned a doctorate in mathematical physics. His first real job was as a scientific officer at the UK. Nuclear research station at Harwell, Berkshire. We both hoped that nuclear energy would prove, unlike the bomb, to be of benefit to mankind. My husband was soon disillusioned, and found other work. He died in 1999 of a horrible cancer.

At age twenty-seven, with two young children and another to come, I founded a local branch of the Campaign for Nuclear Disarmament. I worked on this issue for years, both in the UK and in Canada, joined Aldermaston marches, and have read widely on the subject. I was Ontario's Minister of Energy from 1990 to 1991, possibly being demoted for being "biased" on the nuclear issue. I have a Master's degree in Canadian Studies.

In preparation for this presentation I have pulled over forty books off my shelves. Most of them are fairly old, and I attribute this to the success the authorities have had in distracting our attention and assuring us that all is well. I have read all those books. I think that if any of you were to read even one of them and have a conscience, and care about the human race, you would agree that this license should not be renewed, and that we should be winding down our nuclear power stations.

Nuclear energy, which, for all its complexity, is just a way of boiling water, has been developed for military reasons and the financial windfalls of taxpayers money to big corporations which that makes possible, and is therefore surrounded by lies and the suppression of truth. Nuclear power stations have been needed to provide materials, such as plutonium and tritium, which are needed for nuclear weapons, and to act as a reserve for the resources and expertise needed to maintain nuclear military dominance. That, combined with the lust for power and money which afflicts some males of our species, is why our future is in peril. This is not a separate issue from climate change, but part of the same picture, which sees ultra-rich men creating and running industries

which will lead to the end of a habitable world. Many oil companies are involved in nuclear enterprises. Their wealth allows them to control some politicians, and much of the media, and to make sure that the public is fed lies and has no idea what is really happening.

In October 1957, when my first child was a baby, a fire at the atomic piles at Windscale, Sellafield, in Cumbria, which had been built to produce plutonium needed for British nuclear weapons research, released vast amounts of radiation. Although enough milk was thrown away, to make the rivers stink, the public was lied to, as it always has been, after such events. I quote from the Greenpeace Book of the Nuclear Age, by John May, McClelland and Stewart, 1989. This is not an academic essay, so I will not give page numbers or necessarily word for word quotations.

An official spokesman said:

“There was not a large amount of radiation released. The amount was not hazardous and in fact it was carried out to sea by the wind” None of this was true. On-site, construction workers had been exposed to up to 150 times the maximum permissible level of radioactivity. They were told to go indoors but were not told what was happening to them. Local farmers and villagers received 10 times the maximum permitted lifetime radioactive dose. The UKAEA and the government of the day knew this but decided not to evacuate anyone.”

At the time, it was not recognized that the radioactive cloud from Windscale contained deadly polonium, which increased probable deaths from the event to over 1,000.

Radioactive discharges from the Windscale plant into the Irish Sea had already been deliberately increased “principally to better yield experimental data”. There was subsequently a higher than normal incidence of Down’s Syndrome babies to young women across the sea in Ireland.

I remember not giving fresh milk to my child for days when news from Windscale came through, despite the toned-down version that we received.

Official accounts of nuclear energy have remained bland through the decades. We are told it is cheap, clean, safe, and provides many good jobs, and will see us through to the future. Unfortunately, we have been trained to accept a tissue of lies, now accepted by most people so that the issue is hardly discussed any more.

The cumulative impact of the many books I have read on this subject is devastating. They all tell the same story.

I will make special use of one of these books, “Nuclear Witnesses, Insiders Speak Out”, by Leslie J. Freeman, first published 1982, as a Norton paperback. This book comprises sixteen taped interviews with individuals who found out the hard way that nuclear energy is not safe, and that if you act on this knowledge, you will be severely punished. I will try to present some highlights. It is quite startling how all these accounts mesh, and validate each other.

It all began when the atomic bomb named Trinity was tested in New Mexico in July 1945. According to the New York Times a year later, it contaminated an area the size of Australia. Then the Hiroshima and Nagasaki bombs were dropped, and the war was over.

After this, the testing really got going. The USA, Britain, France, and Russia, joined in the fun. The Marshall Islands in the Pacific received huge doses of radiation from the US testing of massive nuclear bombs. Unspeakably deformed babies were born. Populations were moved around like cattle, and contaminated. In the end, some compensation was paid. The tests were moved to Nevada. But the US authorities did not pay much attention to human life even on their own territory. People were not warned of fallout, or told to take shelter, or not to eat vegetables from their gardens.

In “Nuclear Witnesses”, William Hodsdon tells his tale. A Black man, he was a private in the American army, willing to lay down his life for his country. He was ordered to witness the testing of an atomic bomb named Smoky, in Nevada, in August 1957. He and many others were deliberately used as guinea pigs. His health and his future were destroyed, as were those of many other army personnel, but the authorities denied he was even at the test, and he was diagnosed as being mentally ill. More “important” people watched from much further back and wore protective clothing.

Survivors of the bombs on Japan were studied, by the US, but not helped. The control group were not people who had been unaffected, but were from the suburbs and had been irradiated by fallout, which meant the damage to health was drastically underestimated. The results were not shared. Survivors went on to be shunned, to die young, and to have damaged babies. British tests irradiated aboriginals in Australia, and compensation was eventually paid. The USA held a dominant position at this time, and could have worked to protect the future from the nuclear menace. They did not.

In 1963 a treaty was signed to forbid nuclear testing in the atmosphere. I believe that the group of women, of which I was one, who wrote to politicians and told them things they did not know, was responsible for this. The world still carries a huge legacy of nuclear contamination from these tests, and from accidents, which have been far more widespread and frequent than most of us realize. The Greenpeace Book of the Nuclear Age carries a very useful chronological list. Of course it does not include Fukushima, the worst of all, which is unstoppable and steadily polluting the Pacific Ocean. The immediate concern in 1963 was that strontium 90 would accumulate in children’s bones. Had the tests not been halted, we might already be a crippled species. We know now that no level of radiation is safe. There has always been background radiation, and there has always been cancer, but any increase in that background will give a proportional increase in damage to health. I am not aware that any steps have been taken to record rises in this background, just as there is no way of finding out how many people who attended prince of Wales School as children may have become ill as a result of the factory across the road.

There seem to be more cases now of severe allergies, autism, asthma and other problems. We are told they are hereditary. They probably are, but only because that heredity has been damaged. We cannot afford to create more damage.

I will return to the book Nuclear Witnesses. James Pires was a pipefitter. He went to work in 1971 in a nuclear power plant under construction by the Bechtel Company in Plymouth,

Massachusetts. It seemed like a good job with good pay. By 1997 he had realised working conditions were so unsafe, due to radioactivity, that he quit. He had been led to believe, at his orientation session, that radiation would not hurt him, but he had an enquiring mind and discovered that this was not true. He went back, however, with a friend, who had also quit. When his business agent, a union man, called him to help with a start-up. He thought there would be no “hot” areas. But he and his friend were misdirected into a room where there were fierce levels of radiation and no entry was permitted. Yet they were repeatedly ordered back when they reported that it was the wrong place. They received huge doses. The friend’s hair turned white and he had sores that would not heal. But the worst thing was the run around they received from the company, Edison, which employed its own doctors and lawyers. The nuclear regulatory commission eventually fined Edison a paltry \$16,000 dollars. Pires wisely decided to have no more children, and expected to die young. He went on TV but would not speak in the open in case someone took a pot shot at him.

Rosalie Bertell was a nun, a PhD. in mathematics, and an expert on the relationship between low-level radiation and public health. She took a job, as a young woman, with Bell Aircraft, which was working on guided missiles. They would target military objectives only, she was told and never again hit hospitals and schools. She thought she was helping humanity. She enjoyed the job and was good at it.

In 1969 she started working on the Tri-State Leukemia Survey, at Roswell Park Memorial Institute, which was trying to discover why rates of leukemia had recently increased in New York, Maryland, and Minnesota. The answer was that the increased level was caused by diagnostic medical X-rays. She says: “That’s when I became interested in radiation problems. For decades we had been told that these very low levels of radiation were harmless.” Bertell soon associated radiation with premature aging. She met workers at Erwin, Tennessee, who made plutonium fuel rods for navy submarines. They were prematurely aged. They were striking for retirement at age fifty-five because they knew they would not make it to sixty-five. The public gave little support because they did not understand the situation.

Bertell wrote to the Director of Health Physics at the University of Rochester Medical School complaining: “The public should be made aware of the blatant non-collection of data responsible for the exorbitant claims of the nuclear industry.” She discovered that radiation standards for workers and the public were grossly too high, and were based on faulty data from atomic bomb casualties.

Bertell had one big success, -killing the proposed nuclear power station, at Barker, New York. A citizens group asked her to come and speak on the effects of low-level radiation at a forum organized by the utility company. The company had its speakers, who said radiation was not harmful at low levels. Bertell requested that the company men leave their seats on the stage so that the citizens group could speak on equal terms. They were all women. The utilities’ representatives were all men. Bertell said: “It’s too bad we have split this way on this issue. Maybe it is concern for life.” She got a standing ovation. She told the audience about Dr. Gerald Drake, of Charlevoix County, Michigan, who noticed an increase in cancer and leukemias amongst his patients after the Big Rock power plant started up. He was told that this was not due

to the power plant. The farms for Gerber's baby food were next to the proposed power plant. This was the last straw. It was never built.

After this, Bertell became a target for the authorities. We need public health authorities to document environmental diseases, she says. For example if the health of people around Three Mile Island had been documented before the accident there and could then be compared with changes afterwards, we would really know what happened. This accident was brushed off as "not an extraordinary event". It was, in fact, extremely serious. I have read a book based on meticulous statistical research which proves that this accident caused many deaths to newborn and unborn children as a result of contaminated milk from cows who ate contaminated grass. The nuclear industry has been literally able to get away with murder on a huge scale because of, probably deliberate, absence of data and the fact that death may ensue decades after the original exposure.

Bertell deplores the fact that the US Department of Energy was largely devoted to weapons development, which absorbed most of their funding. She was eventually deemed such a public enemy that there was an attempt to murder her in 1979, through a contrived highway accident. She has died since. I honour her, together with Helen Caldecott, as among those who have contributed the most and sacrificed much in this cause. Bertell later revealed some astonishing truths as to what the US army really does.

The other interviews in this book all point to the same, drastic truths. If you discover the real dangers of radiation, and that people are being exposed to them, and you complain to the authorities, instead of being listened to, you are hounded and destroyed. You could discover that a power station was not being built properly. No-one wanted to know. And if all is fine you can have a nuclear war.

Dr. Sternglas, also recorded in *Nuclear Witnesses*, lost his child as a result of his own father's exposure to radiation. He discovered the work of Dr. Alice Stewart who found that even the smallest amount of radiation to an unborn child could double its chances for leukemia and cancer. Sternglas' own subsequent research showed that each nuclear test meant the deaths of thousands of babies. Please think about that.

Sternglas then went on to discover that nuclear power stations were causing pollution and death, for example Waltz Mills and Shippingport. Before 1970 Sternglas thought that some bureaucrats, at least, were honest people. But President Nixon put an end to this. The big energy companies gave him a payoff, and real regulation was suspended. The Millstone plant released huge quantities of radioactive gases. Sternglas was called a liar, and lost all his friends. He says that secrecy is the one way an open society can be controlled-namely by keeping things from the public. If you want people to go out and fight a nuclear war with the Russians, you cannot tell them that the fallout will kill their own babies. Nuclear energy is supported by the authorities over all other forms of energy, because only nuclear energy makes bombs.

David Pyles, a lab technician, worked at West Valley, a commercial reprocessing plant run by Nuclear Fuel Services in the United States, southeast of Buffalo, starting in 1967. It was not

efficiently run, nor were the buildings efficient. When repairs had to be made, outsiders, had to be called in because of the limited radiation dose that each worker could receive. It is worth remembering that all repairs to radioactive equipment are hampered by this problem. At Fukushima there have been years of deadlock because repairs are not possible at all. Even robot workers are destroyed by the fierce radiation. The temporary workers coming to West Valley, often very young men, were heedlessly exposed, and leukemia, spontaneous abortions, and birth defects have occurred in the families of these temporary nuclear workers, who had no idea what they were getting into. Plant security was zero, and radioactive materials were often taken out of the plant. Radioactive metals have gone into general circulation, here and elsewhere.. Pyles' co-worker had a terrible accident with a radioactive needle, and both were irradiated by a duct under their floor which management would not fix because it would cost too much. He left. And then he discovered that they had been working, not to separate plutonium for the power industry, as they had been told, but for bombs. He decided to fight the licensing of the plant. It was closed in 1976 because he and other citizens proved that there was a risk of earthquakes in the region.

When Nuclear Fuel Services closed down permanently, it left behind six hundred thousand gallons of high-level radioactive waste, and two million cubic feet of low level waste. Government Operations reported that the problem of what to do with this waste was “gargantuan” and might cost as much as six or seven hundred million dollars. There was so much plutonium in the waste that it might even go “critical”and devastate Buffalo and surrounding towns. Some of the waste has leaked into Lake Erie, the source of Buffalo’s drinking water, and it is buried in casks that will only last 50 years, although it will be radioactive for much longer than that. Not Nuclear Fuel Services, but New York State will have to pay to deal with all this, as the major companies have made sure that the tax payer will have to pay for all waste problems.

The waste disposal problem is, indeed, one of the strong reasons why the nuclear endeavour just will not do. There is no way to dispose of it safely. Recent suggestions to bury it near Kincardine, or at Chalk River, risk polluting Lake Huron or the Ottawa River, respectively, and are unthinkable. I once went into a disused mine at Whiteshell where experiments were going on to see if waste could be safely buried there. I found the whole thing ridiculous. Uranium should be left where nature put it.

Uranium mining has killed countless miners. The Navajos of New Mexico have been treated with utter callousness,-their land invaded and contaminated with no explanations, let alone consent, and their health destroyed. Freeman recorded three women, two of them widows of miners. The third, Elsie Peshlakai tells a terrible story. “These corporate people, intend to do what they do They do it in purpose to make more money because money has become a god. I don’t know if they would have the nerve to go in there and kill somebody with a gun. But they can decide to have somebody else do it. What they have done to the Indian people is a kind of murder. They decide to have uranium mined and not worry about the people used to make money. She then has an important insight:

“And these same people, they’re good “fathers”, they’re good “husbands”, philanthropists. They pay their taxes, They’ll claim all that, and from all aspects they’ll even look that way..It’s sad. I know these kind of people really do exist.

The list of companies involved is illuminating, and confirms my suspicion that we are looking at the people who cause global warming here also.

Peshlakai says, "the companies that are mining now are United Nuclear at Dalton Pass...Pioneer still has a lease, Mobil still has a lease-it's doing a project right now-Conoco has a lease, Phillips has a lease, Western Nuclear has a lease, Grace Nuclear too. Gulf Minerals, the Mariuana Lake, is going, United Nuclear, Church Rock is going, Kerr-McGee at Church Rock is going..." These companies leave their tailings behind "Sixty million tonnes of tailings were already lying around in New Mexico". Kerr-McGee (previously a fossil-fuel company) is the company that caused the death of Karen Silkwood, in 1974, since immortalized in film by Jane Fonda.

On 16 July 1979 there was a terrible accident,"one hundred million gallons of radioactive water and eleven million tons of uranium tailings spilled from the United Uranium Corporation's waste storage pool at the mining facility in Church Rock, new Mexico. When the dam broke, radioactive debris poured into the Rio Puerco, the river that provides drinking water to residents of Gallup, Lupton, and Sanders., New Mexico, and a great many people on the Navajo reservation. The riverbed was contaminated as was the soil adjacent to the river banks, and radioactive material was carried eighty miles down river to Arizona.Although the spill was termed "the worst radiation accident in history,"the New York Times did not report the incident until twelve days later. It was pretended that there was no immediate health hazard from the spill, which was, to put it mildly, not true.

I would like to mention one more book, Nuclear Family, by Joanne Young. Ms. Young's husband worked at Eldorado Nuclear, in Port Hope. He started there in 1952, and by 1956 he was dead of a rare cancer, after realizing that he had been exposed to excess radiation. A claim against Eldorado for the death of Bill Young was rejected, as were all such claims made to Eldorado. Joanne was left to struggle financially to raise her four children. Later, when she joined demonstrations against nuclear energy she was thrown into jail, manhandled, and fired from her job as a teacher. She ended up unemployed and with a criminal record. In 1984 she demonstrated against the construction of the Darlington nuclear plant, and was duly manhandled and jailed, again. Port Hope is, despite past cleanup efforts, now thoroughly polluted, although we hear very little about it. I doubt there has been any monitoring of health effects. Nobody in the know would buy a house there.

Nuclear installations are unsafe in so many ways. There are always routine emissions, adding to background radiation and the resulting deaths. They offer opportunities to potential enemies and terrorists,-a free bomb and the power goes out too! If the water power stations need to cool them becomes too warm, they cannot function, or if its level changes too much. They are vulnerable to earthquakes, and this is the case, I believe, with Darlington and Pickering. Any mistakes by personnel or flaws in the building can have disastrous consequences, as they did at Chernobyl, which is still an ongoing menace.

Despite claims to the contrary, nuclear energy is extremely expensive. The cost does not depend on day to day operation, but on construction and maintenance costs and eventual decommissioning. Darlington cost fourteen billion dollars to build and, has needed expensive maintenance. The Pickering station has been in use too long, and although the recent alarm was

withdrawn and the government is now backing away from the enormous cost of decommissioning it, it is really not safe. It has never performed well. Is Ontario to be littered with uncleared nuclear hot spots?

We are not paying the true cost of nuclear energy in our household bills, because it would not look good. We are unknowingly paying some of it through our taxes. Yet the oversupply coming from our nuclear stations is blocking the development of cheaper, cleaner, sustainable energy which will be essential in the future. We could buy cheap hydro power from Quebec at any time if not for this block. Premier Ford has specifically said that he has cancelled sustainable energy initiatives because nuclear is doing the job. Nuclear power is inflexible and produces too much, which has to be sold at a loss.

Nuclear installations are uninsurable, because insurance companies know that losses could be astronomical. The US. has the Price Anderson Act to limit liability, so the public purse would be left to cope, and if radiation drives you out of your home, to which you would probably never be able to return, you are on your own financially.

The nuclear industry employs far fewer people per unit of investment than alternatives such as wind and solar. As long as workers are protected, the transition to better, safer, jobs would benefit everyone, although power workers' unions, which happen to be male-dominated, fiercely defend their jobs.

Nuclear power is basically a scam, which benefits the same rich companies that are leading us to climate destruction. It is not clean, it is not safe, it is not cheap, and it does not provide good employment. Life expectancy is falling in the USA and increased background radiation, which does not seem to be an object of research, could be the major reason for this. People are getting the diseases of old age at younger and younger ages.

We would be mad to expose the children of Prince of Wales school to this menace any longer, let alone to allow uranium dust into our air, or to allow contamination to spread through our residential districts and our hospital, and eventually the whole city and beyond. I have recently realized that some of my grandchildren live close to the nuclear factory in Toronto, which has been manufacturing pellets for a long time. The bad joke is that, although those closest to the nuclear factory here are mostly working class and this is a working-class city, no house in Toronto is now cheap. Perhaps gentrification in Toronto is a motive for bringing the worst pollution here.

The USA itself is already full of nuclear hot spots, including the Hanford nuclear city in Washington State, there since 1943, which is now hopelessly polluted. An experiment there went wrong in 1949, and radioactive iodine in milk may have killed 20,000 children. The USA has also left radioactive pollution more recently in many countries, such as Iraq and Bosnia, where they have used uranium-coated anti-tank shells. Their own troops have gone home with deadly "gulf syndrome" from the resulting nuclear dust, and many babies have died or been damaged, especially in Iraq.

The rich are too rich already, and the nuclear war they are preparing for would kill us all, not just

an enemy We would be genetically compromised, no longer be able to have healthy babies. I know of no country or people that it would be right to destroy.

Neither Peterborough nor Toronto should accept nuclear factories in the heart of their populated area, nor anywhere else for that matter. I salute CARN, and those fighting the same threat in Toronto. The battle is more desperate even than most people realize. We have to win. I hope that the representatives of CNSC at this hearing will understand what is at stake.

Jenny Carter.