



OUR DEADLY SECRET:

Tracing Saskatchewan's Role in the Proliferation of Nuclear WMD¹

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If we are going to eliminate nuclear WMD, and the threat they pose to the evolution of life on this planet, and make a successful transition to sustainable energy technologies, we must lift the veils that collectively blind us from the history of these monstrous inventions. Politicians here as everywhere have become adept at pointing the finger elsewhere to expose the roots of nuclear WMD. The nuclear industry is even trying a "comeback strategy" as though it is part of the solution to global warming. Thankfully, popular democratic, peace and environmental movements are becoming increasingly sceptical of such evasions and false claims.

It is self-serving and deceptive to displace the responsibility for nuclear proliferation. These weapons have become deeply ingrained within the dominant military-industrial system. Technological designs in hinterland as well as metropolis economies have all been shaped by this integration.²

There are many places on the planet where these veils of

secrecy and denial have to be lifted. But, as the northern neighbour to the world largest military-industrial economy, Canada may have the most secrets to reveal. Canada's branch-plant economy and our role as a continental (imperial) resource hinterland, has steadily pushed us in the direction of complicity. While Canada wants to be seen as a world "peacemaker", and has a somewhat honourable tradition in independent foreign policy (Suez, Vietnam and Iraq), Canada has also been deeply complicit in the creation and proliferation of nuclear WMD.

There is a long litany of examples of Canada's direct role in the development and proliferation of these weapons. From the Manhattan Project in WWII, to the first nuclear arms race of the 1950s-60s, to the spreading of nuclear (CANDU) technology that facilitated proliferation, to the second nuclear arms race of the 1980s, to the creation of a new line of radioactive weapons used in the Gulf War and invasion of Iraq, Canada has been involved in laying the ground for mass death and ecocide by nuclear means. And, as we shall see, Saskatchewan's role has become more central in this all.

1. The Manhattan Project: Uranium for A-bombs

Canada was the major source of uranium for the US-based Manhattan Project that developed the atomic bombs dropped on Japanese civilians at the end of WWII. Eldorado's Port Radium mine in the NWT was reopened in 1942 for the purpose of mining uranium to be used as nuclear weapons' fuel in the Manhattan Project. Because of its fundamental importance to the Project, Canada became a full-pledged participant by 1943. Eldorado was made into a federal crown corporation in 1944, and the long history of secret, state-based nuclear development began.

Nuclear weapons were created without any popular knowledge or democratic accountability. It took 20 years, from 1942-62, for Canadians to begin to get some glimmer that our government was centrally involved in the creation of the first nuclear WMD. Eldorado's 1962 Annual Report finally admitted that: "Canada's role (in the

Manhattan Project) was to supply the uranium raw material."³ What they never said was that it was likely uranium from Port Radium that was used in the bomb dropped on Hiroshima.

2. The Chalk River Project: Plutonium for US Nuclear Arsenal

Canada isn't just a resource hinterland for nuclear weaponry. Canada also played a central, technical role in the creation of the first nuclear weapon's arsenal. The experimental nuclear reactor constructed in 1945 at Chalk River, Ont. was the first reactor outside the US used to create weapons-grade plutonium for the US's nuclear weapons' programme. While, at the war's end, the Canadian government told the Canadian public it was only developing nuclear technology for non-military, industrial purposes, it continued to directly supply the US military with plutonium from its "peaceful" experimental reactors until 1963.

These experimental reactors were the first to use heavy water and led to the development of the CANDU nuclear technology. As we shall see, the CANDU technology came to play its own role in nuclear proliferation. While the CANDU is constantly marketed as though it is a peaceful use of the atom, it is vital to remember that: "Canada began the development of military and civilian nuclear technology as two products of a single scientific effort."⁴ And, as we shall see, these interconnections continue to this day.

3. Ontario and Sask. Uranium Mining: Fuel for the US Nuclear Arsenal

The uranium industry in Canada has steadily expanded along with the proliferation of nuclear WMD by the US. While the US had some domestic uranium supplies, it increasingly became dependent on Canadian sources from the start of the Cold War. Between 1942-54 about 30% of the uranium required for US nuclear weapons' production came from Canada.

The Elliot Lake uranium mine in Ont. was initially the main producer of uranium for export to the US. However,

after 1953, the uranium mines at Uranium City, Sask. became more vital to the US weapons' programme. Between 1956-63, 30 million pounds of uranium was exported from Sask. This was more than was mined and exported until the uranium "boom" in the late 1970s. In 1958, a peak year, 6 million pounds of uranium (30% of Saskatchewan's mineral production that year) was mined and exported.

Until the 1970s, ninety (90%) per cent of uranium from Sask. went directly to the US. And, as there was no commercial nuclear industry in the US until the mid-60s, we know that all Sask. uranium exported to that point went into military uses. Overall, it is estimated that Canada supplied the uranium for one-third of the 26,000 nuclear weapons in the US arsenal during the post-WWII period.

This was all done totally under the cloak of state secrecy, completely unknown to the Canadian electorate. One of the biggest historical-political ironies in my life is inviting Tommy Douglas to speak at one of our largest Sask. rallies for nuclear disarmament at the Legislature in the late 1950s, not knowing that he knew about Sask. exports for US nuclear weapons production, but was sworn to secrecy under the War Measures Act.⁵

4. Expanding Uranium Refining Capacity: Refining Uranium for US Nuclear Arsenal

Eldorado Nuclear set up its Port Hope refinery soon after it established the Port Radium mine in the NWT. While it was initially used to refine radium, after the Manhattan Project it refined uranium that then went to the US for enriching for weapons' production.

Eldorado later established a uranium refinery at Blind River, to be closer to the Elliot Lake uranium mine. In 1976, when Canadian uranium production had shifted to Sask., Eldorado proposed a third uranium refinery, to be closer to the new (Cluff and Key Lake) mines. The preferred site was Warman, near Saskatoon, with access to railways going east and west and truck routes going south to the US.

In 1980 federal hearings were held on the proposed new refinery. The Blakeney NDP government backed the proposal, but opposition from throughout Sask. was overwhelming. Most vital, opposition was wide and deep within the local, religious pacifist Mennonite community. The Board of Review recommended against the location because of the potential social impact.⁶

(To my knowledge, the major victories of the non-nuclear movement in Canada, to date, are stopping this proposed uranium refinery at Warman, along with the moratorium on uranium mining in BC, and the stopping of a uranium mine near Baker Lake, NWT. This is something for us to build upon.)

5. Exporting CANDU Technology: A Source of Weapons' Grade Plutonium

Canadian nuclear technology has directly contributed to the nuclear arms race in S.E. Asia, and almost played a role in nuclear proliferation in South America and the Middle East. Canada supplied India with the CANDU technology in 1972, and a little later it supplied it to Pakistan. Wanting "nuclear parity" with China, India used this technology to produce its first nuclear weapon in 1974. When India exploded its first atomic bomb, Pakistan, felt threatened and wanted "nuclear parity" with India. It soon produced the first "Islamic bomb." Though Canada belatedly banned fuel or parts to India and Pakistan, the regional arms race was on.

Canada didn't learn the hard lesson, for later, South Korea was the recipient of a Canadian research reactor and then the CANDU, just when this country was also exploring nuclear weapons production. The Sask. Mining and Development Corporation (SMDC, now Cameco) was also negotiating uranium exports to South Korea at the time.

In 1973 the Atomic Energy of Canada Ltd. (AECL) started negotiating a CANDU sale to Argentina's military dictatorship. In 1981, Argentina's new government admitted its former nuclear programme was for military and strategic, not commercial reasons. Had the CANDU

sale been made it almost certainly would have triggered a nuclear arms race with Brazil.

AECL's salesmen apparently have no scruples, for, in 1974, they even attempted to sell a CANDU to Saddam Hussein's Iraq, with one main selling point being the CANDU's capacity to produce plutonium.⁷ In 1980 the AECL made its largest CANDU sale ever (five reactors) to Romania, while it was still under authoritarian, and repressive rule.

Though the AECL and various Canadian governments have tried to hide behind pronouncements about non-proliferation agreements, CANDU exports have clearly contributed to nuclear proliferation.⁸

6. Sask. Uranium To France: Non-Signatory to the Nuclear Non-Proliferation Treaty

After the discovery of the most concentrated uranium-bearing ore in the world, Sask. moved to the centre of Canada's involvement in nuclear proliferation. The first high-grade uranium mine to open (1977) was at Cluff Lake, where the mine and mill was operated by the French company Amok. (The Sask. government's crown, the SMDC (now Cameco), was a co-owner, controlling 20% of the Cluff lake mine.) Amok was connected to the highly centralized French Atomic Energy Commission (CEA) that oversees both the state-run nuclear power plants and the nuclear weapons programme.

Canada approved contracts for Amok and SMDC to sell to France, even though France operated its commercial and weapons programme under the same authority and had not signed the 1965 Non-Proliferation Treaty (NPT). At the time France was still carrying out above-ground nuclear weapons' tests in the south Pacific. Amok also sold uranium to Germany which, in turn, sold it to Brazil, which at the time was threatening to develop nuclear weapons in reaction to Argentina's nuclear programme.

7. Sask. Uranium Mining: Helping fuel the new US Nuclear Arsenal

Canadian uranium exports to the US were stopped in the

early 1970s, due to court action by US nuclear power companies over a Uranium Cartel keeping uranium prices up.⁹ At the time there was also a growing protectionist, US-uranium lobby, that felt threatened by Sask.'s huge new uranium mines. However, by 1975 Canadian uranium imports were again allowed into the US. By 1979 one-half of Sask.'s uranium was going to the US, where it was enriched for light water reactors or nuclear weapons production.

The Canadian and Sask. governments both claimed that this growing demand for Sask. uranium was due to the expansion of nuclear power plants. However, though there were grandiose claims about the expansion of nuclear power after the OPEC oil price increases in 1973, these didn't materialize. There was, however, growing demand for uranium for the new, second nuclear arms race, that took place in the 1980s.

The Reagan administration had steadfastly opposed US protectionism and supported "free trade" with Canada to ensure security of uranium supply.¹⁰ Under Reagan's presidency, 37,000 more nuclear weapons were produced. This was far more than those produced from 1945 to that point, and the extreme economic pressure created by this massive nuclear arms build-up contributed to the collapse of the Soviet Union's economy. Once the US border reopened to uranium from Canada, military reactors that had been shut down in Southern Carolina coincidentally came back into operation.¹¹ Even when the uranium market was glutting, the US continued to stockpile a further 90,000 tonnes of uranium from Sask.

The Sask. and Canadian governments engaged in legalistic hair-splitting about Sask. uranium (the actual molecules) no longer going directly into US weapons. However, similar to France, the US Department of Energy (DOE) oversees uranium enrichment for both nuclear power and nuclear weapons' production. Therefore, "it's hard to see how the US could have maintained both a civilian and military nuclear programme without importing some Canadian uranium."¹²

8. Depleted Uranium From Sask.: A New Generation of

Weapons and Victims

Depleted Uranium (DU) from yellowcake imported by the US from Sask. becomes part of a common stockpile after uranium enrichment. Some of this gets used for packing the casing in the production of H-Bombs. Some of it now goes into a new generation of tank-piercing super-bullets (DU shells) for the US military.

In 1993 the Inter-Church Uranium Committee (ICUC) released copies of a license from the US Nuclear Regulatory Commission (NRC) that shows that DU from Sask. uranium was directly used for producing these weapons. The steps in this process were as follows:

1. Yellowcake was exported from SMDC (now Cameco) to the Sequoyah Fuels Uranium Conversion Facility for refining. (In 1986, 480,000 pounds was shipped and such shipping from SMDC to Sequoyah Fuels (SF) continued until 1992.)
2. SF then refined the yellowcake into a) uranium hexafluoride (UHF) for reactor fuels, leaving b), depleted uranium tetrafluoride (DU).
3. SF then supplied DU to Aerojet Ordnance Tennessee (AOT).
4. AOT had a license from the US, NRC to send up to 1,000,000 pounds of DU to...are you ready...Eldorado Nuclear's (now Cameco's) uranium refinery in Port Hope to produce into uranium metal. The license was for 1988-90.
5. This uranium metal was for making armour-piercing munitions for the US military.

DU weapons were used in the 1991 Gulf War and again in the invasion of Iraq in 2003. The tens of thousands of rounds used in the Gulf War have probably created somewhere in the range of 30-50 tonnes of radioactive and toxic waste on this fertile land.¹³ Childhood leukemia and some other cancer rates are already five-fold what they were in Iraq before the Gulf War, and the effects from the more recent invasion and occupation have

probably not started to show.¹⁴

The after effects of DU will likely be more devastating in the long run than the actual firing of the bullets. In some bombed areas radioactivity is from 300 to 1,300 times the background level. Iraqi children have been found dismantling ordnance for metal scraps. Birth defects such as no limbs or eyes or other fatal defects were up eighteen-fold in 2001 over 1990.¹⁵ Even so the US and UK troops are not undertaking decontamination procedures.

DU radioactive contamination puts soldiers as well as civilians at risk. For example, Dutch troops were sent into the Al Muthanna area in Iraq, without being told that DU weapons had been used. There are already signs that offspring of soldiers exposed to DU in 1991 are more at risk of such conditions as heart valve, urinary and kidney defects.

9.Challenges To The Saskatchewan Conscience and Future

There are several profound ethical, ecological and political questions raised by "Our Deadly Secret". For one thing, state-run, federal and Sask. crown corporations, have played a central role in nuclear proliferation. Government subsidies have maintained the whole nuclear system from its beginning. AECL has been kept afloat by ongoing federal subsidies which some say are nearing 20 billion. Cameco probably would not even exist if it were not for huge government subsidies that went to develop the crowns, Eldorado Nuclear and SMDC, from which it was formed.

And all this fundamentally compromises the nuclear regulatory system. All regulatory bodies, whether Canadian (AECB, CNSC16), or American (NRC), or even international (IAEA), are blatantly pro-nuclear. Personnel have often gone back and forth between these regulatory bodies, the crowns and private nuclear corporations, all working from the same myopic and perverse vision.

Second, the nuclear/uranium industry has typically

operated in a blatantly anti-democratic and secretive manner. For the most part the Canadian and Sask. public still does not know much of this hidden, manipulated history.¹⁷ The War Measures Act protected the industry from public scrutiny during its earliest years. The Ban-the-bomb Disarmament movement in Sask. knew nothing of the secret uranium exports from here to the US's nuclear weapons programme through the 1950's-60's. Dene people who worked in the Port Radium mine are only beginning to understand that they - along with the Japanese - were victimized by the Manhattan Project.

And has anything fundamentally changed? Most people in Sask. probably don't yet know anything or much about the Sask. uranium industry's connection to the first (1945-65), let alone the second (1980s-present) nuclear arms race. And the denials we hear from politicians and corporate PR people about any contemporary connections to DU weapons are like past denials that any Sask. uranium went into the US nuclear arsenal.

Third, this history shows us that the legalistic protections against proliferation are not at all fail-safe. Though Canada has officially banned exports of nuclear technology or uranium for military purposes since the NPT in 1965, we know that nuclear and uranium industry activities since then have contributed directly to nuclear proliferation. This is clearly true for CANDU technology exports. But it is also true for past and present uranium exports from Sask. to the US, France and likely other countries.

Furthermore, there is steadily growing IAEA documentation of uranium "gone missing" - in 1965, 1968, 1973, 1976, 1978, etc. - long before the threat of "terrorists" getting hold of weapons grade material became such a political football.

And, fourth, it is time we squarely faced the juncture we are at. The threat of global warming and the challenge of the Kyoto Accord, are fundamentally interrelated with the ecological devastation and possibility of further wars due to fossil-fuel based industrialization. But this all

underscores the necessity for social and technological transformation and economic conversion. However, this time we have to do it right, and that means that new energy technologies must pass the big tests of sustainability.

Meanwhile, the nuclear industry is trying, once again, to make a comeback. It mostly failed to successfully exploit the OPEC oil-price crisis in the 1970's. Now it is trying to play an "environmental card", saying it is the "clean, affordable and reliable"¹⁸ alternative to oil and global warming. The absurdity of this nuclear propaganda is shown when you realize that a CANDU in Sask. would likely end up providing energy to bring the heavy oil reserves in Alberta onto the world oil market. Yes, the oil and nuclear industry make good partners.

As we prepare to fight the Nuclear/Non-nuclear issue once again in Sask., it is worth remembering the nuclear and uranium industry is changing. Cameco started as a crown corporation (the SMDC) that was to bring the benefits of uranium mining to the Sask. people.¹⁹ Now, as a multinational, private corporation, it owns Sask. uranium mines, and Ont. uranium refineries and nuclear power plants, in addition to nuclear and other facilities abroad. This puts it among the most integrated nuclear corporations on the planet. Of course it wants a uranium refinery, nuclear reactor and nuclear waste storage industry here. It wants to profit off the complete nuclear fuel system.

Unfortunately some of our politicians, including NDP government politicians, are not on much of a learning curve about these matters. So, prepare for more of the same old Orwellian double-speak that the industry and its government backers have used from the start. We just have to learn to accept that uranium mine tailings, nuclear reactor wastes, DU contamination, and human cancers are "clean"; that capital-intensive, centralized structures, that require huge public subsidy and debt for construction and decommissioning, and have squeezed renewable energy alternatives out of the market, are "affordable"; and that high-cost, inefficient electrical generation, hidden nuclear proliferation, radioactive eco-systems and the spreading

threat of nuclear war make the world
"reliable."
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