Decommissioning comments / Commentaires sur déclassement

Decommissioning

Ole Hendrickson

Jan 29, 2021 - 16:06

The discussion paper states:

"In-situ decommissioning cannot be considered a reasonable decommissioning option for planned decommissioning of… future nuclear facilities… where removal is possible and practicable."

This raises questions: "Is removal of proposed small modular reactor (SMR) designs – such as the MMR proposal at Chalk River or the ARC-100 and Moltex proposals in New Brunswick "possible and practicable" after shut-down? Does Canada's nuclear regulator intend to include removal costs in the "financial guarantee" for decommissioning? Or is the plan to dispose of them "in-situ" (on-site) - rather than at an NWMO repository)?

The paper goes on to state:

"In-situ decommissioning may be considered a solution… for legacy sites."

The IAEA's General Safety Requirements document, Decommissioning of Facilities, says that in-situ decommissioning (also known as entombment) "is not considered a decommissioning

strategy and is not an option in the case of planned permanent shutdown. It may be considered a solution only under exceptional circumstances (e.g. following a severe accident).” The 2019 IAEA review of Canada’s nuclear safety framework calls for “revising… current and planned requirements in the area of decommissioning to align with the IAEA guidance that entombment is not considered an acceptable strategy for planned decommissioning of existing NPPs and future nuclear facilities.”

As in-situ decommissioning is not an option according to the IAEA’s safety requirements, it should be removed from the list of options in the discussion paper. The discussion paper should state that in-situ decommissioning is not an option for “legacy sites” or “future nuclear facilities.”

"Prompt” and “deferred” decommissioning - dismantling and removal of nuclear facilities- are the only options deemed acceptable by the IAEA. These are the only options that should be included in Canadian policy. Nuclear reactors are water-cooled and built near major water bodies. Their wastes must be isolated and contained in a facility located AWAY from major water bodies.

Policy should identify “prompt” decommissioning as the preferred option, and should discuss why prompt decommissioning is preferred, and under what circumstances decommissioning might need to be deferred. It should note that one such circumstance is that a suitable waste management facility is lacking. Canadian decommissioning policy should include development of a long-term decommissioning waste management facility so that

decommissioning can be carried out promptly and is not deferred indefinitely.

Canada's decommissioning policy should require accurate estimates of funding required for decommissioning of nuclear facilities and for long-term management of decommissioning wastes. It should address financial guarantees and acknowledge the need to ensure that adequate funding is available so the burden does not fall upon future generations of taxpayers.

Improved Decommissioning Alignment with International Standards

D. Bilinsky

Mar 16, 2021 - 00:03

IAEA General Safety Requirements (GSR), Specific Safety Requirements (SSR) and Safety Guides (SSG) reflect international consensus of established requirements and recommendations take precedence over supporting informational series publications such as the IAEA Safety Report referenced within NRCan's Decommissioning Discussion Paper. Contrary to NRCan’s presumption, the only special circumstance acceptable to the IAEA where in situ confinement for reactors may be considered is for nuclear facilities that have been damaged in a severe accident. The 2019 IAEA Integrated Regulatory Review of Canada’s nuclear regulatory framework previously stated the strategy of in situ confinement (disposal) for reactors is not in full compliance with

IAEA safety standards GSR Part 6 and SSG-47. Nevertheless, NRCan advocates in situ decommissioning and Section 5.1 of CNSC regulatory document REGDOC-2.11.2 may consider in situ decommissioning for legacy sites, even in situations where removal is possible and practicable.

Canadian Nuclear Laboratories (CNL) has proposed in situ decommissioning of the Whiteshell WR-1 reactor in Pinawa, Manitoba via creation of an Intermediate Level Waste (ILW) disposal site. The removal of the WR-1 reactor followed by ILW consolidation at a larger ILW site is preferable to creating another long-term legacy liability ILW disposal site. Consolidation of smaller nuclear waste inventory sites reduces the burdens on future generations of securely maintaining and monitoring multiple long-term legacy sites while still providing protection of people, the environment and national security. Consolidation of nuclear waste sites also has the benefit of increasing the number of locations released for reuse by future generations.

Canada should improve alignment of nuclear policies and regulations to internationally agreed standards, specifically key fundamental recommendations found in IAEA GSR 6 and SSR 5 by; dismantling and removing nuclear facilities where possible and practicable, and due to the presence of long-lived radionuclides, ILW requires a greater degree of containment and isolation than that provided by near-surface disposal. ILW disposal at significant depth provides greater protection against the migration of long-lived radionuclides and a potential future glacial degradation event.

Verifiable policy and regulatory alignment with IAEA safety standards will build trust with Canadians and provide assurance that the Government of Canada is serious about its commitment to meet international standards and best practices in achieving its top priority of protecting the health and safety of Canadians and the environment, now and in the future.

Decommissioning Language

Peter Baumgartner

Mar 16, 2021 - 13:29

Radioactive Waste Management Policy has only three categories:
- Waste Production
- Waste Storage
- Waste Disposal

Waste Production is the generation and collection of waste products from the mining, processing, fabricating, handling, decommissioning and contaminating of the derivative desired infrastructures and products. Note that decommissioning is a Waste Production activity and not a stand-alone waste production process. Waste minimization is an over-riding consideration in the Radioactive Waste Management Policy, particularly under the Waste Production category where the vast balk of the waste is produced.

Waste Storage is the temporary and safe containment of the waste products until appropriate waste disposal facilities are built and enter operation.

Waste Disposal is the active construction, operation and ultimate closure of approved facilities to permanently and safely contain and isolate the radioactive waste for the long-term protection of the people and environment.

As mentioned previously, decommissioning is a Waste Production process. It is not, and should not be, a Waste Disposal process and should not be confused as such by poor language. Great pains are made to define the term “In-situ Decommissioning” in which “… some or all of the radioactive contaminants are disposed of in place, which may result in the creation of a waste disposal site.” If it is disposed in place, then it “is” a disposal site, not “may create a disposal site.” The discussion of “In-situ Decommissioning” should be retitled as “In-situ Disposal” and should be solely discussed under the Waste Disposal process.
The discussion of decommissioning research and development (R&D) legacy sites uses the weak argument that their initial design and construction did not consider decommissioning as part of the design process. This does not prevent the taking of proper action to remediate this historical omission. Proper engineering plans and designs for remediation options should be undertaken and be impartially reviewed and evaluated before any decision for In-Situ Disposal is ruled upon to eliminate bias. The current unavailability of an operating disposal facility should not be a consideration as this does not pertain to other non-R&D legacy facilities.

Waste minimization is briefly discussed since decommissioning will, not may, produce radioactive and other hazardous wastes which

must also be disposed, not hidden under the guise of the weaker term, managed.

WR-1 Reactor Removal – Possible and Practicable

D. Bilinsky

Mar 17, 2021 - 11:27

The removal and replacement of legacy site research reactor vessels has been conducted by AECL three times, once following a severe reactor accident. CNSC REGDOC-2.11.2 Section 5.1 may consider in situ decommissioning for legacy nuclear sites where decommissioning was not planned as part of the design. Although decommissioning of AECL's WR-1 reactor at Pinawa Manitoba may not have been planned as part of design, it was likely a design consideration as reversal of installation is evident as a possible and practicable reactor vessel removal method.

WR-1 was designed with facilities and equipment to replace fuel channel pressure tubes; a standard operating procedure safely conducted on numerous occasions. Fuel channel replacement, including fuel handling, required about 12 hours per channel [1]. Extending removal of currently defueled pressure tubes to include volume reduction is practicable. A Bruce Power video [2] demonstrates volume reduction for CANDU pressure tubes. WR-1 fuel channel volume reduction is straightforward due to existing handling equipment and the vertical orientation of the fuel

channels. Following removal of a fuel channel, the fuel channel transfer flask could be positioned over a repurposed room under the main floor of the reactor building where the fuel channel is lowered for volume reduction. The compacted volume of all WR-1 fuel channels is ~ 1 cubic meter and fuel channel removal provides ~ 47% reduction [3] in overall reactor core activation radionuclide activity. Removal of the reactor main floor rotating deck plates provides additional direct access to the top of the reactor for use of advanced technologies to dismantle and remove the remaining 53% of core activation radionuclide activity found largely in the reactor vessel.

During the history of WR-1 operations there were about 150 documented nuclear fuel failures, each contributing a small portion to the 1 kg upper bound estimate [3] of high-level radioactive particles deposited in reactor systems. Manitoba's High-Level Radioactive Waste Act does not permit disposal of high-level waste in Manitoba, making removal of the irradiated fuel deposits in WR-1 systems necessary, also required by Section 8.10 of IAEA General Safety Requirement Part 6. WR-1 removal followed by waste consolidation at a larger disposal site eliminates creating another legacy liability in the form of a near-surface intermediate-level waste disposal site.

The Government of Canada should reduce the number of long-term legacy liability sites by dismantling and removing nuclear facilities where possible and practicable, regardless of whether decommissioning was planned as part of design.

1) IAEA-SM-99/33 (1967), Current Status of Canadian Organic Cooled Reactor Technology; https://www.osti.gov/biblio/4557804
2) Bruce Power (2009), YouTube Video; https://www.youtube.com/watch?v=L-HgGjzswAk
3) CNL (2016), WR-1 Reactor Radiological Characterization Summary, WLDP-26100-041-000-001

Decommissioning

Dennis

May 17, 2021 - 13:02

I was responsible for the vault model for the post closure assessment of Canada's high level nuclear waste. In 1999 I developed under contract with AECL a probabilistic risk assessment model for the in-situ decommissioning of the NPD reactor near the Ottawa River. The plan was to fill the subsurface structures with clay. Five hundred simulations of leakage and the subsequent dose consequence risk estimate were determined. The report of this risk assessment appears to have been forgotten or lost. I have seen no other simulations or determinations of risk from decommissioning. There were many large uncertainties in the modelling. One major unknown was the inventory of activation products such as CL36 and C14 in the biological shield. It appears the probabilistic risk assessment methodology developed for high level waste will not be applied to decommissioning. I have seen no detailed plans for decommissioning by dismantling except for a very old paper by Grant Unsworth on the dismantling of the Whiteshell nuclear

reactor. It is clear from his paper that many workers will receive near maximum allowed radiation dose during decommissioning. Decommissioning appears to be an insoluble problem. Dismantling of power reactors will likely entail very high and perhaps unacceptable levels of radiation exposure to workers. In-situ disposal is near surface and will result in eventual contamination plumes in the accessible biosphere. Decommissioning of SMR's will be even more problematic since they will have materials such as contaminated molten salt and and highly reactive sodium to deal with. One of the major contributors to dose consequence from high level waste was CL36. CL36 in Candu comes mainly from small amounts of chloride impurities. In chloride based molten salt coolant the chloride content is orders of magnitude larger. The neutron activation to CL36 will be enormous compared to CANDU. There is no proper detailed research been done on many of these major issues. Look at what happened to the liquid sodium cooled Monju rector in Japan.The SMR program is fraught with high risk and uncertainties and should stop now.

Comment on what is missing from the Decommissioning Discussion P

Brennain Lloyd, Northwatch

May 17, 2021 - 14:34

The paper provides an extremely vague and at times misleading overview of decommissioning For example, it repeatedly refers to

there being three decommissioning options: immediate decommissioning, deferred decommissioning and in-situ decommissioning, implying that this is the internationally recognized approach. In fact, the Internationally Atomic Energy Agency's General Safety Requirements clearly set out that by IAEA standards there are two options:

- Immediate dismantling, which the IAEA identifies as the preferred option, but only in instances where there is a permanent waste facility available (so not applicable in Canada), and
- Deferred dismantling, which is the default option when there is no permanent waste facility available (such as in Canada).

The NRCan discussion paper inserts a third option, "In-situ decommissioning … in which some or all of the radioactive contaminants are disposed of in place, which may result in the creation of a waste disposal site".

Referred to internationally as "entombment", the IAEA Safety Standard, to which Canada has committed, states:

Entombment, in which all or part of the facility is encased in a structurally long lived material, is not considered a decommissioning strategy and is not an option in the case of planned permanent shutdown. It may be considered a solution only under exceptional circumstances (e.g. following a severe accident).

Canada's response to the 2019 IRRS Report is at odds with the Discussion Paper's positioning of in-situ decommissioning as an acceptable strategy. In response to IAEA IRRS S6 that " CNSC should consider revising its current and planned requirements in the area of decommissioning to align with the IAEA guidance that entombment is not considered an acceptable strategy…" Canada

replied “Accepted”
Overall, the discussion paper takes an overly administrative approach to the subject of decommissioning, equating the importance of decommissioning with there being a number of nuclear facilities that will retire from service in the near future, and summarizing decommissioning as “the administrative and technical actions that are taken to allow for the removal of some or all of the regulatory controls”. It goes on to define end-state objectives in entirely administrative terms, i.e. “This end-state generally falls into two categories: 1) unrestricted, where sites are released for unrestricted use, or 2) restricted, where there are some restrictions on the use of sites after decommissioning”.
Several important and directly relevant topic are missing from this NRCan Discussion Paper, including: discussion of waste categories, classification, inventories in relationship to decommissioning options; analysis of shortcomings in the current decommissioning planning process, such as the absence of comprehensive descriptions of site conditions in preliminary decommissioning plans, lack of transparency; and discussion of exposure risk to workers and the public.

Preliminary Responses to Questions in the Decommissioning Discus

Brennain Lloyd, Northwatch

May 17, 2021 - 14:35

Natural Resources Canada poses two questions to those commenting on the Waste Minimization paper; those questions are below, with summary points in response:

1. What do you feel are important policy considerations that should influence the choice of decommissioning strategies by nuclear operators and should be considered as part of Canada's radioactive waste policy?

- Decommissioning approaches must at minimum conform to international safety standards.
- Site conditions must be fully described, including a complete list of radionuclides found in soil, ground or surface water and/or involved in any radioactive decommissioning scenario
- Radioactive wastes on site and projected decommissioning wastes must be fully inventoried
- The list of radionuclides found on site and the inventories of radioactive wastes (on site and decommissioning wastes) must include half-lives, activities (total becquerels as well as becquerels per kilogram or per litre), mode of disintegration, radioactive progeny and target organs in human receptors
- Detailed descriptions of site conditions and the waste inventories must be developed and be publicly available and peer reviewed, including by the public and Indigenous peoples, at all decommissioning stages, including in the preliminary decommissioning planning stages
- Information and inventories related to decommissioning must be available and communicated to indigenous peoples and other members of the Canadian public, including in a plain language

stripped of scientific symbols and abbreviations
- All decommissioning projects must include a comprehensive strategy for the transmission of Records, Knowledge and Memory (RK&M) to future generations, including a detailed inventory of all specific radionuclides included in the decommissioning wastes along with relevant physical, chemical and biological properties of each

2. In what ways should Canada's policy address the setting of end-state objectives for decommissioning?

End state objectives should be set in ecological and human health terms, not administrative terms. There should be measurable objectives for ground and surface water, soil and air, and these objectives should be developed by considering the pre-development state of the site (i.e. without radioactive and toxic contamination) and the protection of human health and the environment.

Decommissioning nuclear reactors/sites

Denise Giroux

May 18, 2021 - 13:56

On the issue of decommissioning, the term is a serious misnomer, for several reasons:

1. it fails to hold the nuclear waste producers responsible--they can make dangerous waste without planning for the management of

that waste--and without any obligation to fund the handling and "disposal", which is opposite to "producer pay" and "cradle to grave" principles which should be adopted for the 21st century;

2. it presumes a moment in time where the waste has been sufficiently "disposed of" even though the means used historically are wholly inadequate to protect against long-term exposures and increasing leaks of radioactive waste in our land and waters; it requires a change to long-term, permanent management, in recognition of the need to monitor and control waste forever;

3. it fails entirely in establishing the Seaborn commission recommendation that communities where reactors and wastes are stored should first require community acceptance; the government has failed entirely to ensure this is done BEFORE reactors and wastes are located and determined--and efforts underway at this time in some communities are largely promoted by the producers, lacking in full transparency and fail to provide proper resources, time, and funding to those who are opposed--and obtaining the information to they need to make fully informed decisions is difficult, unduly;

4. there is inadequate long-term planning for monitoring and management, and ongoing risk-reduction, of sites where "decommissioning" takes place, effectively abandoning all responsibility for producers and successive governments, and putting health and environment at risk.

Canada must establish an independent Task Force to look into the fundamental questions of nuclear energy generation--the need and

adviseability of it at all!--something that was promised but that the government has ignored since then--and to address all nuclear questions in the public interest, as well as to determine appropriate management practices for the current "stockpile" of nuclear waste. It is frustrating participating in a "consultative" process to address critical safety issues, when the very Ministers entrusted with the decisions to be made are publicly promoting and subsidizing the nuclear industry, empowering them with self-regulation, and pretending that it is an answer to "dirty" fossil fuel and an answer to climate change, while never admitting that they are largely influenced by U.S. industry representatives and large and corrupt companies like SNC-Lavalin .

Independent bodies MUST be created to regulate the industry--the CNSC is entirely captured and inadequate, and to manage waste in a coherent manner with public health and safety and the protection of our waters and lands as priority principles.

Denise Giroux, concerned citizen
Cantley, Québec

important policy considerations

Ole Hendrickson

May 18, 2021 - 15:24

Decommissioning strategies justified and in conformity with IAEA guidance and requirements
Public comment opportunities on strategies, end states, waste

transport, financing and waste management
Detailed radiological survey and radionuclide inventory prior to approval of decommissioning plans
No transport without justification, traceability of wastes
No reuse or recycling without justification
Transmission/retention of records
Decommissioning plans for all SMR license applications
Financial provisions for decommissioning federal sites
Long-term management infrastructure for federal wastes
Federal remedial action plan for Chalk River

Nuclear Waste Elimination, 5 Rs (Fundamentals) & Governance

Simon J. Daigle, B.Sc., M.Sc.,...

May 23, 2021 - 17:49

What do you feel are important policy considerations that should influence the choice of decommissioning strategies by nuclear operators and should be considered as part of Canada’s radioactive waste policy?

1. The public needs to be involved for any new policy considerations;
2. Decommissioning strategies must be a transparency;
3. It is not sufficient alone to publish our public comments, it must be put to action as mitigation measures.

In what ways should Canada’s policy address the setting of end-state objectives for decommissioning?

1. We must consider the basic fundamentals of environmental sciences and stewardship. What is the real adaptation strategy for nuclear waste decommissioning? Answer: It is only a public and democratic government that can assume this stewardship;
2. Can we really say that nuclear waste stewardship is possible in the private sector? I believe it cannot.
3a. Decommissioning shall be inclusive of the following components and fundamentals:
3a1. Transparency with the general public;
3a2. Nuclear waste risk assessments, surveillance and monitoring over time (permanently) must be permanent;

Natural Ressources Canada's website, the three Rs apply to the management of radioactive waste (3Rs): reduce, reuse and recycle. There are actually 5Rs to consider and for all waste streams (e.g. Fundamentals of Environmental Stewardship):

A. R1 - Reduce: This step should be considered at stopping using nuclear fuel at its source (reduce meaning elimination at its source as a first step).
B. R2 - Reuse: This concept of nuclear waste (reuse) is not viable economically, and would put considerable risks on the environment, citizens, aboriginal people, and workers).
C. R3 - Recycle: It is not possible to recycle nuclear spent fuel as it will be here for thousands of years. Developing SMR technologies from nuclear waste is not viable economically or environmentally.
D. R4 - Repair: Nuclear facilities maintenance are costly. power plant facilities will be impacted by decommissioning activities.
E. R5 - Refuse: (e.g. Decommissioning – permanent repository, etc...)

If we eliminate over time the need on nuclear energy and technologies, the end result is lower costs for Canadians and for decommissioning.

Final comments:

1. We need to look at a new model for waste minimization, and seriously look at waste elimination at the source.
2. The scope of waste elimination must be at the forefront of these discussions;
3. A moratorium must be explored and a public debate in parliament;
4. We are still in the next industrial revolution, AI (artificial intelligence), automation, jobs replaced by machines, and my biggest concern now is how will this impact nuclear waste decommissioning in the future;
5. Nuclear waste is a transboundary problem locally, provincially, nationally and globally just like climate change and its impact on the world.

Safest regards,

Simon J Daigle, B.Sc., M.Sc., M.Sc(A)

Dennis

Anonymous

May 23, 2021 - 19:17

Some glaring omissions in the NRCAN discussion papers on waste decommissioning are dose estimates. A 1977 paper by Grant Unsworth on the decommissioning of a CANDU-PHW reactor, AECL 5687 is out of date. Unsworth estimated dose based on experience from the decommissioning of Elk River reactor a light water pressure vessel reactor much smaller than a CANDU power reactor. Unsworth assumed the fission products can be removed by a decontaminating solution that would be solidified and disposed of. No dose estimates were given for this process and the solidification method was not described. It is highly optimistic to assume all fission products accumulated during the reactor life in all the corrosion products in the primary coolant and throughout the reactor from pressure tube leaks can be removed.

In 1999 under contract from AECL, I produced a probabilistic risk assessment of the in-situ decommissioning of The NPD reactor. In this study a considerable inventory of fission products was determined to be remaining on all metal surfaces. Missing from the Unsworth study that was a part of the NPD study was the inventory of the activation products of CL 36 and C14. A considerable amount of these activation products are produced in the concrete of the biological shield. In the Unsworth study the reactor components and primary coolant loop was to be dismantled remotely under water. The concrete would be outside the water filled compartment. Cutting up concrete would create dust and exposure to the Cl 36 and C14 and other radioactive contaminants in the biological shield. The dose from this exercise and the required precautions was not determined. The major component in the radiation fields from the Unsworth study was from Co 60 after only thirty years of operation.

It may be best to leave a CANDU mothballed many years to allow the radiation fields to decay. However the expertise and personnel are available from the reactor operators. After the reactor is mothballed this experience and expertise may be lost.

It may well be that the doses from decommissioning a CANDU power reactor by dismantling may be so high as to be not feasible. If decommissioning by dismantling were straightforward and manageable from a dose prospective why has not NPD been dismantled after all these years? Was in-site disposal studied because dismantling is simply too difficult and dangerous? The same applies to the WR-1 reactor in Pinawa. A plan to decommission was studied but not an up to date plan to decommission by dismantling.

Commissioning and handling waste from SMR's is another area where information is lacking. SMR's have enormous material handling problems associated with the coolants of molten salt and sodium. These coolants are almost impossible to contain without leakage. Decommissioning these coolants from the primary coolant loop loaded with fission products and activation products especially Cl 36 from chloride based salt has not been considered.

IAEA Integrated Regulatory Review Service (IRSS) report 2019

James Mihaychuk

May 27, 2021 - 15:10

Please refer to the discussion of recommendation R1 on page 20 of the IAEA Integrated Regulatory Review Service (IRSS) report.
This report is available online using the following hyperlink.
https://www.iaea.org/sites/default/files/documents/review-missions/irrs_...

Recommendation R1 reads: "The Government should enhance the existing policy and establish the associated strategy to give effect to the principles stated in the Canadian Radioactive Waste Management Policy Framework. "

The report included the observation on page 20 that the Canadian Radioactive Waste Management Framework was deficient in several areas. In particular, note the following text that precedes the table with recommendation R1.
"The IRRS team found no evidence, beyond the above principles, contained in the policy framework or REGDOCs of a governmental policy or strategy related to radioactive waste management. The national policy on management of radioactive waste, should include decommissioning aspects, including the choice of possible decommissioning strategies or combinations of options."

Note that the terminology used in the report is "waste management" rather than "waste disposal". The term "waste management" acknowledges the need for long-term stewardship. Therefore Canada should adopt the same terminology and eliminate references to "disposal".

The 1st basis cited for R1, namely GSR Part 5 Requirement 2, specifically references "societal factors". In the Canadian context,

societal factors should include consultation and cooperation with Indigenous peoples as defined in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), the Constitution Acts 1867 and 1982, and treaties with Indigenous peoples. A review of the Calls to Action of the Truth & Reconciliation Commission (TRC) in is also in order. As these matters concerning Indigenous peoples are in a state of ongoing development, a dedicated review process centred on societal factors relevant to Indigenous peoples should be undertaken before the strategy for national coordination is developed.

The 2nd basis cited for R1, namely GSR Part 5 paragraph 3.6, references implementation on a national basis with effective coordination of responsibilities. In the Canadian context, a process of consultation and cooperation should be initiated by the Minister of Crown-Indigenous Relations and/or the Prime Minister based on nation-to-nation negotiations between the Crown and affected Indigenous peoples. In addition, there should be a review of key areas of responsibility related to affected provincial and municipal sub-national governments, for example, to include provincial ministries of natural resources and emergency measures organizations. Without such consultations with Indigenous and sub-national governments, it is not possible to ensure nation-wide coordination of responsibilities.

Sincerely,
James Mihaychuk, Ph.D.
Ottawa, Ontario

Seeking Responsible Governance and Best Practices

Concerned Citizen

May 29, 2021 - 15:59

In 2011 the federal government sold AECL's CANDU nuclear reactor division to Quebec-based SNC-Lavalin for $15 million.
In 2013, SNC-Lavalin Inc. was barred for 10 years from bidding on any projects financed by the World Bank due to fraudulent and unethical conduct stemming from allegations of bribery schemes with officials in Bangladesh.
In Feb 2015, the RCMP and the Public Prosecution Service of Canada (PPSC) laid charges against SNC-Lavalin Group Inc. and two of its subsidiaries: SNC-Lavalin International Inc. and SNC-Lavalin Construction Inc. The charges allege that between 2001 and 2011, SNC-Lavalin paid CA$48 million in bribes to Libyan government officials.
In June 2015 it was announced that the Canadian Nuclear Energy Alliance (CNEA) has been named the preferred bidder for the management of Canadian Nuclear Laboratories (CNL), a subsidiary of Atomic Energy of Canada Limited (AECL). CNEA included SNC-Lavalin Group Inc, CH2M, Fluor and Energy Solutions, with Rolls-Royce in a supporting role. As a cost-saving measure, CNEA proposes in-situ decommissioning of Canada's legacy reactor sites.
In July 2015 legislation was passed that bidders for contracts with Procurement Canada must conform to the Integrity Regime. The Integrity Regime is designed to exclude suppliers that have ethics-

related criminal convictions, such as bribery, price fixing, or lobbying offences. If convicted, SNC-Lavalin could be banned from bidding on federal government contracts for up to ten years.
Following a 2017 public consultation process, the Government of Canada moved forward with the establishment of a "made-in-Canada version of a deferred prosecution agreement (DPA) regime", called the "Remediation Agreement Regime", was introduced in the March budget and came into effect in June 2018.
In August 2019, Mario Dion, conflict of interest and ethics commissioner, released a report that details lobbying efforts by SNC-Lavalin to influence prosecution since at least February 2016, including lobbying efforts to enact DPA legislation.
In Dec 2019, SNC-Lavalin Construction Inc (SLCI) pleaded guilty to fraud for bribes paid to Libyan officials. The Public Prosecution Service of Canada and counsel for SLCI made joint submissions for a fine of $280 million payable in equal regular instalments over a five-year period. Remaining charges were stayed against SNC-Lavalin Group Inc. and its two subsidiaries: SNC-Lavalin International Inc. and SLCI as a result of the resolution.
In April 2020, AECL exercised its option to extend the CNEA contract for an additional four years through to 2026.
In January 2021, CNSC document REGDOC-2.11.2 is issued. Notwithstanding international obligations and numerous expert concerns, in-situ decommissioning may be considered for legacy sites.
Considering CNEA receives about $1 billion per year of Cdn taxpayer funds via NRCan and AECL, there is an obvious need for a more

independent and trusted process to manage the Canadian nuclear industry.