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**Written submission from the
Concerned Citizens of Renfrew
County and Area**

**Mémoire de
Concerned Citizens of Renfrew
County and Area**

**Regulatory Oversight Report for
Canadian Nuclear Laboratories
Sites: 2019**

**Rapport de surveillance
réglementaire des sites des
Laboratoires Nucléaires
Canadiens : 2019**

Commission Meeting

Réunion de la Commission

December 10, 2020

Le 10 décembre 2020

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Regulatory Oversight Report (ROR) for Canadian Nuclear Laboratories (CNL) Sites: 2019
Written submission from Concerned Citizens of Renfrew County and Area

November 2020

Introduction

Concerned Citizens of Renfrew County and Area (CCRCA) is a non-governmental, volunteer organization working to prevent radioactive pollution and to encourage clean-up and responsible long-term management of nuclear industry wastes, with a focus on the Chalk River Laboratories (CRL), the Nuclear Power Demonstration (NPD) reactor, and other facilities in the upper Ottawa Valley.

CCRCA members are concerned about environmental contamination, wastes, and clean-up costs at sites operated by CNL. Some of these issues are noted in a recent article, “U.S. corporations profiting from major Canadian nuclear liability”, which begins:

The nearly 70-year history of the federal crown corporation Atomic Energy of Canada Limited (AECL) has left a \$16-billion toxic legacy of shuttered reactors, polluted lakes and groundwater, contaminated soils, and hundreds of thousands of cubic metres of radioactive waste...¹

We believe it is the CNSC's responsibility under the *Nuclear Safety and Control Act* to provide regulatory oversight in such a way that these serious problems are acknowledged, strictly monitored and carefully managed to avoid risks to the public and the environment. And yet, the CNSC's Regulatory Oversight Report (ROR) for “CNL Sites” can be summarized in three words: “all is well.”

This does not sit well with our group.

Our view is that the Commission is not doing a good job of providing regulatory oversight of CNL's activities at CRL and NPD, given that many of the issues that concern us are never mentioned in staff CMDs. Furthermore, every time there is a licensing hearing or a regulatory oversight report, our group points out serious concerns and CNSC staff and Commissioners largely ignore what we say.

For example, the minutes of the Commission's November 6-7, 2019 public meeting², at which the previous ROR for CNL was discussed, mentions only one of 22 recommendations in CCRCA's submission³ – our request that CNSC reconsider its opposition to the mandatory environmental assessment of new nuclear reactors.

¹ *U.S. corporations profiting from major Canadian nuclear liability*, O. Hendrickson, rabble.ca, October 30, 2020. <https://rabble.ca/blogs/bloggers/views-expressed/2020/10/us-corporations-profiting-major-canadian-nuclear-liability>

² *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on November 6–7, 2019*. <https://nuclearsafety.gc.ca/eng/the-commission/pdf/Minutes-November%206-7,%202019-e.pdf>

³ *Regulatory Challenges in the Age of Nuclear Waste and Decommissioning*. A Report by Gordon Edwards, Ph.D. for Concerned Citizens of Renfrew County and Area. October 7, 2019. http://ccnr.org/GE_report_7.pdf

For the record, we feel that the CNSC staff response to Commission members on this issue was misleading, failing as it did to note CNSC staff's backroom lobbying for exemption of SMRs from environmental assessment that was exposed in a Globe and Mail article on November 6, 2018.⁴

We are not reassured by the platitudes from CNSC staff assuring Commissioners that "all is well". We hope for a more thorough hearing and response to our concerns this time.

1. AECL's activities have never been under effective regulatory control

By way of background to this submission, we refer the Commission to Gordon H.E. Sims' *History of the Atomic Energy Control Board* (the CNSC's predecessor), which says:

In 1954 C.D. Howe piloted through the House some major amendments to the *Atomic Energy Control Act*, one of which provided that AECL should report directly to a Minister and not to the Board... although atomic energy operations were expected to expand rapidly, a similar expansion in the role of the Board was definitely not envisaged. In fact, its role was seen to be a diminishing one. As he explained to the House:

I hope the day is not too far distant when many of the controls now in effect can be removed. We are still retaining the control functions, and only the control functions, in the Atomic Energy Control Board, and it is my thought that in a year or two or three those control functions may no longer be necessary.⁵

Arguably, lack of effective control of AECL (and now CNL) has been the status quo for 65 years. This has created a very large Government of Canada "legacy liability". Yet AECL – the owner of "CNL sites" - warrants not one mention in CMD 20-M22.A, and only one mention in CMD 20-M22: "CNL is responsible for the operation and management of nuclear sites owned by Atomic Energy of Canada Limited (AECL) under a Government-Owned, Contractor-Operated model."

It must be emphasized that CNL is a contractor, and does not own AECL's sites (or its wastes). Neither CMD mentions Canadian National Energy Alliance (CNEA), a consortium of two U.S. companies and SNC-Lavalin that owns CNL. The *Record of Decision* for the 2018 hearing on licensing of the Chalk River Laboratories (CRL) has a lengthy section on intervenors' concerns about the GoCo contractor model.⁶

The Commission's 2018 *Record of Decision* for CNL's application to renew the CRL licence "directs CNSC staff to report annually on the performance of CNL and CRL, as part of an annual Regulatory Oversight

⁴ *Federal nuclear regulator urges Liberals to exempt smaller reactors from full panel review*. Shawn McCarthy, the Globe and Mail, November 7, 2018. <https://www.theglobeandmail.com/business/article-federal-nuclear-regulator-urges-liberals-to-exempt-smaller-reactors/>

⁵ *A History of the Atomic Energy Control Board*. Gordon H.E. Sims, AECB INFO-0026. https://inis.iaea.org/collection/NCLCollectionStore/_Public/14/762/14762380.pdf

⁶ *Record of Decision – CNL – CRL License Renewal – January 2018*. https://nuclearsafety.gc.ca/eng/the-commission/hearings/documents_browse/results.cfm?dt=23-Jan-2018&yr=2018

Report (ROR). CNSC staff shall present this report at a public proceeding of the Commission, where members of the public will be able to participate.”⁷

Questions:

- What happened to public participation?
- Why is the term “CNL sites” used in the ROR when these are AECL sites?
- Why do CMDs 20-M22 and 20-M22.A provide no information about CNL’s ownership by CNEA and the “GoCo” contractual arrangements between CNL, CNEA, and AECL?
- Why do CMDs 20-M22 and 20-M22.A not discuss AECL’s “Site Operating Company” agreement with CNL and its “target-cost” agreements for decommissioning of the Whiteshell Laboratories and the Nuclear Power Demonstration (NPD) reactor?

2. Safety and Control Areas (SCAs) do not adequately measure CNL’s performance

CMD 20-M22 provides qualitative performance ratings for 14 CNSC safety and control areas (SCAs). Seven different AECL sites are evaluated. 99% of the ratings are identical (“satisfactory”). The ROR “focuses on radiation protection, environmental protection and conventional health and safety, in particular.” Five of seven AECL sites have reactors in various stages of decommissioning, but no SCA specifically addresses decommissioning (the waste management SCA includes plans, but not practices, for decommissioning). While waste management is one of the 14 SCAs, CMD 20-M22 does not “focus” on it, although five of seven AECL sites in the ROR are exclusively waste facilities.

There has been nearly constant reorganization and turnover of CNL’s *Executive*, half of whom -- five of ten (Joe McBrearty, President and Chief Executive Officer; Brian Savage, Vice-President, Capital; Dan Wood, Chief Operating Officer; Jeffrey Griffin, Vice-President, Science & Technology; and Jeff Willman, Vice-President, Health, Safety, Security, Environmental & Quality) -- are new to their positions this year. McBrearty and Savage joined CNL in 2019. The other three joined CNL in 2020. None of this is discussed in the ROR, even though management system (including “business continuity” and “management of contractors”) is one of the 14 SCAs.

Questions:

- Why is there no decommissioning SCA?
- How did CNSC choose which SCAs to focus on in the ROR?
- Given that five of the seven AECL sites rated for performance have either Waste Facility or Waste Nuclear Substance licenses, why did CNSC not focus on the waste management SCA?
- Has CNSC considered developing a performance rating system based on measurable indicators?
- Why is there such high turnover in senior management at CNL and does this affect our safety?
- Does management stability affect the rating of the Management System SCA?

A brief section on “Waste and Decommissioning” in CMD 20-M22 (page 20) says:

⁷ *Record of Decision – CNL – CRL License Renewal – January 2018*. https://nuclearsafety.gc.ca/eng/the-commission/hearings/documents_browse/results.cfm?dt=23-Jan-2018&yr=2018

CNL has pursued accelerated decommissioning strategies at many of its sites, resulting in an actual or planned increase in the rate of generation of radioactive wastes... During the reporting period, CNL enhanced its decommissioning program with the release of the Environmental Remediation Process, which is initiated when an environmental remediation is required or a CNL site requires investigation. In terms of reducing its legacy liability, throughout 2019 CNL continued to execute decommissioning and remediation activities at all of its sites

CNL has prepared multiple versions of an *Integrated Waste Strategy*. Our group obtained the original revision 0 (dated January 24, 2017) through an Access to Information Program request and has posted it on our website⁸. CNL called that version a “useful communication tool.” The April 2017 version of revision 0 on CNL’s website⁹ lacks this language; as does revision 1 (dated March 2019)¹⁰.

CCRCA’s submission for the *Regulatory Oversight Report for Canadian Nuclear Laboratories Sites: 2018* had a specific focus on CNL’s “*Integrated Waste Strategy*”. Here is an excerpt from that submission:

CNL's *Integrated Waste Strategy* was first expounded in an April 2017 document entitled *Canadian Nuclear Laboratories Integrated Waste Strategy, Summary Document, Company Wide, CW-508600- PLA-006, Revision 0*, henceforth referred to as the *Integrated Waste Strategy*.

This CNL document, published 19 months after the consortium of private companies that now owns and operates CNL was awarded the contract to manage federal nuclear properties, represents a radical departure from radioactive waste practices and strategies previously espoused by Atomic Energy of Canada (AECL). Nevertheless, the CNL strategy document has received little discussion, debate or circulation. Most members of the public, including elected representatives, seem to be ignorant of its existence.

Surprisingly, the recently released CNSC Regulatory Oversight Report does not mention CNL's *Integrated Waste Strategy* at all. Nor does the Oversight Report discuss the “consolidation of high, intermediate, and low-level waste at Chalk River Laboratories” referred to in the funding agreement, nor does it discuss the extensive transport of radioactive materials of all kinds that has been, is, and will be taking place over public roads and bridges in order to achieve the “consolidation” of radioactive waste at Chalk River Laboratories.¹¹

⁸ *CNL’s Integrated Waste Strategy alarms downstream residents*. <https://concernedcitizens.net/2020/11/04/cnls-integrated-waste-strategy-alarms-downstream-residents/>

⁹ *Integrated Waste Strategy Summary Document Company Wide*. CW-508600-PLA-006 Revision 0. April 2017. https://www.cnl.ca/site/media/Parent/IWS_Aug.pdf

¹⁰ *Integrated Waste Strategy Summary Document Company Wide*. CW-508600-PLA-002 Revision 1. March 2019. <https://www.cnl.ca/site/media/Parent/2019-CNL-IWS.pdf>

¹¹ *Regulatory Challenges in the Age of Nuclear Waste and Decommissioning: A Report by Gordon Edwards, Ph.D.* for Concerned Citizens of Renfrew County and Area. October 7, 2019. http://ccnr.org/GE_report_7.pdf

There is no reference to CNL's *Integrated Waste Strategy* in the minutes of the Commission's November 6-7, 2019 public meeting¹². As noted earlier, the Commission chose to discuss only one of the 22 recommendations in CCRCA's submission – our request that CNSC reconsider its opposition to the mandatory environmental assessment of new nuclear reactors. We believe this demonstrates a serious failing of the Commission to listen to and act upon substantive concerns from the public that directly relate to its mandate to protect public health and the environment. The Regulatory Oversight Report for 2019 again contains no mention of the *Integrated Waste Strategy*.

The *Integrated Waste Strategy*, if implemented, would convert the Chalk River Laboratories into an interim consolidated storage site for all federal radioactive wastes, including high-level used-fuel wastes from accelerated decommissioning of the Whiteshell Laboratories. Figure 3-1 in revision 1 of the *Integrated Waste Strategy* ("Summary of Waste Flows") shows the Port Hope and Port Granby Projects under the "disposal" column. This column also includes "in situ" disposal of the NPD and WR-1 reactors, and the Near Surface Disposal Facility (NSDF), an "engineered containment mound" proposed for CRL.

Our understanding is that the Commission has not licensed permanent radioactive waste disposal at Port Hope, Port Granby, Whiteshell, NPD, or Chalk River. But the Commission has already included the *Integrated Waste Strategy* in the "Compliance Verification Criteria" found in the Licence Conditions Handbook for the Whiteshell Laboratories. It has authorized CNL:

"to operate and decommission the Whiteshell Laboratories (hereinafter "WL") located in Pinawa, Province of Manitoba as further described in the Whiteshell Laboratories Licence Conditions Handbook (LCH)."¹³

The Commission also included CNL's *Integrated Waste Strategy* in the "Compliance Verification Criteria" found in the Licence Conditions Handbook for the Chalk River Laboratories. In March 2018 it authorized the use of the CRL Handbook "to verify compliance with the conditions set out in this licence."¹⁴

Questions:

- Why has the Commission authorized the use of the *Integrated Waste Strategy* to verify compliance with the conditions set out in CNL's licenses for CRL and Whiteshell?
- Does the Commission's authorization of use of the *Integrated Waste Strategy* to verify licence compliance not also constitute approval of the elements of this *Strategy*, such as the in-situ disposal of the WR-1 and NPD reactors, and the Near Surface Disposal Facility?
- At which AECL sites is CNL pursuing accelerated decommissioning strategies?

¹² *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on November 6–7, 2019.*
<https://nuclearsafety.gc.ca/eng/the-commission/pdf/Minutes-November%206-7,%202019-e.pdf>

¹³ *Submission from CNSC staff on CNL's application for renewal of licence for Whiteshell Laboratories.* CMD 19-H4.
<https://www.nuclearsafety.gc.ca/eng/the-commission/hearings/cmd/pdf/CMD18/CMD19-H4.pdf>

¹⁴ *Submission from CNSC staff on CNL's application for renewal of licence for the Chalk River Laboratories.* CMD 18-H2.

- To what degree have these strategies resulted in an actual, as opposed to a planned, increase in the rate of generation of decommissioning wastes? What are current amounts of these wastes?
- Does CNL have an approved strategy for managing the increase in decommissioning wastes?
- Is it correct to use the phrase “reducing its legacy liability” -- referring to the liability as belonging to CNL? Doesn't the liability belong to AECL and the Government of Canada?
- What is the current magnitude of the legacy liability?
- How is the legacy liability calculated?
- Was the legacy liability reduced in 2019?
- Has a financial guarantee been provided for the legacy liability?
- If so, what is the amount of the financial guarantee?
- What is the new “Environmental Remediation Process” (no information is given on CNL's website)? Can a reference to a document describing this Process be provided?
- How is it decided “when an environmental remediation is required”? How is it decided when a site “requires investigation”? Who makes these decisions?

3. CNSC's regulatory efforts may not be strategic

Chalk River Laboratories (CRL) is an active, large and complex site.

CMD 20-M22.A (slide 19) shows a decline in the CNSC's regulatory effort at CRL. The ROR lacks details on the CNSC's three areas of “regulatory focus” for 2019 (slide 13):

- decommissioning of legacy facilities and planning and construction of new facilities;
- monitoring the repatriation of highly enriched uranium to the U.S.; and
- assessing proposals for a new waste facility and a Small Modular Reactor.

Questions:

- Why did CNSC's regulatory effort at CRL decline in 2019?
- How much did CNSC's regulatory effort at CRL decline in 2019?
- Which legacy facilities at CRL were being actively decommissioned in 2019?
- What new facilities were built or are under construction?
- What percentage of the highly enriched uranium at CRL has been repatriated to the U.S?

CMD 20-M22.A also lists “areas of regulatory focus” at other AECL sites. These include:

- monitoring of remediation activities at various properties (slide 16);
- monitoring receipts of off-site waste (slide 16);
- assessment of management and treatment of impacted water (slides 16 and 17);
- monitoring excavation of legacy waste (slide 17); and
- inspection of ongoing hazard reduction and waste characterization work (slide 18).

Questions:

- How is each of these five areas of regulatory focus at other AECL sites relevant to CRL?
- How does CNSC choose its areas of regulatory focus for CRL and other AECL facilities?

The International Atomic Energy Agency (IAEA), following its 2019 IRRS mission¹⁵, said

“CNSC does not have a comprehensive formal process to regularly review on site inspectors to ensure they remain independent and objective. Inspector observation elements, such as direct management observations, used as methods to review inspector objectivity and independence should be formalised.”

Questions:

- Has CNSC formalised a process to review site inspectors to ensure that they remain independent and objective, and applied it to CRL and other AECL facilities?
- Should the public trust the impartiality of the inspectors at CRL and other AECL facilities?

CNL has proposed full decommissioning, using in-situ disposal, of the Nuclear Power Demonstration (NPD) reactor located on the Ottawa River 25 km upstream from CRL. Slide 18 in CMD 20-M22.A covers all three AECL Prototype Power Reactors (NPD, G-1, Douglas Point). It says CNSC is “inspecting CNL’s ongoing hazard reduction and waste characterization work, in preparation for full decommissioning.”

Slide 19 says there were no inspections of the NPD in 2019, and regulatory effort cannot be compared to 2018 because “effort in 2018 was combined for all 3 facilities under one consolidated licence”.

CMD 20-M22 states (p. 45) that “NPD is no longer discharging liquid effluents from the facility sumps to the Ottawa River.”

Questions:

- When was the last time the NPD was inspected?
- How was “inspecting CNL’s ongoing hazard reduction and waste characterization work, in preparation for full decommissioning” carried out without inspections of the NPD?
- How was NPD compliance work done in the absence of inspections?
- Why did CNSC not track licensing and compliance efforts individually for the NDP, G-1, and Douglas Point reactors prior to 2019?
- When did liquid effluent discharges into the Ottawa River from the NPD reactor cease?
- What prompted CNL to stop discharging liquid effluents from the NPD?

4. Derived Release Limits and public dose estimates do not appear to be implemented consistently

The IRRS report¹⁶ suggests that “The CNSC should consider consistently implementing the concept of dose constraints for all facilities and standardising regulatory practice for derived release limits (DRLs).”

¹⁵ *Integrated Regulatory Review Service (IRRS) to Canada*. IAEA, Vienna. 3 to 13 September 2019.
file:///C:/Users/User/Documents/CCRC/irrs_canada_2019_final_report.pdf

¹⁶ *Integrated Regulatory Review Service (IRRS) to Canada*. IAEA, Vienna. 3 to 13 September 2019.
file:///C:/Users/User/Documents/CCRC/irrs_canada_2019_final_report.pdf

CMD 20-M22.A (slide 26, Releases to the Environment 2019 - WL) shows an annual gross alpha release limit to surface water for Whiteshell of 10 billion Becquerels. At 1.32 trillion Becquerels, CRL's gross alpha derived release limit on the previous slide is over 100 times higher. Similarly, CRL's annual gross beta derived release limit to surface water, at 27 trillion Becquerels, is nearly 100 times higher than the sum of the release limits for cesium-137 and strontium-90 (295 billion Becquerels) at Whiteshell.

Slide 26 also shows actual emissions of individual alpha emitters (total uranium, plutonium-238, plutonium-239/240, americium-241) for Whiteshell Labs. These individual radionuclide emissions do not appear on the previous slide for Chalk River Labs. Similarly, actual emissions of individual beta emitters (strontium-90, cesium-137) are shown for Whiteshell, but not for CRL. Slide 26 states that "CNL's environmental protection programs are effective in controlling environmental releases" (for Whiteshell Labs), but this statement does not appear on the previous slide (for Chalk River Labs).

Questions:

- Who sets the derived release limits for CRL -- the CNSC or CNL?
- Why can CNL release so much more alpha and beta radiation from CRL than Whiteshell?
- Has there been a change in release limits at CRL, such that these now only apply to gross alpha and beta, and not to individual alpha and beta emitters?
- Has there been a change in monitoring at CRL, such that data on individual alpha and beta emitters are no longer available?
- How much plutonium is getting into the environment from CRL?
- Given that radionuclides behave differently in the environment, can the public be assured that their environment and health are protected in the absence of data for individual radionuclides?
- Are CNL's environmental protection programs effective in controlling environmental releases from CRL?
- What action has CNSC taken in response to the IAEA's suggestion to standardise regulatory practice for derived release limits?

The *Annual Compliance Monitoring Report -- Environmental Monitoring in 2019 at Chalk River Laboratories* says that total estimated dose to the public for all liquid effluent exposure pathways in 2019 represented 0.097% of the regulatory public dose limit of 1 mSv. This dose estimate was 60 times higher than reported in 2018 (0.0016% of the 1 mSv dose limit).¹⁷

Questions:

- Why does the ROR not provide separate dose estimates for liquid and air effluents from CRL?
- Why did the estimated public dose from CRL's liquid effluents increase 60-fold in 2019?
- What contributions are made by different radionuclides to the liquid effluent public dose estimate for CRL?

¹⁷ *Annual Compliance Monitoring Report -- Environmental Monitoring in 2019 at Chalk River Laboratories*. CRL-Canadian Nuclear Laboratories 509243-ACMR-2019 Rev. 0 (not available on line)

- How can the public be expected to have any confidence in the liquid effluent dose estimate for CRL if it can increase 60-fold in one year without this even being noted in the ROR?

5. Management of tritium

CMD 20-M22.A (slide 24) refers to “Two related exceedances in adjacent weeks at the waste management facilities due to transfer of waste bags with higher than normal quantities of tritium” at CRL. Page 38 of CMD 20-M22 (Table D-1: Chalk River Laboratories annual radionuclide releases to atmosphere for 2015-2019) shows tritium releases on the order of hundreds of TBq/year.

Page 46 of CMD 20-M22, Figure F-1 shows “Average and maximum effective doses to nuclear energy workers at CRL from 2015-2019.”

Questions:

- What was the source of the tritium in the waste bags?
- Were these tritium releases to the atmosphere or to surface water?
- What quantities of tritium were released?
- In what form or forms (HT, HTO or OBT) was tritium released?
- What were the doses to workers from these releases?
- Why was action not taken after the first exceedance?
- Are action levels effective in preventing repeated excessive releases?
- Are tritium exposures included in estimated worker doses at CRL?
- How is tritium uptake by workers at CRL measured? How are associated doses calculated?

6. Environmental protection and groundwater contamination issues

A major interest of CCRCA members is the extensive groundwater contamination at CRL and its impacts on receiving waters, particularly the Ottawa River. Given that the environmental protection SCA is a particular focus of the 2019 ROR, it should provide information on groundwater contamination and how it is being addressed at CRL. But the ROR does not mention groundwater.

CNL’s 2019 *Annual Compliance Monitoring Report (ACMR)* for CRL¹⁸ describes in considerable detail the current status of the groundwater contaminant plumes at CRL and their monitoring and treatment systems. CNSC staff could and should have drawn upon and summarized information contained in the 2019 ACMR in the ROR.

To summarize briefly, the most problematic sources of contamination appear to be in the Perch Lake basin, where strontium-90 plumes from the Liquid Dispersal Area and Waste Management Areas A and B require continuing operation of three groundwater treatment systems. In the Maskinonge Lake basin, a “Wall and Curtain” passive groundwater treatment facility intercepts and treats the strontium-90

¹⁸ *Annual Compliance Monitoring Report -- Environmental Monitoring in 2019 at Chalk River Laboratories*. CRL-Canadian Nuclear Laboratories 509243-ACMR-2019 Rev. 0 (not available on line)

plume arising from the Nitrate Plant. Contaminant plumes from the NRX and NRU reactor facilities discharge tritium and strontium-90 directly into the Ottawa River untreated.

While we applaud CNL for including details about the groundwater plumes in the ACMR, the lack of information about carbon-14 is concerning. Carbon-14 has a 5,700-year half-life and poses risks to public health and the environment that will persist for many centuries after the likely closure of CRL. A peer-reviewed journal article indicates that groundwater plumes from Waste Management Area A are discharging carbon-14 into downslope terrestrial and wetland environments.¹⁹

Questions:

- Why does the ROR not mention the extensive groundwater contamination at CRL, the treatment systems for the groundwater contaminant plumes, and the potential health and environmental consequences if these contaminant plumes are not monitored and controlled?
- Is carbon-14 being monitored in the groundwater plumes at CRL? If so, why is this not mentioned in CNL's Annual Compliance Monitoring Report?
- Do CNL and CNSC consider carbon-14 to be a substance of concern from a health and environmental standpoint?
- Why should the public trust the CNSC's regulation of AECL sites operated by CNL when a topic of major public interest such as groundwater contamination is not addressed in the ROR?
- What are the Commission's views on the quality and usefulness of these annual RORs?

7. Implementation of CNSC Regulatory Documents (REGDOCs)

On page 28 of CMD 20-M22, Table B-1: Regulatory Documents – CRL indicates that the 2017 REGDOC-2.9.1, *Environmental Principles, Assessments and Protection Measures, version 1.1* has not been implemented. It says "Gap analysis due December 2020." The 2018 REGDOC-3.2.1, *Public Information and Disclosure* has also not been implemented, with a Gap analysis due December 2020.

Tables B-2, B-3, B-4 and B-5 indicate that the *Environmental Principles, Assessments and Protection Measures* REGDOC has also not been implemented for the Whiteshell Laboratories, the Port Hope Project, the Port Granby Project, or the Douglas Point, Gentilly-1 and NPD reactor sites. The *Public Information and Disclosure* REGDOC has not been implemented for the Whiteshell Laboratories or the Douglas Point, Gentilly-1 and NPD reactor sites.

Questions:

- Why did CRL and other AECL sites receive "satisfactory" ratings for the Environmental Protection SCA if the 2017 *Environmental Principles, Assessments and Protection Measures* REGDOC has not yet been implemented?
- What is involved in "implementing" a REGDOC?

¹⁹ Yankovich, T.L., King-Sharp, K.J., Carr, J., Robertson, E., Killely, R.W.D., Beresford, N.A. and Wood, M.D. 2014. *Spatial analysis of carbon-14 dynamics in a wetland ecosystem (Duke Swamp, Chalk River Laboratories, Canada)*. Journal of Environmental Radioactivity 137: 173-180.

- What are the CNSC's expectations for the gap analysis of the *Environmental Principles, Assessments and Protection Measures* REGDOC?
- What are the CNSC's expectations for the gap analysis of the *Public Information and Disclosure* REGDOC?
- Why is there no requirement to implement the *Public Information and Disclosure* REGDOC for the Port Hope Project or the Port Granby Project?

Concluding remarks

In conclusion, we are dismayed by the lack of robust regulatory oversight of the CRL and NPD sites. We have raised many questions in this submission.

We would like to receive answers to all of these questions, even though we appreciate that time constraints will not allow all questions to be discussed during the meeting.

We would appreciate receiving your assurance that we will receive answers to all of our questions and that Commissioners will read these answers. We would be grateful if you would establish at this meeting a target date for completion of this request.

We reiterate that we have serious concerns about risks to the public and to the environment from CNL's activities at the Chalk River Laboratories and other sites owned by Atomic Energy of Canada Limited.

We are not reassured by the ROR's assessment that all is well. We hope for a more thorough hearing and response to our concerns this time.