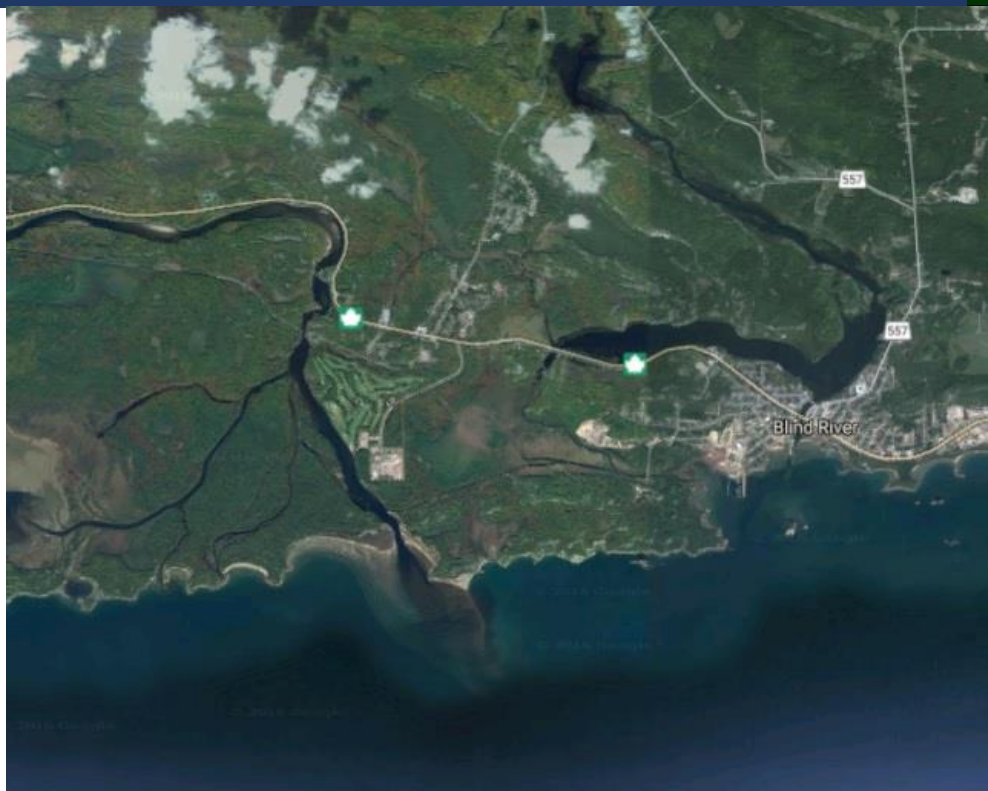


Review of CNSC's Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2016



**Written Submissions by
Northwatch**

Ref. 2017-M-03, CMD 17-M45

Reviewing the CNSC's Oversight of the 'Environmental Protection' and 'Waste Management' Safety Control Areas

*Northwatch's Comments on the CNSC's Regulatory
Oversight Report for Uranium and Nuclear Substance
Processing Facilities in Canada: 2016*

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November 20, 2017

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INTRODUCTION

Northwatch appreciates having the opportunity and Participant Funding Contribution to facilitate our review of the Canadian Nuclear Safety Commission's (CNSC) *Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2016* (ROR).¹ This report has been written jointly by Northwatch and the Canadian Environmental Law Association (CELA).

About Us

Northwatch is a public interest organization concerned with environmental protection and social development in northeastern Ontario, founded in 1988 to provide a representative regional voice in environmental decision-making. We have a long term and consistent interest in the nuclear chain, and its potential effects with respect to northeastern Ontario, including issues related to uranium mining, refining, nuclear power generation, and various nuclear waste management initiatives and proposals as they may relate or have the potential to affect the lands, waters and/or people of northern Ontario.

CELA is a non-profit, public interest law organization. CELA is funded by Legal Aid Ontario as a speciality legal clinic to provide equitable access to justice to those otherwise unable to afford representation for their environmental problems. For nearly 50 years, CELA has used legal tools to advance the public interest, through advocacy and law reform, in order to increase environmental protection and safeguard communities across Canada.

Scope of Review

Parts A and B of this report aim to provide the CNSC with recommendations related to the safety and control areas (SCA) of environmental protection and waste management, as discussed in this year's ROR. We sought to buttress our review and understanding of these SCAs by seeking the current licence, Licence Conditions Handbook, annual compliance report, and waste management and environmental protection programs for each of the licensees.

Part C provides a discuss of the Blind River Refinery, its mid-term performance report, production levels relative to dose and discharge, uranium concentrations in soil and transportation incidents.

Below, we present recommendations based on our findings. These recommendations apply to the entirety of the CNSC's ROR and the licensees within this class. Recommendations specific to a licensee are included in their respective chapters (see [Part A](#) and [Part B](#)). We have also included recommendations related to

¹ CNSC, *Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2016*, CMD 17-M45 (13 October 2017) [**ROR**]

public information and reporting, and reported the results from a localized survey conducted with the residents neighbouring Best Theratronics Ltd.

SUMMARY OF RECOMMENDATIONS

1. Environmental Protection

Licence Conditions and Compliance

The licences reviewed in the ROR all had a consistently worded licensing condition reading the “licensee shall implement and maintain an environmental protection program.”² All but one of the licences also contained specific radiological release limits, for instance of uranium to the atmosphere or sewer system. Flowing from these analogous licence conditions, was an identical statement, repeated throughout the ROR that the “public and the environment continue to be protected from facility releases.”³ **First, Northwatch recommends the report use less repeated, boilerplate statements and instead, frame a licensee’s compliance directly in relation to their licence and LCH. Secondly, Northwatch recommends that providing in-depth, licensee-specific remarks would allow the ROR to function as a mechanism to enhance licensee accountability and regulator transparency.**

Consistency among Calculations

Each of the licensees’ Environmental Protection chapters include tables which report their releases of radiological and hazardous emissions through air and liquid effluent. Northwatch has the following concerns with this method of reporting: first, the monitoring results are reported as annual averages. This contrasts with the licensee release limits, which according to their licence or Licence Conditions Handbook (LCH), are commonly averaged on a weekly basis. Secondly, relying on annual averages removes the data’s outliers and does not illustrate the number of weeks during the year that a release limit was exceeded. **Therefore, Northwatch recommends monitoring results presented in the ROR mirror the averaging period used in the licensee’s licence or LCH.**

By way of example, Table F-5 *Harbour water quality* included in an Appendix of the ROR, provides both the average and maximum values for a number of parameters (uranium, nitrate etc.).⁴ This is the only table in the ROR which includes both average and maximum data. **This method of data presentation more accurately conveys the data outliers which would have otherwise been lost through an annual averaging approach. Northwatch recommends the CNSC report maximums, alongside averages in future RORs.**

Tracking Pollution in Canada

² See Licence Condition 10.1

³ See for instance: ROR, *supra* note 1, p 26, 30, 39, 44, 50, 55, 63, 85, 88, 95, 99

⁴ ROR, *supra* note 1, p 137

Radionuclides are not reported to Canada’s National Pollutant Release Inventory (NPRI). The NPRI is an online data portal and a key resource for identifying pollution prevention priorities, supporting the assessment and risk management of chemicals, and encouraging actions aimed at reducing pollutant releases.⁵ The NPRI is covered under sections 46 – 53 of the *Canadian Environmental Protection Act, 1999*. The legislation enables the NPRI to track pollution using a listing approach and categorize substances by threshold.⁶ **As radioactive substances are not part of the substance list, Northwatch recommends the CNSC support their inclusion in the NPRI’s substance list,⁷ and advance the public’s right to know.**

The public must have the opportunity to know what actual or potential actions are being undertaken that could risk causing harm to the environment, their safety and health. A proponent choosing not to partake in environmental monitoring reporting removes the ability of a member of the public to corroborate the emissions data included in the ROR to real time, postal code based information. **Therefore, Northwatch recommends the CNSC report emission data to the NPRI, or in the alternative, set up a parallel process that is equally as accessible, detailed, and publicly available.**

2. Waste Management

The Need for Comprehensive Review

The licences reviewed in this ROR all included a similarly worded condition that the “licensee shall implement and maintain a waste management program” and “a preliminary decommissioning plan.”⁸ As previously mentioned, only three of fourteen SCAs were discussed in the ROR. While environmental protection was included, waste management was not. Northwatch submits that this is a crucial oversight of the ROR.

As stated by the CNSC, the waste management SCA spans the operator’s internal waste-related programs, plans for decommissioning, waste characterization, waste minimization, and management practices.⁹

Northwatch submits that this SCA and the breadth of activities it covers, should not have been excluded from review in this ROR and recommends its inclusion in next year’s report.

⁵ Environment and Climate Change Canada, “National Pollutant Release Inventory,” online: <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory.html>

⁶ *Ibid*

⁷ Environment and Climate Change Canada, “Substance list by threshold,” online: <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/substances-list/threshold.html>

⁸ See Licence Condition 12.1 and 12.1

⁹ CNSC, “Safety and control areas,” online: <http://nuclearsafety.gc.ca/eng/resources/publications/reports/powerindustry/safety-and-control-areas.cfm> ROR, *supra* note 1, p 120

Northwatch does not support the CNCS's assertion that an ROR discussing three of fourteen SCAs "reflect[s] the overall effectiveness of the implementation of licensee programs."¹⁰ Northwatch also disagrees with the CNCS's characterization of the report as focusing on the licensees' performance in 14 safety and control areas.¹¹ Northwatch does not support the CNCS's approach that a one-word rating for the eleven SCAs not discussed in the report, is sufficient to constitute oversight and reporting. **If it is beyond the scope of the ROR to report on all 14 SCAs, we recommend the CNSC at a minimum, reference the documents which allowed it to rank the licensee for the purposes of the report. We also recommend waste management be prioritized and in addition to environmental protection, be included in this annual reporting process.**

Lacking any discussion of waste management in the ROR, Northwatch requests the CNSC explain how it reached the licensee's individual ratings, and what inspection documents and compliance reports informed this decision. **In order to sufficiently review licensee compliance within the waste management SCA, the CNSC's decision-making must be transparent. Northwatch strongly recommends the ROR include dedicated waste management sections.**

3. Public Information and Disclosure

Documentary Disclosure

The majority of Northwatch's documentary disclosure requests were denied by the CNSC.¹² We provide the following comments on this decision and respectfully ask the CNSC reconsider our request for an open, and public information disclosure process.

The ROR commonly identified that licensees had undertaken a gap analysis in 2016, to update plans and procedures within their licensing conditions. With the trend to longer, ten-year licences, Northwatch agrees that updates are crucial, so a licensee does not become complacent in achieving environmental protection and waste management objectives. It was on this basis that Northwatch requested each of the licensees' environmental protection and waste management plans. **These documents are foundational to demonstrating licence compliance, and we again ask that these plans and their updates be made publicly available.**

Northwatch also sought to obtain copies of the licensee's waste management plans for the express reasons that: (1) the ROR *did not* provide any comment on the waste management SCA, and (2) the licence and licence conditions handbook lacked substantive content with respect to waste management practices. Our participant contribution funding agreement stated that we would provide a legal and technical review of the ROR, "with a focus on environmental protection and waste management." Our findings were to be

¹⁰ ROR, *supra* note 1, p 1

¹¹ CNSC, "Independent Environmental Monitoring Program," online: <http://nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/index-iemp.cfm>

¹² Northwatch, Document Requests [**Appendix 1**]

summarized in a written report to the Commission. Thus, given the absence of any waste management review in the ROR, Northwatch sought copies of the licensees' plans in order to compare them to their respective licence. Northwatch faced two barriers in this regard: first, the CNSC refused our request for these licensee document, noting "they are not referred to in the ROR."¹³

We reiterate that because waste management was not included in the ROR, there was not the opportunity for the ROR to refer to the waste management plan documents. We find the CNSC's repeated denial of documentary disclosure to be pejorative and disrespectful of the capacity and abilities of public intervenors to evaluate complex legal, and technical information such as may be found in these documents. It also fails to meet the public's interest in transparency and oversight with respect to nuclear facilities' operations.

Second, our review of the licences and LCHs was truncated because many of the licence conditions incorporate CSA standards through reference. CSA standards are not publicly available and the manner by which they can be made available to ENGOs is cumbersome and difficult to work with. Without being able to read the standard, it not possible to discern what are allowable emissions, or what strategies or mitigation techniques are required for environmental protection and waste management. Furthermore, while ENGOs may be able to access these standards – albeit through a cumbersome manner – other members of the public may not, or may not have knowledge of the means by which they may do so.

Lastly, the CNSC directed us to "contact the licensees directly" to request these licensing documents. This means of disclosure also proved largely unproductive. Best Theratronics Ltd. responded to our request for documents stating "as a privately held company, we do not supply such corporate information to third parties other than as required by government regulation" (emphasis added).¹⁴ Cameco similarly noted it does not disclose "internal programmatic documents."¹⁵ And, BWXT recommended that we purchase the relevant CSA Standard from the CSA online shop.¹⁶

We do not support the CNSC's pronouncements of transparency and robust public disclosure protocols, when we have repeatedly found there to be a systemic disregard for the principles of meaningful, public and open documentary disclosure. On this point, we recommend the CNSC heed the findings of expert panels who throughout 2016 and 2017, engaged with Canadians to extensive review Canada's environmental assessment process and modernize the National Energy Board. These expert panels found that Canadians suffered from a "crisis of confidence," regulators had "fundamentally lost the confidence of many Canadians," and our environmental assessment processes had "lost the public's trust."¹⁷

The expert panels heard that "decisions must be transparent and open, and all documents and information considered by the decision-maker must be publicly available online and searchable," "the decision-maker

¹³ Letter from the Canadian Nuclear Safety Commission (10 Nov 2017), Request for Disclosure [**Appendix 2**]

¹⁴ Email from Best Theratronics Ltd (7 November 2017), Request for Documents [**Appendix 3**]

¹⁵ Email from Cameco (7 November 2017), Request for Documents [**Appendix 4**]

¹⁶ Email from BWXT (10 November 2017), Request for Documents [**Appendix 5**]

¹⁷ Report of the Expert Panel on the Modernization of the National Energy Board, "Forward, Together: Enabling Canada's Clean, Safe, and Secure Energy Future: Volume I" online: <https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/pdf/NEB-Modernization-Report-EN-WebReady.pdf>, p 7

must give full reasons that provide justification, transparency and intelligibility” and “processes [must be] designed and implemented in such a way as to maximize the inclusion of all parties.”¹⁸

We therefore ask the CNSC to adopt the recommendations, made by the expert panels, including to:

1. Examine and reform processes to achieve a higher degree of engagement and flexibility toward an outcome that the public feel welcome; and, enable the participation of interested parties
2. Restore trust and confidence in assessment processes, by allowing people to see and understand how the process is being applied, how assessments are being undertaken and how decisions are being made. Without this transparency, no process will be trusted.¹⁹
3. Facilitate transparent information sharing and decision-making.²⁰
4. Embrace next-generation environmental law which includes providing accessible information and allowing a sufficient time for its review²¹

Public Outreach and Survey

In addition to the CNSC’s mandate requiring it disseminate objective scientific, technical and regulatory information to the public, licensees are also required to develop and implement public information programs.²² Therefore, our interaction with the licensees - which was precipitated by the CNSC’s suggestion that we reach out to proponents – motivated Northwatch to quantify the awareness of residents living within 500 metres of Best Theratronics facility in Kanata. A door-to-door survey was undertaken to gauge their awareness with respect to the operation of a manufacturer using nuclear substances in the environs of their residence. Northwatch’s survey methodology and results are shared with the Commission, below, and our survey results are included in [Appendix 6](#).²³

Northwatch found that the residents living within 500m of the facility had little to no awareness of BTL’s existence in their community and were overwhelming in favour of being informed of its activities.

Therefore, Northwatch not only recommends that next year’s ROR include a review of licensee public outreach protocols and activities, but report on findings of public awareness conducted by a third-party entity.

¹⁸ Report of the Expert Panel on the Modernization of the National Energy Board, “Forward, Together: Enabling Canada’s Clean, Safe, and Secure Energy Future: Volume II”, online:

<https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/pdf/NEB-Modernization-Annex-EN-WebReady.pdf>, p 200

¹⁹ Report of the Expert Panel for the Review of Environmental Assessment Processes, “Building Common Ground – A New Vision for Impact Assessment in Canada” online:

<https://www.canada.ca/content/dam/themes/environment/conservation/environmental-reviews/building-common-ground/building-common-ground.pdf>, p 13

²⁰ *Ibid*, p 19

²¹ *Ibid*, p 90

²² CNSC, “RD/GD 99.3: Public Information and Disclosure,” online: <http://nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/rdgd993/index.cfm>

²³ See Appendix 6, Northwatch’s Public Awareness Survey Results [**Appendix 6**]

Methodology

The initial step was to locate and identify those residences located within 500 metres of the facility. This was done using a combination of on-line mapping tools, namely Claimaps and Google mapping. A map identifying residences within 500 metres was produced with 413 March Road identified but not named on the map. A short set of questions was developed, and the methodology outlined in order to deliver the survey questions in a consistent fashion and provide transparency to the survey's application and results. A copy of the survey questions is included in [Appendix 7](#).

The residences within 500 metres of the Best Theratronics Ltd facility are on Kimmins Court, Lismer Crescent and Colver Court, all of which are located within the neighbourhood known as Beaverbrook. Beaverbrook was constructed in the mid-60s as a complete Garden City, where Nature is the dominant theme, with 40% green space and Mid Century Modern home and public building architecture. The first and oldest neighbourhood in Kanata, Beaverbrook is a thriving community with the houses and streets designed in a park-like setting; a realization of the Garden City. The community is known for its lush greenspace, walking paths, parkland, hedged houses and community facilities. The area was mainly agricultural until the 1960's when Bill Teron, a developer and urban planner, began to build a community that would suit the needs of the people for a complete lifestyle. When he started, it was "only a cornfield," but now it is one of the most desirable communities in Kanata with its beautiful mature trees, large residential lots, superb recreational facilities and proximity to schools, shopping and all amenities.²⁴ Kanata Beaverbrook Community Association is a non-profit, volunteer community association²⁵ which was mentioned by a number of survey respondents as an active and effective communication hub for the neighbourhood.

An estimated eighteen residences in Kimmins Court, six residences in Colver Court, and 27 on Lismer Crescent were identified as being within 500 metres of Best Theratronics facility at 413 March Road. Of these, the eighteen residences in Kimmins Court, and six of the residences on Lismer Crescent were included in the door-to-door survey which was conducted on Saturday, November 18th. The remaining residences were not included due to time and weather-related constraints.

Findings

Of the 23 residences surveyed, an occupant was found to home in 13 cases. Of those, all agreed to respond to the brief set of questions, which were introduced with a brief explanation that the survey consisted of a few simple questions about residents' awareness of industrial operations in the neighbourhood.

Respondents were then shown a satellite map with streets and buildings depicted, and their home was situated on the map relative to Best Theratronics location at 413 March Road. Residents were then asked a short series of questions to assess their familiarity with the company operating at 413 March Road and its operations, and what information they have received from or about those operations, whether the nature

²⁴ <http://www.kanatabeaverbrook.ca/joomla16/index.php/about>

²⁵ <http://www.kanatabeaverbrook.ca/joomla16/index.php/membership>

of those operations was a concern, and whether they felt residents should have been informed that a nuclear facility was operating within 500 metres of their residence.

Less than ten percent of the responding residents said that they were familiar with Best Theratronics operations, and less than 25% were aware that the company operating at 413 March Road used nuclear substances in their operations. Of those respondents, there appeared to be as much or more familiarity with Nordion, which is the neighbouring facility, although that could be in part due to Nordion being a previous owner of Best Theratronics. The survey was not detailed enough to capture these distinctions, but it was noted in the surveyor's comment sheet.

None of the respondents recalled having received any communications from Best Theratronics about their operations; nor had they received any information from Best Theratronics or any other sources about their annual compliance reports, or their licence applications and the license reviews with the CNSC.

When asked if it made a difference to them that a company operating within 500 m of their residence is using nuclear substances in their production, 30% said it did not, 46% said that it did make a difference, and 23% were undecided. Of those who said that it did make a difference, some clarified that it made a difference, but that it would not likely have altered their decision to live there, feeling that the other neighbourhood amenities were the determining factor in choosing to live there.

Seventy-seven percent of survey respondents felt that they should have been informed that a company operating within 500 m of their residence was using nuclear substances in their production; this included respondents who felt that it did not make a difference to them that a company operating within 500 m of their residence is using nuclear substances in their production. Fifteen percent of survey respondents did not feel that they should have been informed that a company operating within 500 m of their residence was using nuclear substances in their production. One respondent was recorded as being "undecided", given that the survey format did not accommodate his response which was that it would depend on the level or risk associated with the facility and the track record of the operator.

A. URANIUM PROCESSING FACILITIES

Overview

The uranium processing facility licenses reviewed in the ROR were those of Cameco's Blind River Refinery ("BRR"), the Port Hope Conversion Facility ("PHCF") and Fuel Manufacturing Inc ("CFM"), and BWXT Nuclear Energy Canada Inc.'s facility. All of these licensees received a 'satisfactory' compliance rating in the areas of environmental protection and waste management.

1. Cameco: Blind River Refinery

Environmental Protection

Atmospheric Emissions

The ROR states that Cameco's atmospheric emissions for the 2016 licensing year "continued to be effectively controlled".²⁶ Supporting this statement in the ROR is Table 3-2 *Blind River Refinery – Air Emissions Monitoring Results*, which reports the annual average of air emission monitoring results. Northwatch has a number of comments regarding this section.

First, Table 3-2 averages air emissions on an annual basis. This in contrast to the BRR licence which requires air releases to have a weekly, and sometimes daily, averaging period. Because of this discrepancy in averaging period, the chart in the ROR does not track whether there were weeks when radiological release limits were exceeded.

Northwatch submits it would be more effective if the air emission chart illustrated the number of times the licence limit was breached. A hypothetical example is illustrated below:

Air Release Source	Substance	Licence Limit	Averaging Period	Length of Inoperability (weeks)	Instances in which Limit Exceeded (weeks)	Compliance Rating (%)
Incinerator Stack	Uranium	0.01	Weekly	26	4	85%

As included in this chart, an approach which also factors in total operating time increases the rigour of the data. The annual averages used in the ROR remove data outliers and do not show the number of weeks a release limit may have been exceeded.

²⁶ *Ibid*

Furthermore, it is unclear if the ROR's dataset excludes weeks in which the 'air release source' was inoperable. According to BRR's 2016 Annual Compliance Report, "the incinerator did not operate in the second or third quarter of 2016 to allow for repairs to the continuous emissions monitoring system and as a result of the extended summer shutdown."²⁷ Therefore, if the data provided in the CNSC's report does not account for the outage, many weeks of zero emissions could potentially be averaged with the other data. Using the hypothetical chart above, if the inoperable weeks were not removed from the equation, the licensee would have a falsely increased compliance rating of 92%. Northwatch requests the CNSC to explain to what extent outages were accounted for in the calculation of atmospheric emission averages.

Secondly, based on the historical data included in the ROR's Table 3-2, it is evident that the licensee, on an annual average basis, has not surpassed allowable emission limits. For instance, 0.00005kg/h of uranium was emitted via ventilation stack, despite a licence limit of 0.1 kg/h. Similarly, 0.00001 kg/h of uranium was emitted from the absorber stack, even though the licence limit was 0.1kg/h. Therefore, Northwatch asks if the CNSC has discussed amending the licence release limit so as to better reflect the CNSC's licensing principle of "As Low As Reasonably Achievable" (ALARA). Northwatch seeks the CNSC's opinion on this issue and whether the licence release limit remains much higher to account for 'one off' or 'occasional' releases at a higher rate.

Environmental Management System

The ROR notes that " Cameco holds an annual safety meeting in which environmental protection issues are discussed and documented." The ROR continues that based on this meeting, CNSC staff review the annual safety meeting documents to verify licensee compliance and note outstanding issues requiring follow-up. First, Northwatch requests the CNSC confirm whether this annual safety meeting is public and if so, to provide updates when available, on location and date for the next meeting. Secondly, as the ROR does not provide further details on this event, Northwatch requests copies of the documents related to environmental protection that were reviewed at the most recent annual safety meeting.

Waste Management

The BRR received a satisfactory rating on the waste management SCA. The ROR does not include discussion of the licensee's waste management licence condition. Therefore, it is not possible for Northwatch to gauge the extent to which the licence condition has been met, breached, or even surpassed. The comments which follow are based on Northwatch's review of the proponent's annual compliance report and licensing application (dated April 15, 2011), alongside their current operating licence and LCH.

²⁷ Cameco: Blind River Refinery, "2016 Annual Compliance Monitoring & Operational Performance Report" (27 March 2017) [BRR Annual Compliance Report]

Waste Management Oversight and Compliance Verification

Northwatch requests that the CNSC explain how it determined the licensee's rating to be satisfactory, and what inspections, documents and compliance reports informed this decision. Northwatch recommends that the waste management SCA be included in next year's ROR. Northwatch also requests that any future chapter on waste management report the extent to which the uranium contaminated materials generated on site have been reprocessed, recycled and re-used or otherwise stored or disposed of on or off site, and indicate the amounts retained on-site and their respective storage condition.

Reporting on Waste Reduction Strategies

The LCH for BRR reads that the waste management program for Cameco BRR "*should include waste minimization*" (emphasis added). Northwatch submits that waste minimization should not be discretionary and instead, be a requirement of licensing. As we recognize it is not the purpose of the ROR to amend licence conditions, we submit that the ROR, in its reporting of licensee compliance and CNSC oversight, comment on the extent to which this recommended licence condition has been advanced.

Waste minimization is an acute issue and as noted by the licensee "waste materials ... are stored on site until appropriate disposal options are available."²⁸ The disposal options, alluded to in the licensee's most recent licence application are not named. It is likely, however, that these options include one of the many waste repositories undergoing review. In an effort to reduce waste inventory, the licensee describes in its 2011 licence application that it successfully decontaminated over 100,000 empty steel uranium concentrate drums. This event appears to serve as an ongoing marker of success, as it is repeated in the licensee's 2016 annual compliance report. It is unclear if any other waste reduction strategies were pursued in 2016.

Based on our review of this waste management information, our request to the CNSC is two parted: first, we ask that the CNSC require the licensee to report the actions it took in 2016 to reduce waste outputs and existing waste inventory; and second, for the CNSC to comment on the extent to which the licensee's waste management strategy is based on waste disposal options which currently do not exist.

Preliminary Decommissioning Plan

Section 12.2 of BRR's licence requires it "maintain a preliminary decommissioning plan (PDP) for decommissioning the facility. This PDP shall be reviewed every five years or when requested by the Commission, or a person authorized by the Commission." According to BRR's 2016 Annual Compliance Report, their PDP was "updated and reissued in 2016."²⁹ Northwatch requests the CNSC to disclose the updates made by the licensee in order to facilitate our review of the licensee's licensing condition.

²⁸ Cameco, "2012 Licence Renewal Application for the Blind River Refinery" (15 April 2011), p 21

²⁹ BRR Annual Compliance Report, *supra* note 27, p 15

2. Cameco: Port Hope Conversion Facility

Environmental Protection

Atmospheric Emissions

In reference to the Port Hope Conversion Facility's (PHCF) atmospheric emissions, the ROR notes that the "facility continued to be effectively controlled."³⁰ Northwatch has a number of comments regarding this section. First, Northwatch reiterates its comment, (see [Consistency among Calculations](#) above) that air emissions monitoring results included in the ROR should use the same averaging period as that in the licensee's LCH. The ROR's Table 4-2 *Air emissions monitoring results* reports air emissions on an annual average while the LCH requires limits be average over a 24-hour period.

Secondly, Northwatch seeks clarification from the CNSC regarding a discrepancy between the release limits noted in the licensee's licence and the CNSC's ROR.³¹ A side-by-side comparison has been provided in the chart below:

Location or Release Source	Parameter or Release Source	Licence Limit in ROR (2016)	Licence Limit in LCH (2017)
UF ₆ Plant	Uranium	0.290 kg/h	280 g/h
UO ₂ Plant	Uranium	0.150 kg/h	240 g/h

It appears the LCH provided to Northwatch from the CNSC post-dates the data included in the ROR. However, we would appreciate the CNSC's confirmation on this point.

Furthermore, the ROR states the licensee's average annual release of uranium from the UF₆ plant was 1.2 grams. Similarly, the average annual emission of uranium from the UO₂ plant reported in the ROR was also significantly lower than the allowable licence limit (1 g and 15 grams respectively). Therefore, we ask the CNSC to comment on the reason for this differential. In lieu of the finding that the proponent's actual emissions average is significantly lower than the licence limit, what supports keeping the licence many orders of magnitude higher when the CNSC supports the ALARA licensing principle? And, how was the increased licence limit for uranium releases from the UO₂ plant, as noted in the proponent's current LCH, consistent with the ALARA principle?

Reportable Events and Inspections

Section 4.3 of the ROR reviews PHCF's environmental protection performance. According to Table J-2 *Inspections, Port Hope Conversion Facility, 2016*, a Type II Inspection was performed in regards to the

³⁰ ROR, *supra* note 1, p 39

³¹ Cameco: Port Hope Conversion Facility, "Licence Conditions Handbook," Effective date March 10, 2017, Revision 1, p 50 [**PHCF LCH**]

environmental protection SCA. The ROR does not elaborate on the inspection, and therefore it is unknown what compliance issues were found during this onsite, ‘snapshot’ inspection of the licensee’s operations.³² Northwatch recommends that the ROR incorporate findings of inspections and likewise the licensee’s response.

In addition to the Type II inspection, the licensee’s 2016 Annual Compliance Report mentions a number of reportable events which occurred in 2016 and required investigation and corrective action plans. For instance, the licensee reports that:

On January 12, 2016, a gasket failure in the drop line room in the UF6 plant led to a UF6 leak within the plant.

On February 4, there was a small unplanned release of fluorine gas within the UF6 plant as a result of a compressor failure. The release was quickly detected, stopped and emergency ventilation was activated.³³

It is a condition of licensing that the licensee “shall ensure” that the release limits are not exceeded. On this basis, Northwatch submits the ROR should prioritize discussions of reportable events, investigations and corrective actions. Additionally, it would be helpful if the ROR described the reportable event and quantified the emission or release.

Northwatch reminds the Commission that in other RORs, such as the Use of Nuclear Substances ROR reviewed this fall, comments were made on the number of reportable events, their accompanying ranking on the INES scale and the response measures which were taken by the licensee.³⁴ As substance release limits are a central element of environmental protection licensing requirements, Northwatch recommends the ROR emulate the approach taken in the Nuclear Substance ROR and report findings on orders and licensee response.

Waste Management

Cameco’s Port Hope Conversion Facility received a satisfactory rating on the SCA of waste management. Again, lacking a designated chapter which discusses this SCA, Northwatch has referred to the proponent’s licence, LCH and 2016 Annual Compliance Report as a basis for the comments which follow.

³² CNSC, “Type II Inspections,” online: <http://nuclearsafety.gc.ca/eng/nuclear-substances/licensing-nuclear-substances-and-radiation-devices/licensing-process/type-II-inspection-worksheets/index.cfm>

³³ Cameco: Port Hope Conversion Facility, “2016 Annual Compliance Monitoring & Operational Performance Report” (31 March 2017), p 10 [**PHCF Annual Compliance Report**]

³⁴ See for instance: CNSC, “Regulatory Oversight Report on the Use of Nuclear Substances in Canada: 2016,” p 26

Waste Management Projects

Section 12.1 of the PHCF licence sets out requirements of licensing related to waste management. The ROR does not contain any discussion of these licensing requirements. The 2016 Annual Compliance report for the PHCF alludes to the following waste management initiatives:

Waste management projects were deployed, as part of the long-term waste management plan, to dispose of contaminated materials at appropriately licensed hazardous waste facilities.³⁵

[...]

The following is a summary of improvements planned to be implemented during 2016 at the PHCF. Vision in Motion (VIM) is Cameco's plan to clean up and renew the PHCF. The project builds on work now under way through the Port Hope Area Initiative (PHAI) to address historic low-level waste issues in the Municipality of Port Hope. It provides Cameco with an opportunity to deliver an allowance of qualifying waste materials to the Long-Term Waste Management Facility (LTWMF) that will be constructed by the PHAI on the site of the licensed Welcome Waste Management Facility.³⁶

Therefore, Northwatch seeks a response from the CNSC on what elements of the proponents' waste management program were changed or improved in 2016, and what specific actions were taken by the licensee, in this regard.

Preliminary Decommissioning Plan

The licensee must maintain a decommissioning strategy as a condition of licensing. Discussion of this requirement is absent in the ROR and therefore, Northwatch recommends that the ROR provide commentary on this licensing requirement. Northwatch notes that the PHCF's Annual Compliance Report states "the most recent revision of the preliminary decommissioning plan was submitted to the CNSC in May 2016."³⁷ Northwatch notes that while Cameco has provided a summary of the PDP to us upon request (and posted this to their web site), a complete version of the PDP has not been provided. Therefore, Northwatch requests the CNSC provide an overview of the licensee's most recent PDP, noting any changes or amendments and outstanding matters.

2017 vs 2016 Licence and LCH

It has come to our attention that the licence and LCH provided by the CNSC for this proponent covers a licensing period not subject to this ROR's review. Therefore, without being able to review the 2016 LCH,

³⁵ PHCF Annual Compliance Report, *supra* note 33, p 5 and 62

³⁶ *Ibid*, p 100

³⁷ *Ibid*, p 5

Northwatch requests that the CNSC, provide commentary on the extent to which the licensee’s licence and LCH, valid in 2016, were fulfilled.

3. Cameco Fuel Manufacturing Inc.

Environmental Protection

Atmospheric Emissions

The ROR states that building exhaust ventilation emissions “remained consistently well below” their licence limits. This trend, tracked from 2012 to 2016 demonstrates that despite a licence limit of 14,000 g/year, the facility only produced a maximum of 700 g/year.³⁸ Northwatch requests the CNSC explain why the release limit remains significantly higher in the licence, despite drastically lower reported emissions since 2012.

While atmospheric emissions are only one component of a licensee’s environmental protection program, we ask the CNSC to provide a benchmark which would best support the licensee’s pursuit of a “fully satisfactory” or FS rating. Northwatch also recommends that in addition to reporting on existing environmental protection programs, the CNSC should use the ROR as an opportunity to provide guidance to licensees on areas in which improvement can be made in order to reach – what should be – the required benchmark of FS.

Uranium in Ambient Air

The ROR report states that the annual average concentrations from the air samplers located in four locations around the facility, demonstrate that uranium in ambient air level remained “well below” the Ministry of Environment and Climate Change’s standard.³⁹ Northwatch requests that the CNSC consider presenting data, such as this, in an alternative format for next year’s ROR. As previously stated, averaging emissions on an annual basis does not demonstrate the variability of releases across or within the four sampling sites. Furthermore, it is impossible to analyse data trends, if it is not reported on weekly or monthly timescales. Being able to compare the releases for the four sites would provide an additional analysis opportunity.

Surface Water Monitoring

Northwatch seeks further detail from the CNSC on issues raised in its review of CFM’s surface water monitoring. For instance, the ROR mentions that “the highest uranium concentration was collected at SW-4” but, it was “below the applicable CCME guideline for short term exposure.”⁴⁰ Northwatch recommends

³⁸ See Appendix A of Licence

³⁹ ROR, *supra* note 1, p 53

⁴⁰ ROR, *supra* note 1, p 53

that CNSC's ROR build on report incidences, and explain *why* samples or monitoring sites exceed the norm, and what action was required to be taken to lessen the concentration.

Secondly, the ROR contains the statement, "CNSC staff will continue to oversee Cameco's monitoring at locations around the vicinity of CFM, to confirm where there are elevated uranium concentrations in surface water."⁴¹ This statement is perplexing because this section of the ROR otherwise does not identify 'elevated uranium concentrations' as an issue. This statement also implies, through its use of the word confirm, that follow-up testing is being conducted, to verify sampling results. It should be assumed that the CNSC will always continue to oversee and monitor licensee compliance, and therefore Northwatch requests the CNSC to more fully explain this statement.

Inspections

According to Table J-3 *Inspections, Cameco Fuel Manufacturing, 2016*, a Type II Inspection report was sent to the licensee on September 22, 2016 in relation to the environmental protection SCA. As no further details are provided in the ROR, it is unclear what triggered this action. Northwatch recommends the ROR incorporate inspection reports within the environmental protection chapters and, provide a hyperlink or reference to the accompanying documents. While a discussion of the inspection report and resulting compliance actions would be beneficial in the ROR, providing publicly accessible documents through hyperlinks would alternatively relieve much of this information gap while not substantially lengthening the ROR.

Waste Management

CMF received a satisfactory rating for the SCA of waste management. The ROR does not report any inspections having occurred in 2016 with regard to waste management.⁴² Because of the CNSC's lack of discussion of waste management, the following comments we respectfully request responses to are derived from the proponent's Annual Compliance Report.

Airborne Uranium Concentrations

CFM's Annual Compliance Report states the following:

The majority of the elevated readings in the Waste Treatment area occurred during a process that is completed in which employees are required to wear respirators. Upgrades to the equipment in this area is expected to reduce airborne uranium concentrations when commissioned (emphasis added).

⁴¹ *Ibid*

⁴² *Ibid*, p 150

Northwatch seeks an update on the status of this project, the proposed date of commissioning, and interim measures which are in place for the benefit of worker's health and environmental protection.

Improvements for 2017

CFM states in their Annual Compliance Report that as part of their commitment to continual improvement, while minimizing risk to employees, the public and environment, they plan on submitting an updated Waste Management procedure to the CNSC. Because Northwatch was not provided the waste management program for the 2016 year, Northwatch requests the CNSC provide the 2016 and updated 2017 version. We request the revised and historical versions of the waste management plan so that we may review baseline data, track compliance, and identify trends or areas requiring improvement. While the ROR in some way provides this opportunity, because it does not include waste management in any of its discussions, it is even more crucial that these documents – which are foundational to our review – be made publicly available.⁴³

4. BWXT Nuclear Energy Canada Inc

Environmental Protection

BWXT Nuclear Energy Canada Inc (“BWXT”) produces nuclear fuel bundles which are used by Ontario Power Generation's Pickering and Darlington nuclear power plants. This licensee received a satisfactory rating for environmental protection in the 2016 ROR.

Waste Water Discharge

The ROR states that in 2016, the annual release of uranium from the BWXT Toronto and Peterborough facilities were 0.65kg and 0.0001kg kg, respectively. According to the BWXT Licence Appendix A – Release Limits, this means that the Peterborough facility released 0.65kg of its 760 kg/year limit and Toronto used 0.0001kg of its total 9000 kg/year limit.

First, Northwatch asks the CNSC to explain why the release limits are set phenomenally higher than the actual releases and if, based on current monitoring data, why it is necessary for these release limits to remain at these levels. Secondly, it is unclear from the ROR, as it is not discussed, if samples are taken post-water treatment. For instance, the waste water treatment plant at the Long-Term Waste Management Facility in Port Granby is equipped with the “best available technologies to treat the waste water” and improve the “quality of water being discharged into Lake Ontario.”⁴⁴ As uranium releases to the sewer are included in licences and can be as much as 760,000 g/year, Northwatch asks the CNSC to comment on the

⁴³ Cameco: Fuel Manufacturing “2016 Annual Compliance Monitoring & Operational Performance Report” (30 March 2017), p 90

⁴⁴ Canadian Nuclear Laboratories, “Port Granby Waste Water Treatment Plant,” online: <http://www.phai.ca/en/home/port-granby-project/port-granby-project-waste-water-treatment-plant/default.aspx>

capacity of the of the various waste water treatments that BWXT releases its water into, and their treatment standards relative to that of Port Granby.

Furthermore, in order to better review the environmental effects of allowable uranium release into the sewer system, Northwatch asks the CNSC if they incorporate results from post-treatment radionuclide monitoring tests in their analysis. While Northwatch understands that the release limits for the BWXT are set for a period of four years spanning December 2016 to December 2020, we ask if the CNSC requires the proponent to annually review the capacity of waste treatment facilities to treat radiological and hazardous effluent emission. We also recommend the CNSC require the licensee to report uranium levels post-treatment in µg/L. In instances where there are multiple licensees discharging effluent to the same sewer system, we also ask the CNSC explain how it evaluates the capacity of the waste water facility for the cumulative load of uranium.

Waste Management

Waste and By-product Management

BWXT states in its Annual Compliance Report that “waste and by-product management” is described and summarized in a separate submission to the CNSC, appended to its Annual Compliance Report. This appendix is not included in our copy of the Annual Compliance report. Therefore, Northwatch requests the CNSC require licensees to publicly provide the appendices which accompany their Annual Report.

Preliminary Decommissioning Plan

Section 12.1 of the BWXT licence requires that it maintain a preliminary decommissioning plan (PDP) which “shall be reviewed every five years or when requested by the Commission or a person authorized by the Commission.” In the LCH’s explanation of the section 12.1, it expressly requires that “this plan shall be reviewed and revised every 5 years.”⁴⁵

In lieu of this licensing requirement, Northwatch has the following query: BWXT’s current licence spans 2016 – 2020. The effective date of the PDP, as listed in the LCH is year 2000 and it has had 0 revisions. Therefore, Northwatch requests the CNSC to explain whether the licensee has updated its PDP, per the language in the section 12.1 of the existing Licence. Secondly, Northwatch requests the CNSC to clarify if a PDP, current to 2016, was provided to the CNSC for the current licencing period.

Lastly, the LCH requires that PDP be prepared using CSA Standard *N294-09: Decommissioning of facilities containing nuclear substances*. Northwatch recommends the CNSC provide an alternative means of accessing CSA Standards so that public intervenors can review technical licensing documents with ease.

Inspection

⁴⁵ BWXT Nuclear Energy Canada Ltd, “Licence Conditions Handbook,” (Effective date: 17 Jan 2017, Revisions 3), p 67

The ROR notes in Table J-4 that BWXT was subject to an inspection of its Waste Management SCA in an inspection report dated May 20, 2016.⁴⁶ As this SCA is not covered within the scope of the ROR, Northwatch requests the CNSC provide details of this inspection report, the compliance activity at issue, and the licensee's response.

⁴⁶ ROR, *supra* note 1, p 151

B. NUCLEAR SUBSTANCE PROCESSING FACILITIES

Overview

The licensees in this category include SRB Technologies Inc (“SRBT”), Nordion and Best Theratronics Ltd (“BTL”). SRBT received a satisfactory rating for the SCAs of environmental protection and waste management in 2016. Nordion maintained its Fully Satisfactory for the 2016 licensing year and received a satisfactory rating for waste management. BTL received a compliance rating of satisfactory for its environmental protection and waste management SCAs.

1. SRB Technologies Inc

Environmental Protection

Groundwater Monitoring

The ROR states that “tritium concentrations decrease significantly at locations further away from the SRBT.” While this statement is in part true, Northwatch asks the CNSC to comment on the extent to which a hydrological analysis of the area, which maps and identifies pathways for contamination, has been conducted. Also, the ROR states the highest concentration of tritium, at 175 Bq/L, was found in a residential well. It would be helpful if the ROR explained the reason this elevated tritium level. For instance, was it due to location relative to the facility? Was the well contaminated through a pathway (ie. wells, fractures)? And, does the well serve as a pathway to groundwater contamination?

The ROR also states that the SRBT conducted a gap analysis of its groundwater protection program against CSA N288 7-15 *Groundwater protection programs at Class I nuclear facilities and uranium mines and mills* and consequently amended its program to meet standard requirements. Northwatch seeks a response from the CNSC which would clarify what these standards are, what improvements were made, and whether these changes were verified by the CNSC.

Other Monitoring

The ROR does not comment on levels of organically bound tritium (OBT), which persists in relatively high levels in soil, water and vegetation. OBT occurs in many forms (e.g., amino acids, DNA, fats, carbohydrates) and is the form of tritium that is most hazardous to humans.⁴⁷ Therefore, Northwatch requests the ROR provide specific information about OBT levels in soil, water and vegetation.

Environmental Protection Standards

⁴⁷ Dr Ian Fairlie, “Tritium Hazard Report: Pollution and Radiation Risk from Canadian Nuclear Facilities” (June 2007)

The ROR states that SRBT submitted a gap analysis and action plan in line with CSA N288.6-12, *Environmental risk assessments at Class I nuclear facilities and uranium mines and mills*. Again, as this document is not publicly accessible, Northwatch asks the CNSC to expand upon this analysis, the scope of the action plan and the gaps identified.⁴⁸

Environmental Management System

The ROR states that in 2016, SRBT also revised and implemented programs and procedures to align with new CSA Standards, specifically with N288.1-14 *Guidelines for calculating derived release limits for radioactive material in airborne and liquid effluents for normal operation of nuclear facilities* and N288.5-11, *Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills*.

We urge the CNSC to provide a more detailed discussion of this licence and CSA standard alignment. The ROR's comment that "CNSC staff reviewed the submitted documentation from SRBT and determined they meet the requirements outlined in the above CSA standards" does not provide a sufficient basis for our review, nor demonstrate how the CNSC came to this conclusion.

Compliance Inspection Reports

The ROR does not describe the Compliance Inspection Report issued December 2016 which resulted in the two environmental protection based SCA recommendations:

- SRBT procedures should be updated, or reinforced, such that the procedure is consistent with in-field practices.
- Update the procedure to reflect how the calibration of the PerkinElmer LSC machines is documented.⁴⁹

Northwatch again reiterates compliance inspections and reports should be discussed in the ROR, in order to more thoroughly comment on operations, compliance and oversight in the 2016 year.

Ground Water and Soil Monitoring

The ROR provides an overview of SRBT's environmental monitoring. It notes the "public and environment in the vicinity of the SRBT are protected and safe" and the licensee "meets requirements set out in outlined standards."⁵⁰ In lieu of these statements, Northwatch would first like the CNSC to comment on the currency of the samples analyzed and whether, just because a sample is tested in 2016 if its results are current to 2016. By way of example, the licensee states in its Annual Compliance Report that, "Twelve drums of compacted soil collected from the drilling of groundwater monitoring wells in 2006-07 were assessed in

⁴⁸ ROR, *supra* note 1, p 88

⁴⁹ CNSC, "CNSC Compliance Inspection Report No. SRBT-2017-01," p 5

⁵⁰ ROR, *supra* note 1, p 86 and 87

2016 as meeting unconditional clearance requirements with respect to tritium.” Northwatch requests the CNSC confirm the facts in this statement as, on its face it appears that soil collected a decade earlier was tested in 2016.

Secondly, the ROR notes that the wells which exceed the threshold of 7,000 Bq/L are not used for drinking water. Northwatch asks the CNSC to confirm the number of wells which are above this threshold and whether they are sealed. In order to prevent the contamination of source water, we seek clarification on what parameters are in place to ensure these wells do not serve as pathways for groundwater contamination.

Waste Management

Waste Minimization

Unlike other licensees, SRBT’s licence does not refer to waste minimization. Pursuant to licence condition 12.1, SRBT “shall implement and maintain a waste management program.” However, unlike the BWXT licence which requires that its waste management plan “shall include waste minimization” or Nordion’s LCH which states the licensee shall “ensure...radioactive waste is minimized,” similar language is absent for SRBT. It is evident from the proponent’s licence application that waste will be generated and may result in 325 kg of waste per month.⁵¹ Therefore, given that the licensee can estimate future radioactive wastes outputs, it is recommended that their licence also have an express requirement for waste minimization. Northwatch also requests that the CNSC provide an explanation for this differential in licensing.

In an effort to explain this difference in licence condition 12.1, Northwatch also inquires if the ‘waste minimization’ language has been replaced by the statement in SRBT’s LCH which reads, “the licensee shall comply with the requirements of CSA N292.0, *General Principles for the Management of Radioactive Waste and Irradiated Fuel* and CSA N292.3 *Management of Low - and Intermediate-Level Radioactive Waste*.”⁵² Northwatch submits it would be clearer to include an express licence condition requiring minimization, rather than incorporating a CSA Standard by reference.

In the context of waste minimization, the ROR does not provide any comment on this point. In the SRBT’s Annual Compliance Report, it notes that “between 2010 and 2014 inclusive, SRBT made 23 low-level waste consignments to licensed waste management facilities, averaging 4.6 consignments per year. Continuous effort is made to reduce the amount of this type of contaminated waste material.” In lieu of this comment, Northwatch asks the CNSC to confirm whether the licensee has made measurable, waste minimization efforts beyond 2014.

⁵¹ SRB Technologies (Canada) Inc. “Nuclear Substance Processing Facility Operating Licence Renewal Application” (8 September 2014), p 33

⁵² CSA Group, “N292.0-14/N292.3-14 PACKAGE - Consists of N292.0-14, General principles for the management of radioactive waste and irradiated fuel and N292.3-14, Management of low- and intermediate-level radioactive waste,” online: <https://shop.csa.ca/en/canada/nuclear/n2920-14n2923-14-package-/inv/27028162014>

Waste Imports

As a nuclear substance processing facility, SRBT receives waste exit signs from the United States. The tritium-filled glass tubes are removed and this radioactive waste is shipped to Canadian Nuclear Laboratories' Chalk River commercial waste facility. Northwatch recommends the ROR provide details about SRBT's tritium waste imports by volume and the licensing basis for these activities.

2. Nordion

Environmental Protection

Atmospheric Emissions

The ROR notes that Nordion updated its DRLs for all atmospheric emissions in order to align with CSA N288.1-14, *Guidelines for calculating derived release limits for radioactive materials in airborne and liquid effluents for normal operation of nuclear facilities*. Northwatch requests the CNSC to confirm whether the licensee's LCH reflects these updates,⁵³ as the LCH provided to us has an effective date of December 23, 2015 and is marked as 'Revision 0'.

Environmental Monitoring Program

The ROR notes that Nordion committed to complete a gap analysis of its environmental program against CSA N288.4-10 *Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills* and CSA N288.5-11 *Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills*. The ROR notes that CNSC staffs' review of the gap analysis report is ongoing. Therefore, Northwatch asks how the licensee was able to receive a rating of Fully Satisfactory, within the SCA of environmental protection, when a gap analysis is ongoing and compliance issues, not yet identified, have not been remedied?

Soil monitoring

The ROR notes that Nordion conducts soil sampling every two years, to monitor concentrations of radiological materials in the soil. Northwatch requests why soil monitoring is not conducted on an annual basis, as is done for instance, at Cameco's PHCF and Blind River Refinery. Increasing the similarity between monitoring, their frequency and parameters, assists when comparing licensees. We recommend the CNSC explain the rationale for frequency of monitoring chosen at a facility (or, cite the source for this basis) and why it is merited, given differences between licensees. Northwatch recognizes that this information may appear too detailed for inclusion in the ROR, but as our request for Environmental Protection Program for

⁵³ Nordion (Canada) Inc. "Licence Conditions Handbook" (Effective date December 23, 2015, Revision 0)

the licensees was denied, we seek to understand the rationale for the uniqueness among licensees, their licences and LCHs.

Waste Management

As the ROR does not comment on Nordion’s waste management plans and programs, beyond giving them a rating of satisfactory, Northwatch has reviewed the licensee’s Annual Compliance Report. A number of comments follow.

Northwatch seeks an explanation from the CNSC regarding the allowable release limits for radioactive substances. Other licences reviewed have either included specific release limits as an Appendix to the Licence, or as chart within the LCH. Neither can be located for Nordion. The reason for this request is that the Annual Compliance Report states that “Nordion production facilities have been designed and are operated in a manner to prevent radioactive waste from being released to municipal garbage or sewer systems and to ensure that releases to the environment via air or water emissions are within limits approved by the CNSC.”⁵⁴

Despite asserting that it operates in a manner which prevents release, Nordion conversely states releases are within limits approved by the CNSC. Therefore, Northwatch seeks an incidence report detailing the frequency with which releases occur and whether they are intentional and planned, or inadvertent. Secondly, Northwatch requests the CNSC to provide Northwatch with information which outlines the release limits for both liquid and air releases.

Decommissioning Plan

Nordion’s application for a Class 1b Nuclear Substance Processing Facility Operating Licence Renewal notes that a “corrective and preventative action for labelling” of radioactive waste containers was completed in 2014.⁵⁵ Northwatch requests whether this amendment, which resulted in the licensee developing an operating procedure, is reflected in their Preliminary Decommissioning Plan. Without being able to review this document, as our disclosure request was denied by the CNSC, it is not apparent whether this revision and improvement to practice has been noted.

3. Best Theratronics Ltd

Environmental Protection

Effluent and Emission Controls

⁵⁴ Nodion (Canada) Inc. “2016 Annual Compliance Report”

⁵⁵ Nordion (Canada) Ltd. “Class 1B Nuclear Substance Processing Facility Operating Licence Renewal – 15 H7 1” (19 June 2015), p 70

Licence condition 10.1 requires that BTL “shall implement and maintain an environmental protection program.” The ROR states “there are no radiological releases (liquid or airborne) that require controls or monitoring and thus, “BTL does not conduct environmental monitoring.”⁵⁶ The ROR also states that “BTL does not have identified radioactive releases to the environment.” Northwatch asks the CNSC to resolve this discrepancy: how can the ROR state BTL does not have “identified radiological releases” if it does not have any controls or monitoring in place? There are radiological releases within the facility, as described in the Radiation Protection chapter of the ROR and its review of worker protection. Thus, we request the ROR substantiate any statement that there are no identified releases.

Waste Management

Preliminary Decommissioning Plan

While a waste management section is not included for BTL, the ROR has the following related statement about the licensee’s waste management plan in the introduction:

On August 24, 2015, a CNSC Designated Officer issued an order to BTL. The order required BTL to dispose of or transfer all depleted uranium, sealed sources and prescribed equipment in its possession; cease all imports and increases to its current inventory of sealed sources and prescribed equipment containing radioactive sources or depleted uranium; and limit the operation of particle accelerators. As a result of the order issued to BTL, BTL reduced its inventory of nuclear substances.

Based on this order which flowed from BTL’s breach of its licence, Northwatch recommends that the CNSC should not have rated BTL’s waste management SCA as satisfactory. Northwatch requests the CNSC to explain upon what basis a licensee can maintain a satisfactory rating despite being in breach of their waste management condition (and by extension, their licence).

Guidance for Waste Management Program

The ROR is an opportunity for the CNSC to report on licensee compliance in each regard to the SCAs. In order to gauge the sufficiency with which licence conditions have been met, it is necessary to review the documents which are expressly mentioned in the LCH. For instance, the licensee’s LCH states:

Guidance on elements that should be included in the Waste Management Program is provided in the following documents:

1. CNSC Policy P-290, Managing Radioactive Waste
2. CNSC GD-320, Assessing the Long Term Safety of Radioactive Waste Management
3. Management of Low and Intermediate-Level Radioactive Waste, CSA N292.3, 2008

⁵⁶ ROR, *supra* note 1, p 106

First, Northwatch only has the ability to review 2 of these 3 guidance documents as the CSA document noted as item 3 is not publicly available. However, despite our review of the first two documents, the CNSC would not provide us with the licensee's Waste Management Program. Therefore, we ask the CNSC how, based on the absence of waste management information in the ROR and a refusal to disclose the licensee's required waste management plan, we are to adequately comment on the environmental, human health, and safety elements of the licensee's action. We strongly recommend the CNSC revise this process in order to facilitate an engaged and public, licensee oversight review.

C. REVIEW OF THE BLIND RIVER REFINERY

These comments are provided in addition to those included in Section A.1 of this report, which considers the manner in which the Regulatory Oversight Report evaluated the safety control areas of Environmental Protection and Waste Management at the Blind River Refinery, as it did for all eight facilities reported on in the Canadian Nuclear Safety Commission's (CNSC) *Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2016* (ROR).⁵⁷

This section of the report are provided as followup to Northwatch's review of CNSC's *Regulatory Oversight Report for Nuclear Processing, Small Research Reactor and Class IB Accelerator Facilities: 2015*.

As part of this review, we compared the section on the Blind River refinery as found in the 2015 and the 2016 reports. Three key observations emerged from that comparison:

- The reports are extremely similar, even repeating report sections in near entirety
- With the exception of the section that described the several transportation accidents (which were absent from the 2015 report) the 2016 report is generally less detailed and includes less information
- Northwatch appreciates the additional information provided about discussions between Mississaugi First Nation and the CNSC and the development of a monitoring role for Mississaugi First Nation; of additional interest would be in the inclusion in future reports of a verification of these activities and a statement conveying their level of satisfaction by the Mississaugi First Nation

Mid-Term Performance Report

We are particularly disappointed in the quality and level of detail in the regulatory oversight report series given the CNSC staff response to our request for the mid-term performance report, in which they indicated that the section on the Blind River refinery in 2014 Regulatory Oversight Report was the mid-term performance report. In response to our September 2017 request for the mid-term performance reports we were told that "the Mid-Term Performance Report for Blind River is in the 2015 Regulatory Oversight Report (ROR)".⁵⁸

One of Northwatch's concerns with extending the licence length from two years to five years in 2007 was the length of time between between detailed reporting and between occasions for the interested public to provide comment on a licensee's operating performance. This concern was at least partly satisfied by the provision of mid-term performance reports, such as the 2009 mid-term performance report on the Blind River refinery.⁵⁹

⁵⁷ CNSC, *Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2016*, CMD 17-M45 (13 October 2017) [ROR]

⁵⁸ Email subject line: RE: Document Request: Mid-Term Performance Report and Preliminary Decommissioning Plan for Cameco's Uranium Refinery, dated September 13, 2017

⁵⁹ CMD 09-M55 and CMD 09-M55.1

Those reports did, by our assessment, provide additional information to that included in the Regulatory Oversight Reports. For example, in the 2009 reports, the CNSC CMD described the uranium-contaminated by-products, their disposition, the wastes stream burned in the BRR incinerator, the storage of radioactively contaminated non-combustible wastes on-site, the storage and decontamination of scrap metals and their disposition, and the CNSC staff inspection against Cameco Blind River's Waste Management Plan. The Cameco CMD also very briefly described their management program for the two by-products including some volume estimates, management for recycling of uranium-contaminated metals, and their incineration. While neither of the 2009 CMDs were very detailed, they did at least contain more detail than the 2015 or 2016 RORs.

Given that we are now at mid-point in a ten year license issued to the Blind River refinery on February 28, 2012, we had expected a substantive and detailed mid-term performance report, commensurate in increased detail with the increased license term. Further, the ROR does indicate that Cameco submitted an Environmental Risk Assessment for the Blind River refinery in late 2016, but provided not even a summary of the ERA. Nor did they include the ERA in the references for the ROR, or make the ERA available through public notice or posting on the CNSC web site; Cameco has similarly failed to make this report available, including only a very brief statement that an environmental risk assessment had been undertaken and that "the assessment found there was no undue risk or impact to the environment or to human health as a result of refinery operations".⁶⁰

An updated environmental risk assessment would have been an appropriate lens through which to view operating performance mid-term in the ten year license. We disagree with CNSC and Cameco decisions to not make the ERA available and to retroactively inform Northwatch that the 2015 ROR was to be substituted for a mid-term performance report.

Production Levels Relative to Dose and Discharge

The Regulatory Oversight Report indicates that contractors at the Blind River refinery may be identified as Nuclear Energy Workers "if the nature of their work activities and time spent onsite presents a reasonable probability of them receiving an occupational dose greater than 1 mSv". We find this description to be overly vague, and does not make clear how these designations are actually determined. This is particularly a concern if the shift in employee-to-contractor ratio that took place between 2015 to 2016 may be the indicator of a trend towards more contractors and fewer employers: we note that the ratio has shifted from 142 employees and 13 contractors in 2015 to 138 Cameco employees and 16 contractors in 2016.

The 2016 report stated that "Average and maximum effective doses at BRR show a decreasing trend, likely due to the decrease in UO₃ production over these years". This has been similarly stated in previous reports, including in 2015, which noted that production levels had significantly reduced from previous years. What is different in reviewing the 2016 report is that – unlike in every other previous year – neither Cameco's

⁶⁰ 2016 Annual Compliance Monitoring & Operational Performance Report, Blind River Refinery, Page 47

Annual Information Form or Annual Report report on production levels for the Blind River refinery, although they do continue to report on production levels for the Port Hope Conversion facility and fuel manufacturing facility.

	2011	2012	2013	2014	2015	2016	Regulatory limit	Source
Production (tonnes)	13.5	13.1	14.2	8.9	8.4	-	24	Cameco Annual Information Forms
Average effective does (mSv)	2.7	3.7	3.3	3.3	1.7	1.5	50 mSv	Figure 3-3
Maximum effective dose (mSv)	12.6	12	12.1	8.2	7.4	6.1	50 mSv	Figure 3-3 (2015)
Average extremity dose (mSv)	10.2	11.4	14.1	5.4	1.5	1.2	n/a	Appendix E
Maximum individual extremity dose (mSv)	49	47.6	35.1	48.2	15.3	10.6	500 mSv/year	Appendix E
Average skin dose (mSv)	5.5	6	6.8	5.4	4	3.3	n/a	Appendix E
Maximum individual skin Dose (mSv)	48.8	39.2	41.4	41.2	28.1	26	500 mSv/year	Appendix E
Public Dose	0.006	0.012	0.012	0.005	0.005	0.005	1 mSv/year	Table 2-2, Public

The excluding of production levels for the Blind River refinery is a matter of some frustration, and one with no reasonable explanation. As in previous years, we would find it helpful to consider levels of worker exposure and levels of releases to the environment in relations to production levels. For the 2016 report, this is not possible. At best, given the absence of actual information on production levels for the Blind River refinery, we could speculate on the production levels at Blind River relative to the production levels at Port Hope, as there has in the past appeared to be a co-relation.

Source: Cameco Annual Information Forms	2011	2012	2013	2014	2015	2016
Blind River production	13.5	13.1	14.2	8.9	8.4	-
Port Hope production	14.7	14.2	14.9	11.6	9.7	8.4

This is, however, only speculative, with several areas of uncertainty, including whether the Springfield production volumes are included in all six years of reported production from the conversion and fuel fabrication facilities, or only in the volumes for 2011 – 2013, those being the years when Springfield’s inclusion is noted in Cameco’s Annual Information Forms.

Were we to assume that there was a commensurate level of reduction in production at Cameco’s Blind River refinery, i.e. of approximately fifteen percent, we would look to the emissions level for releases to air and water for a commensurate reduction in discharges of harmful substances. We would not find it. While there was a slight decrease in the release of Nitrogen Oxides to air and of uranium and nitrates to water, there were no other decreases in the release of harmful substances to air and there were increases in the release of radium to water. In addition, the highest annual average concentration (amongst the sampling stations) of uranium in ambient air measured also increased.

Uranium concentrations in soil

The presentation of soil sampling results in the 2016 ROR was very similar to that of 2015. Again, there were statements that soil monitoring results remained consistent with concentrations detected in previous years, and again there were unsupported claims that the “current BRR operations do not contribute to accumulation of uranium in surrounding soil” and that “no adverse consequences to relevant human and environmental receptors are expected”. The soil sample results are aggregated, making comparison with actual monitoring results from previous years impossible. Further, given that some sampling locations have been eliminated, a comparison of averages, minimums and /or maximums are no longer valid, particularly absent of specific information about which sampling locations have been eliminated.

17-M45

UNPROTECTED/NON PROTÉGÉ

Table F-3: Soil monitoring results, 2012-2016

Parameter	2012	2013	2014	2015	2016	CCME Guidelines*
Minimum uranium concentration (µg/g)	0.1	0.1	0.1	0.1	0.2	23
Average uranium concentration (µg/g) (within 1000 m, 0-5 cm depth)	3.3	4.3	2.7	3.8	1.5	
Maximum uranium concentration (µg/g)	12.1	16.4	7.2	9.7	2.9	

*Canadian Council of Ministers on the Environment (CCME) Soil Quality Guidelines for the Protection of Environmental and Human Health (for residential/parkland land use).

Table 28 and Figure 16 in Cameco's 2016 Compliance Report for the Blind River refinery similarly shows only aggregated results disassociated with actual sample locations. The report also confirms that soil monitoring locations were lost due to construction of a berm outside the refinery perimeter fence line, and that three new soil sampling locations were established in 2016.⁶¹

That noted, it is of interest that the minimum uranium concentration was higher than it had been for several preceding years.

Prior to the loss of sampling locations, it was possible to make some general observations. For example, the 2006 to 2010 annual averages showed that values varied a great deal, and not in a manner that shows an overall trend (although Northwatch's review in 2011 found that there were upward trends with specific sample stations). However, the values for 2006 to 2010 (8.4, 8.7, 5.4, 3.0 and 4.0 respectively) were significantly different – and lower – than the values for 2011 to 2015 (18.0, 12.1, 16.4, 7.2 and 9.7). While the lowest maximum concentrations from 2011 to 2015 were generally similar to the highest maximum concentrations from 2006 to 2010, the increase from 4.0 in 2010 to 18.0 in 2011 is noteworthy. The information has not been made available to continue to the comparison to include 2016 monitoring results.

While these are averaged annual values and so of only limited value in understanding site conditions, they are helpful in evaluating the statement that *“Essentially, uranium soil concentrations do not appear to increase in the area surrounding the facility. This confirms that current BRR operations have no effects on soil quality.”* In brief, the statement has no basis.

⁶¹ 2016 Annual Compliance Monitoring & Operational Performance Report, Blind River Refinery, Page 56

As noted in Northwatch’s comments on the previous year’s ROR, Northwatch was astounded by the statement in the Cameco monitoring report that as a result of the construction of a berm “*some historic Cameco soil sampling locations in the vicinity of the fence line were compromised. This means a few new sampling locations will need to be selected in 2016. The locations selected will preferably be in open areas, not under tree canopies, and in areas where the soil has been undisturbed by human activity.*”

As previously noted, this shows what we consider to be a reckless disregard for the long term monitoring program. We note that Cameco does not indicate which sampling locations were lost, only saying that they were in the vicinity of the fence line. We further note that three of the four sampling locations with the highest concentration of uranium in the soil in the Ministry of the Environment’s 2007 report (Sites 1, 2 and 4) were also in the vicinity of the fence line, and the two sites that showed the highest concentration of uranium in the soil in the sampling done for Northwatch by the Elliot Lake Field Station in late 2011 (Sites 2 and 4) were also in the vicinity of the fence line. Those two sampling sites had shown increases of 149% and 96% concentrations between 2007 and 2011.

In December 2013 the Ontario Ministry of the Environment released a Technical Memorandum titled “*Soil and Tree Foliage Survey in the Vicinity of Cameco’s Blind River Refinery, Blind River, Ontario (2012)*” which set out the results of the Ministry’s 2012 soil and vegetation monitoring at the Blind River refinery.

The MOE report in 2007 stated:

Despite the fact that Sites 2 and 4 are within forested areas and exhibit variable year-to-year concentrations, there are strong indications that uranium concentrations have increased during the operating period of the Cameco facility. These sites are located at the fence line surrounding Cameco’s process area. At Site 3, which is more distant, uranium concentrations have remained constant over time.

It is a challenge to ensure that long-term soil monitoring plots are not disturbed or otherwise compromised.

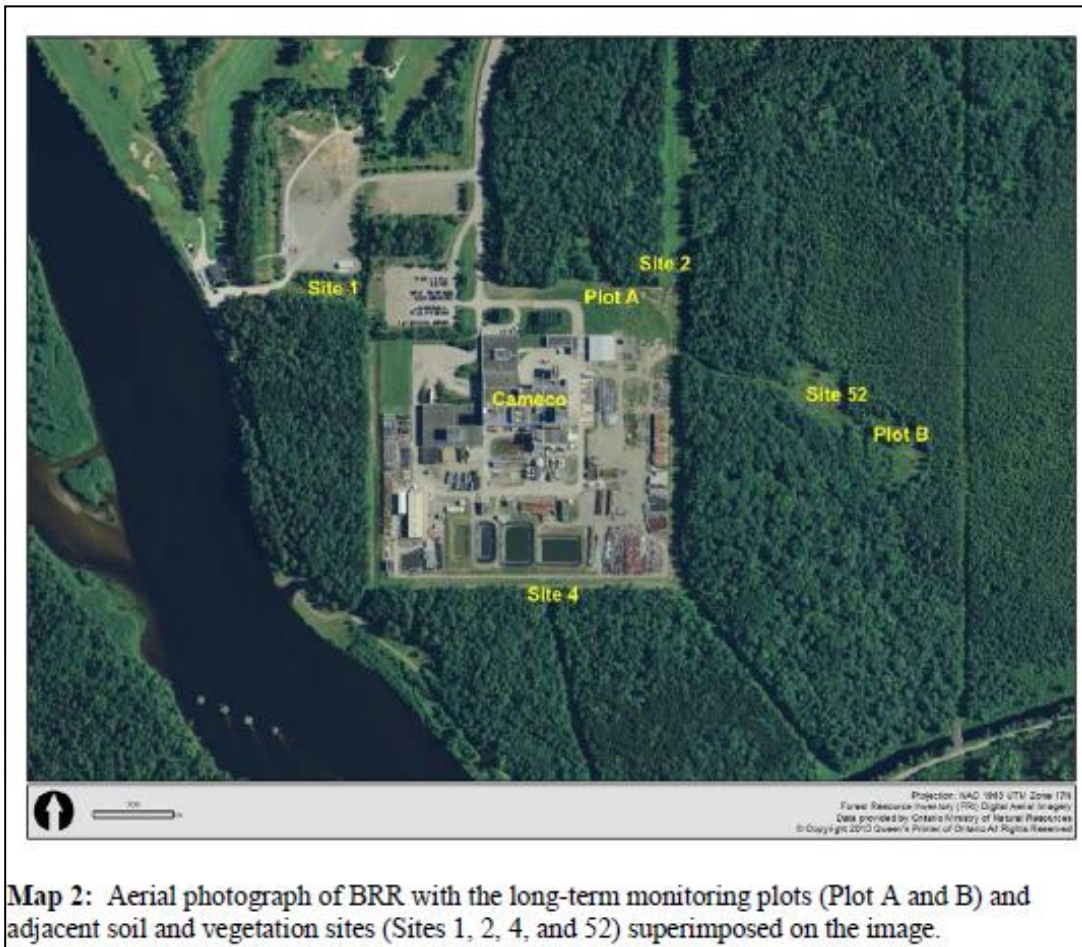
Soil and Tree Foliage Survey in the Vicinity of Cameco’s Blind River Refinery, Blind River, Ontario (2012)” 2012 Report, MOE

As with the Ministry’s 2007 report and Northwatch’s 2011 report, in the Ministry of the Environment’s 2012 report a small number of the sampling sites showed increased concentrations; others remained relatively constant and a few showed decreases.

The MOE 2012 report indicated that the highest soil uranium concentrations in 2012 were reported at sites within 500 m of BRR (Sites 4, 2, 1, 52, and 8), consistent with MOE soil uranium data since 2000. As in the Northwatch 2011 report, Sites 2 and 4 results show the highest concentration of uranium, and MOE noted that in 2012 soil uranium concentrations were much higher at Site 2 than in previous years.

We note that Site 4 was one of two sites showing the highest concentration of uranium in the soil, and it is located immediately south of the perimeter fence. Site 1 was one of five sites showing the highest concentrations and it is located west of perimeter fence. Cameco indicated in their 2016 Compliance report that “As a result of a third-party review of Cameco soil monitoring locations, in conjunction with construction of a berm outside the refinery perimeter fence line, three new soil sampling locations were

established in 2016” and states that two of the three new sites are located south and south-west of the perimeter fence.



Transportation

The Regulatory Oversight Report indicates that the Blind River refinery “experienced five events that were reported to CNSC staff in 2016” and that four of the five reports were related to transport. The report indicates that “three of the transport events were minor traffic accidents where there was no personal injury or damage to the packages being transported” but provides no detail, and provides on very limited description of the fourth transport-related event, that being the accident near Swift Current, Saskatchewan in January 2016.

Interestingly, the details which are provided are almost entirely different from those provided in the brief report available on the CNSC website,⁶² although neither report is inconsistent with the known facts

⁶² <http://nuclearsafety.gc.ca/eng/acts-and-regulations/event-reports-for-major-nuclear-facilities/event-reporting/transport-intransit-events.cfm?pedisable=true>

pertaining to the incident. Excluded from the ROR is any information about the two other traffic accidents included on the CNSC website (a traffic accident near Massey in April and another in West Nipissing in December 2016). Of these, only the Massey and West Nipissing accidents are reported on the Cameco website's incident reporting,⁶³ and no details or descriptions are provided in the Regulatory Oversight Report, or on the CNSC or Cameco's on-line incident reporting.

⁶³ <https://www.cameco.com/businesses/fuel-services/refining-blind-river/environment-safety>

CONCLUSION

Northwatch has sought to provide the CNSC with comments and recommendations which are within their jurisdiction to remedy. We have suggested ways in which the ROR data could be more clearly presented and also, identified gaps in licensee compliance and discrepancies between the ROR, proponent licences, LCHs and Annual Compliance Reports.

The CNSC remarks in the opening pages of the 2016 ROR that reviewing three of fourteen safety control areas reflects the “overall effectiveness of the implementation of licensee programs, and represent[s] a good indication of safety performance.”⁶⁴ To the contrary, Northwatch submits a review of all fourteen safety areas, plus a review of licensee public outreach, would be the strongest indication of industry performance and compliance. While the CNSC may not intend for the ROR to be so comprehensive as to cover all 14 SCAs, we reiterate that to grade a licensee’s actions, but not reference the documents and actions which informed this decision, can and should not constitute reporting or oversight.

At a minimum, the CNSC must additionally include the waste management SCA in future RORs. Our review of waste management and our request for documents, which was denied, was made redundant because the CNSC chose not to incorporate a discussion of nuclear waste, the decommissioning process or the nuclear lifecycle in its report.

We are greatly concerned that if a reference or material is not included in the substance of the ROR, a public intervenor will be denied access to documents. As we have sought to explain, we were tasked with reviewing an SCA that the CNSC chose not to include its ROR. In keeping with the intent of the ROR, its public-reporting purpose, and the CNSC’s mandate to ensure adequate provisions are made for the protection of the environment and health of persons, documentary disclosure ought not be constrained by the regulator nor the process frustrated by a documents system which is neither online nor independent of Commission’s documentary vetting.

All of which is respectfully submitted this 20th day of November 2017:

NORTHWATCH



Brennain Lloyd

Project Coordinator

⁶⁴ ROR, *supra* note 1, p 1

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

A handwritten signature in black ink, appearing to read "Kerrie Blaise".

Kerrie Blaise

Counsel

Appendix 1 - Document Requests

Licensee	Facility	License	Document Requested	Detail	Reference
Cameco	Blind River Uranium Refinery	FFOL-3632.00/2022	License application	License Issued 28 February 2012	License
Cameco	Blind River Uranium Refinery	FFOL-3632.00/2022	Waste Management Program Document PR300	Section 12.1, page 53	License Condition Handbook
Cameco	Nuclear Fuel Facility	FFOL-3641.00/2022	License application	License Issued 28 February 2012	License
Cameco	Nuclear Fuel Facility	FFOL-3641.00/2022	Waste Management Plan WMP-01; Clean-Up Program WMP-02	Section 12.1, Page 59	License Condition Handbook
Cameco	Uranium Conversion Facility	FFOL-3631.00/2027	License application	License Issued 10 March 2017	License
Cameco	Uranium Conversion Facility	FFOL-3631.00/2027	Waste Management Document MSP-29-04	Section 12.1, Page 42	License Condition Handbook
BWXT	Nuclear Fuel Facilities	FFOL-3620.01/2020	License application	License Issued 21 December 2016	License
BWXT	Nuclear Fuel Facilities	FFOL-3620.01/2020	Toronto (Pellet Operations) Waste Management, Document EHS-P-3.0T	Section 12.1, Page 66	License Condition Handbook
BWXT	Nuclear Fuel Facilities	FFOL-3620.01/2020	Peterborough Operations (Fuel & Services) Waste Management, Document EHS-P-E-3.0P	Section 12.1, Page 66	License Condition Handbook
BWXT	Nuclear Fuel Facilities	FFOL-3620.01/2020	Peterborough Operations (Fuel & Services) & Toronto Pellet Operations	Section 12.1, Page 66	License Condition Handbook

			Radiation Protection Manual Volume 1, Document EHS-P-RPM-001		
BWXT	Nuclear Fuel Facilities	FFOL-3620.01/2020	Decommissioning Planning for Licensed Activities, Document G-219	Section 12.2, Page 67	License Condition Handbook
BWXT	Nuclear Fuel Facilities	FFOL-3620.01/2020	Decommissioning of facilities containing nuclear substances, Document N294-09	Section 12.2, Page 67	License Condition Handbook
SRB	Tritium Processing Facility	NSPFOL-13.00/2022	License application	License Issued 29 June 2015	License
SRB	Tritium Processing Facility	NSPFOL-13.00/2022	Waste Management Program	Section 12.1, page 49	License Condition Handbook
SRB	Tritium Processing Facility	NSPFOL-13.00/2022	Preliminary Decommissioning Plan	Section 12.2, Page 51	License Condition Handbook
Nordion	Nuclear Substance Processing	NSPFOL-11A.00/2025	License application	License Issued 28 September 2015	License
Nordion	Nuclear Substance Processing	NSPFOL-11A.00/2025	Radiation Protection Manual, SE-RP-001	Section 12.1, Page 52	License Condition Handbook
Nordion	Nuclear Substance Processing	NSPFOL-11A.00/2025	Preliminary Decommissioning Plan, Document N294	Section 12.2, Page 53	License Condition Handbook
Best Theratronics Ltd.	Nuclear Substance Processing	NSPFOL-14.02/2019	License application	License Issued 14 July 2017	License
Best Theratronics Ltd.	Nuclear Substance Processing	NSPFOL-14.02/2019	Waste Management, Document C1B-SD-11	Section 12.1, page 53	License Condition Handbook

Best Theratronics Ltd.	Nuclear Substance Processing	NSPFOL-14.02/2019	Waste Management Program, Document 5.08-SE-24	Section 12.1, page 53	License Condition Handbook
Best Theratronics Ltd.	Nuclear Substance Processing	NSPFOL-14.02/2019	Management of Depleted Uranium Radioactive Material, Document 5.08-RP-04	Section 12.1, page 53	License Condition Handbook
Best Theratronics Ltd.	Nuclear Substance Processing	NSPFOL-14.02/2019	Financial Guarantee (cost estimate)	Section 12.2, page 54	License Condition Handbook
Best Theratronics Ltd.	Nuclear Substance Processing	NSPFOL-14.02/2019	C1B-SD-15D	Section 12.2, page 54	License Condition Handbook

Appendix 2 - Letter from the Canadian Nuclear Safety Commission (10 Nov 2017)

Canadian Nuclear Safety
CommissionCommission canadienne de
sûreté nucléaire

November 10, 2017

VIA EMAIL

e-Docs 5390348 (pdf)

Ms. Kerry Blaise
Counsel
Canadian Environmental Law Association
55 University Avenue
Suite 1500
Toronto, ON M5J2H7

Dear Ms. Blaise,

Thank you for your letter of November 6, 2017 regarding a request by Northwatch for access to licence applications from several licensees in support of its intervention concerning the CNSC's Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities: 2016 (ROR).

Specifically, Northwatch requested several additional licensee documents related to waste management identified in the license condition handbooks and also the applications from the licensees for their most recent licence renewals. We reiterate our response sent to Northwatch on October 25 that the additional documents that Northwatch requested are licensee documents and, as they are not referred to in the ROR to be discussed at the December 13-14 Commission meeting, these will not be provided at this time by the CNSC. Consequently, we invited Northwatch to contact the licensees directly to request these licensee documents.

We note your concerns regarding the timeframe for submissions. We acknowledge that it took too long in this instance to inform your client that the CNSC would not provide certain licensee documents, and provided Northwatch an additional week to file its submission. The Commission highly values Northwatch's contributions to the Commission proceedings, and understands the necessity to receive documents or responses with celerity.

We also note the comment that licence applications have previously been provided to intervenors. The Commission has provided, and will continue to provide in future, licence applications in the context of licensing hearings, as the applications are referenced in the CMDs and are part of the record. This is not the case with respect to this ROR. We also acknowledge that several licensees are now posting their applications on their websites, and the Commission will continue to encourage licensees to do so.

Regards,

Marc Leblanc
Commission Secretary
(613) 995-6506

Appendix 3 - Email from Best Theratronics Ltd (7 November 2017)

Subject: RE: Request for documents, contact person for questions related to waste inventory and management at Best Theratronics Ltd's facility on March Drive in Ottawa
From: Mojgan Soleimani <mojgan.soleimani@theratronics.ca>
Date: 2017-11-07 8:58 AM
To: "northwatch@northwatch.org" <northwatch@northwatch.org>
CC: Ruth Bergin <rbergin@teambest.com>, Mike de van der Schueren <mdvds@theratronics.ca>, Andrei Ciresianu <andrei.ciresianu@theratronics.ca>, Pietro Zanetti <pietro.zanetti@theratronics.ca>

Good morning,

Thanks you very much for your inquiry. As a privately held company we do not supply such corporate information to third parties other than as required by governmental regulations. If you would like to provide us with any such request per a government requirement we will respond promptly as required. At Best we are committed to excellence and compliance with all rules and regulations while providing life saving medical equipment to hospitals and clinics.

We wish you the best in your endeavors.

Regards,

Mojgan Soleimani

Mojgan Soleimani, M.Sc.
Medical Physicist, Radiation Safety Officer
Best Theratronics Ltd. ■■■
Direct: 613-591-2100 ext. 2766
Cell: 613-355-7771
Fax: 613-591-6627
413 March Road, Ottawa ON
K2K 0E4
mojgan.soleimani@theratronics.ca

Appendix 4 - Email from Cameco (7 November 2017)

Subject: Request for Documents and Information
From: Rebecca Peters <Rebecca_Peters@cameco.com>
Date: 2017-11-07 10:16 AM
To: "northwatch@northwatch.org" <northwatch@northwatch.org>
CC: Dave Ingalls <Dave_Ingalls@cameco.com>, Joe DeGraw <Joe_Degraw@cameco.com>, Doug Jensen <Doug_Jensen@cameco.com>, Dale Clark <Dale_Clark@cameco.com>, Chris Astles <Chris_Astles@cameco.com>

Good Morning Ms. Lloyd,

We have reviewed your requests for additional information regarding Cameco's Ontario operations that are licensed by the Canadian Nuclear Safety Commission. My name is Rebecca Peters and I am the Superintendent of Special Projects in the regulatory compliance and licensing group of Cameco's Fuel Services Division. The Fuel Services Divisions encompasses all of Cameco's Ontario operations. I will be your contact person for these requests.

In response to your requests:

I have attached the licence applications for the current licences for Blind River Refinery (BRR), Port Hope Conversion Facility (PHCF) and Cameco Fuel Manufacturing (CFM). The applications for BRR and CFM are from 2011 and PHCF from 2016. I will note that the applications are also available on the camecofuel.com website.

Cameco does not disclose internal programmatic documentation due to its proprietary and confidential nature. This applies to the Waste Management Programs for each site, as well as the Clean-Up Program for PHCF. For areas of our operations that are of interest to the public, we develop technical summaries which can be made publically available. I have attached the summary that pertains to waste management; this document will be posted on our website in the near future.

Finally, you indicated that you had additional questions related to waste management and waste inventories at each of the sites. Part of my role is to coordinate waste management activities within the division and am therefore the appropriate contact for these questions. If you could provide me with your questions that relate to the 2016 Regulatory Oversight Report, I will follow-up with information that can be made available.

Regards,

Rebecca

Rebecca Peters, M.Sc, B.ScH, B.Com
 Superintendent, Special Projects
 Fuel Services Division
 Cameco Corporation
 205 Peter Street
 Port Hope, Ontario
 L1A 3V6

Telephone	(905) 800 2017
Mobile:	(209) 251 6230
Facsimile:	(905) 885 5976
E-mail:	Rebecca_Peters@cameco.com

Appendix 5 - Email from BWXT (10 November 2017)

Subject: Re: EXTERNAL: Re: FOLLOWUP: Request for documents, contact person for questions related to waste inventory and management at BWXT's Toronto and Peterborough facilities

From: [REDACTED]

Date: 2017-11-10 7:54 PM

To: "brennain@onlink.net" <brennain@onlink.net>

Hi Brennain,

Thank you for your request and your patience as we reviewed your request.

Document G-219, Decommissioning Planning for Licensed Activities is a public document that is located here:

<https://www.cnsccsn.gc.ca>

[/pubs_catalogue/uploads/G219_e.pdf](#)

N294-09 (R2014) - Decommissioning of facilities containing nuclear substances is a CSA standards document and can be purchased on the CSA

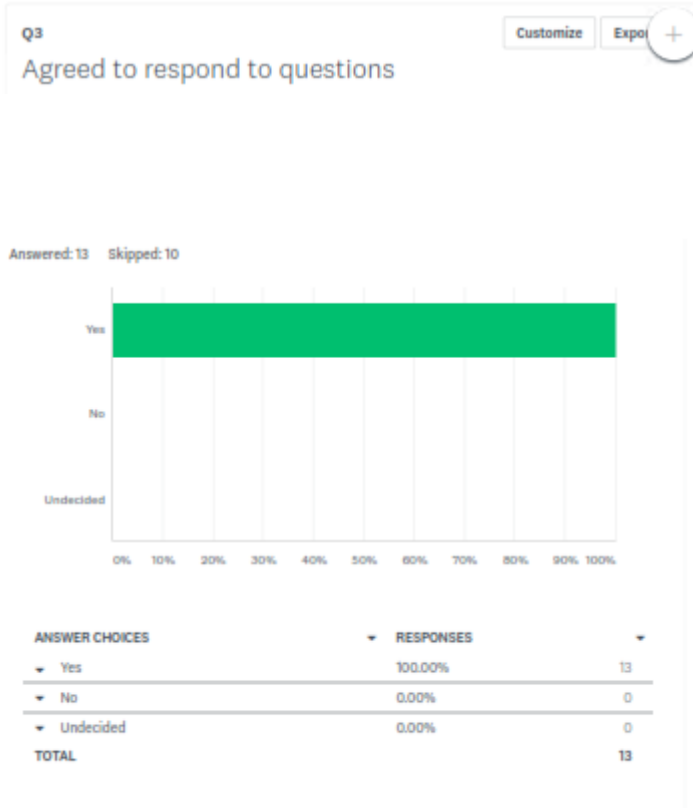
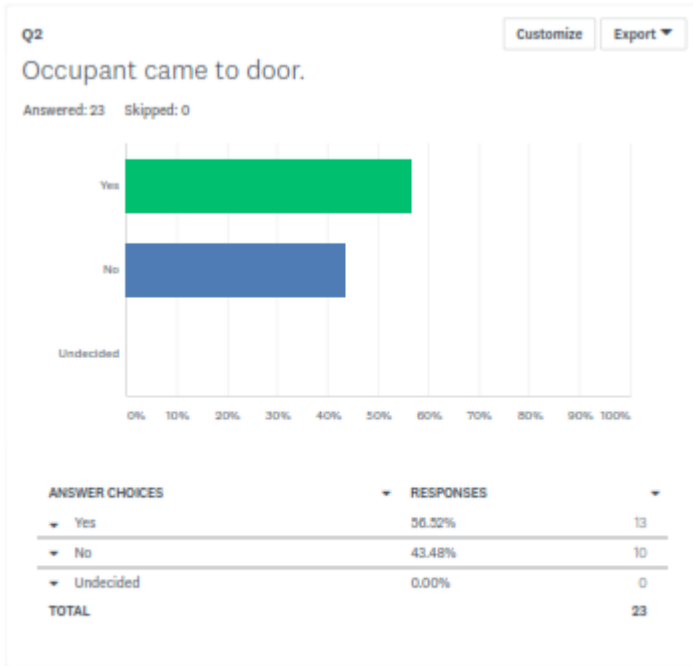
website. <https://shop.csa.ca/en/canada/nuclear/n294-09-r2014/inv/27029842009>.

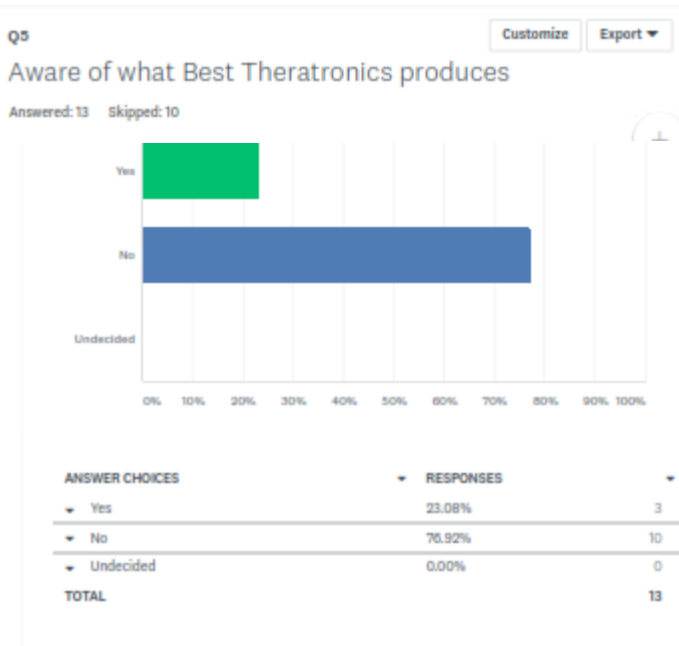
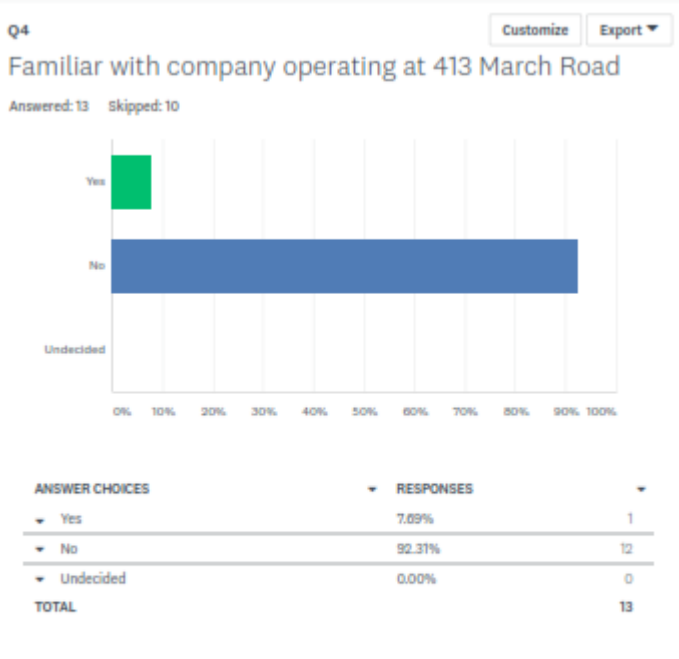
The other documents are confidential, proprietary BWXT documents and are not publicly available.

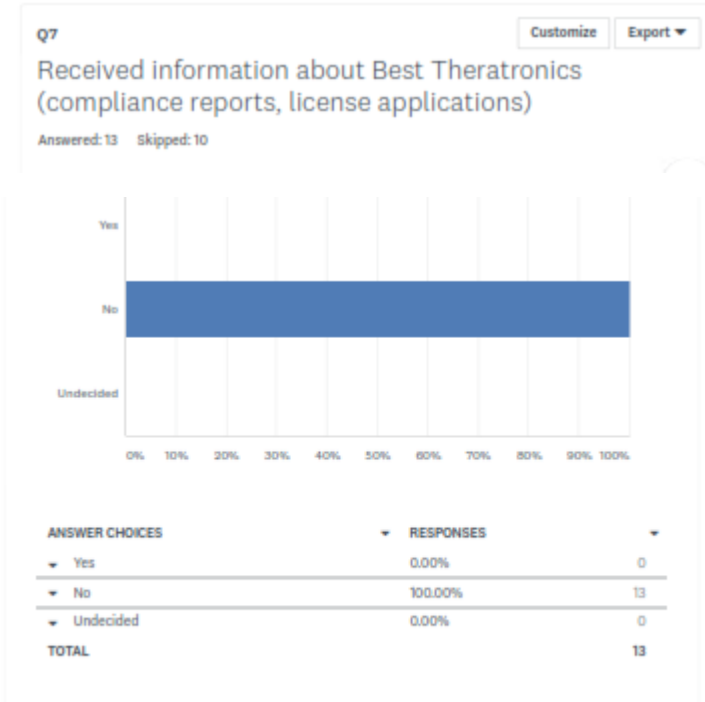
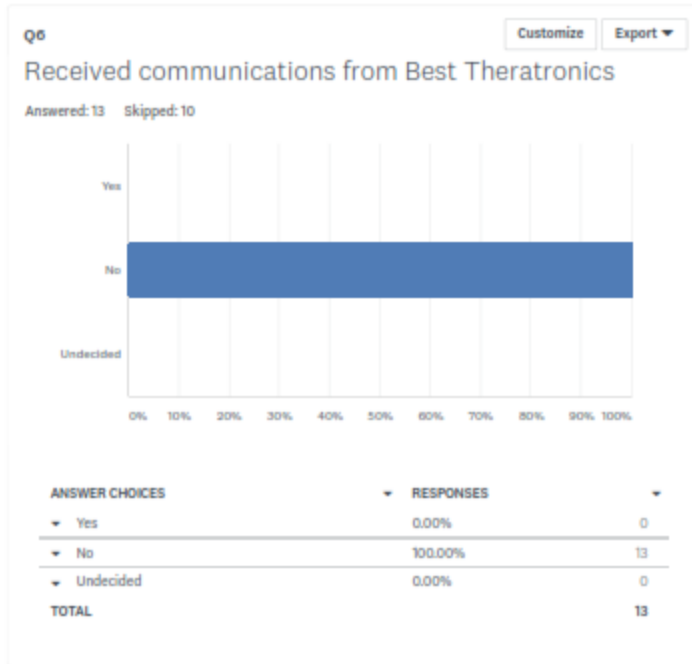
Thank you,

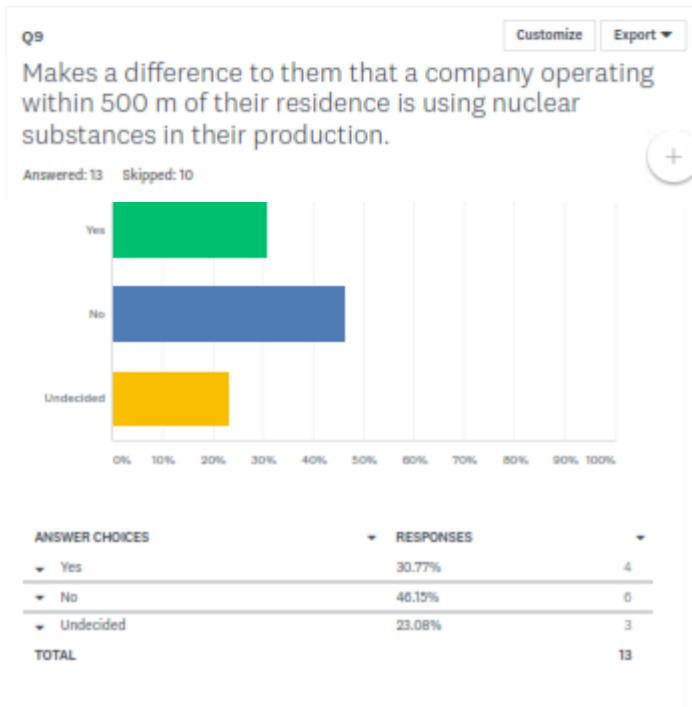
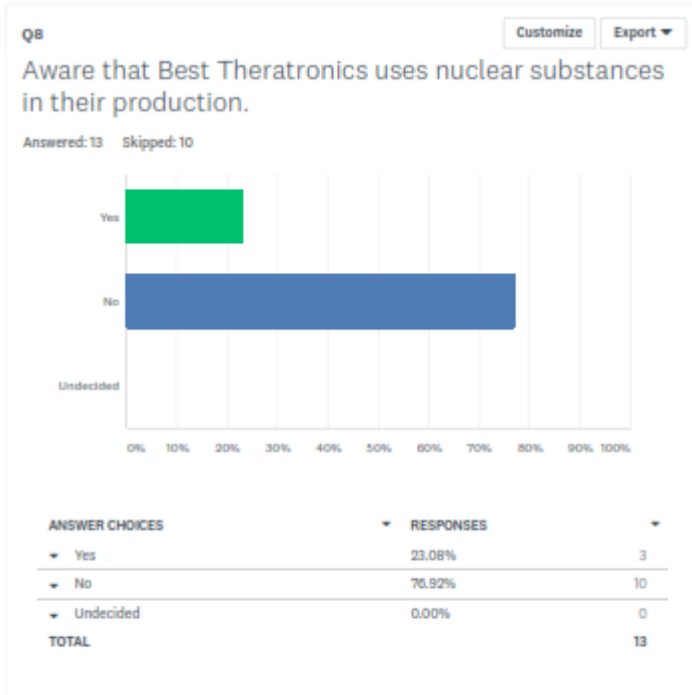
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Appendix 6 - Northwatch's Public Awareness Survey Results







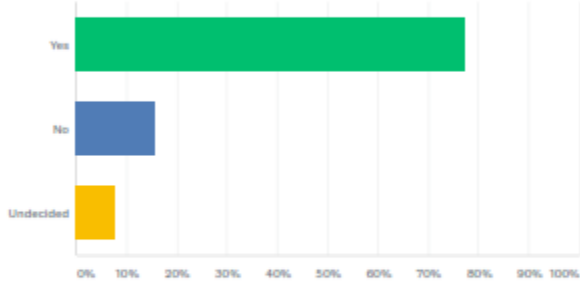


Q10

Customize Export

Feels they should have been informed that a company operating within 500 m of their residence was using nuclear substances in their production.

Answered: 13 Skipped: 10



ANSWER CHOICES	RESPONSES	
Yes	76.92%	10
No	15.38%	2
Undecided	7.69%	1
TOTAL		13

Appendix 7 - Northwatch's Public Awareness Survey Questions

1. Does someone answer the door? Y or N
2. Introduce yourself; explain doing a neighbourhood survey, ask if they will spend three minutes answering a few simple questions about their awareness of industrial operations in the neighbourhood. Y or N; if yes, proceed; if no, thank them and move on.
3. Show map, situate their home and Best Theratronics. Ask if they are familiar with the company operating at 413 March Road, and if they can name the company. Y, N, U, I
4. Whether or not they name Best Theratronics: are you aware of what the company at 413 March produces? Y, N, U
5. Do you recall receiving any information from Best Theratronics, the company at 413 March Road? Y, N, U
6. Do you recall ever receiving any information about Best Theratronics making reports on their operations to the Canadian Nuclear Safety Commission or applying for licence changes or renewals from the Canadian Nuclear Safety Commission? Y, N, U
7. Were you aware that Best Theratronics uses nuclear substances in their production?
8. Does it make a difference to you that a company operating within 500 m of your home is using nuclear substances in their production? Y, N, U