

August 16, 2017

From: Northwatch

To: Nicole Frigault, Environmental Assessment Specialist
Canadian Nuclear Safety Commission

By email: cnsc.ea-ee.ccsn@canada.ca

Email 1: Northwatch Comment on CNL's Draft EIS for the proposed Near Surface Disposal Facility
Email 2: Northwatch Information Requests | CNL's Draft EIS for the proposed Near Surface Disposal Facility

CEAA Reference number: 80122

Note: these were originally sent as separate submissions.

Email 1: Please find Northwatch's comments attached.

Email 2. Please find attached Northwatch's Information Requests generated during our review of the draft Environmental Impact Statement for CNL's proposed Near Surface Disposal Facility.

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Northwatch

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Canadian Nuclear Laboratories Proposed
Near Surface Disposal Facility for
Radioactive Wastes at Chalk River, Ontario

Northwatch Comments

CNL's Draft Environmental
Impact Statement 2017

August 2017

1. Introduction

Canadian Nuclear Laboratories is proposing to construct an engineered mound in which an estimated one million cubic metres of low and intermediate level radioactive wastes would be placed in the immediate vicinity of Perch Lake and less than one kilometre from the Ottawa River. The waste mound would be within the Chalk River Laboratories (CRL) site. The Chalk River Laboratories, formerly known as the Chalk River Nuclear Laboratories, is a 3,700 hectare Canadian nuclear research facility in Renfrew County, near Chalk River, about 180 km (110 mi) north-west of Ottawa. The Chalk River Laboratories were opened in 1944 as part of international wartime collaboration in nuclear research.

Branded as a “Near Surface Disposal Facility” by the proponent, the proposal is for an engineered mound made up of multiple disposal cells, a synthetic base liner and final cover, and a leachate collection system. Other components include a leak detection system, a waste water treatment system which is intended to remove some of the contaminants, and other supporting infrastructure, such as a truck wheel wash, vehicle monitoring and weighing stations.¹

Under the Nuclear Safety and Control Act, CNL’s proposal requires approval by the Canadian Nuclear Safety Commission (CNSC) and involves an amendment to the Chalk River Laboratories (CRL) Nuclear Research and Test Establishment Operating Licence. An environmental assessment (EA) conducted under the Canadian Environmental Assessment Act, 2012 is required. Notice of the commencement of the environmental assessment was issued in May 2016, and public comments were invited on a 31 page project description in May and on a revised project description in October 2016. Public comments were invited on the draft environmental impact statement (EIS) for the Near Surface Disposal Facility Project in March 2017, and an initial deadline of May 17th was extended to August 16th to allow time for the proponent to provide and the public to consider a French language version of the EIS. A final EIS and an environmental assessment report to be prepared by CNSC staff is currently expected to be released for public comment in the first half of 2018.

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

¹ <http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80122>

in environmental decision-making and to address regional concerns with respect to energy, waste, mining and forestry related activities and initiatives, we have a long term and consistent interest in the nuclear chain, and its serial effects and 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.

The NSDF project is outside Northwatch's geographic area, which is comprised of the six federal districts of northeastern Ontario, albeit in an immediately neighbouring county. Northwatch's direct interest is in the potential for decisions related to the NSDF project to be precedent-setting, including for a "mound" currently proposed by Cameco for decommissioning wastes from Port Hope, which the company has signaled they intend to construct in Blind River, in Algoma District of northeastern Ontario on the north shore of Lake Huron. CNSC decisions on many of the issues associated with Canadian Nuclear Laboratories proposed Near Surface Disposal Facility have potential implications for northern Ontario in the event that practices, policies and / or regulatory decision-making with respect to the management of radioactive wastes become precedent-setting or normative in Canada. In particular, the waste management approach of "surface disposal" may be similar to that being proposed by Cameco for northeastern Ontario, and CNL's stated intention to open the facility proposed for Chalk River to commercialization and traffic and disposal of radioactive wastes from undisclosed sources could be of consequence in other projects or regions in which Northwatch has a direct interest.

2.0 Review of Draft Environmental Impact Statement

2.1 Focus of Northwatch Review

Consistent with Northwatch's primary interest in the project and as an outcome of collaboration with other public interest groups participating in this review (including the Canadian Environmental Law Association, Concerned Citizens of Renfrew County, Nuclear Waste Watch, Old Fort William Cottagers Association and Ottawa Riverkeeper) Northwatch intends to focus our review in two key areas: CNL's presentation and technical evidence with respect to their proposed Waste Acceptance Criteria, and CNL's selection and presentation of international examples in support of their proposed engineered mound. General comments of the draft Environmental Impact Statement are also provided.

2.2 Waste Acceptance Criteria

The draft Environmental Impact Statement persistently couples the Waste Acceptance Criteria (WAC) with operational performance and safety, and yet fails to provide sufficient information about the Waste Acceptance Criteria and its application to assess its adequacy.

The linkage is first set out in the opening section of the EIS; in Section 1.1 the proponent writes:

All waste to be disposed at the NSDF Project will be required to meet the waste acceptance criteria (WAC) established to assure operational and post-closure safety requirements.²

In the Project Overview, the draft EIS states the linkage between the Waste Acceptance Criteria and the facility's performance as follows:

The NSDF Project includes components and activities related to construction, operations, closure, and post-closure, as well as long-term performance of the engineered containment mound (ECM) for the management of radioactive waste and mixed waste that meet the Waste Acceptance Criteria (WAC).³

The linkages are further illustrated by the project summary, later in the same section:

² Draft EIS Pg 1-1

³ 3.1.1 Project Overview

The main physical works related to the NSDF Project are the ECM that will contain the radioactive and mixed waste that meets the WAC; the wastewater treatment plant (WWTP) that treats leachate, contact water and operational waste water; various support facilities that enable operation; and site infrastructure.⁴

Section 3.2.2 is titled “Waste Acceptance Criteria” and would reasonably be expected to include a fulsome discussion and description of the Waste Acceptance Criteria. It does not.

Section 3.2.2 does contain a general description of the importance of the Waste Acceptance Criteria, as follows:

The WAC, along with adequate waste characterization, are essential for ensuring only waste with acceptable physical, radiological, and chemical characteristics is emplaced in the ECM. Specifically, the WAC are developed for the following purposes:

- *provide quantitative limits (applicable to the disposal of radioactive waste in the ECM) that are protective of workers, the public and the environment;*
- *ensure waste conforms to operational and ECM post-closure safety case requirements;*
- *provide safe handling of waste under normal and operational conditions including anticipated upsets; and,*
- *identify relevant parameters that will influence the facility design and safety case for radioactive waste to be emplaced in the ECM so that each criterion is considered and accounted for.*

The section then describes – again, very generally - the development process for the WAC:

The development of the WAC is an iterative process that occurs in parallel with the development of the safety analysis, performance assessment, facility design, and the environmental assessment process. The development of the WAC is based on the interpretation and application of IAEA guidelines, relevant regulations and WAC documents from other approved similar waste disposal sites. In addition, the WAC are based on Canadian Standards Association (CSA) standards, and CNL’s strategic planning and stakeholder workshops.

Inarguably, the means by which the WAC are developed is important. However, this brief description offers little in terms of understanding the basis for the WAC, the methodology for its development, or the grounding of its development in either best practices or regulatory standards. Instead, it raises numerous questions:

⁴ EIS page 3.1

- How do the timelines for the development of the WAC, safety analysis, performance assessment, facility design, and the environmental assessment process compare or coincide?
- What is the nature of the “iterative process” among the cited project components?
- Which IAEA guidelines, relevant regulations and WAC documents from other approved similar waste disposal sites were relied upon?
- If there were differences among these referenced documents, what were they and how were they reconciled?
- Which of the CSA standards are the WAC based on?
- What CNL strategic planning and stakeholder workshops are the WAC based on? Who participated in those sessions? At what point and in how many of the “iterations” were the strategic planning and/or the stakeholder workshops convened?

In addition, the brief description of the development of the WAC as an iterative process is ambiguous as to whether this process is now complete or is ongoing. However, given some of these elements that were purportedly developed “in parallel” with the WAC are still under development – such as the safety analysis, performance assessment, facility design, and the environmental assessment process – the reader must conclude that the iterative process is still ongoing and the products are not complete. That, at least, is consistent with the incomplete nature of the WAC as presented in the draft EIS.

The EIS then proceeds to argue against itself in terms of the WAC being of central importance to the safe performance of the facility by intimating that the process for setting radiological limits for the WAC potentially involved some trading off between safety and volume:

Radiological limits for WAC were determined in a manner designed to ensure that NSDF can meet safety objectives while maximizing potential range of suitable waste.⁵

The draft EIS very briefly describes a three-step approach which was purportedly used to define activity limits and screen potential waste, but it is so sparse in its description that important information is omitted.

⁵ Section 3.2.2 Waste Acceptance Criteria

For example, it summarized that “Six separate criteria were considered in selecting WAC, as defined by a group of subject matter experts” but that only “only the following two criteria were determined to be essential in defining radiological limits for NSDF WAC”, those being: 1) *Meeting Performance Assessment Safety objectives*, and 2) *Proven technology*.

This presentation falls apart on several counts:

- Only the two final criteria are identified, with no discussion of or indication of what the other four – or more – criteria were, the basis for considering the initial group of six criteria (i.e. the basis for selecting those initial six “candidate” criteria) and the basis for retaining only two of them;
- The retained criteria “*Meeting Performance Assessment Safety objectives*” is meaningless in the absence of any discussion or description of those Performance Safety Objectives and the basis for their development and selection
- The retained criteria “*Proven technology*” is meaningless in the absence of any discussion or description of those technologies and the basis for their selection and reliable analysis of the technologies’ performance elsewhere; the information would have to be sufficiently detailed to allow readers to develop an understanding of the degree to which to those other instances are applicable to the project as being proposed
- There is no information provided about the “group of subject matter experts”, what their inputs were, what basis or methodology they used for identifying the initial six separate criteria
- It is unclear whether the same “group of subject matter experts” shortlisted the criteria from six to two, or if that was done by some other means or party

It is also unclear whether the following few paragraphs⁶ are a discussion of the criteria that were discarded. The discussion reads as a grab-bag of half-statements on safety analysis, objectives, and principles, and is written in such a manner as to leave the reader uncertain as to whether the statements are a partial discussion of the discarded four criteria which are not identified, or are simply random statements. These paragraphs raise additional questions:

⁶ Bottom of page 3-9

- What were the separate analysis that considered “Criticality Safety and potential constraints on the quantities of fissile material”, and what were the inputs and outcomes of these analysis?
- Why were fissile materials and hazardous chemicals considered using separate analyses, and how are / would the outcomes of those separate analysis inform the WAC?
- What “other, operational safety objectives” were considered, and how do those considerations inform the WAC? This question requires a much more detailed answer than the offered statement of “such as WWTP operations and compliance with the ALARA principle were considered”.
- If, as stated earlier, the WAC is (to be) developed in “*an iterative process that occurs in parallel with the development of the safety analysis, performance assessment, facility design, and the environmental assessment process*” how is it that “these requirements can be met through appropriate design measures and operational systems and should not impact radiological limits for WAC”?
- The safety analysis and the performance assessment are not presented in the draft EIS
- There is no presentation – or even discussion – of the safety case, despite the many references to the safety case
- There are several references to the long-term performance of the engineered containment mound (ECM) but there is no presentation or discussion of that long-term performance and how it is going to be evaluated and benchmarked in qualitative and/or quantitative means

Perhaps as evidenced by the numerous references in the draft EIS to the “safety case”, this concept is usually a foundational piece of the project development process for a radioactive waste management facility. The safety case is the set of technical arguments which, in combination, make the case for the long term safety and performance of a proposed facility. The Nuclear Energy Agency defines the Safety Case as “the synthesis of evidence, analyses and arguments that quantify and substantiate a claim that the repository will be safe after closure and beyond the time when active control of the facility can be relied on”. More simply stated, the

IAEA defines the safety case as “the collection of arguments and evidence to demonstrate the safety of a facility”.⁷

No safety case was presented in the draft Environmental Impact Statement. Perhaps in its stead, the Canadian Nuclear Laboratories has prepared a “Performance Assessment for Near Surface Disposal Facility to support the Environmental Impact Statement”; a “performance assessment” is referred to repeatedly in the draft EIS and the details of which are included in the EIS reference section.⁸ However, the terms “safety case” and “performance assessment” are excluded from the glossary of terms in the draft EIS, making it difficult to determine the degree to which CNL may be using the terms interchangeably or what relationship CNL contends exists between a safety case and a performance assessment for a radioactive waste facility. Furthermore, notable in its absence, this performance assessment was not presented or even summarized in the draft EIS, the document is not included in the appendices,⁹ and is not available on-line through the public registry, through the CNL web site, or through a general search.

The draft EIS asserts that the limits for total specific activity of any waste consignment accepted for disposal at NSDF is based on the analysis of long-term performance of NSDF, but in the absence of CNL having presented any evidence or even information with respect to the safety case and/or performance assessment this cannot be verified or even assessed.

Northwatch will defer its review of assigned values CNL recommends until the review of the final EIS. We will, however, raise a question at this point about the usefulness of setting limits for the total specific activity (for example, of alpha-emitting or long-lived beta radionuclides) of any waste consignment accepted for disposal at NSDF. It would seem that such measures can be readily manipulated through load splitting or other measures to register consignments of smaller

⁷ <http://2016.radioactivewastemanagement.org/images/slide/BRUNO.pdf>

⁸ CNL. 2016c. Performance Assessment for Near Surface Disposal Facility to support the Environmental Impact Statement, 232-509240-ASD-001 Revision R0. 2017.

⁹ CEAR #29. March 17, 2017. Appendices of the Draft Environmental Impact Statement for the Near Surface Disposal Facility Project

volumes – and therefore lesser levels of radioactivity – while not reducing the pace or rate of increase to the radiological burden.

We note as more general comments, based on our review of sections related to the Waste Acceptance Criteria, that the draft EIS:

- Repeatedly confuses topics: for example, it moves between discussions of the Waste Acceptance Criteria, waste types and waste characteristics in a disorganized fashion.
- Makes numerous unsupported and unsubstantiated statements, some of them reading as complete non-sequiturs, such as “Containers and packaging will meet the WAC requirements for dimension and mass in order to assure safe handling and on-site transportation of the package”; meeting the WAC requirements for dimension and mass might be good very good measures, but will not in themselves assure safe handling and on-site transportation of the package; further, the draft EIS does not appear to present WAC requirements for dimension and mass

Section 3.2.2.2 of the draft EIS, titled “Radiological Characteristics” states that “*Waste has been defined as suitable for disposal in the ECM on the following basis*” and then proceeds to set out three non-definitive and very general descriptions of radiological characteristics, as follows:

- *limited concentrations of long-lived alpha-emitters, fission and activation products, such that long-term safety objectives can be met;*
- *limited concentrations of fissile materials, such that criticality safety can be assured during the NSDF Project operations and post-closure; and*
- *proven track record of successful disposal of similar waste types in near surface repositories in other jurisdictions.*

These statements are close to meaningless, given that they are completely unquantified and wholly subject to interpretation. They do not contribute in any meaningful way to a Waste Acceptance Criteria, other than – being as generous as possible – if they were to serve as a general introductory preamble to an actual discussion of Waste Acceptance Criteria which set real and measurable limits and thresholds.

The “Waste Acceptance Criteria Variance Process” outlined in Section 3.2.3 of the draft EIS lacks clarity, definition and rigour. While having failed to present actual Waste Acceptance

Criteria in the draft EIS, with the “Waste Acceptance Criteria Variance Process” the proponent has outlined a process which effectively voids any Waste Acceptance Criteria that might be put in place as part of or prior to project approval (one would hope).

Our comments include the following:

- the purpose of the WAC is to support the performance of the operation by limiting wastes to those within the range of radiological activity anticipated during project design; exceedances of or exemptions from the WAC risk impairing facility performance
- no rationale is provided for why the WAC should be exceeded
- wastes should have been analyzed to identify the radiological, chemical, or physical hazards in advance of deployment to the facility, providing advance knowledge that the waste will meet the WAC, not after-the-fact information about who it does not meet the WAC
- while we might assume that the “Waste Management organization” is the CNL, such an entity is not mentioned elsewhere in the document, including the glossary of terms
- the Waste Acceptance Criteria was developed, according to earlier sections of the draft EIS, during an iterative process that incorporated considerations from the development of the safety argument (although the terms used in Section 3.2.2. were *safety analysis and performance assessment*) so it simply doesn’t follow to suggest that a “*safety argument can be made*” for accepting waste shipments that are at odds with the Waste Acceptance Criteria

Finally, we note that the draft Environmental Impact Statement was made available in March 2017 for public comment¹⁰, and as earlier noted the draft EIS does not include the Waste Acceptance Criteria. In June 2017, a “Waste Acceptance Criteria” was presented to the CNL’s Stewardship Advisory Committee, and it is now posted on the CNL web site.¹¹ The document, titled “*Waste Acceptance Criteria 232-508600-WAC-002, Deliverable 1.1, Revision 2*” is dated

¹⁰ CEAR #28, March 17, 2017, Public Comments Invited on the Draft Environmental Impact Statement for the Near Surface Disposal Facility Project

¹¹ <http://www.cnl.ca/site/media/Parent/WAC-232-508600-WAC-002-R2.pdf>

June 21, 2017, but according to the record of revisions it was delivered to CNL as a “Final Deliverable” on March 31, 2017. We wholly object to the following:

- the EIS having been released just prior to CNL’s receipt of this Waste Acceptance Criteria document
- the EIS having been released without the inclusion of the Waste Acceptance Criteria document, or at minimum the document summarized and included in full as an appendix or technical support document
- the *Waste Acceptance Criteria 232-508600-WAC-002* not having been posted on the public registry

Given its exclusion from the draft EIS, Northwatch provides no comment on *Waste Acceptance Criteria document 232-508600-WAC-002* at this time.

2.3 International Examples

The draft EIS promotes an argument that the acceptability of the waste mound as currently proposed is demonstrated by performance of a number of other facilities, all of which CNL refers to as a “near surface disposal” facilities.

CNL introduces this notion in Section 2.4.2 “Design Principles from External Sources”, with the very general suggestion that “*In addition to CNL design principles, the design and operation of the NSDF will also use Canadian and international best practices and safety fundamentals, including those from the International Atomic Energy Agency (IAEA) and the CNSC.*” This argument is continued in Section 2.5.2.1.1 of the draft EIS, titled “Technical Feasibility”, where CNL sets the claim out as follows:

A near surface disposal facility is a suitable and technically feasible means of disposing of LLW and ILW and the effectiveness of such facilities for disposal of LLW and ILW has been demonstrated as illustrated through the following near surface facilities currently in operation globally:

- *LLW Repository near the Village of Drigg in Cumbria operated by United Kingdom (UK) Nuclear Waste Management Ltd (consisting of AECOM, Studsvik UK, and Areva) on behalf of the Nuclear Decommissioning Authority.*
- *Four commercial LLW disposal facilities in the United States, namely:*
 - *Waste Control Specialists in Andrews, Texas;*
 - *Energy Solutions facility in Barnwell, South Carolina;*

- *Energy Solutions facility in Clive, Utah; and,*
- *US Ecology Washington’s site at Hanford, near Richland, Washington.*
- *United States Department of Energy Facilities and National Laboratories on-site disposal facilities:*
 - *Idaho CERCLA Disposal Facility at the Idaho National Laboratory, Idaho;*
 - *Environmental Management Waste Management Facility at the Oak Tennessee;*
 - *Fernald Environmental Management Project – On-Site Disposal Facility near Hamilton, Ohio; and,*
 - *Environmental Restoration and Disposal Facility at Hanford Site, Washington.*¹²

And there the discussion of these international precedents and examples of feasibility and reliable performance ends.

Of the listed facilities, only one receives later mention, and that is a mention only: Section 6.2, titled “General Approach” states that a hazard identification involved a literature review of documents and guidance and lists “Some of the documents included as part of the literature review”, and a Performance Assessment for the Idaho CERCLA NSDF (US DOE 2011) is listed. We emphasise that this is a listing only; there is no description of the document, and no discussion of how the Performance Assessment for the Idaho CERCLA NSDF informed the development of CNL’s proposed waste mound.

While the draft EIS makes a number of other references to best practices and international experience, there is no substantive discussion of these topics and no actual information or analysis is provided.¹³

In Section 2.5.2.1.1 of the draft EIS, CNL further sets out:

Within Canada, CNL is implementing the Port Hope and Port Granby Projects, on behalf of the Government of Canada, in eastern Ontario for the safe, long-term management of historic LLW arising from the operations of the former Eldorado Nuclear Ltd. These projects are building near surface engineered mounds for the storage of LLW that are similar in design that that proposed for the NSDF.

¹² *Draft EIS page 2-17*

¹³ *See page 2-18, Table 2.5-2, Table 2.5-3, and the first paragraph of Section 3.1.1*

The NSDF Project entails design, licensing, procurement and construction, followed by operation. The time required to complete the activities that precede operation are expected to take four to five years.

Given that work on the NSDF Project commenced in 2015, the schedule requirement to place the facility in operation by 2020 is achievable.

Again, this provides no useful information with respect to CNL’s proposed surface mound at the Chalk River property and adds little to nothing to the understanding a reader many gain of the radioactive and hazardous waste mound being proposed by CNL for Chalk River. Of note:

- The Port Hope and Port Granby “projects” are not yet operational, so provide no performance-related information and offer no operational “track record”
- Given that the “time required to complete the activities that precede operation” are still only expectations and not yet experience, not even this detail informs the reader in terms of reliability of the projection of the facility being in operation by 2020 (we comment in the following section on the issue of scheduling and the projection of taking the facility to operational by 2020)

In a discussion of alternative means of carrying out the project, the draft EIS includes a brief section on a geologic repositories.¹⁴ While we do not dispute is overall message – geological repositories are not the method of choice for long term management of low level radioactive wastes – we would note that CNL has again opted to take a list approach rather than providing substantive information about the international examples it presents, and in the small amount of detail that is included in in the draft EIS there are errors and omissions.

2.4 Additional Comments

¹⁴ 2.5.2.2 Geologic Waste Management Facility

As a general observation, we found the draft environmental impact statement submitted by Canadian Nuclear Laboratories in March 2017 to be of poor quality and inadequate to the task of describing and providing an evidentiary basis and technical defence of the CNL proposal.¹⁵

The following comments provide examples of the deficiencies Northwatch identified in our review of the draft environmental impact statement:

- The document is not identified as the draft environmental impact statement; DRAFT EIS, reference protocol, referred to as being the draft of the environmental impact statement; the EA protocol, the public registry and other sources accurately identify it as a draft document, but the document itself does not
- The document does not identify its authors or provide their credentials or areas of expertise
- The document, regrettably, emphasises what CNL characterizes as “business opportunities” in which CNL includes the “revitalization” of the Chalk River property; this conflicts with the public interest priority, which is the remediation of the CNL site and the containment and control of radioactive contamination in the most protective manner possible
- CNL argues in the opening section of the EIS that “To support the future plans for the CRL property, CNL identified the need for a disposal facility capable of accepting radioactive waste from legacy waste management areas, current operations, and decommissioning projects at Chalk River Laboratories and its other business locations” but does not clearly set out what those “future plans” or provide any evidentiary record of how those plans were developed in general and more specifically how the public and indigenous peoples were engaged in the development of those plans
- In the earlier versions of the project descriptions and in the draft EIS CNL has failed to clearly set out the various sources of waste; in the EIS it has failed to distinguish clearly between wastes that are already in storage or will be generated through a) cleanup and remediation at the CNL property, b) cleanup and remediation at other AECL properties,

¹⁵ Near Surface Disposal Facility Environmental Impact Statement, Volume 1 : EIS Report. Prepared by Golders Association for Canadian Nuclear Laboratories (CNL). March 17, 2017. Project No. 1547525

i.e. Rolphton and Whiteshell, c) from other AECL liabilities, i.e. Douglas Point and Gentilly, I, and d) from other sources, including commercial sources. Further, it has failed to differentiate between “commercial sources” which are institutional wastes (e.g. hospitals and universities) versus commercial and industrial wastes (e.g. the energy sector). It has also failed to differentiate between wastes that are in Canada, wastes that are being returned to Canada, and wastes from international sources.

- The definitions and descriptions of waste types, characterization and volumes are inconsistent internally within the document, but across documents. For example, the definitions of waste types and categories are different than those commonly put forward by the Canadian Nuclear Safety Commission and CNSC staff.
- As noted in the draft EIS “*Canadian Nuclear Laboratories (CNL) is proposing to carry out the designated NSDF Project on land that is held in the name of AECL, which is property of the Crown. As such, CNL is the proponent for the development of the NSDF Project and associated infrastructure*”¹⁶; what the EIS fails to provide is any contingency plans or alternate planning scenarios in the event that the Canadian Nuclear Energy Alliance does not continue to have a management role beyond the current contract; for example, there is no description of how management would transition to a different consortium, what the role of Atomic Energy of Canada Limited is in project definition and direction under the current model and what AECL’s role would be in transitioning to a different contracted operator, and how such transitions would impact project implementation at each of its various stages through construction, operation and closure
- Descriptions throughout the draft EIS are overly generalized and lack the specificity and technical basis to be useful in understanding or evaluating the project design and implementation; for example, the descriptions of the base liner system and the cover system are extremely general and are written more in the language of objectives – to “limit” the release of contaminated water or rain water infiltrating to the waste, but lacks the specifics necessary to evaluating likelihood of performance success

¹⁶ Draft EIS Page 1-5

- Statements such as “The environmental monitoring systems will monitor air, surface water and groundwater consistent with existing CRL licence requirements”¹⁷ provide no information about the project, its likely performance, of even about the monitoring program; it is simply a statement of the obvious
- The EIS repeatedly uses subjective terms which are unclear in their meaning and so lack meaning; for example, in the description of the project location included in the draft EIS, CNL stated that “*The nearest area of considerable agriculture and dairy farming is 15 km southeast on the Quebec side of the Ottawa River and 35 km southeast on the Ontario side*”;¹⁸ the first question this raises is with respect to what “considerable” may mean; the second question is around the reliability of the statement and its estimate of distances; while it is not Northwatch’s practice to provide evidence while commenting on draft EIS documents, in this instance we bring forward two specific information pieces as a means of reflecting back on the reliability of statements in the draft EIS on even the most basic of information items, such as project location: CNL’s draft EIS statement is that the nearest area of “considerable” agriculture and dairy farming is 15 km southeast on the Quebec side, but a simple check via Google Earth indicated that there is a farming area only ten kilometres away on the Quebec side; CNL’s draft EIS statement is that the nearest area of “considerable” agriculture and dairy farming is 35 km southeast on the Ontario side but according to the CNSC’s Independent Environmental Monitoring Program (IEMP) there were food samples from approximately 10 km away on the Ontario side.¹⁹
- The draft EIS reports that “*Canadian Nuclear Laboratories has developed an Integrated Waste Strategy (IWS) which concisely details “cradle to grave” pathways for all CNL waste streams, from generation to final disposition. The IWS is based on CNL’s waste inventory and forecast data and founded on the fundamental principles of waste avoidance, minimization and re-use*”; the strategy is summarized briefly in Sections 2.2 and 3.2 of the draft EIS, but is not provided, is not available on the public registry or

¹⁷ Draft EIS Page 1-6

¹⁸ Draft EIS Page 1-7

¹⁹ <http://nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/ch-river.cfm#table>

through the CNL web site or through a general search, and is not identified in the list of references included in the draft EIS; singly and in combination this failure to provide the Integrated Waste Strategy as part of the EIS and supporting documents a) suggests that it has not been given the central importance it merits, b) it may be CNL's assessment that the document would not withstand public scrutiny

- Only through an intervenor's submission posted on the public registry²⁰ would the public even have been able to confirm the existence of a full version of the Integrated Waste Strategy²¹
- Given its non-availability, Northwatch will not comment on the CNL's Integrated Waste Strategy as set out in document CW-508600-PLA-006, "Canadian Nuclear Laboratories Integrated Waste Strategy Summary Document", but note the following observations based on review of the summaries of the Integrated Waste Strategy as presented in the draft EIS:
 - The information provided on wastes, waste volumes, types and categories should be provided in volume instead of by percentage; quantification of the radiological burden by waste volume, type and unit should also be provided, and information should be provided and presented in such a way as to allow comparative analysis across waste types, categories, sources and locations
 - CNLs's waste strategy lacks quality assurance and quality control and does not provide any indication that there is a chain of custody with respect to the wastes being handled, whether they are from internal (currently on site) sources or external (off site) sources; the deficiencies include gaps with respect to tracking wastes from the point of origin to endpoint, inadequate waste characterization and classification, and inadequate waste segregation and routing procedures
- The purpose of the project as set out in the draft EIS²² is to "*enable CNL to move from its current practice of interim waste storage and to direct waste disposal*" and "*to meet the*

²⁰ CEAR #91

²¹ CW-508600-PLA-006, "Canadian Nuclear Laboratories Integrated Waste Strategy Summary Document"

²² Section 2.3 *Purpose of the Project*

requirements established by Atomic Energy of Canada Limited (AECL), on behalf of the Government of Canada...” but it is unclear from the presentation whether the “revitalization of the CRL property” is an obligation under the contract between CNL and AECL or if it is an expression of ambition on the part of CNL; like so many other key areas and key documents, the details and the support documents have been omitted from the draft EIS package

- CNL has set March 2020 for a “ready to accept waste” date for the proposed waste mound at Chalk River but have provided only a very vague statement of urgency in support of this extremely short timeline;²³ CNL has not provided any substantive rationale for this very compressed amount of time for the project development, and provides only a general statement that the Port Hope facility can be developed in 4-5 years to support their notion that the NSDF can be ready for service in less than 2.5 years
- There are multiple indications in the draft EIS that the private sector’s profit motivations are the driving force behind the project’s development in aspects ranging from development timelines to design to standards of care; for example, the draft EIS states:

Protective measures against the hazards of ionizing radiation will be considered to be optimized when further reductions in radiation doses are outweighed by the additional efforts and costs required for their implementation. This principle applies throughout the life cycle of the NSDF Project, from design to decommissioning, and is a particularly important consideration when developing the operational procedures.²⁴

This statement conveys an intent on the part of the proponent to take a least cost / least care approach, and while it is not our objective at this stage in the review to argue the merits of the project (or lack thereof) this particular statement illustrates a mighty failure on the part of the draft EIS to present a project which is consistent with federal laws and policies, society’s expectations, or a reasonable standard of care.

- The development of this project needs to be more clearly placed in the context of overall activities and conditions at the Chalk River Laboratory property, including remediation requirements, decommissioning plans, and broader timelines and anticipated milestones.

²³ Draft EIS Sections 2.3 and 3.2

²⁴ Draft EIS Section 2.4.1.2 “As Low As Reasonably Achievable Principle”

2. Conclusions

As illustrated by the many failings of the draft EIS identified in this submission and in the submissions of many other intervenors and review participants, the proponent and their consultants have failed to produce a credible environmental impact statement and set of supporting documents; the documents simply do not provide the basis for proceeding in the environmental assessment process.

There are several potential causes for this failure; we offer three:

- The proponent is seeking to avoid the scrutiny that would come from a rigorous assessment process by simply starving the process of necessary information
- The project is not sufficiently developed to provide an adequate description with sufficient supporting information
- The project is simply not viable, and evidence in its support cannot be presented due to the fundamental flaws with the project concept and design

Like so many others, we have sincere and longstanding concerns about conditions within the Chalk River Laboratories property, and the levels of radiological contamination within the site. On that basis, we would very much like to have confidence in this project. Upon review of the draft EIS we very much do not.

The way forward for this project is not clear. Yes, the EIS needs to be revised and to a large degree redone, and several supporting documents need to be provided or developed and then provided. However, the CNL missteps with this project's development predate the draft EIS. For example, CNL has failed to engage the public and indigenous peoples in building the project fundamentals, including the project's purpose, the project scope, the preferred design, and desired end-states. Clearly, there is a large investment of effort required of CNL before they will be in a position to complete a revised EIS; what is unclear is whether CNL has the commitment and the capacity to meet these challenges.

As the responsible authority, the Canadian Nuclear Safety Commission must ensure that the review is rigorous, that the social and technical scientific findings presented by CNL in support of any eventual project are sound, and that public and indigenous engagement and scientific

investigation are not sacrifice to meet the Canadian Nuclear Energy Alliance / Canadian Nuclear Laboratories business needs.

In the immediate, we make three requests of the Canadian Nuclear Safety Commission:

- Require CNL to respond to information gaps and deficiencies and questions raised by public intervenors and review participants before the review proceeds
- Require CNL to resubmit a revised draft EIS after the above step has been completed, and make it subject to a public review and review by the federal departments in a manner similar to the review closing August 16th
- Review the protocol between CNSC and CNL in an open and transparent manner, engaging the public and indigenous peoples in a process that leads to a revision of the protocol, including and particularly the timeline, to improve the review process and better accommodate the level of public and indigenous interest and better reflect lessons learned in this process to date

Northwatch looks forward to continued engagement in this review process and additional opportunities to provide input into the review of this project.

Canadian Nuclear Laboratories Proposed
Near Surface Disposal Facility for
Radioactive Wastes at Chalk River, Ontario

Northwatch Comments

CNL's Draft Environmental
Impact Statement 2017

August 2017

Northwatch Information Requests Following Review of Near Surface Disposal Facility Draft Environmental Impact Statement

IR#	EIS Page	EIS Section	Description / EIS Excerpt	Discussion	IR
1	1-1	1.0	The draft EIS states: “To support the future plans for the CRL property, CNL identified the need for a disposal facility capable of accepting radioactive waste from legacy waste management areas, current operations, and decommissioning projects at Chalk River Laboratories and its other business locations”	The draft EIS is ambiguous and imprecise in its references to commercial opportunities and waste sources.	Provide a detailed explanation as to what is being meant by “business locations”, including and specifically whether these business locations include the business locations of the member companies of the CNEA consortium.
2 3	1-1	1.0	The draft EIS states: “The NSDF Project is rooted in the requirements established by Atomic Energy of Canada Limited, on behalf of the Government of Canada, to substantially reduce the risks associated with the CNL legacy wastes, liabilities, and to create the conditions for the revitalization of the CRL property. The NSDF Project will enable the site revitalization through improved environmental management of Government of Canada legacy waste liabilities and the decommissioning of outdated infrastructure at the CRL property and other business locations.”	The draft EIS makes several references to “revitalization” of the CRL property in the document, but the document is unclear about the relationship between remediation objectives and revitalization.	Provide a definition of revitalization and of remediation and discuss each in relationship to the proposed NSDF Provide a description with supporting documentation of how the contractual arrangements between CNEA, CNL and AECL set priorities and targets with respect to a) site remediation and b) site revitalization.
4	1-1	1.0	The draft EIS states: “Canadian Nuclear Laboratories (CNL) is proposing to carry out the designated NSDF Project on land that is held in the name of AECL, which is property of the Crown. As such, CNL is the proponent for the development of the NSDF Project and associated infrastructure.”	The draft EIS is silent on how authority over project directions and design are exercised by AECL and/or shared between AECL and CNEA/CNL and/or exercised solely by CNEA/CNL.	Provide a description with supporting documentation of how, within the contractual arrangements between CNEA, CNL and AECL, decision-making is exercised by AECL with respect to NSDF project and/or shared between AECL and CNEA/CNL.

5	1-5	1.1	The draft EIS states: “The base liner system includes a primary and secondary liner to contain the waste and to limit the potential release of contaminated water (i.e., leachate) to the subsurface and groundwater. The surface water management system will control clean surface water on-site, while preventing contact with contaminated areas. The final cover system (i.e., cap for the mound) will be designed to eliminate exposure due to direct contact with waste, and provide gamma radiation shielding. It will also limit the infiltration of precipitation to the waste, thereby limiting leachate generation.”	The terminology throughout the draft EIS is overly generalized and lacks the necessary precision.	Provide an explanation as to how the report authors are using the term “limit” in this context.
6					Provide quantitative estimates for the release of contaminated water to the subsurface and groundwater and for the infiltration of precipitation to the waste after the final cover is installed. If these details are provided elsewhere in the document, in those instances where general statements (such as in Section) are made, provide a foot note or bracketed reference to the location in the document where details are provided.
7	1-5	1.1	The draft EIS states: “The environmental monitoring systems will monitor air, surface water and groundwater consistent with existing CRL licence requirements.”	The draft EIS implies that no additional monitoring regime will be put in place specific to the NSDF, should it be constructed.	Describe what – if any – monitoring programs and regimes will be developed and implemented specific to the NSDF.
8	1-7	1.2	The draft EIS states: “The nearest area of considerable agriculture and dairy farming is 15 km southeast on the Quebec side of the Ottawa River and 35 km southeast on the Ontario side.”	The draft EIS statements with respect to the proximity of the project to agricultural production are unclear and potentially erroneous.	Provide a definition of what the report author means by “considerable” agriculture, and the basis for their distance estimates.
9	2-5	2.2.2.1	The draft EIS states: “Radioactive waste will be emplaced in the ECM and as necessary, treated in advance of shipment to the NSDF”.	The draft EIS does not provide any description about the referenced “treatment in advance of shipment” of wastes to be placed in the NSDF.	Provide a description of the methods and effects of the “treatment” in advance of shipment” referenced in this section. In particular, describe the location, means, and

					proponent/operator for the treatments.
10	2-5	2.2.2.1	The draft EIS states: “The NSDF will accept LLW, ILW (less than 1% by volume), and other wastes that meet the WAC”.	The draft EIS does not provide sufficient detail about the inclusion of intermediate level waste in the proposed facility. ILW requires very different management methods, making this is a significant variance.	Provide a rationale for the inclusion of ILW in ECM, and a description of the decision-making process and inputs within CNL that led to this reversal of this decision.
11	2-5	2.2.2.2	The draft EIS states: “The IWS recognizes the need for a disposal solution for ILW. The feasibility of locating an ILW repository deep underground within bedrock at CRL has been assessed and it was determined that CRL bedrock is suitable for such a facility. To determine the best way forward, further options and locations need to be identified and studied, and national discussions held. Treatment of ILW may be required to meet the WAC for the future repository.”	Throughout the draft EIS there are general and incomplete descriptions of or references to the Integrated Waste Strategy, but the IWS has not been made available, either as an appendix or supporting document, and it is not available on the CNL web site or the public registry. The IWS is a central document and should form part of a set of (publicly available) documents related to this project.	Provide a copy of the Integrated Waste Strategy Provide background information and supporting documents related to statements in the draft EIS about the assessment and suitability of “CRL bedrock” for a “deep underground” facility for ILW”.
12					
13					Describe what treatment may be required of ILW to meet the WAC for the future repository, and how this would compare to treatment of the ILW to meet the WAC for the ECM.
14	2-5	2.2.2.3	The draft EIS states: “Sewage sludge is generated at the CRL Sanitary Sewage Treatment Plant and considered to be very low level waste (VLLW). For the foreseeable future, the sludge will continue to be placed in the CRL Bulk Material Landfill which is an engineered mound with leachate collection system (CNSC 2010).”	No additional information is provided about sewage sludge, or its levels of radioactivity, volume, or associated hazards.	Provide a definition of “foreseeable future” and describe any circumstances or conditions under which CNL would consider placing the sludge in the ECM.

15					Indicate current projected volumes of this waste, and levels of hazards associated with the sewage sludge.
16	2-5	2.2.4	The draft EIS states: “Mixed waste is hazardous waste that is radiologically contaminated. It is generally dispositioned as it is generated and will continue to be sent to a commercial processor for treatment unless or until an appropriate local (CRL) treatment process is developed. The commercial processor returns the radioactive portion of the material to CRL, where it is stored until disposal as per the radioactive classification of the material. Mixed waste may be accepted for disposal in the NSDF provided that it meets the intent of land disposal and leachate requirements specified in the Ontario Environmental Protection Act, Regulation 347 General Waste Management. Where required, mixed waste must be processed in advance of placement in the ECM.”	The draft EIS provides insufficient information about this waste stream to determine its importance and potential impacts as a result of emplacement in the proposed ECM.	Describe the current disposal pathway for “mixed waste”, including its destination, treatment by “commercial processors”, the location of the “commercial processors”, the packaging requirements for the outgoing “mixed waste” and the returning “radioactive portion” of these wastes Describe the radiological hazard of the returning “radioactive portion” of these wastes and the additional chemical or other characteristics of the outgoing and returning wastes
17					
18	2.3	2-6	The draft EIS states: “Canadian Nuclear Laboratories will continue to accept waste on a commercial basis (e.g., medical waste from hospitals).”	The descriptions of waste sources and types in the draft EIS are overly general and require additional detail and description.	Provide a definition of “commercial basis”. Provide a description of the the volumes of medical waste from hospitals, including volume, contracts, volumes already received and projections for future receipt
19					
20	2.3	2-6	The draft EIS states that the waste to be disposed in the NSDF includes the following: “waste now in storage that has resulted from legacy CNL operational and decommissioning activities and	The descriptions of waste sources and types in the draft EIS are overly general and require additional detail and description.	Clarify whether this statement refers to waste in storage at the CRL, or in storage at CNL sites more generally.

			past commercial activities;		
21	2.3	2-6	The draft EIS states that the waste to be disposed in the NSDF includes the following: “waste to be generated from the ongoing decommissioning of existing CRL buildings and structures and the remediation of contaminated lands; waste generated from the decommissioning of WL and prototype reactor sites that is not disposed in situ;”	The descriptions of waste sources and types in the draft EIS are overly general and require additional detail and description.	Clarify what is included in “prototype reactor sites”. For example, whether this is referring only to Rolphton and Whiteshell, or does it also Douglas Point and Gently 1 and/or additional sites
22	2.3	2-6	The draft EIS states that the waste to be disposed in the NSDF includes the following: “ future waste arising from continuing CNL operations, commercial activities, the decommissioning of buildings and structures that have not yet been built, and the remediation of soils from the CRL property.	The descriptions of waste sources and types in the draft EIS are overly general and require additional detail and description.	Provide a clear definition of “commercial activities” and supported statement of what volume of waste is associated with this category, what are the waste sources and types. Describe how is this commercial activity is enabled by the contract to manage the AECL sites.
23					
24	2-8	2.4.1.2	The draft EIS states: “The ALARA principle is that the residual risk associated with a particular design feature or operational procedure shall be as low as reasonably achievable. This principle is applicable to justifying risks from radiological hazards during routine operation and takes economic factors into consideration.”	The draft EIS lacks sufficient support in terms of documentation and technical information and policy and programs in support of the project. CNL’s ALARA program is briefly references and summarized, but in insufficient detail to be meaningful.	Provide a copy of CNL’s ALARA program.
25	2-8	2.4.1.2	The draft EIS states: Protective measures against the hazards of ionizing radiation will be considered to be optimized when further reductions in radiation doses are outweighed by the additional efforts and costs required for their implementation. This principle applies throughout the life cycle of the NSDF Project, from design to decommissioning, and is a particularly important consideration when developing the operational procedures.”	This is perhaps one of the most significant statements in the draft EIS, but given its characteristically vague and unqualified nature, it is difficult to assess its implications in operational terms.	Provide additional detail in both qualitative and quantitative terms, supported by case studies / actual examples of how CNL has operationalized this philosophy to date, and detailed scenarios of how this philosophy would apply in

					real-case examples during design, operation and decommissioning of the proposed ECM.
26	2-9	2.4.1.3	The draft EIS states: “Canadian Nuclear Laboratories has adopted the Institute of Nuclear Power Operations’ (INPO) nuclear safety culture definition (2004): “Nuclear safety culture is defined as the core values and behaviors resulting from a collective commitment by leaders ...”	CNL has described “safety culture” as one of the three design principles. As such, it is presumably central to the design and operation of the proposed ECM.	Provide CNL’s policy / program which operationalizes CNL’s adoption of the Nuclear Power Operations’ (INPO) nuclear safety culture definition (2004) , and any additional documentation of CNLs safety culture and how CNL would apply this safety culture to the ECM.
27	2-17	2.5.2.1.1	The draft EIS states that “A near surface disposal facility is a suitable and technically feasible means of disposing of LLW and ILW and the effectiveness of such facilities for disposal of LLW and ILW has been demonstrated as illustrated through the following near surface facilities currently in operation globally” and then goes on to list nine facilities, of which one is in the U.K. and the remainder in the U.S. No description of discussion of these facilities of the means by which they demonstrate “effectiveness” is provided.	While the draft EIS asserts that the nine sites listed demonstrate the effectiveness of “near surface disposal” the draft EIS provides no information about the nine facilities, their operation, their design, the waste inventory being managed, or their performance.	Provide reports on each of the nine sites listed describing their design, period of operation, waste streams and inventories including characterization of hazards, and their performance assessment, and provide a detailed comparison of each of these facilities to the proposed ECM.
28	2-20	2.5.2.2.2	The draft EIS states: “The costs associated with constructing a GWMF are considerably higher than a NSDF. Similarly, the operating costs for a GWMF would also be greater than that of the NSDF due to the need for additional waste packaging and handling of all waste. For example, the total waste volume to be disposed in OPG’s DGR Project is 200,000 m3 of LLW and ILW (OPG 2011a). The estimated capital costs for this project are \$1,000 M (OPG 2011a). Annual operating costs are estimated at \$25 M (Golder 2004). Using these values, the inferred lifetime	The sections of the EIS dealing with the GWMF are poorly organized, poorly written and unsupported by references and technical documents. In some instances statements are inaccurate and/or outdated. The assessment of alternatives is an important element of environmental assessment, and must be clearly thought out, clearly set out, and well supported with technical assessments and public engagement.	Provide reports and findings of research conducted in support of the statements in the draft EIS with respect to a potential GWMF

			expenditure for a GWMF with a total waste volume of 1,000,000 m3 and 50-year operational phase could be greater than \$10,000 M, which is more than 36-times greater than the cost of the NSDF alternative.”		
29	2-21	2.5.2.3	The draft EIS states: “A study has been performed (CRL 2011) to gather sufficient facts for the resultant geoscientific interpretations and analyses to determine whether or not suitable bedrock conditions likely exist at CRL for a GWMF. Hydraulic testing was completed which suggests that intrablock regions of the CRL rock base is generally low to very low below the 400 to 500 m depth. In accordance with the groundwater-flow models, the deeper bedrock at the CRL site appears to be able to provide moderately strong natural barrier against transport of contaminants from a GWMF. In summary, although both alternatives would be designed to be protective of groundwater; a GWMF is considered to be more favourable as it would provide additional barriers against potential groundwater transport.”	The draft EIS indicates that (CRL 2011) is the reference for the study on conditions for a GWMF at the CRL, but no such reference is included in the references section of the draft EIS.	Provide the report, reports and/or document of findings of the study referenced in Section 2.5.2.3 of the draft EIS described as having investigated the bedrock conditions at CRL and their suitability for a GWMF.
30	3-9	3.2.2	The draft EIS states: “ <i>The WAC, along with adequate waste characterization, are essential for ensuring only waste with acceptable physical, radiological, and chemical characteristics is emplaced in the ECM</i> ” and “ <i>The development of the WAC is an iterative process that occurs in parallel with the development of the safety analysis, performance assessment, facility design, and the environmental assessment process. The development of the WAC is based on the interpretation and application of IAEA guidelines, relevant regulations and WAC documents from other approved similar waste</i>	According to several statements in the draft EIS the WAC is of central importance to the performance and safe operation of the proposed ECM, but the descriptions are very limited and the document is not provided.	Provide a copy of the document, titled “ <i>Waste Acceptance Criteria 232-508600-WAC-002, Deliverable 1.1, Revision 2 and a detailed discussion of how it informs, supports or challenges design as currently developed for the ECM.</i>

			<i>disposal sites. In addition, the WAC are based on Canadian Standards Association (CSA) standards, and CNL’s strategic planning and stakeholder workshops.”</i>		
31	3-9	3.2.2	The draft EIS states: “Six separate criteria were considered in selecting WAC, as defined by a group of subject matter experts. Ultimately, only the following two criteria were determined to be essential in defining radiological limits for NSDF WAC: 1) Meeting Performance Assessment Safety objectives, and 2) Proven technology” as well as including numerous other references to the performance assessment.	“Performance assessment” is referred to repeatedly in the draft EIS but the performance assessment was not presented or even summarized in the draft EIS, the document is not included in the appendices, and is not available on-line through the public registry, through the CNL web site, or through a general search. It is listed in the references.	Provide a copy of “CNL. 2016c. Performance Assessment for Near Surface Disposal Facility to support the Environmental Impact Statement, 232-509240-ASD-001 Revision R0. 2017.”
32	1-6, 2-10, 3-5, 3-9, 3-11, 3-62, 5-14, 5-192, 5-450, 5-538, 5-578, 5-614, 6-3, 9-17	1.1, 2.4.2.1, 3.1.1, 3.2.2, 3.2.2.2, 3.10.1, 5.1.3.2, 5.4.2.3.2, 5.8.3.2, 5.9.3.2, 5.10.3.2, 6.3.1, 10.0	There are numerous references to the “safety case” in the draft EIS, throughout several sections. All references and descriptions are brief and very generally, with the common theme of referencing the “safety case” as being integral to the performance of the proposed ECM. For example, in Section 2.4.2.2 the draft EIS states “Canadian Nuclear Laboratories considered these CNSC’s guidance documents in developing the design and safety case for the NSDF” and numerous aspects of the operation are described in the draft EIS as having to “demonstrate compliance with the safety case assumptions”	The “safety case” is a foundational piece of the project development process for a radioactive waste management facility, comprised of the set of technical arguments which, in combination, make the case for the long term safety and performance of a proposed facility. An assessment of the safety case is integral to the evaluation of the project – in this case the ECM – which has been developed to support.	Provide a copy of the report(s) that present the safety case, and its development and technical basis, along with all related and supporting documents.