



Supplementary Information

Written submission from Northwatch

In the Matter of the

Canadian Nuclear Laboratories (CNL)

Application from the CNL to amend its Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility

**Commission Public Hearing
Part 2**

May 30 to June 3, 2022

Renseignements supplémentaires

Mémoire de Northwatch

À l'égard des

Laboratoires Nucléaires Canadiens (LNC)

Demande des LNC visant à modifier le permis du site des Laboratoires de Chalk River pour autoriser la construction d'une installation de gestion des déchets près de la surface

**Audience publique de la Commission
Partie 2**

30 mai au 3 juin 2022

Northwatch Supplementary Submission

2022-H-07

Presentation slides for Northwatch,
Radioactive Waste Management
Associates and Hutchinson
Environmental Science Inc.

These presentations may be viewed at www.northwatch.org/video
prior to the hearing commencing on May 30th, 2022



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Comment on Canadian Nuclear Laboratories Proposed Near Surface Disposal Facility

Brennain Lloyd
On behalf of Northwatch

NEAR SURFACE DISPOSAL FACILITY (NSDF)

IAA REF# 80122

CNSC REF# 2022-H-07

May 2022

Presentation to the Canadian Nuclear Safety Commission



Introduction and EA Process

The screenshot shows the Canadian Nuclear Safety Commission website. At the top, there are logos for the Government of Canada and the Commission, along with a red maple leaf. The main content area is a blue box with white text. It lists the agenda for a public hearing on February 22, 2022. The agenda items are: 1. Opening Remarks, 2. Adoption of the agenda, and 3. Canadian Nuclear Laboratories (CNL). Under item 3, there is a sub-section for 'Application from the CNL to amend its Chalk River Laboratories site licence to authorize the construction of a rear surface disposal facility'. Below this, there is a bullet point for 'Presentation by CNL'. The right side of the box has the French equivalent of the agenda items: 1. Ouverture, 2. Adoption de l'ordre du jour, and 3. Laboratoires Nucléaires Canadiens (LNC). Under item 3, there is a sub-section for 'Demande des LNC visant à modifier le permis du site des Laboratoires de Chalk River pour autoriser la construction d'une installation de gestion des déchets près de la surface'. Below this, there is a bullet point for 'Présentation par LNC'. The Canada logo is visible in the bottom right corner of the blue box. At the bottom left of the page, there are links for 'Help' and 'Download'.

Government of Canada / Gouvernement du Canada

Canadian Nuclear Safety Commission / Commission canadienne de sûreté nucléaire

Public Hearing / Audiance publique
February 22, 2022 / 22 février 2022

1. Opening Remarks / 1. Ouverture
2. Adoption of the agenda / 2. Adoption de l'ordre du jour
3. Canadian Nuclear Laboratories (CNL) / 3. Laboratoires Nucléaires Canadiens (LNC) :
 - Application from the CNL to amend its Chalk River Laboratories site licence to authorize the construction of a rear surface disposal facility / Demande des LNC visant à modifier le permis du site des Laboratoires de Chalk River pour autoriser la construction d'une installation de gestion des déchets près de la surface
 - Presentation by CNL / • Présentation par LNC

Help / Download

Northwatch's Interest



Focus of Northwatch Review

During review of the project description and the draft Environmental Impact Statement Northwatch focused our review primarily 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.

Northwatch has continued with these same areas of focus during this review period for the final Environmental Impact Statement and the CNSC commission member documents

Comparative Sites Study

Comparative Study of NSDF Reference Sites

Dr. Marvin Resnikoff

NEAR SURFACE DISPOSAL FACILITY (NSDF)
IAA REF# 80122
CNSC REF# 2022-H-07

May 2022

Presentation to the Canadian Nuclear Safety Commission



RADIOACTIVE WASTE
MANAGEMENT ASSOCIATES

NEAR SURFACE DISPOSAL FACILITY (NSDF)

IAA REF# 80122

CNSC REF# 2022-H-07

Comparative Study of NSDF Reference Sites

PREPARED ON BEHALF OF NORTHWATCH



RADIOACTIVE WASTE
MANAGEMENT ASSOCIATES

Waste Acceptance Criteria

Review of
Canadian Nuclear Laboratories
Waste Acceptance Criteria
for a Near-Surface Disposal
Facility




Emily Ham, M.Sc.

NEAR SURFACE DISPOSAL FACILITY (NSDF)
IAA REF# 80122
CNSC REF# 2022-H-07

May 2022

Presentation to the Canadian Nuclear Safety Commission



NEAR SURFACE DISPOSAL FACILITY (NSDF)

IAA REF# 80122
CNSC REF# 2022-H-07

Review of Canadian Nuclear Laboratories Waste Acceptance Criteria for a Near- Surface Disposal Facility

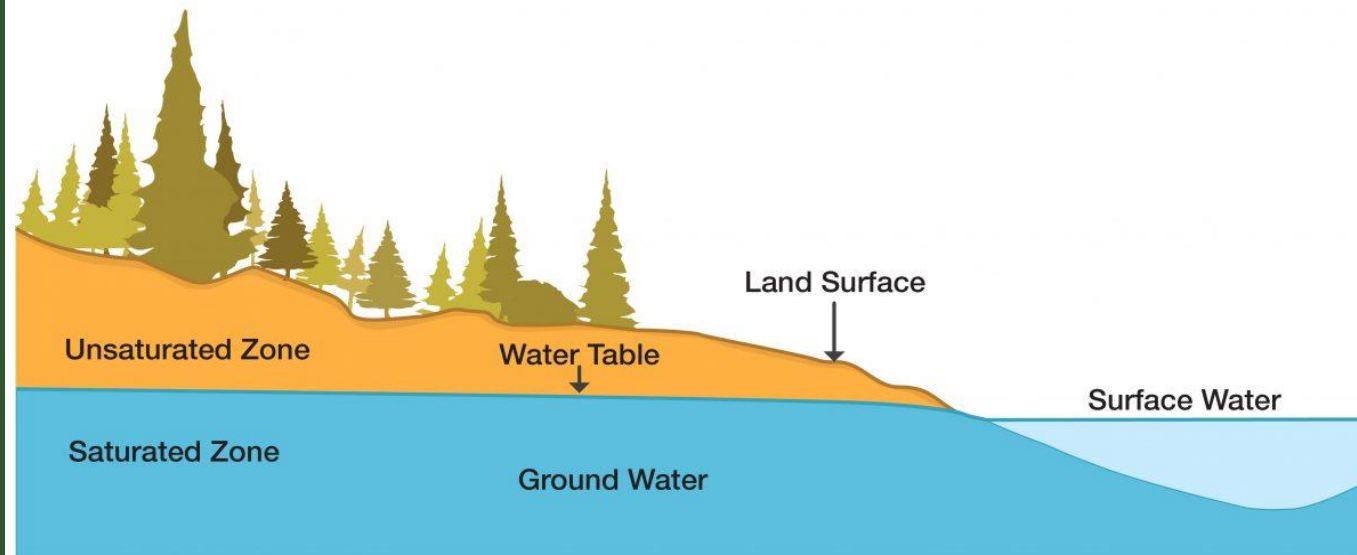
PREPARED ON BEHALF OF NORTHWATCH



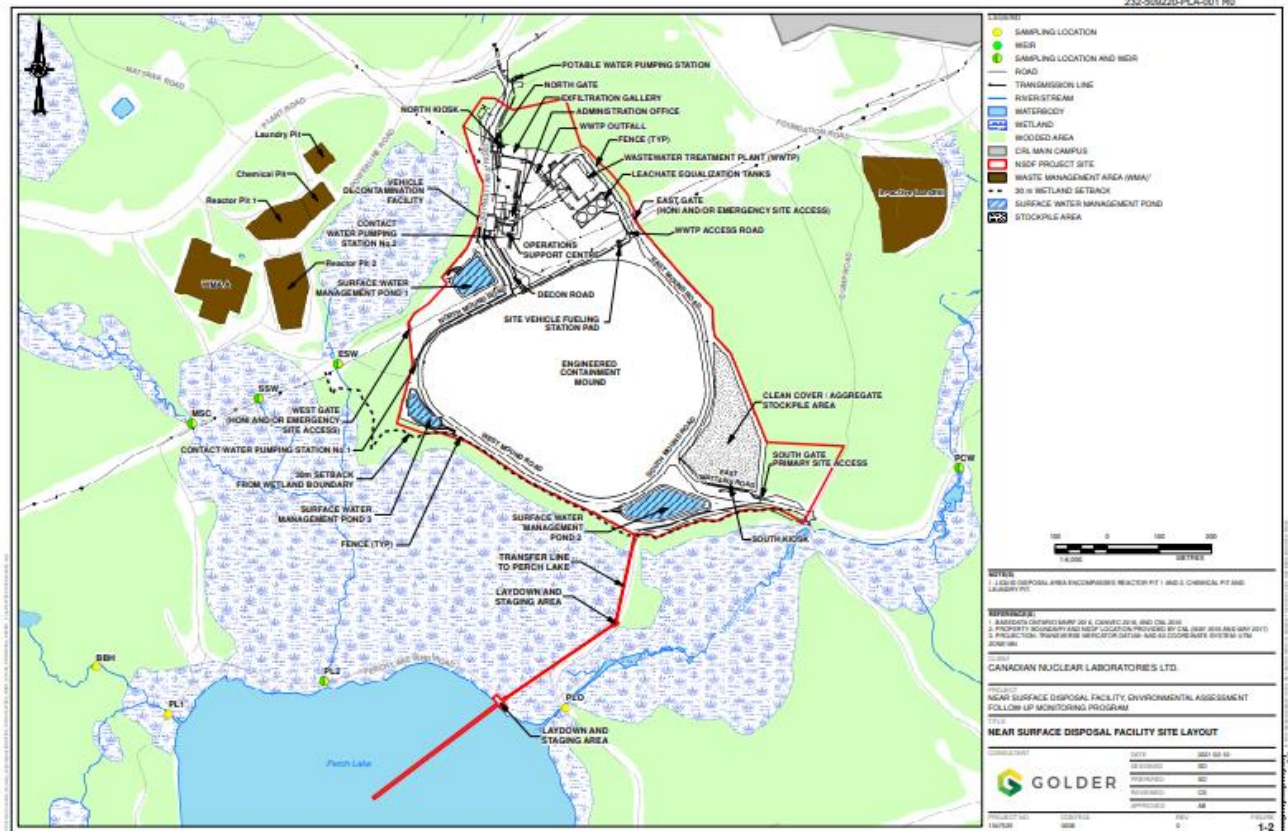
Additional EA Issues

- Groundwater Table
- Monitoring
- Site Selection
- Alternative Design
- Record Keeping

EA Issue: Groundwater



EA Issue: Monitoring



Source: [Draft Environmental Assessment Follow-Up Monitoring Program for the Near Surface Disposal Facility](#)

The Chalk River Laboratories site is the most suitable as more than 90% of the waste to be managed by the NSDF Project is already located there. This site eliminates the additional time and cost of transporting the waste to another location (an effort which would require approximately 45,000 transport truck trips) and reduces the generation of greenhouse gas emissions.

Fifteen potential sites within the CRL site were initially screened to see how they met mandatory criteria such as the minimum space required. Sites that passed this initial screening were then evaluated to see if they met other criteria such as location in relation to the floodplain, geological characteristics and the presence of plants and animals. Based on this review two sites were identified for further evaluation. Both sites were technically feasible, however they differed in how each would be affected environmentally.

EIS ES-2

EA Issue: Site Selection

2.5.3.5 Summary

As summarized in Table 2.5.3-1, both alternatives are technically and environmentally feasible. Both alternatives can be constructed such that they meet the purpose of the NSDF Project and both alternatives can be constructed to accommodate up to 1,000,000 m³ of radioactive waste. The AGCV and ECM facility designs are best available technology and there are several international examples of each. Both have relatively moderate technical requirements and can be sited on the CRL site. The AGCV is expected to be more vulnerable to seismic events compared to an ECM which behaves as a single “entity” and is more resilient to seismic events. The monitoring requirements for these surface-located options are similar and employ conventional environmental technologies. The life cycle costs associated with an AGCV design are approximately five times the cost of the ECM alternative. In addition, the additional packaging and containment is not required for most of the LLW intended to be disposed on the CRL site. Therefore, the most favourable alternative facility design for the NSDF is an ECM.

EIS 2-30

EA Issue:
Alternative
Design

A Waste Placement Mapping Plan will be developed to ensure accurate record-keeping and documentation of the cell and ECM development, as well as the placement locations of different wastes in the cells. This plan will specify a three-dimensional waste location recording system and methods for maintaining proper spacing of waste placed within the ECM. As waste is placed in the ECM, the locations/elevations will be documented, mapped and updated on a regular basis during the ECM operation.

EIS 3-41

EA Issue: Record Keeping

In May 2016, CNSC staff determined that the proposed NSDF meets the definition of a “designated project” under the [*Regulations Designating Physical Activities*](#) and is therefore subject to an environmental assessment (EA) under the [*Canadian Environmental Assessment Act, 2012*](#) (CEAA 2012). Although the [*Impact Assessment Act*](#) came into force in August 2019, replacing CEAA 2012, it includes provisions to allow ongoing projects with EAs initiated under CEAA 2012 to continue under their existing EA processes. As a prerequisite to the licence amendment decision, the Commission must also make an EA decision to determine whether the proposed activities are likely to cause significant adverse environmental effects.

Notice of Public Hearing, October 28, 2021 Ref. 2022-H-07

“Based on the licensing regulatory review and technical assessments, CNSC staff have determined that the proposed NSDF project is protective of people and the environment, taking into account the implementation of all identified EA regulatory commitments and licensing regulatory actions (for further details, please refer to section 1.2.3 and part two of this CMD). CNSC staff conclude that CNL’s licence application to construct the NSDF at the CRL site complies with all applicable regulatory requirements.”

Licensing Decision

CMD 22-H7 p 19

Conclusions

- Northwatch will provide the Commission with our conclusion in final comments, after hearing and weighing the evidence and its evaluation in the course of the public hearing
- Based on our review to date of the EIS, supporting documents, the CNL application and CNSC and CNL Commission Member Documents we do not believe there is sufficient evidence to approve the Environmental Assessment or grant the requested licence amendment

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Comparative Study of NSDF Reference Sites

Dr. Marvin Resnikoff

NEAR SURFACE DISPOSAL FACILITY (NSDF)

IAA REF# 80122

CNSC REF# 2022-H-07

May 2022

Presentation to the Canadian Nuclear Safety Commission



RADIOACTIVE WASTE
MANAGEMENT ASSOCIATES

Project Introduction



Purpose of the Comparative Sites Study

- In their May 2021 Environmental Impact Statement, CNL argued that “the preferred option for disposal of low-level waste (LLW) is near surface disposal facilities (IAEA 2001)” and positioned their proposed Near Surface Disposal Facility as one such facility.
- CNL identified a short list of sites, including the Oakridge National Laboratories Environmental Management Waste Management Facility, the Hanford Environmental Restoration Disposal Facility, the Portsmouth On-site Waste Disposal Facility, and the Fernald On-site Disposal Facility
- This comparative sites study examined the validity of the statements made by CNL with respect to a) the effectiveness of the referenced facilities in isolating radionuclides from the environment, b) the relevance of the example facilities for review and consideration of the Near Surface Disposal Facility and c) the alignment of this project with IAEA guidelines, as referenced by CNL

Comparative Sites Study Overview

- The four U.S. sites referenced - Oakridge National Laboratories Environmental Management Waste Management Facility, the Hanford Environmental Restoration Disposal Facility, the Portsmouth On-site Waste Disposal Facility, and the Fernald On-site Disposal Facility – are all part of the legacy of the U.S. nuclear weapons program, but each addresses only a portion of the contamination issues at its respective host site.
- The nuclear weapons production complex is vast and includes 13 nuclear weapons sites located in 10 states.
- Cleanup has been underway at the 13 nuclear weapons factories run by the Department of Energy (DOE) over the last few decades, and the four facilities cited by CNL in the 2021 EIS for the proposed Near Surface Disposal Facility are part of this cleanup effort

Nuclear Weapons Sites - the Challenge of Cleanup

“The Department of Energy faces monumental challenges in restoring the environment at installations that were part of the U.S. nuclear weapons production complex...

“Despite the large amount invested in DOE environmental management, progress on groundwater and soil remediation has been slow.”

SOURCE: National Research Council, Groundwater and Soil Cleanup: Improving Management of Persistent Contaminants, National Academy Press, Washington, D.C. 1999

Oakridge
National
Laboratories
Environmental
Management
Waste
Management
Facility - Context



Oak Ridge Environmental Management Waste Management Facility

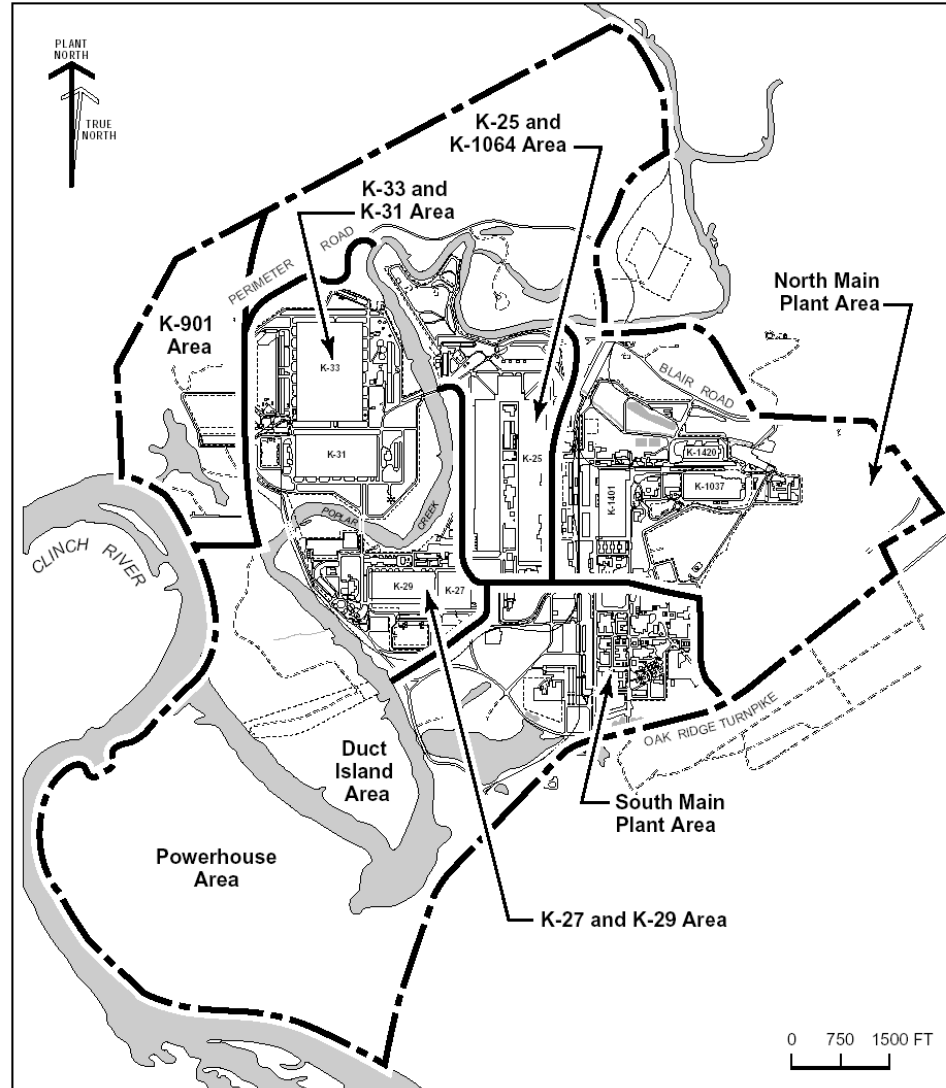
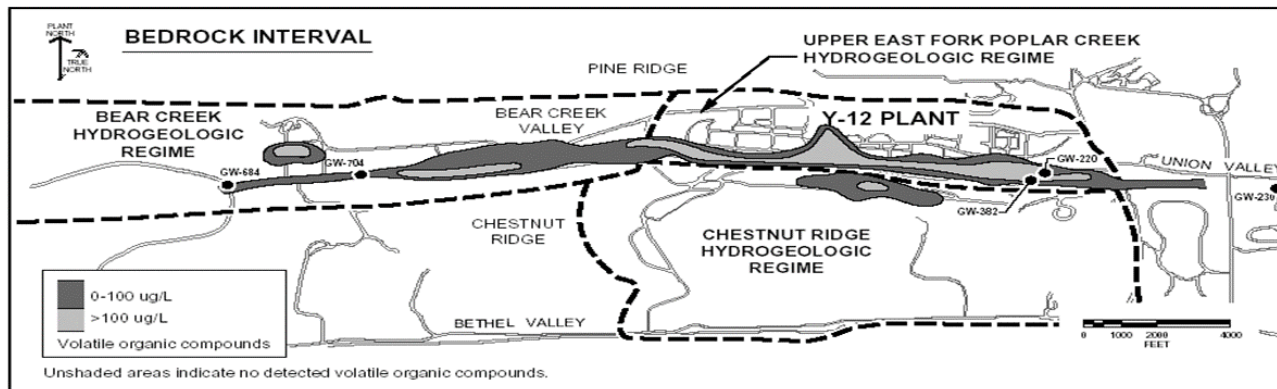
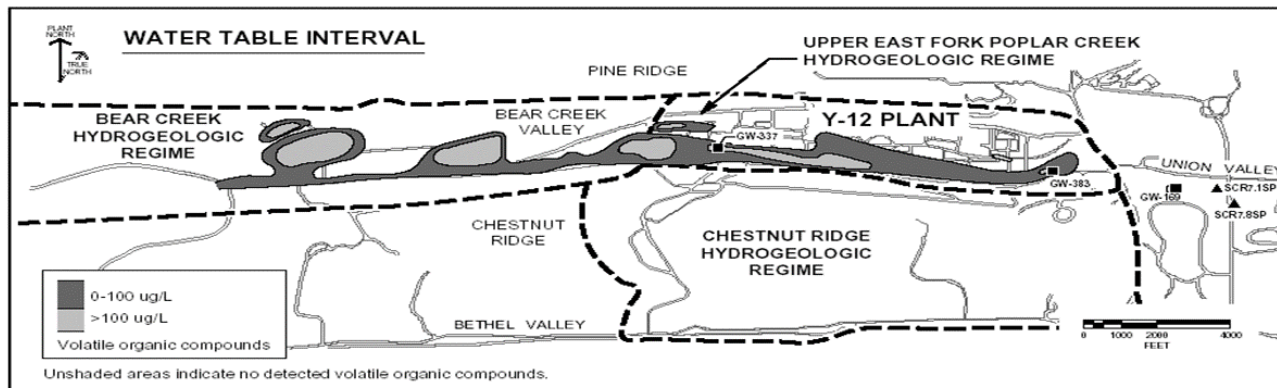


Figure 3: K-25 Site and Waste Area Grouping

Source: http://www.ornl.gov/Env_Rpt/asr95/asr.htm

Environmental Concerns at Oak Ridge EMWMF



Environmental Violations at Oak Ridge EMWMF



Bear Creek, at Oak Ridge National Laboratory Site

Source: <https://www.esd.ornl.gov/BMAP/bear.htm>

Observations on the Oak Ridge EMWMF

Three observations can be drawn from the example violation:

- The operation of the EMWMF does not demonstrate the effectiveness of a facility such as CNL's proposed Near Surface Disposal Facility.
- The contractor Bechtel Jacobs Limited was made aware of the situation and the associated risks to the environment prior to the events.
- The environmental violations resulted from a combination of design and operational failures: There was insufficient water storage capacity as part of the facility design and there were operational decisions made which resulted in environmental harm as a result of those design limitations

Hanford Environmental Restoration Disposal Facility – Context



Hanford Nuclear Reservation. Source: CBC

Hanford Environmental Restoration Disposal Facility – Facility

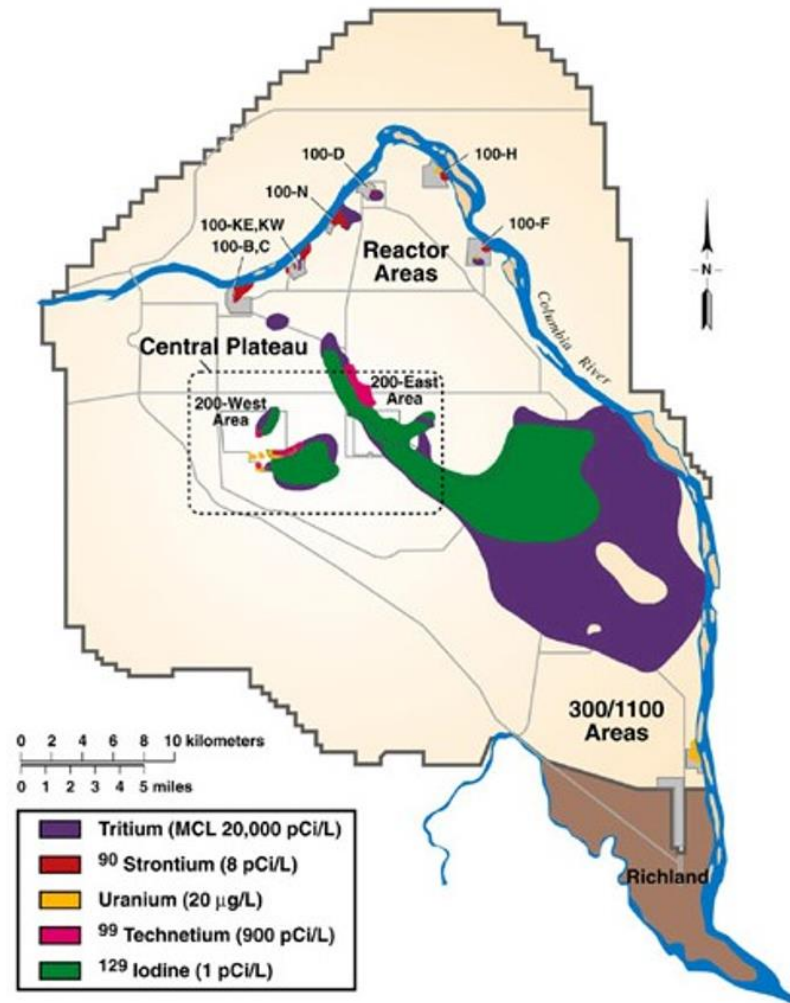


Figure 2: Groundwater Contamination at Hanford Site

Source: <http://www.hanford.gov/gifs/maps/sitemap1.gif>

Project Irregularities

An independent technical review found:

- Falsification of compaction data went undetected for several months due to shortcomings in past procedures, a lack of accountability of the subcontractor and lack of visual verification of testing.
- Analyses indicated that the problem would have been noticed had the pumping rate been regularly compared to historical pumping rates.
- Analysis of the impacts of the excessive leachate level did not assess the most significant impact associated with the elevated leachate level, i.e., whether the excessive leachate level cause additional leakage from the ERDF.
- The most significant issue regarding waste compaction is whether the compacted waste fill in the ERDF will provide adequate support for the final cover.
- The density methodology that has been used to evaluate compaction has many technical flaws and is of questionable value.
- Documentation was not available to confirm that the 3:1 ratio (soil to debris) was adequate to support the final cover for the ERDF.
- The the soil pressure requirement has not been directly related to compaction criterion.
- The information was insufficient to confirm that the existing compaction specification and compaction methods were adequate to ensure that the waste will provide a stable foundation for the final cover to be placed on the ERDF.

Despite these project irregularities, the CERCLA 5 Year Report for the period of 2005 to 2011 simply reported the ERDF as “operating as required to meet the objectives outlined in the ROD for disposing of waste from all Hanford CERCLA activities”

Project Evolution



Environmental Restoration Disposal Facility – Super Cells 9 & 10 Construction

Source: <https://www.delhur.com/portfolio-items/environmental-restoration-disposal-facility-super-cells-9-10>

Observations at the Hanford Environmental Restoration Disposal Facility

Three can be drawn from the irregularities and the project evolution observed at the ERDF:

- In the GOCO model in place at the Hanford Environmental Restoration Disposal Facility, a lack of oversight from both the contractor and the site owner was observed, which allowed key equipment failures to continue undetected for seven months and a falsification of documents to be carried out over a period of years.
- Government agency oversight reports failed to note even such significant failures as those noted immediately above.
- The initial authorization for the facility changed significantly even in the first decade of operation. It began with an expansion of the acceptable wastes in the first year after initial authorization and an expansion of the size of the facility the following year; multiple additional expansions to the authorization have continued throughout the operating period.

Fernald On-site Disposal Facility - Context

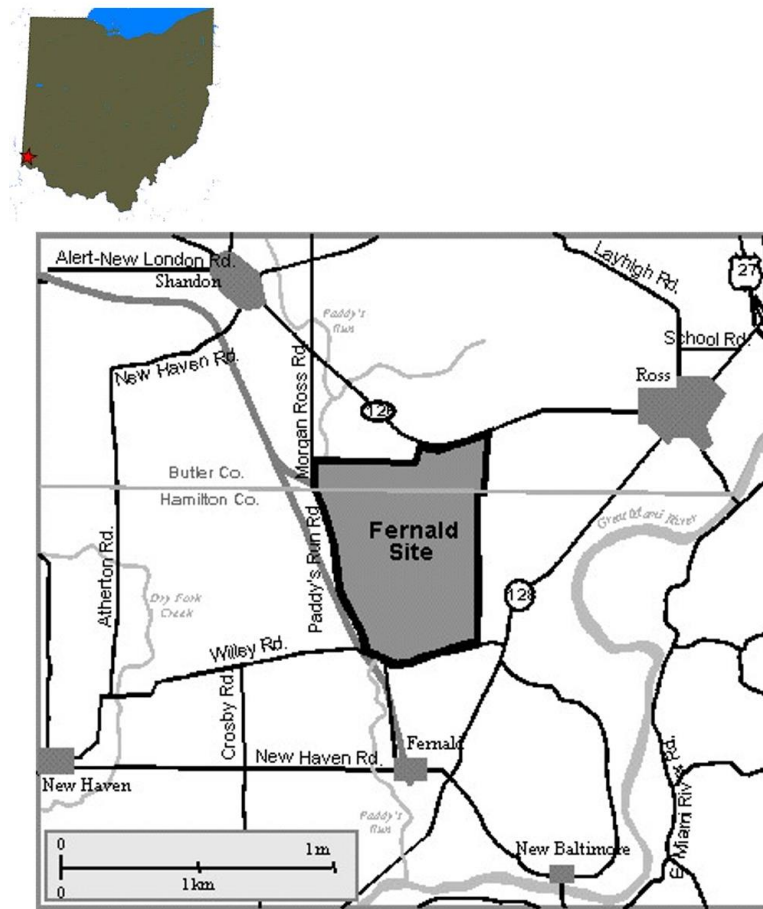


Figure 1: Location of Fernald Site

Fernald On-Site Disposal Facility

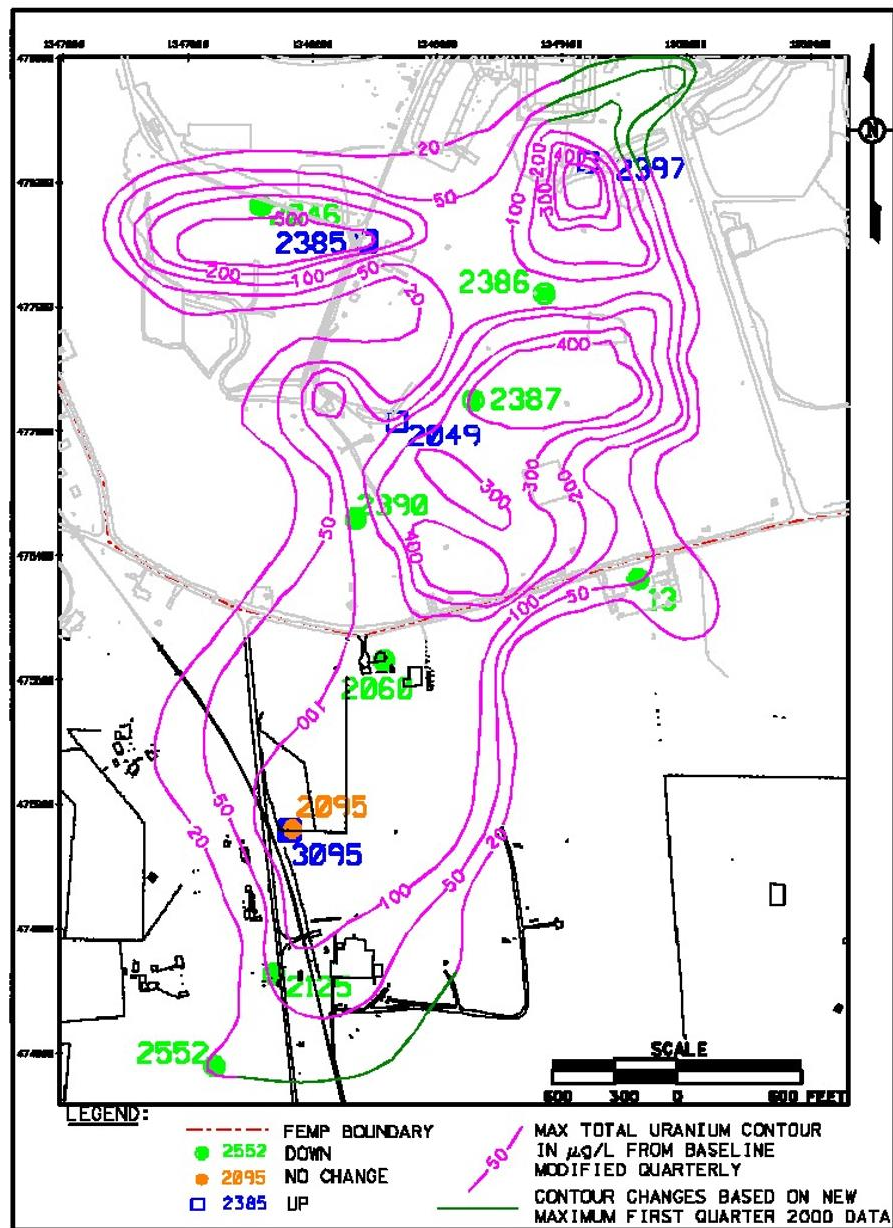


Figure 3: Uranium Groundwater Concentrations: May 2001

Source: <http://www.fernald.gov/newsupdate/5yrReview/Sec-6.pdf>

Citizen Engagement at Fernald



*Fernald Citizens Task Force and Advisory Board
(Source: [top] Fernald Citizens Advisory Board;
[bottom] U.S. DOE)*



Interpretive exhibits in the atrium of the Fernald Preserve Visitors Center. (Source: U.S. DOE)

Observations

Three observations can be drawn from the Fernald case study:

- The degree to which the Fernald clean-up operations were successful relied on several critical factors, including and particularly that the remediation activities followed closure, rather than running concurrent with continued waste generating and contaminating activities co-located on the site.
- Citizen engagement was a priority, and citizens occupied a central role in decision- making, communicating with the public, priority setting.
- Perpetual care was embedded as a project expectation, and the oversight agencies have a known and seemingly reliable plan for long term record keeping and retention of institutional memory.

Alignment of the NSDF Project with IAEA Guidelines

- The 2021 EIS states that, “To meet the requirements of IAEA’s SSR-5, CNL has defined the near surface disposal within its Integrated Waste Strategy as the primary disposal path for LLW that meet the Waste Acceptance Criteria.”
- However, a fundamental issue with the NSDF is continued uncertainties with respect to the radioactive waste inventory and the characterization of the radioactive wastes which CNL may deposit in the NSDF. Until such issues are resolved, there can be no reliable determination made as to whether the wastes being placed in the NSDF meet IAEA guidance.

Conclusions of the Comparative Sites Study

- Each of these facilities and their operating experience was unique, but each provided insights and observations which were relevant to CNL's proposed Near Surface Disposal Facility at Chalk River.
- Some observations were common across the three sites:
 - All three sites operate under the GOCO model, and two of the three have contractors which are partners in the Canadian Nuclear Energy Alliance (operator of CNL).
 - All three examples appear to be effectively reducing the footprint or the extent of radio-contaminants but none are successfully isolating the radio-contaminants from the environment.
 - All three are facilities whose operations were part of the nuclear weapons complex; similarly, the origins of the Chalk River nuclear laboratory site are with the Canadian contribution to nuclear weapons development.

Observations Unique to Each Site – Oakridge

The Oakridge National Laboratories Environmental Management Waste Management Facility illustrated:

- A lack of oversight and/or commitment to operational safety can result in violations of operating protocol and subsequently, environmental violations.
- The environmental violations resulted from a combination of design and operational failures in that there was insufficient water storage capacity as part of the facility design and there were operational decisions made which resulted in environmental harm as a result of those design limitations.
- The responsibility chain went from site owner to contractor to sub-contractor and was broken.

Observations Unique to Each Site – Hanford

The Hanford Environmental Restoration Disposal Facility demonstrated:

- In the GOCO model a lack of oversight from both the contractor and the site allowed key equipment failures to continue undetected for seven months and a falsification of documents to be carried out over a period of years.
- Government agency oversight reports failed to note even such significant failures as those noted immediately above.
- A form of “ authorization creep” emerged, with the initial authorization for the facility changing significantly over even the first decade of operation, including broadening the categories of waste and the size of the facility

Observations Unique to Each Site – Fernald

The Fernald On-site Disposal Facility provides an example of several elements which do not appear to be in place in the case of CNL's proposed NSDF, but were important to the Fernald project, including:

- the remediation activities followed closure, rather than running concurrent with continued waste generating and contaminating activities co-located on the site.
- Citizen engagement was a priority, and citizens occupied a central role in decision-making, communicating with the public, and priority setting.
- perpetual care was embedded as a project expectation, and the oversight agencies have a known and seemingly reliable plan for long term record keeping and retention of institutional memory.

Overall Conclusion

Rather than providing examples of success, the observations from the Oakridge National Laboratories Environmental Management Waste Management Facility, Hanford Environmental Restoration Disposal Facility and Fernald On-site Disposal Facility operating experience provide caution warnings.

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Review of Canadian Nuclear Laboratories Waste Acceptance Criteria for a Near-Surface Disposal Facility

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IAA REF# 80122

CNSC REF# 2022-H-07

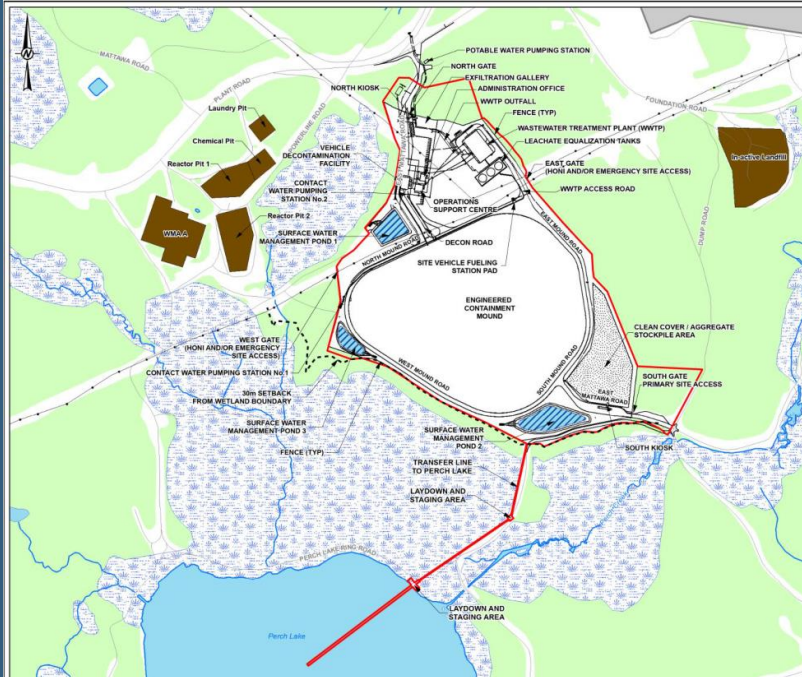
May 2022

Presentation to the Canadian Nuclear Safety Commission



Hutchinson
Environmental Sciences Ltd.

Chalk River Laboratories NSDF



CNSC, 2022. Licence Amendment, required approvals for the construction of the Near Surface Disposal Facility, Canadian Nuclear Laboratories Chalk River Laboratory, Commission Public Hearing Part 1, scheduled for February 22, 2022 (CMD22-H7).

- Will house solid, low-level radioactive waste for permanent disposal in an Engineered Containment Mound
- 1,000,000 cubic metres of waste within 10 internal cells
- Includes a wastewater collection and treatment system
- Designed to contain low-level radioactive waste from previous and future operations, contaminated soils, and building materials

Review Objectives

- The following core licensing documents were reviewed:
 - Canadian Nuclear Laboratories, 2020. Near Surface Disposal Facility Waste Acceptance Criteria, Revision 4.
 - CNSC, 2022. Written submission from Canadian Nuclear Laboratories, Commission Public Hearing Part 1, February 22, 2022 (CMD22-H7-1)
 - CNSC, 2022. Licence Amendment, required approvals for the construction of the Near Surface Disposal Facility, Canadian Nuclear Laboratories Chalk River Laboratory, Commission Public Hearing Part 1, scheduled for February 22, 2022 (CMD22-H7)
 - NSDF Environmental Impact Statement 232-509220-REPT-004, Revision 3, 28 May 2021.
- Main objectives:
 - identify key elements of Waste Acceptance Criteria (WAC) that might have uncertain impacts on environmental and human health
 - Identify any shortcomings in comparison to international WAC.

Issues Identified

1. Uncertainty in communication in licensing documents

2. Some information may not have been fully considered from an environmental perspective

3. Differences in approach from international Waste Acceptance Criteria

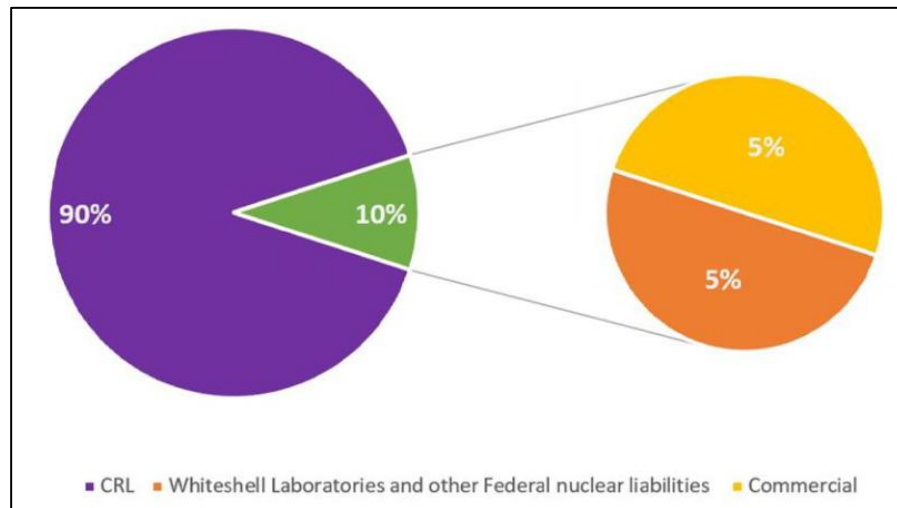
1. Communication Uncertainties in Licensing Documents



<https://www.cbc.ca/news/canada/ottawa/nuclear-laboratories-radioactive-disposal-committee-1.5969544>

- Well-informed and detailed background documents, but very little environmental context given in WAC and other licensing documents.
 - Difficult to find environmental information without a substantial review of the EIS.
- Uncertainty regarding the Post-Closure Safety Agreement's inclusion in the licensing agreement, as well as what other documents are included in the licensing.

Communication Uncertainties – Intermediate-Level Radioactive Waste Acceptance



CNSC, 2022. Written submission from Canadian Nuclear Laboratories, Commission Public Hearing Part 1, February 22, 2022 (CMD22-H7-1)

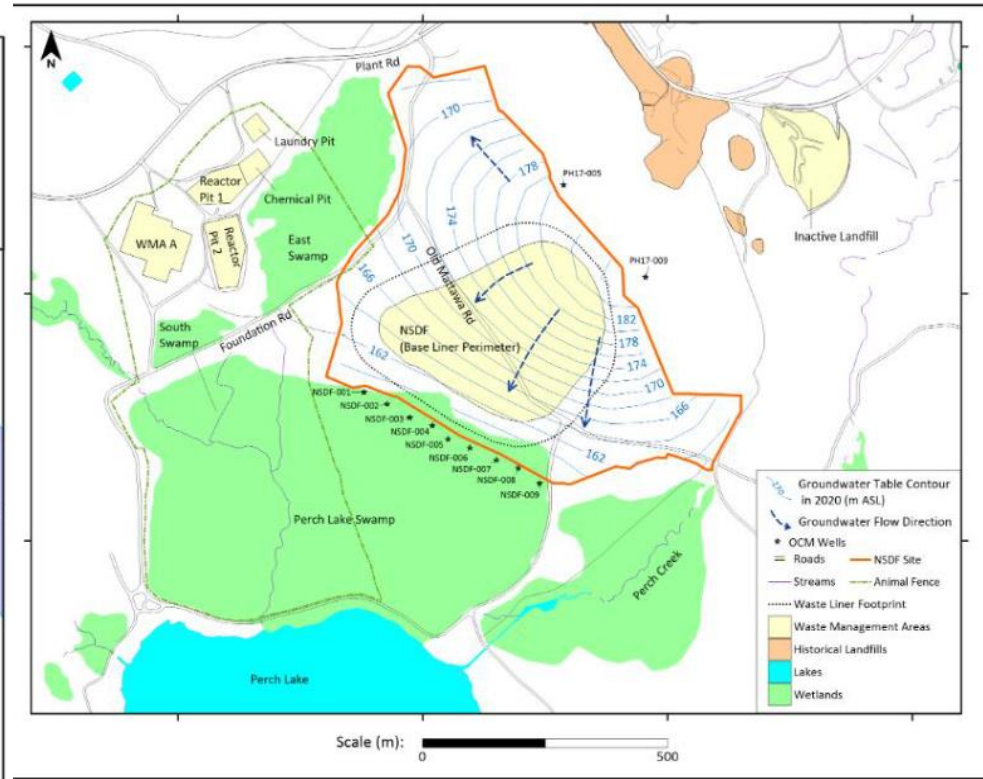
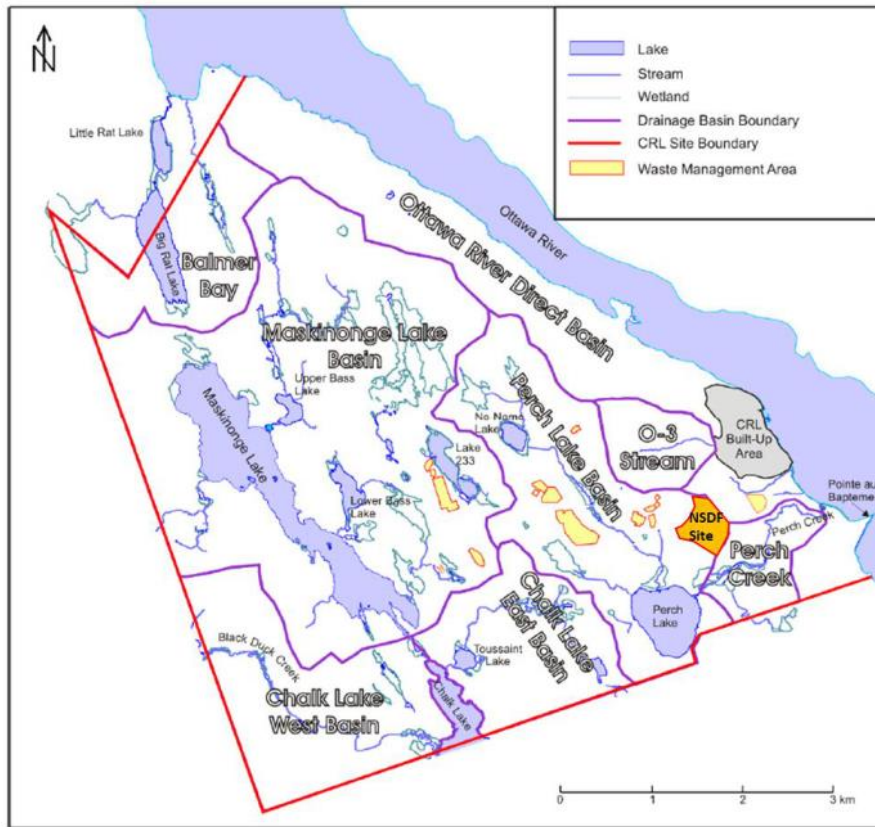
- Some confusion surrounding the types and quantities of intermediate-level radioactive waste that are acceptable in the NSDF
 - Provisions made for inclusion of intermediate-level waste if separating longer-lived radionuclides from legacy waste is not feasible.
 - In the EIS, 87% of accepted waste volume will be bulk materials, 13% packaged waste. In CNSC document, ~90% of waste is contaminated soils and building materials.
 - The acceptable amount of intermediate-level radioactive waste should be further defined to prevent unacceptable quantities/types from being deposited.
- The number and volume of long-lived radionuclides (half-life >30 years) that will be accepted for disposal is not well understood.

2. Information that may not be fully considered from an environmental perspective



- Landfill gas capture
 - Not clear how methane gas production will be mitigated; Monitoring for radionuclides
- Groundwater monitoring around the NSDF and in potential stratified groundwater regimes not well described - May be insufficient for detecting effects.
- Criteria for assessing surface water quality –may not be sufficient or appropriate
 - Drinking Water Quality Guidelines (less stringent).
 - PWQO should be used (more appropriate for ecological receivers)
- Stated multiple times that WAC will limit the level of contamination, therefore limiting the magnitude of surface water and groundwater quality changes
 - No rationale given for what mitigation strategies will be implemented

Impacts to Potential Receivers

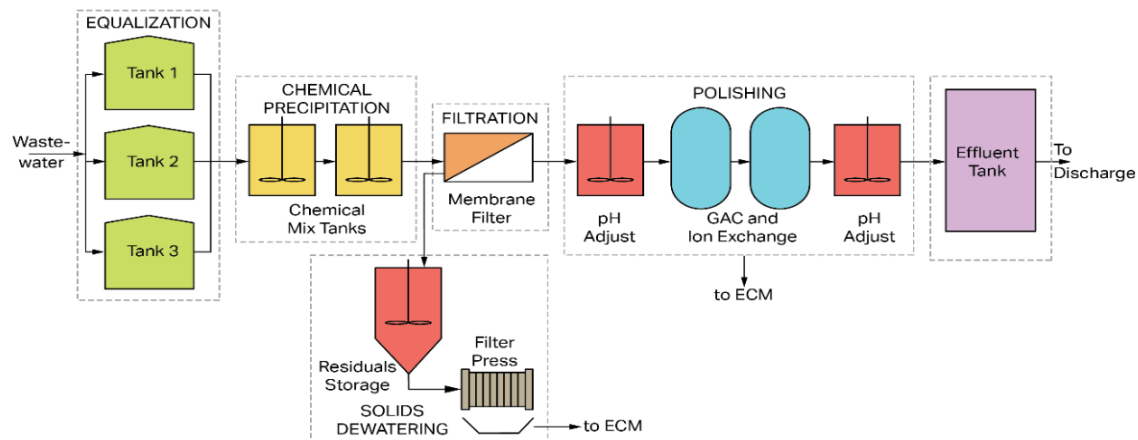


(CNSC, 2022. Written submission from Canadian Nuclear Laboratories, Commission Public Hearing Part 1, February 22, 2022 (CMD22-H7-1) Figure 13: Chalk River Laboratories Site Drainage Basins showing the NSDF Site in the Perch Lake Basin; Figure 14: Near Surface Disposal Facility local water flow gradients.)

Potential environmental impacts and framework for detecting project-related effects were not well understood from the core documents

- Reference/summary of guidelines and mitigation strategies should be available in licensing documents to increase public confidence

Leachate Collection and Treatment



- The fate of metals and radionuclides separated from leachate during water treatment process was not described in background documents – collection and disposal of these residuals should be clarified
- “Several radionuclides and non-radiological constituents may be present in the wastewater at concentrations exceeding discharge targets” (CMD22-H7)– Plans for treating leachate if wastewater treatment system is not operational should be provided.
 - What will be done if leachate and treatment collection system is overcapacity?
 - Increase in leachate production during precipitation events –Has this sufficiently been accounted for?

3. Differences in approach from international Waste Acceptance Criteria

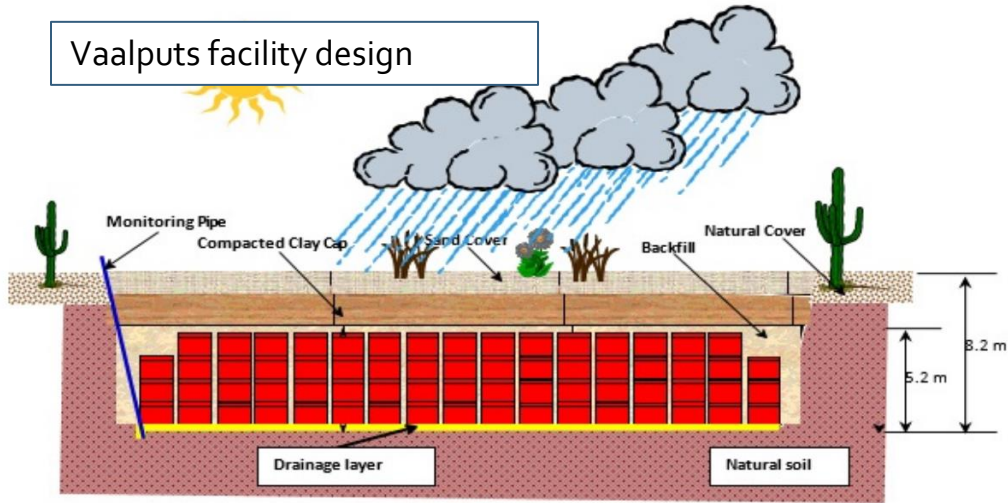
National Nuclear Security Site, Nevada



- NSDF waste acceptance criteria compared to 4 international facilities:
 - National Nuclear Security Site, Nevada, USA
 - Lillyhall Landfill, Cumbria, UK
 - Paducah Gaseous Diffusion Plant, Kentucky, USA
 - Vaalputs facility, South Africa
- Considerations for particle and radionuclide resuspension
- Groundwater velocity – not provided in NSDF WAC
- Leak detection protocols – not encountered

https://www.nnss.gov/docs/docs_RWM/11x17_RCRA_Mtg_Posters-4-Web.pdf

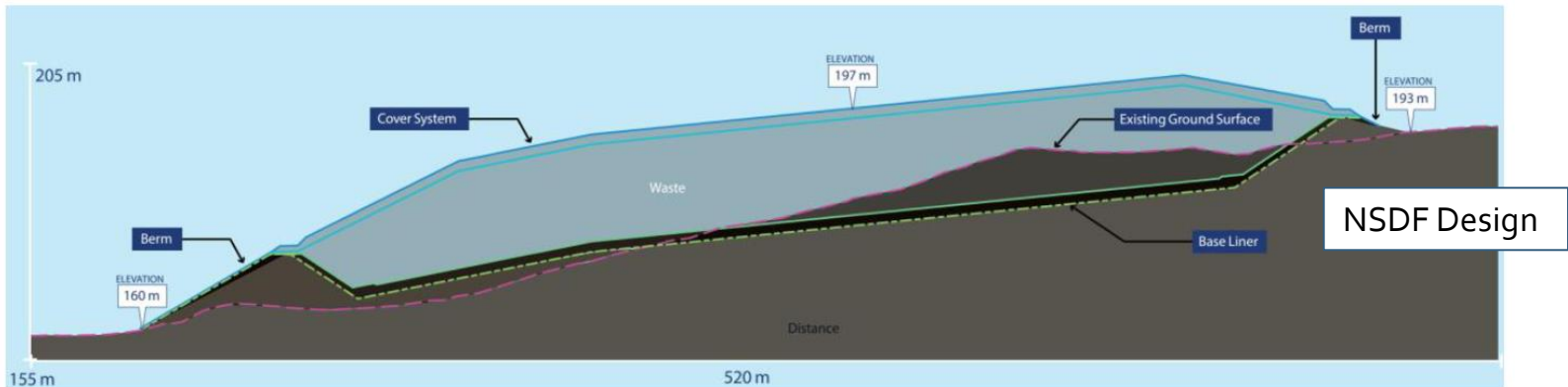
Vaalputs facility design



<https://www.nwrdi.org.za/approach.html>



<https://www.osti.gov/servlets/purl/1464516>



CNSC, 2022. Written submission from Canadian Nuclear Laboratories, Commission Public Hearing Part 1, February 22, 2022 (CMD22-H7-1). Figure 19: Cross-Section of Engineered Containment Mound.

- No provisions made for intermediate-level radioactive waste in other international facilities– NSDF may have a more robust construction

Conclusions

- Uncertainties in communication should be amended in core licensing documents
- More sufficient environmental context should be included in the licensing documents to increase public confidence in the project
- Knowledge gaps (potential contaminant pathways, mitigation strategies) should be addressed in licensing documents
- WAC considerations identified in international documents (leak detection and response protocols, groundwater monitoring insufficiencies, and particle/radionuclide resuspension) should be clarified in the NSDF WAC

Thank you!



Hutchinson
Environmental Sciences Ltd.