Comment on
Canadian Nuclear Laboratories
Proposed
Near Surface Disposal Facility

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On behalf of Northwatch

NEAR SURFACE DISPOSAL FACILITY (NSDF)

IAA REF# 80122

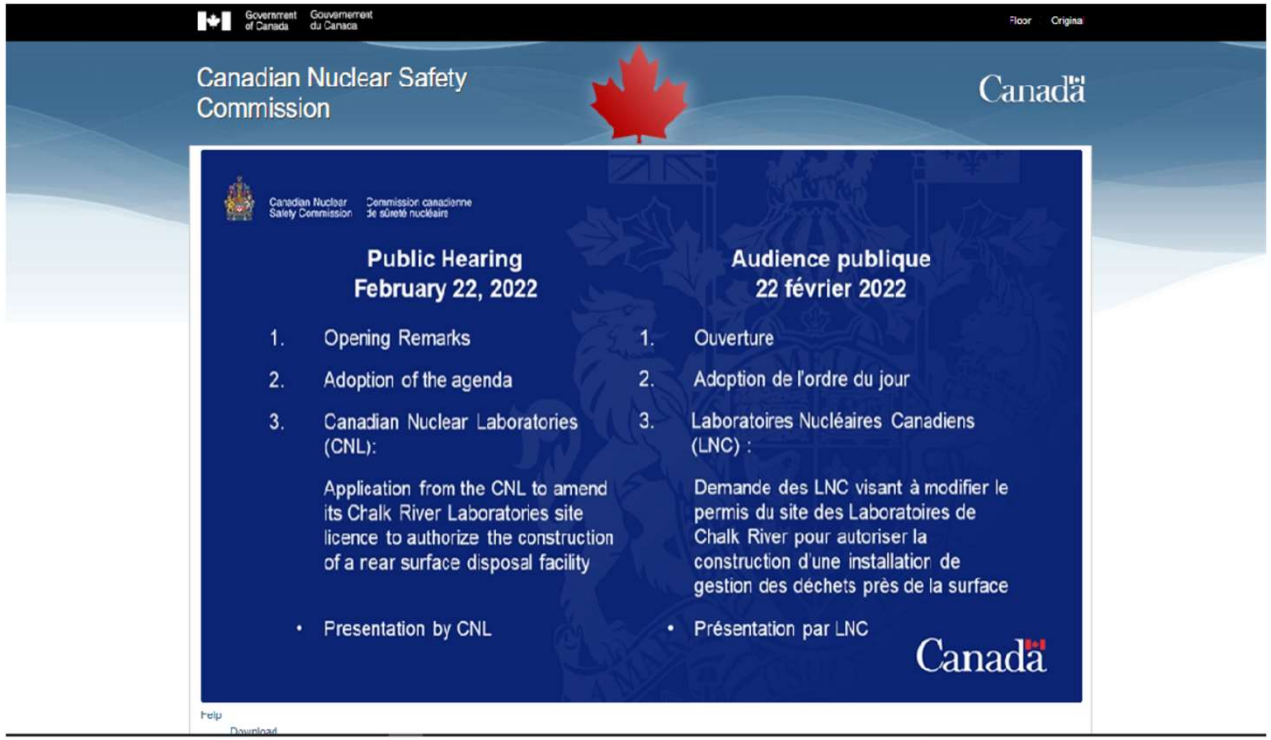
CNSC REF# 2022-H-07

May 2022

Presentation to the Canadian Nuclear Safety Commission

NORTHWATCH

Introduction and EA Process



Northwatch's Interest

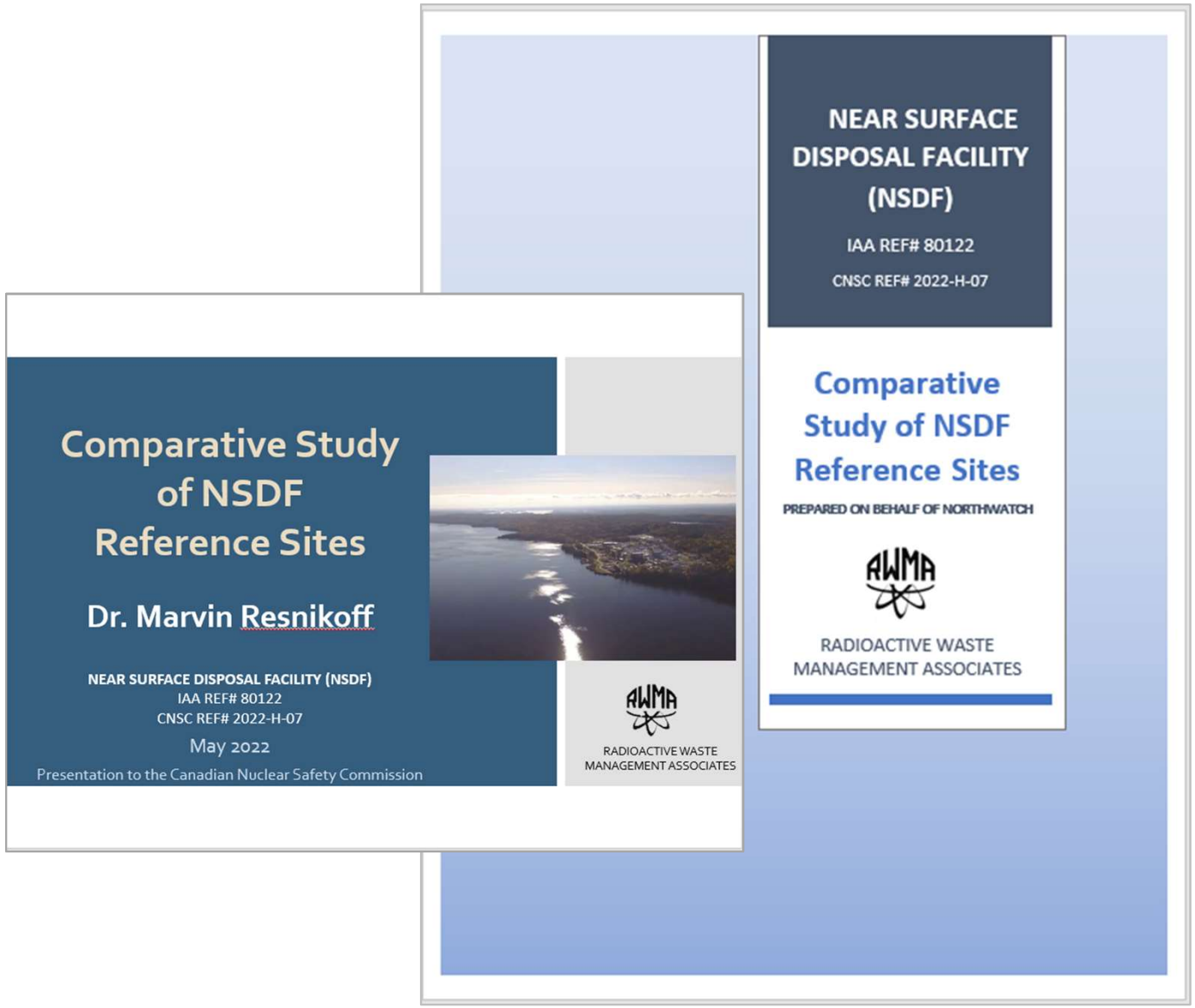
Focus of Northwatch Review

During review of the project description and the draft Environmental Impact Statement Northwatch focused our review primarily in two key areas:

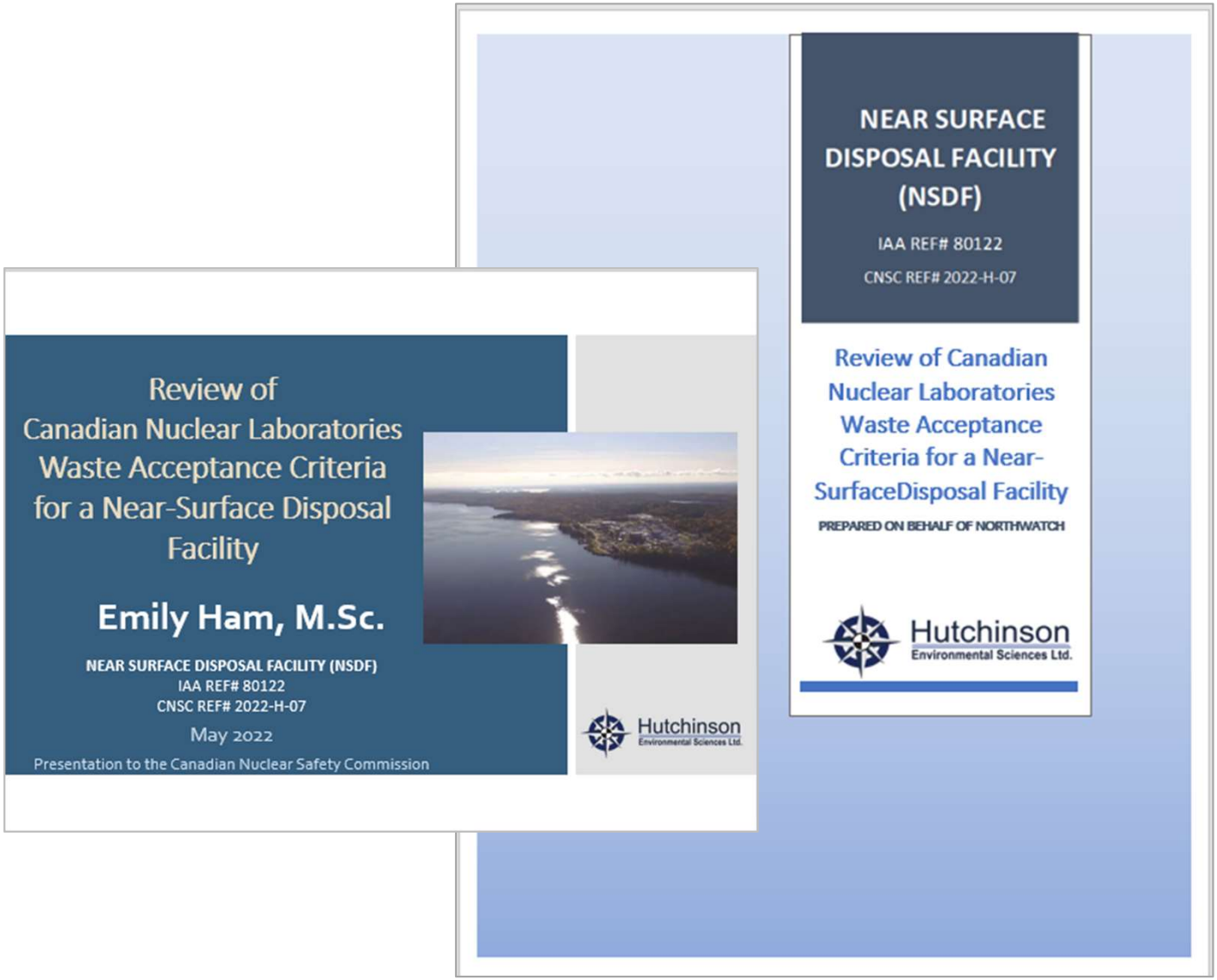
- CNL's presentation and technical evidence with respect to their proposed Waste Acceptance Criteria, and
- CNL's selection and presentation of international examples in support of their proposed engineered mound.

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



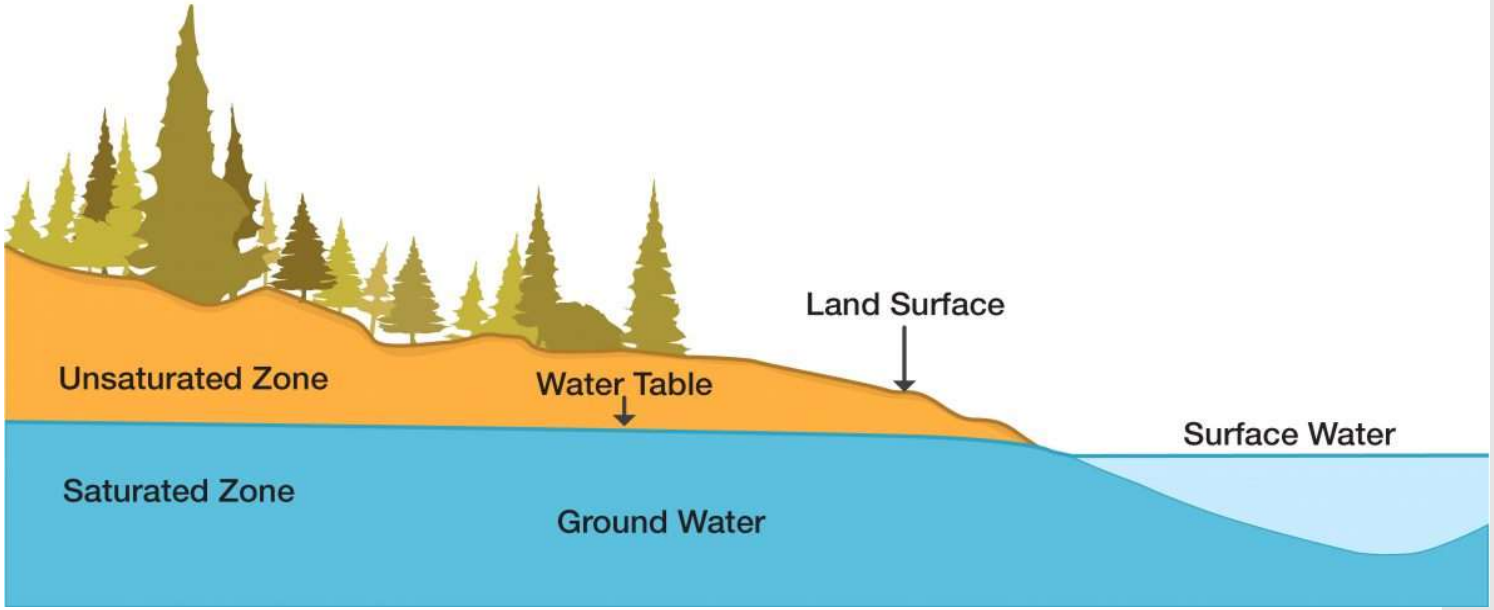
Waste Acceptance Criteria



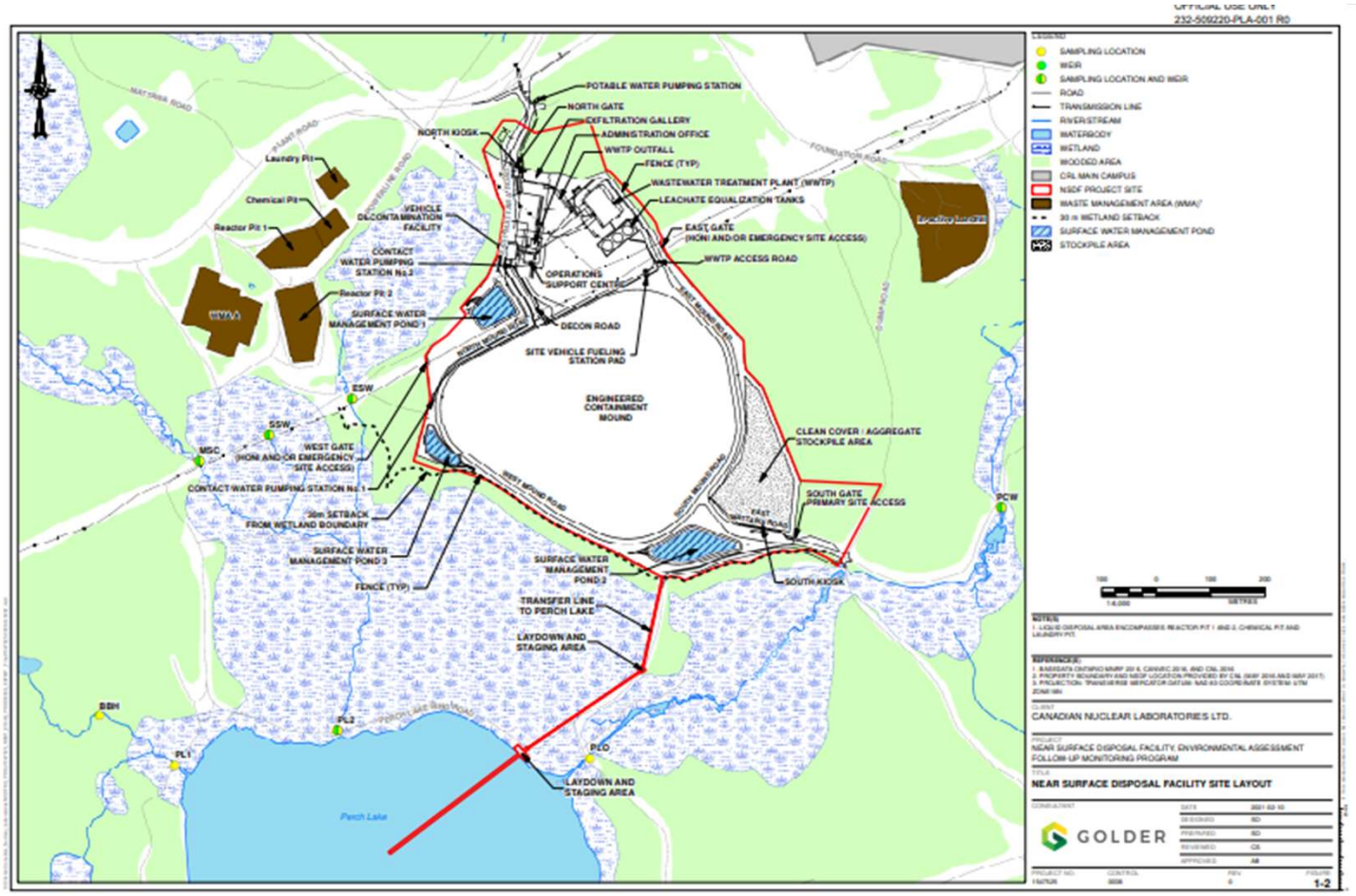
Additional EA Issues

- 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]

EA Issue: Site Selection

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: Alternative Design

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 m^3 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

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

EA Decision

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, October28,2021Ref.2022-H-07

Licensing Decision

"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."

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