



UNCLASSIFIED/NON CLASSIFIÉ

**SUPPLEMENTAL/COMPLÉMENTAIRE**

**CMD: 23-H2.A**

**Date signed/Signé le : 16 March 2023**

**Reference CMD(s)/CMD(s) de référence : 23-H2**

A Licence Renewal

Un renouvellement de permis

**École Polytechnique de  
Montréal**

**École Polytechnique de  
Montréal**

**SLOWPOKE-2 Reactor**

**Réacteur SLOWPOKE-2**

Commission Public Hearing

Audience publique de la Commission

Scheduled for:

Prévue pour :

19 April 2023

19 avril 2023

Submitted by:

Soumise par :

CNSC Staff

Le personnel de la CCSN

## Summary

The purpose of this supplemental Commission Member Document (CMD) is to supplement the information presented in [CMD 23-H2](#), including:

- CNSC staff's assessment of ÉPM's Preliminary decommissioning plan
- ÉPM's Proposed Financial Guarantee
- Waiver requested by ÉPM on the financial guarantee
- Licence term

## Résumé

L'objectif de ce CMD supplémentaire est d'apporter des informations supplémentaires à ce qui est présenté dans le [CMD 23-H2](#), comprenant:

- L'évaluation du plan préliminaire de déclasséement de l'ÉPM par le personnel de la CCSN
- La garantie financière proposée par l'ÉPM
- Avis sur une dérogation au sujet de la garantie financière sollicitée par l'ÉPM
- Durée de permis

**Signed/signé le**

March 16, 2023

*The French version is signed by Kavita Murthy and is considered the official version.*

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**Director General**

Directorate of Nuclear Cycle and Facilities Regulation

**Directrice générale**

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## EXECUTIVE SUMMARY

This CMD is submitted to supplement CNSC staff's [CMD 23-H2](#) regarding the École Polytechnique de Montréal (ÉPM) licence renewal for its SLOWPOKE-2 reactor. This CMD provides additional information that was not available at the time of submission of [CMD 23-H2](#).

In CNSC staff's [CMD 23-H2](#) submitted on January 13, 2023, certain issues about the Preliminary Decommissioning Plan (PDP) and the financial guarantee could not be resolved in time for filing the CMD with the Registry of the Commission by the deadline. As a result, CNSC staff committed to filing a supplementary CMD with updates and recommendations.

Also, in its [CMD 23-H2.1](#), ÉPM requested a 20-year licence term, rather than the 10-year term indicated in the original application for a licence renewal, but later indicated that it would stay with its original request for a 10-year licence term.

In its [CMD 23-H2.1](#), ÉPM also requested the Commission's advice on the possibility of a waiver of the regulatory requirement for financial instruments to ensure future decommissioning, and on the possibility of accepting a formal commitment from Polytechnique Montréal, an institution made permanent by provincial legislation.

The purpose of this supplemental CMD is therefore to provide an update on the PDP and to make a recommendation on the financial guarantee proposed by ÉPM. This CMD also addresses ÉPM's request for a possible waiver from the regulatory requirement for financial instruments, as well as the issue of licence duration.

The documents referenced in this CMD are available to the public upon request, subject to confidentiality considerations.

## 1. Overview

The purpose of this supplemental CMD is to update the information on ÉPM's PDP and to make recommendations on the proposed financial guarantee. This CMD also discusses ÉPM's request for advice on a waiver of the regulatory requirement for financial instruments to ensure decommissioning of the facility.

ÉPM applied for a 20-year licence in its [CMD 23-H2.1](#), but later indicated that it would stay with its original application for a 10-year licence. CNSC staff therefore stand by their recommendations for a 10-year licence, as set out in [CMD 23-H2](#).

### 1.1. Background

On March 15, 2022, ÉPM applied for a 10-year renewal of its SLOWPOKE-2 reactor operating licence. CNSC staff's review of this application and recommendations to the Commission are documented in [CMD 23-H2](#), which was filed with the Commission Registry on January 13, 2023. Some issues regarding the assessment of the financial guarantee and the PDP as the basis for the financial guarantee could not be resolved in time for the CMD to be filed with the Registry of the Commission by the deadline. For this reason, CNSC staff committed to file a supplemental CMD with updates and recommendations on these issues.

ÉPM submitted its [CMD 23-H2.1](#) to the Registry of the Commission in which ÉPM summarized its application for licence renewal, highlighting key performance and safety aspects of the facility. ÉPM also expressed concerns regarding the financial guarantee and sought the Commission's advice on the possibility of waiving some of the regulatory requirements and accepting a formal commitment in lieu of a financial guarantee. In support of its request, ÉPM pointed out that the institution is made permanent by provincial legislation.

On February 21, 2023, ÉPM submitted a new version of its PDP and an updated financial guarantee proposal for CNSC staff's evaluation. These items are discussed in the following sections.

Three aspects are therefore addressed in this supplemental CMD, namely:

- CNSC staff's assessment of ÉPM's PDP
- The financial guarantee proposed by ÉPM
- The advice sought by ÉPM on a waiver of the regulatory requirement for financial instruments to ensure decommissioning of the facility

## 2. CNSC Staff Assessment

### 2.1. Preliminary decommissioning plan

With its licence renewal application, ÉPM submitted an updated PDP and a proposed financial guarantee. It is the responsibility of CNSC staff to determine whether the PDP meets regulatory requirements and to accept it. CNSC staff then make their

recommendations to the Commission on the financial guarantee, as it is based on the decommissioning cost estimates detailed in the PDP.

In their assessment of the PDP, CNSC staff indicated to ÉPM that it was not possible to determine whether the decommissioning costs were credible since the cost estimates did not appear to be based on a sufficiently detailed analysis in accordance with Regulatory Document [REGDOC-2.11.2, \*Decommissioning\*](#) and CSA N294-19 [1].

On February 21, 2023, ÉPM submitted a revised PDP [2]. CNSC staff reviewed the document and determined that the majority of the concerns were resolved satisfactorily, including the decommissioning cost estimate. The cost to put the facility in a safe state remained unchanged at \$2.2M while the total decommissioning cost increased from \$4.6M to \$5.4M. ÉPM provided additional details for the cost analysis and CNSC staff determined that these costs were credible. The financial guarantee can therefore be based on this cost estimate.

Some details such as the assumptions used in the cost calculations still need to be resolved in order to meet the requirements of [REGDOC-2.11.2](#), and ÉPM has committed [3] to resolving them after the April 19, 2023 hearing.

## 2.2. Financial guarantee

ÉPM is required to make adequate provision for a financial guarantee for the safe decommissioning of its reactor. In accordance with its licence, ÉPM is required to update its financial guarantee for decommissioning to ensure that it remains valid, in effect and sufficient to meet the decommissioning needs described in the most up-to date PDP.

[REGDOC-3.3.1, \*Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities\*](#) states: *Institutions that operate research reactors, such as SLOWPOKE reactors, should maintain sufficient financial guarantees in a form other than expressed commitments to bring the facility to a safe state, including removal of fuel and radioactive and hazardous materials from the site. The remaining cost for completing the decommissioning of the facility may be covered by a letter of commitment acknowledging the responsibility and liability of decommissioning. The letter of commitment must be signed by a person of authority at the institution.*

ÉPM has maintained its proposed financial guarantee described in [CMD 23-H2](#) with an updated total decommissioning amount of \$5.4 million. ÉPM is proposing a financial guarantee consisting of three financial instruments:

- A bank account, currently totaling \$750,000, which will be incremented by \$50,000 per year by ÉPM;
- A letter of credit in the amount of \$1.5 million to the CNSC. This is an increase from the current \$800,000 letter of credit;
- A letter of commitment from ÉPM acknowledging its responsibility and obligations for decommissioning and assuming full financial responsibility for the decommissioning of the SLOWPOKE reactor.

The bank account held by ÉPM for the purpose of a financial guarantee and the letter of credit total \$2.25 million, which exceeds the cost estimated in the PDP to place the facility in a safe state, which CNSC staff consider satisfactory.

The letter of commitment states that ÉPM is committed to assume all financial responsibility for the decommissioning of the SLOWPOKE reactor and this provision is also included in the Financial Security Agreement between the CNSC and ÉPM. CNSC staff determined that this instrument is acceptable.

CNSC staff requested that ÉPM review the details of the total estimated decommissioning cost in its PDP. If this total cost were to change, only the Financial Security Agreement would need to be updated with the new total amount and the instrument would be submitted to the Commission for approval, as with any other change to the financial guarantee.

### **2.2.1. Conclusion**

The proposed financial guarantee complies with the applicable regulations and CNSC staff conclude that it is valid, in effect and sufficient to meet the decommissioning requirements of the PDP. The financial guarantee is therefore acceptable.

### **2.3. Request for a waiver**

In [CMD 23-H2.1](#), ÉPM requested an opinion from the Commission on the possibility of a waiver of the regulatory requirement for financial instruments and the possibility of accepting a formal commitment from Polytechnique Montréal, an institution which ÉPM claims is made permanent by provincial law.

ÉPM also contends that this institution is a corporation created by private law, the *Loi sur la Corporation de l'École Polytechnique de Montréal*, assented to on December 14, 1987 by the National Assembly of Quebec. Section 41 of this Act states that *Notwithstanding any general or special law, the Corporation may not be dissolved unless an Act of the Parliament of Quebec is passed for that purpose.*

CNSC staff understand that ÉPM is not requesting an exemption from any financial guarantee. Rather, the financial guarantee would be fully assured by a letter of commitment from ÉPM management. It is in this context that CNSC staff assessed ÉPM's request, and the following paragraphs discuss the implications of this request.

#### **2.3.1. Regulatory requirements**

Paragraph 24(5) of the [Nuclear Safety and Control Act](#) states: *A licence may contain any term or condition that the Commission considers necessary for the purposes of this Act, including a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission.*

Paragraph 3(1)l) of the [General Nuclear Safety and Control Regulations](#) states : An application for a licence shall contain a description of any proposed financial guarantee relating to the activity to be licensed.

[REGDOC-3.3.1](#) provides guidance on financial guarantees and that a graded approach may be used in assessing financial guarantees. Part 3 of [REGDOC-3.3.1](#) states that the instrument must meet the listed acceptance criteria of liquidity; certainty of value, adequacy of value; and continuity. Paragraph 4 of [REGDOC-3.3.1](#) provides examples of

acceptable financial guarantee instruments:

- 4.1 Cash funds
- 4.2 Investment funds
- 4.3 Letters of credit
- 4.4 Surety bonds
- 4.5 Insurance
- 4.6 Expressed commitments from Canadian government entities
- 4.7 Other types of instruments that the Commission may consider.

Section 4.6 of the regulatory document [REGDOC-3.3.1](#) specifies situations such that commitments made by a Canadian federal, provincial or territorial government, including universities and hospitals, could constitute an acceptable financial security instrument.

[REGDOC-3.3.1](#) also specifies that *Institutions that operate research reactors, such as SLOWPOKE reactors, should maintain sufficient financial guarantees in a form other than expressed commitments to bring the facility to a safe state, including removal of fuel and radioactive and hazardous materials from the site. The remaining cost for completing the decommissioning of the facility may be covered by a letter of commitment acknowledging the responsibility and liability of decommissioning. The letter of commitment must be signed by a person of authority at the institution.*

## 2.3.2. Discussion

In Canada, only the Royal Military College of Canada (RMC) can compare to ÉPM as a SLOWPOKE-2 reactor operator. RMC's financial guarantee is fully assured by a letter from the Deputy Minister of National Defence, in accordance with [REGDOC-3.3.1](#). To date, ÉPM has indicated that it has not been able to produce such a commitment from the Government of Québec that would meet the requirements of [REGDOC-3.3.1](#).

The CNSC must be assured that the financial instrument ensuring that the facility can be placed in a safe state is available, and that payment for decommissioning cannot be prevented, unduly delayed or compromised for any reason. If ÉPM wishes its financial guarantee to be entirely in the form of a letter of commitment, it should demonstrate that it meets the acceptability criteria of liquidity, certainty of value, adequacy of value, and continuity.

## 3. Conclusions

CNSC staff conclude that the PDP and associated cost estimate provide a credible basis for the financial guarantee. Some details remain to be resolved in order to meet all the requirements of the regulatory document [REGDOC-2.11.2, Decommissioning](#), but these details are not significant and ÉPM has committed to resolving them within a reasonable timeframe following the public hearing.

CNSC staff assessed ÉPM's financial guarantee proposal and concluded that it is adequate to cover the decommissioning costs of ÉPM's SLOWPOKE-2 facility.

With respect to ÉPM's request for the Commission's advice on the possibility to accept a formal commitment from ÉPM as a financial guarantee, CNSC staff is not in a position to provide a recommendation since ÉPM has not provided a commitment that meets regulatory requirements. If in the future ÉPM is able to obtain a commitment from a government entity, or a commitment from ÉPM that meets the requirements of [REGDOC-3.3.1](#), CNSC staff will report to the Commission with its findings and recommendations.

## 4. Recommendations

CNSC staff recommend the Commission accept the proposed financial guarantee for the period of 2023 to 2028, consisting of :

- a bank account, with a current balance of \$750,000, which ÉPM will increase by \$50,000 annually;
- a letter of credit in the amount of \$1.5 million to the CNSC;
- a letter of commitment acknowledging ÉPM's responsibility and obligations for decommissioning, and assuming full financial responsibility for the decommissioning of the SLOWPOKE reactor.

## 5. References

1. CSA Group, CSA N294-19, *Decommissioning of Facilities Containing Nuclear Substances*, November 2019.
2. *Avant-Projet de déclasserment pour les installations SLOWPOKE de Polytechnique Montréal*, SLO-901 Rev. 6, 20 février 2023, e-Doc 6979572.
3. Email from N. Godbout to P. Tanguay, *Plan préliminaire de déclasserment*, 10 March 2023, e-Doc 6991973.

## 6. GLOSSARY

CMD	Commission Member Document
CNSC	Canadian Nuclear Safety Commission
CSA	Canadian Standards Association
ÉPM	École Polytechnique de Montréal
PDP	Preliminary Decommissioning Plan
REGDOC	Regulatory Document
RMC	Royal Military College of Canada

For definitions of terms used in this document, see [REGDOC-3.6, Glossary of CNSC Terminology](#), which includes terms and definitions used in the Nuclear Safety and Control Act and the Regulations made under it, and in CNSC regulatory documents and other publications.