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CMD: 21-H103

Date signed/Signé le : 7 APRIL 2021

7 AVRIL 2021

Request for a temporary exemption from the requirement under paragraph 9(2)(b) of the Class I Nuclear Facilities Regulations for reactor operators certified at Ontario Power Generation hired into the initial certification program at Bruce Power

Demande d'exemption temporaire de l'exigence de l'alinéa 9(2)(b) du Règlement sur les installations nucléaires de catégorie I pour les opérateurs de réacteur accrédités à Ontario Power Generation qui sont embauchés dans le programme d'accréditation initiale de Bruce Power

Hearing in writing based solely on written submissions

Audience fondée uniquement sur des mémoires

Scheduled for: April 2021

Prévue pour : Avril 2021

Submitted by:

Soumise par:

CNSC Staff

Le personnel de la CCSN

eDocs 6357362 (WORD) eDocs 6434920 (PDF)

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Summary

This CMD pertains to a matter regarding:

A request from Bruce Power for a temporary exemption under paragraph 9(2)(b) of the Class I Nuclear Facilities Regulations for section 23.1.2(2) for minimum experience and section 23.2.1 for General training for the application of REGDOC-2.2.3 Volume III: Certification of Persons Working at Nuclear Power Plants for reactor operators certified at Ontario Power Generation (OPG) and hired into the initial certification program at Bruce Power.

The following actions are requested of the Commission:

Accept CNSC staff's recommendation to grant in accordance with section 7 of the Nuclear Safety and Control Act and section 11 of the General Nuclear Safety Control Regulations, a temporary exemption under paragraph 9(2)(b) of the Class I Nuclear Facilities Regulations for section 23.1.2(2) for the application of REGDOC-2.2.3 Volume III for minimum experience for reactor operators certified at OPG and hired into the initial certification program at Bruce Power and authorize the use of a replacement minimum experience requirement of six months at the plant where certification is sought through the completion of a structured Learning Package, as detailed in Appendix B.1 of this CMD.

Résumé

Le présent CMD porte sur la question suivante:

La demande présentée par Bruce Power en vue d'obtenir une exemption temporaire, aux termes de l'alinéa 9(2)b) du Règlement sur les installations nucléaires de catégorie I, de l'application de la section 23.1.2(2) sur l'expérience minimale et de la section 23.2.1 sur la formation générale du REGDOC-2.2.3, tome III: Accréditation des personnes qui travaillent dans des centrales nucléaires à l'endroit des opérateurs de réacteurs accrédités par Ontario Power Generation (OPG) et embauchés dans le programme d'accréditation initiale de Bruce Power.

On demande à la Commission de prendre les mesures suivantes :

Accepter la recommandation du personnel de la CCSN d'accorder, conformément à l'article 7 de la Loi sur la sûreté et la réglementation nucléaires et à l'article 11 du Règlement général sur la sûreté et la réglementation nucléaires, une exemption temporaire, aux termes de l'alinéa 9(2)b) du Règlement sur les installations nucléaires de catégorie I, de l'application de la section 23.1.2(2) sur l'expérience minimale du REGDOC-2.2.3, tome III: Accréditation des personnes qui travaillent dans des centrales nucléaires à l'endroit des opérateurs de réacteurs accrédités OPG et embauchés dans le programme d'accréditation initiale de Bruce Power. Autoriser également l'utilisation d'une exigence de rechange sur l'expérience minimale de six mois à la centrale pour laquelle

Accept CNSC staff's recommendation to grant in accordance with section 7 of the Nuclear Safety and Control Act and section 11 of the General Nuclear Safety Control Regulations, a temporary exemption under paragraph 9(2)(b) of the Class I Nuclear Facilities Regulations for section 23.2.1 for the application of REGDOC-2.2.3 Volume III for General training for reactor operators certified at OPG and hired into the initial certification program at Bruce Power and authorize the transfer of General training credits to Bruce Power for the completion of General training.

- l'accréditation est demandée; cette expérience sera acquise par l'intermédiaire d'une série de cours structurés qui est décrite à l'annexe B.1 du présent CMD.
- Accepter la recommandation du personnel de la CCSN d'accorder, conformément à l'article 7 de la Loi sur la sûreté et la réglementation nucléaires et à l'article 11 du Règlement général sur la sûreté et la réglementation nucléaires, une exemption temporaire, aux termes de l'alinéa 9(2)b) du Règlement sur les installations nucléaires de catégorie I, de l'application de la section 23.2.1 sur la formation générale du REGDOC-2.2.3, tome III: Accréditation des personnes qui travaillent dans des centrales nucléaires à l'endroit des opérateurs de réacteurs accrédités par OPG et embauchés dans le programme d'accréditation initiale de Bruce Power. Autoriser également le transfert à Bruce Power des crédits de formation générale pour l'achèvement d'une formation générale.

Signed/signé le

7 April 2021/7 avril 2021

Digitally signed by Viktorov, Alexandre DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Viktorov, Alexandre" Reason: I am approving this document Location: your signing location here Date: 2021-04-07 15:24:48 Foxit PhantomPDF Version: 9.7.1

A. Viktorov, Ph.D.

Director General / Directorate of Power Reactor Regulation Directeur général / Direction de la réglementation des centrales nucléaires

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EXECUTIVE SUMMARY

Licensees must meet the requirements of REGDOC-2.2.3 Volume III: *Certification of Persons Working at Nuclear Power Plants* when certifying persons working in designated positions that have a direct impact on nuclear safety at a nuclear power plant (NPP). Section 23 of REGDOC-2.2.3 Volume III provides the initial certification requirements for reactor operators.

Bruce Power has requested that an alternate approach be accepted for sections 23.1.2(2) and 23.2.1 of REGDOC-2.2.3 Volume III dealing specifically with minimum experience and General training, respectively. The alternate approach would apply to certified reactor operators from an Ontario Power Generation (OPG) NPP hired by Bruce Power in the initial certification program. The current version of REGDOC-2.2.3 Volume III did not consider the potential for certified staff to relocate to another NPP and therefore does not allow certifications and associated qualifications to be transferred when a certified reactor operator is hired into the initial certification program at another NPP. CNSC staff plan to address personnel transfer requirements in the next amendment of REGDOC-2.2.3 Volume III, which is expected to be published in 2022.

The alternate approach can be implemented, as requested by Bruce Power, through a temporary exemption under section 7 of the *Nuclear Safety and Control Act* and Section 11 of the *General Nuclear Safety and Control Regulations* from the requirement under paragraph 9(2)(b) of the *Class I Nuclear Facilities Regulations* for section 23.1.2(2) for minimum experience and section 23.2.1 for General training for the application of REGDOC-2.2.3 Volume III and the use of replacement requirements.

CNSC staff reviewed the Bruce Power request and concluded the temporary exemption is reasonable and does not have an impact on the safety envelope. The temporary exemption would address the situation of certifications of reactor operators previously certified at OPG and hired into the initial training program at Bruce Power. The temporary exemption would be in effect until this situation is addressed through an amendment to REGDOC-2.2.3 Volume III.

1 OVERVIEW

1.1 Background

In late November 2020, Bruce Power requested [1] that an alternate approach be authorized for REGDOC-2.2.3 Volume III *Certification of Persons Working at Nuclear Power Plants* for the minimum experience and General training requirements for reactor operators at Ontario Power Generation (OPG) hired into the initial certification program at Bruce Power.

The first requirement in the request is for minimum experience and is found in section 23.1.2(2) of REGDOC-2.2.3 Volume III. The requirement states:

"The person must have a minimum of two years of plant experience at the NPP where certification is sought, or an acceptable alternative to this experience. Acceptable alternatives are: ... (2) two years of plant experience at any NPP of the same type and at least one year of additional plant experience at the NPP where certification is sought."

Bruce Power requested that the CNSC accept an alternate approach for reactor operators previously certified at an OPG NPP to require six months of additional plant experience at the NPP where certification is sought instead of one year through the completion of a structured Learning Package as detailed in Appendix B.1 of this CMD.

The second requirement in the request is for General training, referenced in section 23.2.1 of REGDOC-2.2.3 Volume III. The requirement states:

"The person must have completed training, appropriate to the knowledge requirements of the position, covering:

- 1. science fundamentals relevant to the operation of the NPP where certification is sought; and
- 2. principles of operation of the equipment at that NPP."

Bruce Power requested an alternate approach where the General training credits obtained at an OPG NPP could be considered valid at Bruce Power as part of the initial certification program of the candidate.

The current version of REGDOC-2.2.3 Volume III does not allow certifications and associated qualifications to be transferred when a reactor operator certified at one NPP is hired into the initial certification program at another NPP. CNSC staff plan to address personnel transfer requirements in the next amendment of REGDOC-2.2.3 Volume III, which is expected to be published in 2022.

The Bruce Power submission [1] was refined to a request [2] for a temporary exemption under section 7 of the *Nuclear Safety and Control Act* and section 11 of the *General Nuclear Safety and Control Regulations* from the requirement

under paragraph 9(2)(b) of the *Class I Nuclear Facilities Regulations* for section 23.1.2(2) for minimum experience and section 23.2.1 for General training for the application of REGDOC-2.2.3 Volume III.

CNSC staff have reviewed the Bruce Power request and concluded that granting a temporary exemption together with the use of an alternate approach for meeting the requirements of REGDOC-2.2.3 Volume III for the certification of reactor operators previously certified at OPG and hired into the initial training program at Bruce Power will have a neutral impact on the safe operation of the NPP.

2 MATTERS FOR CONSIDERATION

2.1 Regulatory Basis

Section 7 of the NSCA gives the Commission the authority to, "in accordance with the regulations, exempt any activity, person, class of person or quantity of a nuclear substance, temporarily or permanently, from the application of this Act or the regulations or any provision thereof".

Furthermore, section 11 of the GNSCR provides that "For the purpose of section 7 of the Act, the Commission may grant an exemption if doing so will not

- (a) pose an unreasonable risk to the environment or the health and safety of persons;
- (b) pose an unreasonable risk to national security; or
- (c) result in a failure to achieve conformity with measures of control and international obligations to which Canada has agreed".

Persons working in positions that have a direct impact on nuclear safety at a NPP, as identified in the Power Reactor Operating Licences (PROLs), must be certified in accordance with subsection 9(2) of the CINFR. Paragraph 9(2)(b) of the CINFR states that "The Commission or a designated officer authorized under paragraph 37(2)(b) of the Act may certify a person referred to in paragraph 44(1)(k) of the Act for a position referred to in a licence after receiving from the licensee an application stating that the person has successfully completed the applicable training program and examination referred to in the licence".

The applicable training program and examination are specified in the certification programs required for Bruce Power in Licence Condition 2.4, "The licensee shall implement and maintain certification programs in accordance with CNSC regulatory document, CNSC REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants..."

REGDOC-2.2.3 Volume III defines the requirements regarding the certification of persons who work at NPPs in positions that have a direct impact on nuclear safety such as shift supervisors or reactor operators.

The specific sections of REGDOC-2.2.3 Volume III which are relevant to this CMD are:

Section 23.1.2(2): "The person must have a minimum of two years of plant experience at the NPP where certification is sought, or an acceptable alternative to this experience. Acceptable alternatives are: ... (2) two years of plant experience at any NPP of the same type and at least one year of additional plant experience at the NPP where certification is sought."

<u>Section 23.2.1</u>: "The person must have completed training, appropriate to the knowledge requirements of the position, covering:

- 1. science fundamentals relevant to the operation of the NPP where certification is sought; and
- 2. principles of operation of the equipment at that NPP."

2.2 Technical Basis

CNSC staff performed a technical assessment [3] of the licensee's request for approval of a temporary exemption from sections 23.1.2(2) and 23.2.1 of REGDOC-2.2.3 Volume III and the use of replacement requirements for minimum experience and General training.

The minimum plant experience requirement (section 23.1.2 of REGDOC-2.2.3 Volume III) does not qualify the nature of the plant experience and it also does not recognize the depth of knowledge, skills and attributes that a certified reactor operator from another NPP possesses. For example, a field operator, a radiation specialist and a certified reactor operator seeking certification at Bruce Power with two years of plant experience from another NPP of the same type would all be recognized as having the same basic plant experience and would require one additional year of plant experience at Bruce Power. Since a certified reactor operator possesses relevant knowledge, skills and attributes that vastly exceed that of candidates from non-certified roles (e.g., field operator, radiation specialist), it follows that the required plant familiarity at the NPP where certification is sought should be reduced for the certified reactor operator.

The purpose of the minimum plant experience requirement is twofold. Firstly, it provides Operations Management an opportunity to observe candidates in the field and assess if their personal traits and values are well aligned with the culture and values of the organization. Secondly, it provides candidates a basic plant familiarity on which to successfully acquire the remaining knowledge, skills and abilities of the certification program.

The six-month plant experience proposed by Bruce Power will be fulfilled through the implementation of a structured Learning Package that provides exposure to operational and administrative processes that are specific to certified operators. Although the proposed six-month plant familiarization is shorter than the one-year requirement, CNSC staff concluded that the specificity of the structured Learning Package would ensure that candidates are fully prepared to undertake the initial certification program for reactor operators at Bruce Power.

It is important to note that as part of the structured Learning Package, Bruce Power will be conducting an oral board to provide Operations Management with an opportunity to ascertain that prospective candidates satisfy the relevant standards in effect at the station. This board interview is another program feedback that complements the field observation to ensure that the right candidates with the right attributes enter the initial certification program.

In summary, recognizing the depth of knowledge, skills and attributes of a certified operator from OPG coupled with Bruce Power's personalized structured Learning Package, the six-month reduction in plant experience does not pose an unreasonable risk as it relates to fulfilling the minimum experience requirement as outlined in section 23.1.2 of REGDOC-2.2.3 Volume III.

The General training program, developed from the requirements given in section 23.2.1 of REGDOC-2.2.3 Volume III, is identical amongst NPP licensees in Canada. It addresses science fundamentals and equipment principles and therefore does not discriminate design variations across NPPs in Canada. Candidates would receive the same General training at either Bruce Power or OPG. The candidates being considered under the Bruce Power request have already successfully completed General training and certification examination by virtue of being certified as reactor operators at OPG. The candidates are also partaking in continuing training, formal evaluations and requalification testing at OPG, which ensure that General knowledge is applied and maintained.

The current version of REGDOC-2.2.3 Volume III does not include personnel transfer requirement for certified reactor operators seeking certification at another NPP. This is the reason for the need for a temporary exemption for General training for the reactor operators certified at OPG and to allow the transfer to Bruce Power of General training credits obtained at OPG.

As a result of this request, candidates would only be exempted from the General training and General certification examination within the initial training program. They would still have to undertake the rest of the initial training program starting with the Radiation Protection training. The Radiation Protection training credits from OPG cannot be transferred to Bruce Power as the Radiation Protection training includes coverage of the radiation protection procedures used during normal, abnormal and emergency operation that are specific to the NPP where certification is sought. To be clear, once the candidates obtain six-months of plant experience at Bruce Power, they would undertake the rest of the initial

certification program for reactor operators starting with the Radiation Protection training in accordance with section 23.2.2 of REGDOC-2.2.3 Volume III.

In addition, the initial certification program contains other program elements after the General training. Notably, the first phase of the Co-Piloting program and the On-the-Job Training program provide further candidate exposure to field operation and control room operating practices under mentorship. Certified operators from OPG would have to successfully complete these program elements as part of their initial certification training at Bruce Power.

By virtue of the candidates' certified operator status at OPG, the requirement for General training stated in section 23.2.1 and the requirement for the General certification examination in section 23.3.1 of REGDOC-2.2.3 Volume III have in effect been fulfilled. With the candidates attending continuing training and partaking in formal evaluations and requalification testing at OPG, General knowledge continues to be applied and maintained.

Based on the information provided by Bruce Power [1, 2] and CNSC staff's assessment [3], CNSC staff conclude that the temporary exemption from sections 23.1.2(2) and 23.2.1 of REGDOC-2.2.3 Volume III and the use of replacement requirements satisfactorily address initial certification requirements for minimum experience and General training for reactor operators that were previously certified at OPG and hired into the initial training program at Bruce Power. CNSC staff conclude that the application of a temporary exemption will have negligible or no unreasonable impact on health, safety, the environment, security, or safeguards.

The temporary exemption will remain in effect until a new revision of REGDOC-2.2.3 Volume III that includes personnel transfer requirements is published, expected in 2022.

3 OTHER MATTERS FOR CONSIDERATION

3.1 Environmental Protection Review

CNSC staff have reviewed the request under the NSCA and concluded that, given the negligible affect on safety of the proposed request, there are no impacts to the environment.

3.2 Indigenous Consultation

The common law duty to consult with Indigenous peoples applies when the Crown contemplates actions that may adversely affect potential or established Indigenous and/or treaty rights. Given that the proposed exemption will have a negligible affect on safety and will not result in changes to the physical footprints of the sites, they will not cause adverse impacts to any Indigenous and/or treaty rights. Therefore, based on the information provided in the application, CNSC staff have determined that the duty to consult does not arise in relation to the

proposed exemption. In the interest of building and maintaining relationships with Indigenous peoples, CNSC staff will be open to answering any questions about the proposed exemption should any Indigenous groups express interest.

3.3 Participant Funding Program (PFP) Determination

As the requested Commission proceeding is a panel of one with no written or oral interventions from Indigenous groups and members of the public, CNSC staff determined that no participant funding would be offered. However, should the format of the proceeding change, CNSC staff will re-evaluate this determination.

4 OVERALL CONCLUSIONS AND RECOMMENDATIONS

CNSC staff concluded that the temporary exemption, as described in this CMD, under section 7 of the *Nuclear Safety and Control Act* from the requirement under paragraph 9.2(b) of the *Class I Nuclear Facilities Regulations* for sections 23.1.2(2) and 23.2.1 for the application of REGDOC-2.2.3 Volume III, and the use of replacement requirements for reactor operators certified at OPG and hired into the initial certification program at Bruce Power, if granted by the Commission, will not pose an unreasonable risk to the environment or the health and safety of persons; pose an unreasonable risk to national security; or result in a failure to achieve conformity with measures of control and international obligations to which Canada has agreed.

Therefore, CNSC staff recommend the following:

- The Commission accept CNSC staff's assessment and conclusions outlined in this CMD.
- The Commission grant in accordance with section 7 of the *Nuclear Safety* and *Control Act* and section 11 of the *General Nuclear Safety Control* Regulations, a temporary exemption under paragraph 9(2)(b) of the Class I Nuclear Facilities Regulations for section 23.1.2(2) for the application of REGDOC-2.2.3 Volume III for minimum experience for reactor operators certified at OPG and hired into the initial certification program at Bruce Power and authorize the use of a replacement minimum experience requirement of six months at the plant where certification is sought through the completion of a structured Learning Package, as detailed in Appendix B.1 of this CMD.
- The Commission grant in accordance with section 7 of the *Nuclear Safety* and *Control Act* and section 11 of the *General Nuclear Safety Control Regulations*, a temporary exemption under paragraph 9(2)(b) of the *Class I Nuclear Facilities Regulations* for section 23.2.1 for the application of REGDOC-2.2.3 Volume III for General training for reactor operators certified at OPG and hired into the initial certification program at Bruce Power and authorize the transfer of General training credits to Bruce Power for the completion of General training.

REFERENCES

1. Bruce Power Letter, M. Burton to M. Leblanc, "Alternate Approach for Minimum Experience and Generals Training requirements for Personnel Certified at Ontario Power Generation hired into the Initial Certification Program at Bruce Power", November 30, 2020, BP-CORR-00531-00809, e-Doc 6433624.

- 2. Bruce Power Letter, M. Burton to M. Leblanc, "Request for a temporary exemption under section 7 of the Nuclear Safety and Control Act and section 11 of the General Nuclear Safety and Control Regulations", March 30, 2021, BP-CORR-00531-01481, e-Doc 6527264.
- 3. CNSC Memo, F. Newbury to D. Sims, "Analysis and Recommendation Alternate Approach for Minimum Experience and Generals Training Requirements for Reactor Operators Certified at Ontario Power Generation Hired into the Initial Certification Program at Bruce Power", January 18, 2021, e-Doc 6450123, *PROTECTED A*.

ACRONYMS

ANO Authorized Nuclear Operator

ANOIT Authorized Nuclear Operator-in-Training

CBT Computer Based Training

CINFR Class I Nuclear Facilities Regulations
CMD Commission Member Document

CRO Control Room Operator

CROIT Control Room Operator-in-Training
CRSS Control Room Shift Supervisor

CRSSIT Control Room Shift Supervisor-in-Training

DOM Duty Outage Manager
EFOs Emergency Field Operations
EME Emergency Mitigating Equipment

GNSCR General Nuclear Safety and Control Regulations

IDP Individual Development PlanMCR Major Component Replacement

NPP nuclear power plant

NSCA Nuclear Safety and Control Act **Operations Control Centre OCC** OFI **Operator Field Inspection OPG** Ontario Power Generation **Projects Control Centre PCC PFP** Participant Funding Program **PROL** power reactor operating licence **U0CRO** Unit 0 Control Room Operator

A. BASIS FOR THE RECOMMENDATIONS

A.1 Regulatory Basis

The regulatory basis for the recommendations presented in this CMD is as follows:

- Nuclear Safety and Control Act, section 7
- General Nuclear Safety Control Regulations, sections 11, 12(1)(a) and 12(1)(b)
- Class I Nuclear Facilities Regulations, subsection 9(2)
- CNSC REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants

B. BRUCE POWER LEARNING PACKAGE

B.1 Requirements of the Bruce Power Learning Package for section 23.1.2(2) of REGDOC-2.2.3 Volume III

The Bruce Power Learning Package for partial satisfaction of the requirements of section 23.1.2(2) of REGDOC-2.2.3 Volume III will include the following requirements:

- 1. Completion of relevant Computer Based Training (CBTs) associated with General Employee and Plant Access Training.
- 2. Assigning of a certified mentor currently working in the main control room.
- 3. Completion of Individual Development Plan (IDP) FORM-14113 Certification Training Program Entry Individual Development Plan.
 - a. Includes completion of FORM-12365 Certification Training Prerequisite MCR Familiarization for ANOIT, CROIT and CRSSIT Candidates
- 4. Completion of field walk down of all general Operator Field Inspections (OFIs) related to the certified position being sought.
- 5. Completion of field walk down of all specific OFIs related to the certified position being sought.
- 6. Completion of GRP-OPS-00003 Certification Training Co-Pilot procedure section related to Operations Processes and Administrative Processes (Appendix B Sections 4.3 and 4.4 for Authorized Nuclear Operator (ANO), Appendix A Sections 4.3 and 4.4 for Control Room Shift Supervisor (CRSS), and Appendix C Sections 4.3 and 4.4 for Unit 0 Control Room Operator (U0CRO)).
- 7. Completion of field walk downs of all Emergency Field Operations (EFOs) for the station where certification is sought.
- 8. Completion of field walk downs of all Emergency Mitigating Equipment (EME) guides for the station where certification is sought.
- 9. Vault tour at the station where certification is sought (dependent on outage schedule).
- 10. A single shift shadowing a Duty Outage Manager (DOM) during an outage shift in an Operations Control Centre (OCC).
- 11. A single shift shadowing a DOM during a shift in the Projects Control Centre (PCC) for Major Component Replacement (MCR) project.

12. Completion of an oral board with Operations Management prior to entry to station systems training in the authorization program. The intent of the oral board is to evaluate/assess requisite knowledge for entry into certification training program and ensure the required acclimation has been demonstrated.