



# CMD 24-H110.A - CNSC Staff Submission

**Reference Package for CMD 24-H110 - Application by Bruce Power, Ontario Power Generation and New Brunswick Power for the Amendment of their Power Reactor Operating Licences to implement REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2**

<b>Classification</b>	UNCLASSIFIED
<b>Type of CMD</b>	References
<b>CMD Number</b>	24-H110.A
<b>Original CMD</b>	24-H110
<b>Public hearing date</b>	
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<b>Summary</b>	This supplemental CMD includes all publicly available documents referenced in CNSC staff CMD 24-H110.
<b>Actions required</b>	There are no actions requested of the Commission. This CMD is in support of the actions and recommendations set out in CNSC staff CMD 24-H110.



## **CMD 24-H110.A**

# **Reference Package for CMD 24-H110 - Application by Bruce Power, Ontario Power Generation and New Brunswick Power for the Amendment of their Power Reactor Operating Licences to implement REGDOC- 2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2**

**Signed by:**

X

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Alex Viktorov

Director General, DPRR



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- 1. CNSC Commission Member Document, CMD 23-M22, Submission from CNSC staff on REGDOC-2.2.3, Volume III, Version 2, June 2023**





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ORIGINAL/ORIGINAL

CMD : 23-M22

Date signed/Signé le : 9 JUNE 2023

Approve Regulatory Document

Approuver le document d'application de la  
réglementation

**REGDOC-2.2.3, *Personnel  
Certification, Volume III:  
Certification of Reactor  
Facility Workers, Version 2***

**REGDOC-2.2.3,  
*Accréditation du personnel,  
tome III : Accréditation des  
travailleurs des installations  
dotées de réacteurs, version 2***

Public Meeting

Réunion publique

Scheduled for:  
June 28, 2023

Prévue pour le :  
28 juin 2023

Submitted by:  
CNSC Staff

Soumis par :  
Le personnel de la CCSN

**Summary**

This CMD pertains to a request for a decision regarding:

- draft regulatory document  
REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*

The following action is requested of the Commission:

- approve draft REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*

The following items are attached:

- draft REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*
- detailed comments table

**Résumé**

Ce document à l'intention des commissaires (CMD) concerne une demande de décision au sujet de :

- l'ébauche du document d'application de la réglementation REGDOC-2.2.3, *Accréditation du personnel, tome III : Accréditation des travailleurs dans des installations dotées de réacteurs, version 2*

La Commission pourrait considérer prendre la mesure suivante :

- approuver l'ébauche du REGDOC-2.2.3, *Accréditation du personnel, tome III : Accréditation des travailleurs dans des installations dotées de réacteurs, version 2*

Les pièces suivantes sont jointes :

- l'ébauche du REGDOC-2.2.3, *Accréditation du personnel, tome III : Accréditation des travailleurs dans des installations dotées de réacteurs, version 2*
- le tableau des réponses aux commentaires reçus

**Signed/signé le**

June 9, 2023/9 juin 2023

A handwritten signature in blue ink that reads "DBeaton".

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Dana Beaton

**Director General**

Regulatory Policy Directorate

**Directrice générale de la**

Direction de la politique de réglementation

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## EXECUTIVE SUMMARY

Regulatory document REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2 sets out requirements and guidance for the certification of reactor facility workers by the CNSC.

REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2* provides increased flexibility to licensees in managing staff and in developing and implementing their training. Moreover, it sets performance-based, technology-neutral requirements as the basis for the development of the pertinent programs at future, non-CANDU sites. Finally, the removal of the validity periods from knowledge-based certification examinations provides licensees with significant added flexibility, which should alleviate reported candidate recruitment and retention issues, particularly with regards to persons planning to start a family. Based on evidence, CNSC staff concluded that the existing validity periods did not constitute an effective means of knowledge decay prevention; however, candidates would continue to undergo a series of exams prior to certification.

The fundamentals from REGDOC-2.2.3, Volume III, Version 1 have been preserved in Version 2. The only entirely new, major requirement is the implementation of a performance-based personnel selection program, which is primarily intended to guide the recruitment of personnel at future reactor facilities. CANDU reactor licensees already maintain personnel selection programs meeting the minimum requirements.

The layout of the REGDOC has been completely redesigned to facilitate the subsequent inclusion of non-CANDU facilities, reduce the document's length, eliminate repetition, and provide a more intuitive layout.

During the consultation period, the CNSC received 139 comments from six stakeholders, including three nuclear reactor licensees. Representative comments and CNSC staff responses are provided below. Although given the opportunity, neither environmental non-governmental organizations, nor Indigenous peoples commented on the REGDOC. In addition to the formal consultation process, CNSC staff had ongoing discussions during analysis with the industry, notably through the Certification Training Advisory Group (CTAG).

This revision will have positive impacts on regulatory oversight as well as on licensee operations by addressing known regulatory gaps and reducing administrative burden, while ensuring nuclear reactor workers employed in designated positions have the necessary knowledge, skills, and safety-related attributes to perform their duties effectively and safely.

CNSC staff concluded that this REGDOC is ready for final approval by the Commission for publication.

# 1 OVERVIEW

## 1.1 Background

REGDOC-2.2.3, Volume III, Version 2 specifies detailed requirements and provides guidance regarding the certification of the reactor facility workers employed or seeking employment in designated positions at reactor facilities, excluding research reactors.

The original personnel certification regulatory document for Nuclear Power Plants (NPP) workers, RD-204, *Certification of Persons Working at Nuclear Power Plants*, was published in 2008. As part of the rebranding initiative, RD-204 was republished in 2019 as REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants*. The purpose of the rebranding initiative was to update legacy regulatory documents to the new REGDOC nomenclature and numbering system. All regulatory documents were migrated to the CNSC's new framework structure.

REGDOC-2.2.3, Volume III, Version 1 included a single amendment relating to the validity periods for knowledge-based certification examinations. CNSC changed the maximum length of the extension of validity periods for knowledge-based certification examinations, currently possible under Subpart F, from one year to three years after completing the technical analysis (e-Doc #5916147), which included a Gender-Based Analysis Plus (GBA+) component. This change was designed to allow licensees to recruit additional, suitable candidates for positions requiring CNSC certification, particularly persons planning to start a family. This change did not change any knowledge requirements only the validity periods after a candidate had passed an exam.

An extensive revision of REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 1*, was conducted to incorporate CNSC's regulatory experience, feedback from the relevant practitioners at reactor facilities, and gender and as well as non-gender-based GBA+ considerations. Based on the analysis conducted by CNSC staff, it was determined that the document should be revised to ensure ease of use, standardization, regulatory clarity, regulatory coherence, reduction of burden, completeness, and shelf life.

The main objectives of this revision were:

- Balancing a performance-based approach with prescriptive objectives to:
  - promote licensee ownership, innovation, and best practice; and
  - prepare for the future via technology-neutral requirements;
- clarifying the regulatory intent via an improved document layout, new and updated terminology, and addition of guidance;
- making pragmatic choices to reduce burden by eliminating complexity of limited safety pay-off;

- creating a comprehensive reference, particularly to:
  - include requalification requirements and unpublished expectations;
  - reference complementary REGDOCs published after 2008; and
- making regulatory improvements by leveraging lessons-learned.

Generally, the changes proposed are modifications to existing requirements. The fundamentals remain, but the CANDU-centric, prescriptive requirements have been made technology-neutral where possible, and new processes are recommended as necessary to address known regulatory gaps. The only entirely new major requirement is the implementation of a performance-based personnel selection program — designed to guide the selection of suitable candidates at future reactor facilities; programs meeting the minimum requirements are already implemented at CANDU facilities. The REGDOC continues to require that candidates undergo a series of exams, including a final exam in a reactor simulator, prior to certification.

## 1.2 Highlights

Personnel certification is intended to provide additional assurance of the safety and competence of certified workers while employed in positions of immediate relevance to nuclear safety, as designated in operating licences. Personnel certification is an independent attestation, by the certifying body, which is also the regulator in the present case, of worker competency, in the interest of public safety and public trust. [REGDOC-3.6, \*Glossary of CNSC Terminology\*](#) defines certification as a “written attestation from the Commission, or from a designated officer authorized by it, that a person is qualified to carry out licensed activities (including the duties of a given position)”. If approved, this REGDOC will apply to:

- workers requiring CNSC certification at Class IA nuclear facilities other than research reactors;
- licensees operating the said reactor facilities; and
- personnel involved in the training and evaluation, or the certification examination and requalification testing, of the pertinent workers.

REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*, provides the detailed requirements and guidance for the certification of the reactor facility workers employed or seeking employment in the following designated positions:

- auxiliary systems operator (ASO) (aka Unit-0 Control Room Operator);
- reactor operator (RO) (aka Authorized Nuclear Operator, Control Room Operator);
- shift supervisor (aka Shift Manager, Control Room Shift Supervisor); and

- senior health physicist (SHP) (aka Authorized Health Physicist, Responsible Health Physicist).

The layout of the REGDOC has been completely redesigned to include existing processes previously undocumented, allow for the eventual inclusion of compliance schemes applicable to non-CANDU facilities, reduce the length of the document, remove repetition, and make its usage more intuitive. REGDOC-2.2.3, Volume III, Version 2 comprises three parts:

- Part I describes the regulatory and procedural provisions of the CNSC personnel certification scheme relevant to reactor facility workers;
- Part II describes the organizational and physical infrastructures that must be implemented by the licensee to support the personnel certification scheme described in Part I and achieve the worker qualifications specified in Part III; and
- Part III specifies the prerequisites that reactor facility workers must meet to be eligible for the personnel certification processes described in Part I.

Some of the key regulatory changes documented in Version 2 based on the revision objectives include:

- a shift toward more performance-based, technology-neutral requirements overall, while retaining sufficient prescriptiveness to maintain a standardized, hence fair, personnel certification scheme for all candidates and certified workers;
- the removal of prescriptive education and experience prerequisites in favor of performance-based requirements as basis for the implementation of fair and effective personnel selection programs, notably for non-CANDU operations;
- the removal of prescriptive training topics and sequence consistently with the systematic approach to training (SAT) mandated by REGDOC-2.2.2 and implemented at CANDU sites after 2008;
- the removal of a distinct certification process for Shift Managers (SM) employed at multi-unit CANDU sites and the issue of a single certification for all shift supervisors, addressing long-standing SM employment issues;
- the removal of the validity periods from all knowledge-based certification examinations to address reported candidate recruitment and retention issues;
- the replacement of threefold, two-tier minimum shift requirement scheme with a universal four (4) shifts/quarter requirement, significantly reducing burden for CNSC and licensee staffs without negatively impacting safety;
- the addition of new and existing (but previously undocumented) standardized processes to address known regulatory gaps; and



- the use of guidance and explicit expectations to clarify the regulatory intent, thereby addressing longstanding regulatory interpretation issues.

CNSC staff expects REGDOC-2.2.3, Volume III, Version 2 to have positive impacts on both regulatory oversight and licensee operations, such as:

- supporting the submission of compliant personnel certification applications;
- assuring and assisting licensee compliance;
- reducing administrative and regulatory burden by simplifying complex requirements;
- clarifying terminology;
- clarifying regulatory interpretations;
- resolving known regulatory issues, such as the employment of shift managers;
- establishing new standard processes to address modern employment realities, including personnel transfer between reactor facilities and the post-retirement employment of certified workers; and
- alleviating candidate recruitment and retention issues previously reported and only partially addressed in Version 1.

## 2 CONSULTATION

During analysis, CNSC staff had ongoing discussions with the industry, notably trainers and examiners employed by licensees, and representatives from the CANDU Owners Group (COG) and the Driving Advancement of Women in Nuclear (DAWN)<sup>1</sup>.

In addition, management representatives from industry and CNSC staff regularly met to discuss the revision of REGDOC-2.2.3, Volume III during CTAG meetings.

A draft version of REGDOC-2.2.3, Volume III, Version 2 was issued for a 106-day public consultation period beginning on July 4<sup>th</sup>, 2022, and ending on October 18<sup>th</sup>, 2022.

During the consultation period, the CNSC received 139 comments from six stakeholders, including three nuclear reactor licensees; namely:

- Bruce Power
- Ontario Power Generation
- New Brunswick Power

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<sup>1</sup> DAWN is a group of Canadian leaders and influencers from the nuclear sector who are championing gender equity. The initiative aims to remove structural and cultural barriers for women to establish successful careers in the nuclear sector.

- Canadian Nuclear Association
- GE- Hitachi Nuclear Energy
- Froats and Froats Associates

Neither environmental non-governmental organizations, nor Indigenous peoples commented on the REGDOC. While no formal indigenous consultation was held, Indigenous peoples were informed using our regular communications channels, including email to subscribers, social media posts and emails to users of Let's Talk Nuclear Safety. CNSC's Indigenous and Stakeholder Relations Division confirmed that the topic of personnel certification was not one that Indigenous communities have expressed interest in discussing with the CNSC in more detail.

A workshop was held on February 16<sup>th</sup>, 2023 with representatives of nuclear reactor licensees and COG to discuss how CNSC staff addressed their comments. Industry requested clarification and underlined some implementation challenges, which were satisfactorily addressed by CNSC staff without any negative effect on safety. Despite the number of comments initially received, the industry publicly expressed support for the document after the workshop.

The following comments offered during the consultation activities may be of particular interest:

#### **Comment 1: Applicability and implementation at new facilities**

Stakeholders raised concerns regarding applicability and ability to implement at new facilities, such as Small Modular Reactors (SMRs).

##### **CNSC staff response:**

The revised REGDOC was developed to be less specific to nuclear power plants and to provide flexibility for future facilities. It is more performance-based and less CANDU-centric in anticipation of new facilities, including, but not limited to, SMRs. The document structure was also revised to allow for the addition of new designated positions and compliance schemes in the future.

Furthermore, the CNSC's licensing process is largely performance-based, allowing for flexibility. A graded approach will allow for the combined use of the proposed REGDOC, existing licensing guides, and future licence conditions handbooks (LCH). This combined approach is meant to deal effectively with the commissioning and licensing challenges posed by new technology and novel concepts of operations (COO).

Finally, many of the relevant concerns were largely based on vendor's familiarity with the US context, since the USNRC sets detailed, but more prescriptive, operator licensing requirements, notably during construction and commissioning.

No change was applied to the proposed REGDOC as a result of Comment 1.

#### **Comment 2: Use of subjective and prescriptive wording**

Industry commented that the draft REGDOC included subjective wording throughout the document (e.g., acceptable, suitable, effective, comprehensive).

They also commented on terms that seemed overly prescriptive (e.g., applicable, relevant, mandated).

**CNSC staff response:**

The proposed draft was reviewed post-consultation and some minor changes were applied to remove unnecessary subjective and prescriptive wording.

However, given that the revised REGDOC represents a fundamental departure from the past prescriptive approach, in favor of a hybrid, more performance-based personnel certification scheme, CNSC staff have maintained the use of qualitative metrics wherever the use of quantitative metrics was undesirable or impossible.

This usage is consistent with other REGDOCs. In order to discharge their duties under the Act, CNSC staff must be able to exercise some professional judgment in overseeing compliance. CNSC staff must also have the option to disagree with licensee staff, especially in the context of a performance-based regulatory approach.

Minor changes only were applied to the proposed REGDOC as a result of Comment 2.

**Comment 3: Perceived conflict with SAT programs**

Industry found the REGDOC seemed to undermine the systematic approach to training (SAT) that licensees have in place. Additionally, they noted that the document and REGDOC-2.2.2, *Personnel Training* had some overlap.

**CNSC staff response:**

The revised REGDOC-2.2.3 neither undermines nor contradicts any training system, including the SAT already implemented at CANDU sites. The introduction of generic program descriptions and performance-based safety goals for the SAT-based training components was necessary in replacement of the training topics currently mandated. The prescription of these training topics is no longer necessary since the publication of REGDOC-2.2.2 and the implementation of SAT-based training.

As a result of the revised requirements, new facilities will be able to implement training systems without interfering with existing CANDU-centric programs. The overlap between the two REGDOCs exists by design, since the *raison d'être* of personnel certification is to exercise added regulatory oversight for workers employed in designated positions, in addition to the requirements applicable to all workers. Since aligning REGDOC-2.2.3 with the current regulatory framework was one of the objectives of the revision, CNSC staff duly considered all complementary REGDOCs published after 2008, including REGDOC-2.2.2.

No change was applied to the proposed REGDOC as a result of Comment 3.

**Comment 4: Misalignment with CNSC examination guides**

Industry found the document included misalignment with CNSC examination guides EG1, *Requirements and Guidelines for Written and Oral Certification Examinations for Shift Personnel at Nuclear Power Plants* and EG2,

*Requirements and Guidelines for Simulator-based Certification Examinations for Shift Personnel at Nuclear Power Plants*

**CNSC staff response:**

The examination guides were published in 2004 and 2005 and are at once outdated and CANDU-centric. The misalignment issues raised were already known by CNSC staff and will be reflected in the updated examination guides. This modernization project has already begun and the required revision will resume once Version 2 of REGDOC-2.2.3, Volume III is published.

No change was applied to the proposed REGDOC as a result of Comment 4.

**Comment 5: Increased requirements for Senior Health Physicists (SHP)**

Industry questioned the proposed increase of relevant work experience from six months to two years at the hiring facility. These new requirements would increase staffing challenges and power plants already have a limited number of SHPs.

**CNSC staff response:**

CNSC staff initially proposed to simplify the work experience prerequisite overall, but at the same time to extend the minimum time spent at the hiring facility, because six (6) months appeared too short for a leadership position. Further discussions revealed that this period was simply made to coincide with the minimum time required (in 2008) to train an experienced SHPs transferred from another CANDU station.

Given that the current requirement is not based on first principle, but past empirical knowhow, and since the proposed increase would cause operational issues, the requirement to have two (2) years of work experience at the hiring facility was modified to include experience gained at any reactor facility. This change was deemed acceptable because the newly required performance-based personnel selection program includes a requirement for the licensee to determine suitable minimum experience for all designated positions, which purpose differs from training.

However, it should also be noted that the revised four (4) years of prior experience overall is actually more flexible than current requirement since the former need not be gained at a reactor facility.

The change proposed by industry under Comment 5 was applied to the proposed REGDOC post-consultation.

**Comment 6: Minimum employment**

Industry was concerned that the new minimum employment requirement focused on a lead position. As a result, scheduling and tracking shifts and hours of work could be problematic, and all certified shift workers may not be able to meet the quarterly minimum shift requirement.

**CNSC staff response:**

The requirement was revised based in the industry feedback and now specifies that certified shift workers must perform the minimum quarterly shift requirement as members of the minimum staff complement (MSC). The modified requirement recognizes shifts worked in an assisting capacity. This change was deemed acceptable by CNSC staff because work in an assisting capacity, when done as a member of the MSC, constitutes meaningful exposure to the duties of the designated position, based on the documented purpose of the minimum employment requirements, which is explicitly stated for the first time via Version 2.

The change proposed by industry under Comment 6 was applied to the proposed REGDOC post-consultation.

### **3 IMPLEMENTATION**

CNSC regulatory documents are primarily implemented by revising License Conditions Handbooks (LCHs) during licensing renewals and by requesting implementation plans from licensees on an ongoing basis. Implementation plans are then captured in the LCH.

However, the implementation of REGDOC-2.2.3, Volume III, Version 2 differs because the document is referenced within a Licence Condition (LC) in all Power Reactor Operating Licences (PROLs) in accordance with section 9(2) of the *Class I Nuclear Facilities Regulations*.

Currently, licensees are required to comply with REGDOC-2.2.3, Volume III, Version 1 as an LC under the Human Performance Management Safety and Control Area (SCA) in all PROLs. To implement the revised REGDOC, all PROLs will require an amendment to the appropriate LC, to replace REGDOC-2.2.3, Volume III, Version 1 with REGDOC-2.2.3, Volume III, Version 2. If Version 2 is approved by the Commission, CNSC staff will contact impacted licensees to discuss timelines for requesting a licence amendment.

CTAG will continue to provide a forum for industry to communicate information and express any potential concerns related to implementation.

## **4 OVERALL CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 Overall Conclusions**

Draft REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2* was developed through consultation with stakeholders and is essential to communicating and formalizing the CNSC's requirements and guidance related to the certification of the reactor facility workers employed or seeking employment in designated positions.

CNSC staff conclude that this REGDOC is ready for final approval by the Commission for publication.

## **4.2 Overall Recommendations**

CNSC staff recommend that the Commission approve REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*.



# Human Performance Management **Personnel Certification, Volume III: Certification of Reactor Facility Workers**

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REGDOC-2.2.3, Version 2

June 2023



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

Canada

## **Personnel Certification, Volume III: Certification of Reactor Facility Workers**

Regulatory document REGDOC-2.2.3, Version 2

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### **Document availability**

This document can be viewed on the [CNSC website](#). To request a copy of the document in English or French, please contact:

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### **Publishing history**

September 2019      Version 1

[Month year]      Version 2



## Preface

This regulatory document is part of the CNSC's human performance management series of regulatory documents, which also covers human factors, personnel training and other personnel certification matters. The full list of regulatory document series is included at the end of this document and can also be found on the [CNSC's website](#).

Regulatory document REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers*, Version 2 sets out the detailed requirements and guidance for the certification of workers employed at reactor facilities operated in Canada.

This document is the second version of REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants*, published in September 2019. A document showing the changes made to the first version is available from the CNSC upon request.

### Complementary regulatory documents

The requirements and guidance documented in this regulatory document are in addition to the requirements and guidance applicable to reactor facility workers in general. Workers certified or seeking certification by the CNSC are therefore not exempt from any applicable requirements specified in other regulatory documents.

In particular, this document must be read in conjunction with complementary regulatory documents in the human performance management series and other safety and control areas referenced in the licence or any accompanying documentation, as applicable. A comprehensive list of complementary regulatory documents of relevance is included as "Additional Information" in the last section of this regulatory document.

### Regulatory approach

For information on the implementation of regulatory documents and on the graded approach, see REGDOC-3.5.3, *Regulatory Fundamentals*.

The words "shall" and "must" are used to express requirements to be satisfied by the licensee or licence applicant. "Should" is used to express guidance or that which is advised. "May" is used to express an option or that which is advised or permissible within the limits of this regulatory document. "Can" is used to express possibility or capability.

Nothing contained in this document is to be construed as relieving any licensee from any other pertinent requirements. It is the licensee's responsibility to identify and comply with all applicable regulations and licence conditions.

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## Personnel Certification: Certification of Reactor Facility Workers

### 1. Introduction

The Canadian Nuclear Safety Commission (CNSC) requires that the reactor facility workers employed in certain positions of immediate relevance to nuclear safety must be certified by the CNSC as qualified to carry out the duties of their employment. For the purpose of this regulatory document, said positions are referred to as designated positions.

#### 1.1 Purpose

The purpose of this regulatory document is to specify the detailed requirements and provide guidance pertinent to the certification of the reactor facility workers employed or seeking employment in designated positions.

#### 1.2 Scope

When referenced in a licence, this regulatory document applies to:

- a. all workers seeking certification by the CNSC, or seeking to maintain or renew such certification, for employment in one of the designated positions identified in the licence
- b. the licensee operating the reactor facility identified in the licence
- c. the personnel identified in this regulatory document and involved in the training and evaluation, or the certification examination and requalification testing, of workers employed or seeking employment in designated positions at the reactor facility identified in the licence

This regulatory document comprises 3 parts, as follows:

- a. Part I describes the regulatory and procedural devices that make up the CNSC personnel certification scheme relevant to reactor facility workers.
- b. Part II describes the organizational and physical infrastructures that the licensee must implement to support the personnel certification scheme described in Part I and achieve the worker qualifications specified in Part III.
- c. Part III specifies the prerequisites that reactor facility workers must meet to be eligible for the personnel certification processes described in Part I.

#### 1.3 Relevant legislation

The following provisions of the Nuclear Safety and Control Act (NSCA) and the regulations made under it are relevant to this document:

- a. NSCA, paragraphs 21(1)(i), 37(2)(b), 44(1)(k) and 44(1)(l)
- b. General Nuclear Safety and Control Regulations, paragraphs 12(1)(a) and 12(1)(b)
- c. Class I Nuclear Facilities Regulations, section 10, subsections 9(2), 9(3), 9(4), 11(1), 11(2), 12(1), 12(2), 13(1), 13(2) and 14(5), and paragraph 14(2)(e)

#### **1.4 National and international standards**

The key principles and elements used in developing this document are consistent with national and international standards. The following standards are relevant to this regulatory document:

- a. IAEA Nuclear Energy Series NG-T-2.8, *Systematic Approach to Training for Nuclear Facility Personnel: Processes, Methodology and Practices*
- b. IAEA Safety Standard Series NS-G-2.8, *Recruitment, Qualification and Training of Personnel for Nuclear Power Plants*
- c. IAEA TECDOC 525, *Guidebook on Training to Establish and Maintain the Qualification and Competence of Nuclear Power Plant Operations Personnel*
- d. IAEA TECDOC 1502, *Authorization of Nuclear Power Plant Control Room Personnel: Methods and Practices with Emphasis on the Use of Simulators*
- e. ISO/IEC 17000, *Conformity Assessment – Vocabulary and General Principles*
- f. ISO/IEC 17024, *Conformity Assessment – General Requirements for Bodies Operating Certification of Persons.*

## **Part I – Personnel Certification Scheme**

Part I describes the regulatory and procedural devices that make up the CNSC personnel certification scheme relevant to reactor facility workers.

### **2. Background Information**

The relevant legislation authorizes the Commission and designated officers (DO) to certify workers as qualified to carry out their duties, to renew the certification of certified workers, and to decertify certified workers following due process. The reactor facility workers certified by the CNSC are issued certificates as proof of certification specifying, among other information, a date of expiry. In accordance with regulations, certifications issued by the CNSC expire 5 years after their date of issuance or renewal. Consequently, authorized applicants must submit applications on behalf of the certified workers seeking the renewal of their certification(s) before the expiry date specified on each certificate.

### **3. Employment Stipulations**

#### **3.1 Permitted employment**

The certificates issued by the CNSC to reactor facility workers permit the employment of the worker identified on the certificate:

- a. on a full-time, part-time, or temporary basis
- b. as an employee or a contractor
- c. by the specified licensee
- d. at the specified reactor facility or facilities
- e. in the specified designated position

#### **Guidance**

**Certificate transferability** – Unless otherwise indicated on the certificate, certifications granted by the CNSC to reactor facility workers are not transferable between reactor facilities and licensees; however, candidates and certified workers may be transferred between reactor facilities equipped with similar technologies in accordance with subsection 14.5.

**Employee–employer relationship** – The licensee is responsible for the competency of all workers employed at the reactor facility identified in the licence regardless of the contractual agreement binding the workers, including any certified worker, and the licensee, as employer.

**Multiple certifications** – Certified workers may be employed in more than one designated position as long as the worker holds a valid certificate for each designated position, meets the

employment and training requirements linked to each designated position, and can safely and competently perform the duties of each designated position.

### **3.2 Employment status**

The licensee shall assign an employment status to each certified worker in accordance with the following categories:

- a. an active status is assigned to a worker who:
  - i. holds a valid certificate
  - ii. attends the scheduled continuing training
  - iii. meets the applicable minimum employment requirements
  - iv. continues to be able to perform the duties of the pertinent designated position safely and competently
- b. an inactive status is assigned to any certified worker who holds a valid certificate, but was formally removed from duty in accordance with subsection 20.3 or subsection 20.4
- c. an uncertified status is assigned to a worker whose certificate has expired
- d. a decertified status is assigned to a worker decertified by the CNSC

### **Guidance**

**Certificate validity** – A valid certificate is a certificate duly issued by the Commission or a DO that has not yet expired.

**End of employment** – The CNSC will not decertify workers holding a valid certificate who retire or announce their retirement or who, for any other reason, cease to work in, or train for, a designated position. In such cases, subsection 20.3 on the management of prolonged unemployment applies until the certificate expires, unless the worker is reinstated to duty as per subsection 20.5 before the certificate expires.

**Multiple certifications** – When a worker holds multiple certifications, a distinct employment status is assigned to the worker in relation to each pertinent designated position.

### **3.3 Employment record**

The licensee shall maintain, in accordance with subsection 21.2, a continuous and auditable employment record for each worker certified by the CNSC, including, at a minimum:

- a. the employment status assigned to the worker
- b. the number of complete shifts and hours of work performed in a designated position by the worker, specifying:
  - i. the pertinent designated position
  - ii. the date on which each complete shift and hour of work were performed

**Guidance**

Applicability – This subsection applies to any certified worker, whether an employee or a contractor, but only in relation to the reactor facility identified on the certificate(s).

**4. Designated Positions**

This regulatory document applies to the certification of the reactor facility workers employed or seeking employment in the following generic classes of designated positions:

- a. auxiliary systems operator (ASO)
- b. reactor operator (RO)
- c. shift supervisor
- d. senior health physicist (SHP)

**Guidance**

Management system – The generic classes of designated positions referenced throughout this regulatory document reflect the management systems implemented by licensees at the time of publication. However, nothing stated in this regulatory document should be construed as limiting the establishment of alternate management systems, including new positions.

**4.1 Station-specific designated positions**

The station-specific positions corresponding to the generic classes of designated positions are designated in the applicable licences.

Appendix A specifies which station-specific position(s) correspond to each generic class of designated position and which CNSC certification is required in each case.

**4.2 Designated position staffing**

The site-specific positions designated in reactor facility licences shall be staffed with workers certified by the CNSC as qualified to perform the duties of said designated positions.

**4.3 Roles and responsibilities of certified workers**

When in possession of a valid certificate, workers are deemed qualified to perform the duties of the pertinent site-specific positions listed in Appendix A in accordance with the licensee's management system.

**5. General Provisions Pertinent to All Applications****5.1 Authorized applicant**

Applications made under the provisions of this regulatory document shall be signed by a signatory officially authorized by the pertinent licensee to represent said licensee.

**Guidance**

Authorized applicant – In the reactor facility context, the applicant is the licensee, who necessarily needs to be represented by an authorized signatory referred to as the authorized applicant.

**5.2 Complete application**

Authorized applicants shall ensure that the applications submitted to the CNSC are complete. Incomplete applications may be rejected by the CNSC without further analysis.

**Guidance**

Complete application – In accordance with regulations, the Commission or a DO may certify a worker or renew the certification of a worker only after receiving an application. CNSC staff cannot make informed recommendations to the Commission or a DO based on incomplete applications. An application is deemed complete when it contains all the required information and contains no errors.

Minor omissions and typographic errors – The submission of incomplete applications causes undue administrative burden and leads to processing delays. Nonetheless, applications deemed incomplete as a result of minor omissions or typographic errors will be processed once the authorized applicant has submitted a revised application or provided additional information to the satisfaction of the CNSC.

**5.3 Basic information**

Applications made under the provisions of this regulatory document shall contain the following information:

- a. the purpose of the application
- b. the legal name of the worker, including a first name, a surname, and a middle name or initial when possible
- c. the designated position in which the worker is or will be employed
- d. the reactor facility where the worker is or will be employed, including, where applicable, a specific reactor or group of reactors
- e. the corporate name of the licensee operating said reactor facility
- f. the effective date of the application
- g. the legal name, position, contact information, and signature of the authorized applicant
- h. a valid return mailing or email address

**5.4 Transmission**

An authorized applicant may submit any application made under the provisions of this regulatory document either in printed or electronic form.

Printed submissions must be delivered to the following address:

Canadian Nuclear Safety Commission  
280 Slater Street  
P.O. Box 1046, Station B  
Ottawa, ON K1P 5S9

Electronic submissions must be emailed to [forms-formulaires@cnsccsn.gc.ca](mailto:forms-formulaires@cnsccsn.gc.ca) and include a complimentary copy (cc) to [pcd-dap@cnsccsn.gc.ca](mailto:pcd-dap@cnsccsn.gc.ca).

## **6. Application for Certification**

In addition to the general provisions specified in section 5, an application for certification shall meet the requirements specified in this section.

### **6.1 Worker competency declaration**

In accordance with regulations, the application shall state that the worker:

- a. meets the applicable qualification requirements referred to in the licence
- b. has successfully completed the applicable training program and examination referred to in the licence
- c. is capable, in the opinion of the licensee, of performing the duties of the position

### **6.2 Personnel selection**

The application shall describe how the applicable prerequisites of the personnel selection program described in section 14 were met, including, at a minimum:

- a. the worker's education or literacy level upon selection for initial training
- b. any education or literacy level equivalency recognized by the licensee
- c. any prior work experience required by the CNSC or the licensee
- d. any personnel selection interview undergone by the worker
- e. any personnel selection test administered to the worker, including any medical screening
- f. any exemption explicitly sanctioned in this regulatory document that was employed by the licensee

### **6.3 Worker qualification summary**

The application shall provide a chronological summary of the qualifications achieved by the worker, covering the initial training components, the certification examinations, and all other personnel certification requirements successfully completed by the worker.

The worker qualification summary shall offer sufficient evidence that the worker meets all of the applicable qualifications specified in Part III. At a minimum, this summary shall include, as applicable depending on the designated position:

- a. the date of each summative learner evaluation marking the completion of each initial training component
- b. the date of each knowledge-based certification examination
- c. the date of the performance-based certification examination

- d. any remedial action required by CNSC staff as a result of a certification examination administered by CNSC staff
- e. the date of completion of any period of work under supervision, including the total number of supervised work hours
- f. the date of the management interview

### **Guidance**

Effective dates – The dates referenced in the worker qualification summary are the dates on which the evaluations, examinations and interview were conducted, not the dates on which their grading was finalized.

## **6.4 Supporting documentation**

The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records shall be maintained in accordance with subsection 21.2 and made available for verification by the CNSC upon request.

## **6.5 Application schedule**

The licensee may apply for the certification of a qualified worker at any time.

## **6.6 Effective date of certification**

Unless the licensee requests a deferment, the effective date of the certification will be that of the certification decision made by the Commission or a DO.

## **6.7 Certification deferment**

The licensee may request that the effective date of certification be delayed up to 60 calendar days from the effective date of application for certification.

### **Guidance**

Limitation – In order to provide licensees with scheduling flexibility, the CNSC will consider any preference expressed by the authorized applicant regarding the effective date of certification as long as the preferred date falls within the aforementioned 60-day period. However, the CNSC is not obligated to comply with any request for certification deferment.

# **7. Application for Certification Renewal**

In addition to the general provisions specified in section 5, an application for the renewal of a certification shall meet the requirements specified in this section.

## **7.1 Worker competency declaration**

In accordance with regulations, the application shall state that the worker:

- a. has safely and competently performed the duties of the position for which the worker was certified
- b. continues to receive the applicable training referred to in the licence



- c. has successfully completed the applicable requalification tests referred to in the licence for renewing the certification
- d. is capable, in the opinion of the licensee, of performing the duties of the position

## **7.2 Worker requalification summary**

The application shall provide a chronological summary of the requalification requirements met by the worker during the current certification period, covering the continuing training components, the requalification tests, and all other personnel certification requirements successfully completed by the worker.

The worker requalification summary shall offer sufficient evidence that the worker meets all of the applicable requalification requirements specified in Part III. At a minimum, this summary shall include, as applicable depending on the designated position:

- a. a confirmation that the worker attended continuing training and successfully underwent formal learner evaluations compliant with the requirements specified in section 15, including suitable update, refresher, simulator-based and nuclear emergency response training
- b. the dates of all knowledge-based requalification tests successfully completed
- c. the dates of all performance-based requalification tests successfully completed
- d. the total number of complete shifts and hours of shiftwork in the designated position performed by the worker over the current certification period
- e. any remedial action required by CNSC staff as a result of a requalification test administered by CNSC staff

### **Guidance**

Effective dates – The dates referenced in the worker requalification summary are the dates on which the tests were conducted, not the dates on which their grading was finalized.

## **7.3 Supporting documentation**

The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records shall be maintained in accordance with subsection 21.2, and made available for verification by the CNSC upon request.

### **Guidance**

Applicability – The supporting documentation referenced in this subsection encompasses any knowledge or performance-based requalification test that the worker completed during the current certification period, in either a lead or supporting role, and whether or not the worker successfully completed said test.

## **7.4 Application schedule**

The licensee shall apply for the renewal of the certification of a requalified worker no later than the date of expiry specified on the certificate.

### **Guidance**

Application deadline – The CNSC will accept any certification renewal application duly signed and dated before midnight on the day of the certificate expiry, as long as the application is

received by the CNSC before midnight on the same day for an electronic submission, or within a reasonable time frame for a printed application sent by mail or courier. When the licensee fails to meet this application deadline, section 8 applies instead of section 7.

**Normal processing time** – In order to avoid having to remove the worker from duty in accordance with sub-subsection 20.4.4 followed by a reinstatement as per subsection 20.5 and sub-subsection 20.6.4, the application should be made well in advance of the certificate expiry date, preferably allowing for a normal processing time of 60 calendar days.

**Incomplete application** – When a certification renewal application submitted before the deadline is found to be or remains incomplete after the certificate has expired, the application will be accepted, but the technical assessment will be paused until a revised application or additional information is submitted by the licensee to the satisfaction of the CNSC.

**Prohibited employment** – When the certificate expires while the certification renewal application is being processed by CNSC staff, the worker is considered no longer qualified to work in the pertinent designated position until the certification has been officially renewed by the CNSC.

## **7.5 Effective date of renewal**

When the application is signed and dated by an authorized applicant no earlier than 90 calendar days before the certification expiry, the effective date of the certification renewal will be made to coincide with the date of expiry of the existing certification.

## **7.6 Early certification renewal**

When the application is signed and dated by an authorized applicant earlier than 90 calendar days before the certification expiry, the effective date of the certification renewal will be that of the certification decision made by the Commission or a DO.

## **Guidance**

**Limitation** – In order to provide licensees with scheduling flexibility, the CNSC allows the renewal of the certification of reactor facility workers before the end of the certificate validity period. This allowance is made because shortening the certification period effectively increases the requalification testing frequency. However, in order to ensure that the proof of worker competency provided at the time of application is relatively recent, and therefore valid, the CNSC will not postpone the effective date of any early certification renewal beyond the processing time actually incurred. Authorized applicants should therefore plan ahead and duly consider the time constraints specified in this section before submitting certification renewal applications.

**Certificate expiry** – In all cases, when the certificate expires before the application can be processed by CNSC staff and a renewed certificate issued by the CNSC, the effective date of the certification renewal will be made to coincide with the date of expiry of the existing certification. The certification expiry date is the latest certification renewal date regardless of any other consideration since the Commission or a DO may only renew an existing certification.

## 8. Application for Recertification Within 5 Years of a Certificate Expiry

In addition to the general provisions specified in section 5, an application for recertification submitted no later than 5 years following the expiry of a certificate shall meet the requirements specified in this section.

### Guidance

Applicability – This section applies to the recertification of a worker for employment in the same designated position as the one identified on an expired certificate when the authorized applicant has failed to submit a certification renewal application before the certification renewal deadline specified in subsection 7.4.

### 8.1 Worker competency declaration

In accordance with regulations, the application shall state that the worker:

- a. meets the applicable qualification requirements referred to in the licence
- b. has successfully completed the applicable training program and examination referred to in the licence
- c. is capable, in the opinion of the licensee, of performing the duties of the position

### Guidance

Important note – To satisfy the condition set by subsection 9(2) of the *Class I Nuclear Facilities Regulations*, the correct worker competency declaration in the context of an application for recertification is the same as the competency declaration required for a certification.

### 8.2 Worker requalification summary

The application shall provide a chronological summary of a suitable reinstatement process, specifying the effective date of completion of each step, including, at a minimum:

- a. the tailored training, including any knowledge and performance-based refresher and update training, completed by the worker
- b. the knowledge-based requalification test successfully completed by the worker
- c. the performance-based requalification test or series of tests successfully completed by the worker
- d. the work-under-supervision (WUS) hours completed by the worker
- e. the management interview

The applicable worker requalification requirements are specified in Part III.

### Guidance

Notwithstanding the worker competency declaration required by the pertinent regulations, the “examination” referenced in subsection 8.1 is the suite of requalification tests specified in subsections 8.2 and 24.4. Neither the legislative basis nor the licence actually references a pertinent examination; rather, the applicable licences reference this regulatory document as an added source of specificity. Therefore, based on the graded approach, the CNSC considers it sufficient that a worker whose certificate expired less than 5 years ago be examined using

requalification tests in lieu of the full suite of certification examinations initially required at the time of certification.

### **8.3 Supporting documentation**

The following supporting documentation shall be appended to the application:

- a. the individual training needs analysis (ITNA) or a summary of the ITNA
- b. the individual training plan (ITP) or a summary of the ITP
- c. the knowledge-based requalification test successfully completed by the worker, including the worker's answers and the grade obtained, in percentage
- d. the performance-based requalification test or series of tests successfully completed by the worker, including the graded candidate actions
- e. a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker
- f. a recording, a transcript, or the minutes of the mandated management interview

### **8.4 Application schedule**

The licensee may apply for the recertification of a worker in accordance with section 8 no later than 5 years after the date of expiry specified on the certificate.

#### **Guidance**

Application deadline – When the certificate has expired more than 5 years prior to the effective date of application for recertification, section 9 applies instead of section 8.

### **8.5 Effective date of certification**

The effective date of the certification will be that of the certification decision made by the Commission or a DO.

## **9. Application for Recertification Following Decertification or Certificate Expiry After 5 Years**

In addition to the general provisions specified in section 5, an application for the recertification of a worker following decertification by the CNSC, or following a certificate expiry that occurred more than 5 years prior to the effective date of the application for recertification, shall meet the requirements specified in this section.

#### **Guidance**

Applicability – This subsection applies to the recertification of a worker for employment in the same designated position as the one identified on a certificate in relation to which the worker was

previously decertified by the CNSC, or which expired more than 5 years prior to the effective date of the current application.

### **9.1 Worker competency declaration**

The application shall state that the worker:

- a. meets the applicable qualification requirements referred to in the licence
- b. has successfully completed the applicable training program and examination referred to in the licence
- c. is capable, in the opinion of the licensee, of performing the duties of the position

### **Guidance**

Important note – To satisfy the condition set by subsection 9(2) of the *Class I Nuclear Facilities Regulations*, the correct worker competency declaration in the context of an application for recertification is the same as the competency declaration required for a certification.

### **9.2 Recertification substantiation**

The application shall present a substantiated argument in support of the recertification of the worker, explaining why the CNSC should recertify a worker previously decertified by the CNSC, or whose certificate expired more than 5 years ago, including:

- a. a description of the remedial actions taken by the licensee, including any remedial training, to ensure that any deficiency identified as part of the basis for the prior decertification has been adequately remedied or mitigated, as applicable
- b. a summary of a suitable reinstatement process and the effective date of completion of each step, including:
  - i. the tailored training, including any knowledge and performance-based refresher and update training, completed by the worker
  - ii. the knowledge-based certification examination successfully completed by the worker
  - iii. the performance-based certification examination successfully completed by the worker
  - iv. the WUS hours completed by the worker
  - v. the management interview
- c. a description of any relevant mitigating circumstances

The applicable worker requalification requirements are specified in Part III.

### **9.3 Supporting documentation**

The following supporting documentation shall be appended to the application:

- a. the individual training needs analysis (ITNA) or a summary of the ITNA
- b. the individual training plan (ITP) or a summary of the ITP
- c. the knowledge-based certification examination successfully completed by the worker, including the worker's answers and the grade obtained, in percentage
- d. the performance-based certification examination successfully completed by the worker, including the graded candidate actions
- e. a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker

- f. a recording, a transcript, or the minutes of the mandated management interview
- g. any other documentation deemed essential in support of the application

#### **9.4 Application schedule**

The licensee may apply for the recertification of a worker following decertification at any time after being informed of the Commission's or DO's decision to decertify the worker.

The licensee may apply for the recertification of a worker following certificate expiry in accordance with section 9 no earlier than 5 years after the effective date of expiry specified on the certificate of the worker.

#### **9.5 Effective date of certification**

The effective date of the certification will be that of the certification decision made by the Commission or a DO.

### **10. Application for Senior Health Physicist Examination or Requalification Testing**

An authorized applicant may submit an application for the administration of a certification examination or requalification test to a worker seeking certification or the renewal of a certification for employment as senior health physicist (SHP) once the worker has met the pertinent prerequisites specified in Part III.

The application shall be submitted in writing in accordance with the general provisions of the personnel certification application processes specified in section 5, and shall state that the worker:

- a. has successfully completed the applicable training referenced in the licence, specifying the effective date of completion of the initial or continuing training referenced in section 25
- b. has successfully undergone the applicable management interview referenced in section 25, specifying the date of the interview

#### **Guidance**

Early notification – Given the time required for CNSC staff to prepare, conduct, and grade each examination or test, the licensee should notify the CNSC as early as possible in advance of the formal application for certification examination or requalification test.

Candidate availability – The licensee should specify, as part of any early notification and as part of the formal application, alternate dates when the worker will be qualified and available to take the certification examination or requalification test.

### **11. Refusal to Certify and Decertification**

#### **11.1 Background information**

In accordance with the relevant legislation, the Commission or a DO may refuse to issue or renew a certification upon receiving an application for certification or the renewal of a certification, and may initiate the decertification of a certified worker on its own motion or upon request. Prior to making a final decision, the Commission or a DO will give prior notice of the proposed decision

to the licensee and the worker concerned, offering each party an opportunity to be heard, either in support of or against the proposed decision.

### **11.2 Licensee requests for decertification**

The licensee may request the decertification of a certified worker employed at the reactor facility identified in the licence. All such requests shall be submitted in writing in accordance with subsection 5.4 and contain the following information:

- a. the purpose of the request
- b. the legal name of the worker, as shown on the most recent certificate issued to the worker
- c. the designated position for which the worker is to be decertified
- d. the reactor facility where the worker is employed, including, where applicable, a specific reactor or group of reactors
- e. the corporate name of the licensee operating said reactor facility
- f. a description of the basis for the request
- g. supporting documentation, as may exist, establishing a sufficient basis for decertification
- h. the effective date of the request
- i. the legal name, position, contact information and signature of an authorized licensee representative
- j. a valid return mailing or email address

### **11.3 Requesting an opportunity to be heard**

A licensee or a worker who has received notice of a proposed decision may request an opportunity to be heard within 30 calendar days of the receipt of the notice. All such requests shall be submitted in writing in accordance with subsection 5.4.

### **11.4 Commission or designated officer decision**

On completion of an opportunity to be heard, the licensee and the worker concerned will be notified in writing of the Commission or DO decision and the rationale for the decision.

## **12. Administrative Processes**

### **12.1 Legal name change**

The licensee shall promptly:

- a. inform the CNSC of any change in the legal name of any worker employed or training for employment in a designated position
- b. request that the CNSC issue a replacement certificate for any certified worker who has officially changed their legal name

## **Guidance**

Purpose – The CNSC needs to know the legal identity of all workers employed or training for employment in a designated position in order to maintain accurate personnel certification records and issue certificates to the correct persons.

### **12.2 Replacement certificates**

The licensee may request that the CNSC reissue a certificate on behalf of a certified worker if:

- a. the certificate has been lost
- b. some of the information shown on the certificate is no longer legible
- c. the legal name of the worker was officially changed, as mandated in subsection 12.1.

All requests for a replacement certificate shall be submitted in writing in accordance with subsection 5.4 and contain the following information:

- a. the purpose and the rationale for the request
- b. the legal name of the worker, as shown on the most recent certificate issued to the worker
- c. the new legal name that is to appear on the replacement certificate, as applicable
- d. the title of the designated position shown on the certificate
- e. the corporate name of the licensee employing the worker
- f. the legal name, position, contact information and signature of an authorized licensee representative
- g. the effective date of the request



## **Part II – Licensee Organizational and Physical Infrastructures**

Part II describes the organizational and physical infrastructures that the licensee must implement to support the personnel certification scheme described in Part I and achieve the worker qualifications specified in Part III.

### **Subpart A – Organizational Infrastructure**

#### **13. Policies and Procedures**

##### **13.1 Training and qualifying workers for initial certification**

The licensee shall establish and document effective policies and procedures to train and qualify the workers seeking certification for employment in designated positions.

##### **13.2 Maintaining the qualification of certified workers**

The licensee shall establish and document effective policies and procedures to train and maintain the qualification of the certified workers employed in designated positions.

#### **14. Personnel Selection Program**

The licensee shall implement and document a personnel selection program that ensures the selection of suitable candidates for entry in the initial training programs referenced in this regulatory document.

##### **14.1 Personnel selection program requirements**

As an integral part of the personnel selection program, at a minimum and for each designated position identified in the licence, the licensee:

- a. shall set a minimum prior education level or minimum literacy and numeracy levels commensurate with the duties of the designated position and consistent with the entry level of a suitable initial training program
- b. shall require that candidates selected on the basis of their prior education level provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider
- c. may recognize equivalencies to any minimum education, literacy, or numeracy level set by the licensee
- d. shall use standardized tests and proven methods to assess whether or not candidates selected on the basis of a literacy or numeracy level, or a recognized equivalency, do in fact meet the applicable minimum standards
- e. shall determine whether or not prior work experience may be desirable or essential and, when deemed essential, develop plans and procedures to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program
- f. shall identify attributes and aptitudes deemed essential to safely and competently perform the duties of the designated position, including integrity, leadership, and resilience, as may be pertinent, and select candidates accordingly
- g. may use standardized tests and proven methods, or require a medical assessment performed by a licensed physician, to assess whether or not candidates have any permanent, physical or

mental limitation that would prevent them from performing the duties of the pertinent designated position safely and competently

### **Guidance**

**Prior education** – The licensee should set personnel selection criteria based on a considered rationale, and avoid setting prescriptive requirements for the sake of expediency, including specific education prerequisites, if suitable candidates may thereby be unduly excluded. The CNSC recognizes that modern learners may acquire acceptable levels of prior knowledge and literacy through various methods and avenues, including distance learning and homeschooling, and from jurisdictions other than provincial authorities, depending on individual circumstances.

**Work experience** – In the context of the personnel selection program, relevant work experience means any employment in a role or position of an operational or technical nature providing:

- a. the candidate with:
  - i. meaningful exposure to the organization and the daily operation of a reactor facility in some way relevant to the duties of the pertinent designated position
  - ii. an opportunity to develop transferable knowledge and skills (K&S) and safety-related attributes that will eventually be valuable to the successful candidate once employed in a designated position
- b. the management team with an opportunity to evaluate the prospective candidate against the pertinent personnel selection criteria, in particular any essential safety-related attributes, including integrity, leadership and resilience, as applicable

## **14.2 Personnel selection criteria**

### **14.2.1 Basic prerequisites**

Candidates selected for entry in any initial training program referenced in this regulatory document shall:

- a. have demonstrated literacy and numeracy levels commensurate with the duties of the pertinent designated position
- b. have provided sufficient proof of any prior education level required by the CNSC or the licensee
- c. have gained any prior work experience required by the CNSC or the licensee
- d. possess all the safety-related attributes and aptitudes deemed essential by the licensee
- e. meet all other applicable position-specific selection criteria set by the licensee

### **14.2.2 Supplementary prerequisites for shift supervisors and senior health physicists**

In addition to meeting the applicable basic prerequisites, shift supervisor and senior health physicist (SHP) candidates shall, to the licensee's knowledge:

- a. possess known leadership skills or potential
- b. have consistently demonstrated a high level of integrity

### **14.3 Selection of reactor operators for shift supervisor training**

A worker certified or previously certified for employment as reactor operator (RO) at the reactor facility identified in the licence may be selected for entry in an initial training program for shift supervisor candidates in accordance with the requirements specified in this subsection.

#### **14.3.1 Performance as reactor operator**

Prior to being selected for shift supervisor training, the worker must:

- a. have performed the duties of an RO safely and competently
- b. be known to possess the safety-related attributes and aptitudes required of a shift supervisor

#### **14.3.2 Personnel selection exemption**

The licensee may, if the worker has been regularly employed as a certified RO for at least 4 calendar quarters, exempt the worker from any education level or work experience normally required of shift supervisor candidates.

#### **Guidance**

Regulatory intent – Since the worker is to be exempted from prerequisites considered essential by the licensee for other candidates, the worker is to have consistently demonstrated shift supervisor potential over a meaningful observation period.

Regular employment – “Regularly employed” means that the worker, at a minimum, met the pertinent quarterly minimum shift requirement; however, the required 4 calendar quarters need not be consecutive.

#### **14.3.3 Notification of selection for shift supervisor training**

The licensee shall notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program for shift supervisor candidates. This communication shall include:

- a. the full legal name of the worker
- b. a confirmation that the worker performed the duties of an RO safely and competently
- c. a confirmation that the worker possesses the safety-related attributes and aptitudes required of a shift supervisor
- d. a summary of any exemption explicitly sanctioned in sub-subsection 14.3.2 and employed as part of the selection of the worker, including the start and end dates of the observation period(s) adding to 4 calendar quarters in total

#### **Guidance**

In accordance with subsection 6.2, the application for certification includes a summary of any exemption(s) employed as part of the selection of the worker for shift supervisor training, in addition to the notification specified in this sub-subsection.

#### **14.4 Advancement to senior shift supervisor**

Any certified shift supervisor who, as a member of the minimum staff complement (MSC), exercises authority over any number of certified shift supervisors shall, prior to being employed in such a senior shift supervisor position, have been selected and trained by the licensee for the express purpose by means of a documented process meeting the requirements specified in this subsection.

The licensee shall not allow any worker to act as senior shift supervisor who is not duly qualified to exercise authority over other certified shift supervisors in accordance with the aforementioned process.

##### **Guidance**

**Applicability** – This subsection applies when the management system implemented at the reactor facility requires the presence of at least one senior shift supervisor having authority over at least one shift supervisor as part of the MSC.

**Special circumstances** – The CNSC recognizes that, at reactor facilities employing senior shift supervisors, the role and responsibilities of all shift supervisors may entail making safety-significant or otherwise time-sensitive decisions when the senior shift supervisor on duty is indisposed or unavailable. Nothing in this regulatory document should be construed as preventing any certified shift supervisor acting as a member of the MSC from making operational or safety-critical decisions normally delegated to the senior shift supervisor as the situation dictates.

##### **14.4.1 Minimum experience as shift supervisor prior to advancement**

The worker must have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a minimum number of complete shifts and a minimum number of hours of shiftwork acceptable to the CNSC.

##### **Guidance**

**Compliance scheme** – Appendix B specifies the minimum number of complete shifts and hours of shiftwork acceptable to the CNSC for the pertinent reactor facilities in service at the time of publication of the current version of this regulatory document.

##### **14.4.2 Supplemental training**

The worker must have successfully completed training based on a training system, including some on-the-job training (OJT), covering the K&S and safety-related attributes required to safely and competently perform the duties of the senior shift supervisor, as defined by the licensee's management system.

##### **14.4.3 Work under supervision**

The worker must have performed the duties of the senior shift supervisor under the supervision of a qualified senior shift supervisor for a number of complete shifts that the licensee considers necessary to confirm that the worker can perform said duties competently and safely.

#### **14.4.4 Notification of advancement to senior shift supervisor**

The licensee shall notify the CNSC within a reasonable time frame when a worker certified as shift supervisor has obtained a senior shift supervisor qualification. This communication shall include:

- a. the full legal name of the worker
- b. a summary, showing the effective date of completion in each case, of the requirements successfully met by the worker as part of the advancement process specified in this section

#### **14.5 Personnel transfer**

The licensee shall implement and document an effective personnel transfer process compliant with the requirements and guidance specified in this subsection.

##### **Guidance**

**Applicability** – This section applies to the case of a worker who will be seeking certification for employment in a designated position at the reactor facility identified in the licence (the gaining reactor facility) after being transferred from another reactor facility of an equal or comparable design (the ceding reactor facility). When a worker is transferred between reactor facilities differing significantly in design or concept of operation, the worker should be hired and trained as any other candidate in accordance with the established personnel selection process and by means of the full, applicable initial training program.

##### **14.5.1 Personnel transfer process**

As an integral part of the personnel transfer process, the licensee of the gaining reactor facility:

- a. shall request, from the licensee of the ceding reactor facility:
  - i. the training and qualification records and, if applicable, the certification examination history of the worker, including sufficient proof of any certification examination successfully completed by the worker
  - ii. confirmation that the worker performed their duties in a safe and competent manner, be it in a designated position or not
  - iii. confirmation that the worker is trustworthy
- b. shall ensure that the worker meets all of the applicable personnel selection criteria in effect at the gaining reactor facility prior to the worker's entering one of the initial training programs referenced in this regulatory document
- c. may administer a single or a series of standardized general knowledge test(s) based on proven methods to identify any gaps in the general knowledge of the worker
- d. may use the results of the aforementioned general knowledge test(s) as part of the basis for the development of an individual training needs analysis (ITNA) and an individual training plan (ITP), on a case-by-case basis
- e. may administer a general knowledge certification examination to the worker in order to ascertain that the worker possesses adequate general knowledge
- f. may employ one or both potential exemptions explicitly sanctioned in this subsection

## **Guidance**

Best practice – The CNSC recognizes that the gaining reactor facility licensee cannot be held accountable for a refusal, on the part of the ceding reactor facility licensee, to share personal information related to the worker, and will therefore not fault the licensee if the ceding facility refuses to transmit the information referenced under paragraph 14.5.1.a. Nevertheless, the gaining reactor facility licensee should ascertain, to the fullest extent possible, the suitability of the worker as a candidate for the applicable initial training program.

### **14.5.2 Initial training**

Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.3, the worker shall successfully complete the same initial training that is administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.

### **14.5.3 General knowledge training exemption**

The licensee is not obligated to administer additional general knowledge training to the worker if the worker has previously successfully completed general knowledge training that:

- a. is equivalent to the general knowledge training administered to all workers seeking employment in the same designated position at the gaining reactor facility
- b. was administered in accordance with the applicable requirements specified in this and complementary regulatory documents
- c. is, in all other respects, acceptable to the gaining reactor facility licensee

## **Guidance**

Limitation – The general knowledge training is the only component of any initial training program specified in this regulatory document from which the worker may be exempted.

SHP candidates – The licensee may exempt SHP candidates meeting the exemption criteria specified in this sub-subsection from the applicable general training program. However, such candidates shall successfully complete tailored training covering, at a minimum, the relevant station-specific knowledge.

### **14.5.4 Certification examinations**

Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.5, the worker shall successfully complete the same certification examinations as those administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.

### **14.5.5 General knowledge examination exemption**

The licensee is not obligated to administer an additional general knowledge certification examination to the transferred worker if the worker previously received a passing grade on a general knowledge examination that:

- a. is equivalent to the general knowledge examination administered to all workers seeking employment in the same designated position at the gaining reactor facility

- b. was administered by qualified examiners in accordance with the conditions set in the gaining reactor facility licence or accompanying document, including any detailed requirements specified in documents referenced in the licence or accompanying document
- c. is, in all other respects, acceptable to the gaining reactor facility licensee

### **Guidance**

Limitation – The general knowledge certification examination is the only personnel certification examination from which the transferred worker may be exempted. Furthermore, SHP candidates are not eligible for the exemption specified in this sub-subsection, since CNSC staff administer SHP certification examinations and requalification tests covering both the general and station-specific knowledge.

### **14.5.6 Notification of personnel transfer**

The licensee shall notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program referenced in this regulatory document. This communication shall include:

- a. the full legal name of the worker
- b. a summary of any exemption(s) explicitly sanctioned in subsection 14.5 and employed as part of the selection of the worker, including, as applicable:
  - i. the start and end dates of the general training referenced as basis for the exemption and the licensee and reactor facility responsible for the associated general training program
  - ii. the date on which the general certification examination referenced as basis for the exemption was administered and the licensee and reactor facility responsible for its administration

### **14.5.7 Added information upon application for certification**

At the time of application for certification, the worker shall meet all of the personnel certification requirements applicable to any worker seeking certification for employment in the pertinent designated position at the reactor facility identified in the licence.

In addition to the requirements specified in subsection 6.2 and the notification specified in this subsection, the application for certification shall include a summary of any ITNA, ITP and certification examination employed as part of the transfer of the worker.

### **Guidance**

Exemption basis – The potential exemptions referenced in this section assume an adequate degree of equivalency between the general training and the general knowledge examination successfully completed by the candidate and those administered at the gaining reactor facility. The CNSC is not obligated to certify any worker previously granted an exemption by the licensee if the CNSC is not satisfied that a sufficient degree of equivalency did in fact exist when the exemption was granted. The licensee should consult CNSC staff when in doubt.

Licensee discretion – The potential exemptions referenced in this section are not mandatory. The gaining reactor facility licensee remains free to require that the transferred worker successfully complete additional general training and an additional general knowledge examination, regardless

of any general training or certification examination previously successfully completed by the transferred worker.

## **15. Training Programs**

### **15.1 Initial training programs**

The licensee shall implement and document initial training programs specifically designed to prepare workers for employment in each designated position identified in the licence, and to qualify the said workers for certification by the CNSC in accordance with the applicable worker qualifications specified in Part III.

### **15.2 Continuing training programs**

The licensee shall implement and document continuing training programs specifically designed to maintain the competency of workers employed in each designated position identified in the licence, and to requalify the said workers prior to the renewal of their certification by the CNSC in accordance with the applicable worker requalification requirements specified in Part III.

#### **Guidance**

Purpose – The purpose of the continuing training programs is to ensure that certified workers:

- a. retain the essential K&S and safety-related attributes acquired during their initial training
- b. acquire new K&S and safety-related attributes as necessary to deal successfully with the relevant procedural and technical changes implemented over time

#### **15.2.1 Update training**

The pertinent continuing training programs shall include suitable update training, including formal knowledge and performance-based evaluations, covering any relevant technical or procedural changes implemented at the reactor facility identified in the licence, as well as the relevant lessons learned by the industry over time, including, but not limited to:

- a. changes to reactor facility systems and subsystems
- b. changes to licensee and station-specific policies, standards, and procedures
- c. amendments to, or exemptions from, regulatory requirements
- d. amendments to the licence or to documents referenced in the licence
- e. station-specific and industry operational experience and operating events

The licensee shall deliver the knowledge update training referenced in this regulatory document promptly following the occurrence of the initiating change or event using effective instructional methods, including suitable simulator-based training whenever pertinent.

#### **Guidance**

Regulatory expectation – In order to ensure that certified workers can perform their duties safely and competently at all times, update training is to be delivered in a timely manner. Certified workers should attend update training as soon as feasible depending on circumstances and the safety significance of the change(s). Safety-critical changes should be communicated to



operations personnel during turnovers if update training cannot be delivered to the shift crew beforehand.

### **15.2.2 Refresher training**

The pertinent continuing training programs shall incorporate suitable refresher training, including formal knowledge and performance-based evaluations, covering the essential K&S and safety-related attributes that certified workers acquired during their initial training and which must be periodically reviewed and applied to ensure adequate retention.

The licensee shall deliver the knowledge refresher training referenced in this regulatory document on a regular basis and according to a training cycle not exceeding 5 years using effective instructional methods, including suitable simulator-based training whenever pertinent.

#### **Guidance**

Best practice – Allowing for individual circumstances, certified workers should attend sufficient refresher training to review all the applicable K&S and safety-related attributes during each 5-year certification period preceding a renewal of their certification.

### **15.2.3 Simulator-based continuing training for operations personnel**

The continuing training programs for operations personnel shall include suitable simulator-based training designed to ensure that operations personnel maintain their qualification by applying their K&S and safety-related attributes through recurrent performance-based training covering varied simulated scenarios under normal, abnormal and, to the extent possible, emergency conditions.

At a minimum, the continuing simulator-based training for operations personnel shall include:

- a. simulator-based exercises covering the normal reactor manoeuvres and plant evolutions infrequently performed by certified workers while on duty
- b. simulator-based exercises covering varied scenarios:
  - i. challenging the diagnostic and decision-making abilities of certified workers
  - ii. ensuring that certified workers remain proficient in selecting and executing the correct operational procedures under abnormal and emergency conditions
- c. exercises and drills ensuring that certified workers are ready to respond to accidents and emergencies

#### **Guidance**

Best practice – The simulator-based continuing training should in particular cover those situations requiring that safety-significant and time-sensitive decisions be made and implemented promptly in order to prevent harm to workers, the public or the environment.

### **15.2.4 Nuclear emergency response training**

The licensee shall conduct, on a periodic basis, nuclear emergency response training to ensure that certified workers are adequately prepared to respond to credible beyond-design-basis accidents and manage nuclear emergencies in accordance with the established emergency operating procedures and severe accident management guidelines.

## **Guidance**

Instructional strategies and methods – Nuclear emergency response training should focus on the roles and responsibilities relevant to certified workers, and may be delivered through any effective means, from classroom (tabletop) exercises to the participation of certified workers in full-scale nuclear emergency response exercises.

Complementary regulatory documents – Further requirements and guidance pertinent to the personnel involved in accident management and in nuclear emergency preparedness and response can be found in the relevant complementary regulatory documents listed as “Additional Information” in the last section of this regulatory document.

### **15.3 Training system for reactor facilities**

The initial and continuing training programs referenced in this regulatory document shall be consistent with a training system for reactor facilities acceptable to the CNSC.

When the licensee contracts out, in whole or in part, any aspect of the training referenced in this regulatory document, the licensee shall ensure that the requirements and guidance specified in this and any relevant complementary regulatory document are complied with by the contracted party or parties.

## **Guidance**

Instructional strategies and methods – In implementing and administering the initial and continuing training referenced in this regulatory document, the licensee is free to employ any effectual instructional strategies and any combination of recognized instructional methods, including self-paced learning, remote learning, and e-learning.

Complementary regulatory document – Further requirements and guidance pertaining to personnel training, including training systems, can be found in the relevant complementary regulatory documents listed as “Additional Information” in the last section of this regulatory document.

Training program samples – Appendix D contains examples of training programs initially implemented at CANada Deuterium Uranium (CANDU) reactor facilities and found acceptable by the CNSC. Notwithstanding this added guidance, a suitable training program is based on a reactor facility training system, as mandated by the CNSC.

### **15.4 Formal learner evaluations**

All training programs and tailored training referenced in this regulatory document shall include formal learner evaluations, either knowledge-based or performance-based as appropriate, designed to assess the progress of each learner during the course of said training.

The licensee shall administer all such formal learner evaluations in accordance with a documented process specifying:

- a. the number and scope of the formative and summative evaluations deemed necessary to monitor candidate progress in relation to pertinent training segments and milestones

- b. the requirements and procedures applicable to the design, development, conduct and grading of the evaluations
- c. the qualification requirements for the personnel tasked with designing, developing, conducting, and grading the evaluations

All formal learner evaluations shall be administered either by qualified trainers or by qualified examiners as part of a documented instructional strategy.

### **Guidance**

Purpose – The purpose of the formal learner evaluations differs from that of the certification examinations and requalification tests in that the former provide timely measures of learner progression throughout training, while the latter serve as formal proof of worker competency for the purpose of seeking certification by the CNSC. The results of the learner evaluations can also be used to provide learners with feedback, and to help managers and trainers determine an appropriate time, on a group or individual basis, when the examiners should administer the personnel certification examinations and the requalification tests required by the CNSC.

## **15.5 Trainer qualifications**

The licensee shall ensure that the personnel tasked with administering the training and formal learner evaluations referenced in this regulatory document are duly qualified to administer training and formal learner evaluations to the workers certified or seeking certification by the CNSC.

# **16. Certification Examination and Requalification Testing**

## **16.1 Separation of the training and examination functions**

The licensee shall ensure that, to the greatest extent possible, adequate separation and an arm's-length relationship are maintained between the trainers delivering the training referenced in this regulatory document and the examiners administering certification examinations and requalification tests on behalf of the CNSC. At a minimum:

- a. no knowledge or performance-based certification examination or requalification test administered in accordance with the requirements specified in this regulatory document shall be designed, developed, conducted, or graded, in whole or in part, by an examiner acting as trainer to any of the candidates undergoing the examination or test
- b. no trainer or examiner shall benefit, financially or otherwise, from the success rate of the candidates undergoing any formal learner evaluation, certification examination, or requalification test referenced in this regulatory document.

### **Guidance**

Purpose – The purpose of maintaining sufficient separation between trainers and examiners is to ensure that the primary proof of competency required by the CNSC at the time of certification or certification renewal, namely the results of the certification examinations or requalification tests, was obtained by qualified examiners independently of the pertinent trainers. In the personnel certification context, the examiners' opinion of worker competency must be an autonomous validation of the trainers' opinion on the matter since the examiners are tasked with representing the certifying body rather than the employer. This separation is a fundamental aspect of best

practice for certifying bodies. The Commission or DO requires satisfactory proof of competency in order to form a sensible opinion of worker competency prior to making any personnel certification decision.

Best practice – Ideally, the training and examination personnel should be members of distinct staffs, led by different managers; however, the CNSC recognizes that this level of separation is neither essential nor always feasible.

## **16.2 Certification examinations**

The licensee shall ensure that the knowledge and performance-based certification examinations referenced in this regulatory document are designed, developed, conducted, and graded by qualified examiners in accordance with the applicable CNSC requirements specified or referenced in the licence or any accompanying documentation.

## **16.3 Requalification testing**

The licensee shall ensure that the knowledge and performance-based requalification tests referenced in this regulatory document are designed, developed, conducted, and graded by qualified examiners in accordance with the applicable CNSC requirements specified or referenced in the licence or any accompanying documentation.

## **16.4 Security of certification examinations and requalification tests**

The licensee shall implement and document effective policies and procedures to control access to, and the use of, the formal learner evaluations, certification examinations and requalification tests referenced in this regulatory document.

The associated security measures shall meet the following minimum requirements:

- a. Only personnel with a valid need to know shall have access to the pertinent formal learner evaluations, certification examinations and requalification tests, as well as any associated documentation and materials providing a direct clue as to their content.
- b. Trainers shall not have access to, or prior knowledge of, the specific content of any certification examination or requalification test administered to their learners.
- c. Answers to modified essay question (MEQ) examinations and tests shall be protected from unauthorized access.
- d. Answer keys to multiple choice question (MCQ) examinations and tests shall be protected from unauthorized access.
- e. Any repository, physical or virtual, containing MEQ or MCQ examinations and test questions shall be protected from unauthorized access.
- f. In order to discharge their duties, CNSC staff participating in compliance verification activities shall be exempt from any security measure established by the licensee in accordance with the requirements specified in this subsection.

## **Guidance**

CNSC staff access – CNSC staff will take appropriate precautions consistent with the security standards applicable to federal employees and the security measures specified in this subsection. In addition, CNSC staff will respect the pertinent licensee procedures to the fullest extent possible. However, no CNSC inspector or any other member of an inspection team may be denied

access to any information required by CNSC staff members to discharge their duties under the NSCA.

### **16.5 Examiner qualifications**

The licensee shall ensure that the personnel tasked with administering the certification examinations and requalification tests referenced in this regulatory document have successfully completed suitable training and are duly qualified to administer certification examinations and requalification tests to the workers certified or seeking certification by the CNSC.

## **17. Work Under Supervision**

The licensee shall establish and document, for each pertinent designated position identified in the licence, effective procedures for the administration of the work under supervision (WUS) referenced in this regulatory document.

All mandatory WUS periods shall meet the following objectives:

- a. WUS shall provide the worker being evaluated with a meaningful opportunity to demonstrate a functional level of competency and the ability to stand solo shifts as lead operator or shift supervisor
- b. WUS shall provide operations managers with a sufficient observation period to confirm that the worker being evaluated can be trusted to stand solo shifts as lead operator or shift supervisor and can perform the pertinent duties safely and competently

When implemented as part of an initial training program, WUS shall not begin until the responsibility for the learner's performance has been transferred from the training authority to the operations authority.

### **Guidance**

Supervising authority – Given that WUS primarily serves a performance evaluation function rather than a training function, WUS periods are supervised by certified operations personnel under the authority of the operations management team. When attending an initial training program, the learner should have acquired a functional level of competency prior to the start of the WUS period.

On-the-job training – Notwithstanding the primary purpose of the mandated WUS, the licensee may conduct OJT and mentorship during any WUS period, notably as an integral part of an initial training program.

## **18. Management Interviews**

The licensee shall establish and document effective procedures for preparing and conducting the various management interviews referenced in this regulatory document.

Each mandatory management interview shall serve an evaluation function and:

- a. be conducted orally by a minimum of one manager authorized to represent the licensee and to conduct the interview

- b. provide the worker being evaluated with a meaningful opportunity to demonstrate an adequate level of competency
- c. provide at least one member of the operations management team with a meaningful opportunity to make a final determination of worker competency
- d. be recorded in writing or via any other retrievable medium, the record of which shall be retained and made available to the CNSC upon request

### **Guidance**

Purpose – The purpose of the management interview is to ensure that the licensee and the operations management team make a final determination of adequate worker competency and take ownership of each candidate individually, prior to their presentation for CNSC certification or their reinstatement to duty following a removal for cause.

## **19. Administrative Policies and Procedures Applicable to Workers in Training**

The policies and procedures specified in this section apply to any worker, whether certified or not, who is attending one of the initial training programs referenced in this regulatory document, in the context of, and in relation to, said training.

### **19.1 Reintegration of a worker in training following a prolonged training interruption**

The licensee shall establish and document an effective process to manage the case of any worker reintegrating an initial training program after a prolonged training interruption. As an integral part of this process, the licensee shall:

- a. determine the need for, and perform as necessary, a formal learner evaluation, including knowledge and performance-based testing as warranted, to assess the K&S retention of the worker and to identify any K&S gap that the worker may have developed during the period of absence
- b. determine the need for tailored training based on an individual training needs analysis (ITNA), considering any K&S forgotten by the worker and any changes or updates to the essential K&S and safety-related attributes that occurred during the period of absence
- c. formulate and implement an individual training plan (ITP) as may be necessary
- d. ensure that the worker, at a minimum, successfully completes any training and formal learner evaluation(s) missed during the period of absence
- e. determine a suitable point of re-entry into the pertinent initial training program

At a minimum, any worker who is absent from an initial training program for a period of 6 months or more shall undergo a formal reintegration process meeting the requirements specified in this subsection.

### **Guidance**

Best practice – The licensee should ensure, on a case-by-case basis, that all workers who absent themselves from initial training to any significant extent are evaluated in order to ensure adequate

K&S retention prior to their reintegration into an initial training program. However, when the absence is shorter than 6 months, formal reintegration is at the licensee's discretion.

## **20. Administrative Policies and Procedures Applicable to Certified Workers**

The policies and procedures specified in this section apply to all certified workers in the context of, and in relation to, their employment in the pertinent designated position(s).

### **20.1 Fitness for duty**

The licensee shall implement and document effective fitness-for-duty policies and procedures providing the CNSC with reasonable assurance that certified workers are free of any physical or mental impairment that could hinder their ability to perform the duties of the pertinent designated position(s) safely and competently.

The fitness-for-duty policies and procedures applicable to certified workers shall be implemented consistently with the requirements and guidance specified in this and complementary regulatory documents regarding fitness for duty, including those related to the management of worker fatigue and the management of alcohol and drug use.

#### **Guidance**

Complementary regulatory documents – Further requirements and guidance pertaining to the management of worker fatigue and the management of alcohol and drug use, including testing, can be found in the relevant complementary regulatory documents listed as “Additional Information” in the last section of this regulatory document.

### **20.2 Minimum employment of certified workers**

The licensee shall ensure that certified workers are employed in the designated position(s) specified on their certificate(s) to the extent necessary to maintain an adequate competency level throughout the full duration of their certification.

#### **20.2.1 Minimum shift requirement for operations personnel**

Certified shift workers shall perform the duties of the pertinent designated position(s) for a minimum number acceptable to the CNSC of complete shifts per calendar quarter amounting to a minimum number acceptable to the CNSC of hours of shiftwork per calendar quarter.

Each certified shift worker shall perform the mandated minimum employment as a member of the minimum staff complement, as opposed to in any back-up or supernumerary capacity, and, to the fullest extent possible, in relation to a fuelled and operating reactor or group of reactors.

#### **Guidance**

Purpose – The purpose of the minimum employment requirement is to ensure that certified workers performing shiftwork are exposed to the duties of the pertinent designated position at a sufficient frequency to maintain an adequate competency level. This minimum employment is primarily aimed at those routine tasks that are neither safety-significant nor time-sensitive, and that may therefore be performed while on duty without negatively impacting nuclear safety.

Safety-significant or time-sensitive K&S should be systematically covered during continuing training.

Minimum requirement – The licensee is not obligated to ensure that every single shift worked by certified shift workers meets the requirements and guidance specified in this subsection, as long as each certified shift worker is sufficiently employed so as to meet the applicable minimum employment requirement on a quarterly basis.

Compliance scheme – Appendix B specifies the minimum shift requirements acceptable to the CNSC for the pertinent reactor facilities in service at the time of publication of the current version of this regulatory document.

Complete shift – A complete shift means a minimum of 4 consecutive hours of work in a designated position as an operator or shift supervisor that is preceded by a formal turnover of the responsibilities for the shift with an outgoing counterpart and that is concluded by an equal turnover with an incoming counterpart.

Normal shift duration – The CNSC acknowledges that the licensee may implement, either as the norm or to manage work schedules on an individual basis, varied but equally effective shift rotations and durations, including, but not limited to, a normal shift duration of 12 hours.

Minimum shift duration – Considering the known concerns and existing limits related to worker fatigue, the CNSC will not define a minimum shift duration other than the aforementioned minimum duration of 4 consecutive hours. This minimum duration is specified merely to ensure that each complete shift recorded for the purpose of meeting a minimum shift requirement provides meaningful exposure to the duties of the pertinent designated position.

Reasonable accommodation – In order to provide the licensee with sufficient flexibility to manage individual circumstances, including, but not limited to, workers suffering from chronic illnesses or pain, certified shift workers are free to perform complete shifts of any acceptable minimum duration as long as the applicable minimum number of complete shifts and total hours of shiftwork are met on a quarterly basis.

Senior shift supervisors – Once duly qualified, senior shift supervisors are permitted to perform the duties of any applicable site-specific shift supervisor position listed in Appendix A, and may therefore stand shifts in either or both the shift supervisor and the senior shift supervisor positions interchangeably in order to meet an applicable quarterly minimum shift requirement.

### **20.2.2 Minimum shift requirement deferment**

When a certified shift worker fails to meet, during any given calendar quarter, an applicable minimum shift requirement, the omitted number of complete shifts and hours of shiftwork shall be performed in the following calendar quarter, in addition to the minimum shift requirement strictly applicable to said calendar quarter.

### **20.2.3 Minimum employment of senior health physicists**

The licensee shall ensure that workers certified for employment as an SHP regularly perform the duties of an SHP throughout the full duration of their certification.



### **20.3 Management of prolonged unemployment**

Any certified worker shall be formally removed from the duties of the pertinent designated position and assigned an inactive employment status who, for a period lasting 6 consecutive months or more, regardless of the rationale, is or will be unable to:

- a. attend the scheduled continuing training
- b. meet an applicable quarterly minimum shift requirement

#### **Guidance**

Applicability – This subsection applies to any certified worker who meets one or both of the prolonged unemployment criteria regardless of the circumstances. Relevant circumstances encompass, but are not limited to, any competing work assignment, including a temporary or permanent reassignment inside or outside the reactor facility, and any prolonged leave of absence, including sabbatical, medical, parental, and maternity leave. In addition, any worker holding a valid certificate who ceases to attend continuing training or meet the applicable minimum employment requirement, be it voluntarily or not, including due to a planned retirement, should likewise be formally removed from duty in accordance with this subsection and may be reinstated to duty in accordance with the baseline reinstatement process specified in subsection 20.5, as the situation later dictates.

### **20.4 Removal from duty for cause**

Any certified worker who meets any one of the criteria specified in this subsection shall be formally removed from the duties of the pertinent designated position for cause and assigned either an inactive or uncertified employment status as applicable.

#### **20.4.1 Failure to meet a minimum employment requirement**

The worker has failed to meet an applicable quarterly minimum shift requirement for 2 consecutive calendar quarters.

#### **Guidance**

Applicability – This criterion applies to a certified shift worker who was expected to meet an applicable minimum shift requirement and has already failed to meet said requirement for 2 consecutive calendar quarters. Workers who are unable to perform sufficient shiftwork due to a prolonged absence or a competing work assignment should be managed under the prolonged unemployment provisions specified in subsection 20.3.

#### **20.4.2 Requalification test failure**

The worker has failed a requalification test, be it in a lead or supporting role.

#### **20.4.3 Inability to work safely and competently**

The worker was the subject of a verified positive alcohol or drug test administered in accordance with the fitness-for-duty program mandated by the CNSC, or is otherwise deemed unfit, by the

licensee, to perform the duties of a designated position safely and competently for any reason, including, but not limited to:

- a. a medical or physical condition, be it permanent or temporary
- b. a mental health condition, be it permanent or temporary
- c. inadequate performance while on duty, including any action or decision that puts at risk the health and safety of workers, the public or the environment
- d. a demonstrated unwillingness or failure to take the necessary precautions to protect the health and safety of workers, the public or the environment
- e. a demonstrated lack of integrity or trustworthiness

### **Guidance**

Applicability – In regard to any medical, physical, or mental health condition, the removal from duty criterion applies to the case of a certified worker who must be removed from duty by the licensee, with or without the worker's consent, because the resulting physical, physiological, or mental impediment interferes with the worker's ability to perform the duties of the pertinent designated position safely and competently, regardless of the expected duration of the condition.

#### **20.4.4 Certificate expiry**

The certificate of the worker has expired.

#### **20.4.5 Proposed decision not to certify or to decertify**

The worker was identified by the CNSC as the worker concerned in a proposed decision not to certify, or a proposed decision to decertify, while a final decision by the Commission or a DO remains pending.

### **Guidance**

Rationale for removal – In accordance with section 11, both the worker and the licensee have 30 calendar days to request an opportunity to be heard. When, in addition to this minimum time frame, an opportunity to be heard is requested, the final decision by the Commission or a DO may be significantly delayed. Since the worker remains certified throughout the whole of the proceedings, while the Commission or a DO has reason to decertify or refuse to certify the worker, the worker is to be removed from the duties of the pertinent designated position until the Commission or a DO has reached a final decision.

#### **20.5 Baseline reinstatement process**

No certified worker who has been formally removed from the duties of a designated position shall be allowed to perform said duties until the worker has successfully undergone a suitable baseline reinstatement process compliant with the requirements specified in this subsection.

### **Guidance**

Applicability – The baseline reinstatement process applies to all certified workers removed from duty, regardless of the rationale. The remediation process specified in subsection 20.6 is in

addition to the baseline reinstatement process but applies only to certified workers removed from duty for cause.

#### **20.5.1 Update training**

The worker must have completed suitable update training covering any relevant technical or operational changes implemented, and any relevant lessons learned, while the worker was formally removed from the duties of the designated position, including, but not limited to:

- a. changes to reactor facility systems and subsystems
- b. changes to licensee and station-specific policies, standards, and procedures
- c. amendments to, or exemptions from, regulatory requirements
- d. amendments to the licence or to documents referenced in the licence
- e. station-specific and industry operational experience and operating events

#### **20.5.2 Refresher training**

The worker must have successfully completed suitable refresher training commensurate with the duration of the period of absence or removal from duty of the worker.

At a minimum, this refresher training shall encompass any scheduled refresher training that the worker failed to attend while the worker was formally removed from the duty.

#### **20.5.3 Simulator-based training**

For operations personnel, the worker must have successfully completed suitable simulator-based training covering a number and variety of scenarios commensurate with the duration of the period of absence or removal from duty of the worker.

At a minimum, this simulator-based training shall challenge the diagnostic and decision-making skills of the worker and encompass any scheduled simulator-based training that the worker failed to attend during the period of absence or removal from duty.

#### **20.5.4 Work under supervision**

For operations personnel, the worker must have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform said duties competently and safely.

#### **20.5.5 Management interview**

When removed from duty for cause, the worker must have successfully undergone a formal management interview.

## **Guidance**

Applicability – The management interview is not mandatory for workers being reinstated to duty after a period of prolonged unemployment.

### **20.6 Remediation following removal from duty for cause**

In addition to the baseline reinstatement process specified in subsection 20.5, no certified worker who has been removed from duty for cause based on one of the criteria defined in subsection 20.4 shall be allowed to perform the duties of the pertinent designated position until the worker has successfully undergone suitable remediation consistent with the applicable cause for the removal, as further specified in this subsection.

#### **20.6.1 Failure to meet a minimum employment requirement**

The licensee may reinstate a worker to the duties of the pertinent designated position following a failure to meet a minimum employment requirement, if:

- a. the circumstances that prevented the worker from performing the duties of the pertinent designated position no longer exist
- b. the worker has performed, under the supervision of a qualified worker certified for employment in the pertinent designated position, a number of complete shifts and hours of shiftwork no less than the minimum number of complete shifts and hours of shiftwork that the worker failed to complete in the quarter preceding the removal from duty

#### **20.6.2 Requalification test failure**

The licensee may reinstate a worker to the duties of the pertinent designated position following a requalification test failure once the worker has successfully completed a remedial requalification test equivalent to the failed requalification test.

This remedial requalification test shall be equivalent in all respects, but must not be the same as the failed requalification test or any other remedial requalification test the candidate may have failed as part of the reinstatement process. Furthermore, any restrictions set in complementary documents regarding the allowed topic overlap between requalification tests shall apply.

#### **20.6.3 Inability to work safely and competently**

The licensee may reinstate a worker to the duties of the pertinent designated position following a removal from duty due to an inability to work safely and competently if the basis for the removal from duty has been adequately remedied or mitigated or no longer exists.

#### **20.6.4 Certificate expiry**

The licensee may reinstate a worker to the duties of the pertinent designated position following a certificate expiry if and when officially informed of the Commission's or DO's decision to recertify the worker.

**Guidance**

When the Commission or DO intends not to recertify the worker, a proposed decision not to certify will be made, in which case sub-subsection 20.4.5 applies.

**20.6.5 Proposed decision not to certify or to decertify**

The licensee may reinstate a worker to the duties of the pertinent designated position who was the subject of a proposed decision not to certify, or a proposed decision to decertify, if and when officially informed of the Commission's or DO's decision to certify, or not to decertify, the worker.

**Guidance**

When the Commission's or DO's final decision is to not certify or to decertify the worker, the worker is no longer certified by the CNSC as qualified to perform the duties of the pertinent regulated position, and the staffing restriction set in subsection 4.2 applies.

**20.7 Notification of change in employment status****20.7.1 Notification of removal from duty**

The licensee shall promptly inform the CNSC of any certified worker removed from the duties of a designated position, be it due to a prolonged period of unemployment or a removal for cause, specifying:

- a. the full legal name of the worker
- b. the pertinent designated position
- c. the resulting employment status assigned to the worker as per subsection 3.2
- d. the basis for the removal from duty as per subsection 20.3 or 20.4, as applicable

**20.7.2 Notification of reinstatement to duty**

The licensee shall promptly inform the CNSC of any certified worker reinstated to the duties of a designated position, to include:

- a. the full legal name of the worker
- b. the pertinent designated position
- c. the resulting employment status assigned to the worker as per subsection 3.2
- d. the basis for the prior removal from duty and a confirmation that said basis no longer exists or has been adequately remedied or mitigated, as applicable
- e. a summary of the baseline reinstatement process successfully completed by the worker
- f. when following a removal for cause, a summary of any remediation action(s) taken to satisfy the applicable requirements specified in subsection 20.6

**Guidance**

Applicability – Items 20.7.2.e and 20.7.2.f are not mandatory following a recertification, since the CNSC is made aware of the particulars of the case by means of the recertification process.

**21. Information Management**

The licensee shall implement and document effective information management policies and procedures ensuring:

- a. the retention and ready retrieval of the corporate documentation and proof-of-competency records related to personnel certification
- b. the safeguard and control of sensitive information pertaining to personnel certification
- c. the unrestricted access, by authorized CNSC staff, to the corporate documentation and personnel records specified in this section

**21.1 Corporate documentation****21.1.1 Roles and responsibilities**

The licensee shall document, retain, and make available to the CNSC upon request, the roles and responsibilities of:

- a. certified workers
- b. all personnel, including management, involved in the training and qualification of workers seeking or holding a certification, including trainers, examiners, and managers delegated with relevant approval authorities

**21.1.2 Operational procedures**

The licensee shall retain, and make available to the CNSC upon request, a copy of the latest version of the licensee and station-specific policies, procedures and technical diagrams referenced by certified workers to perform the duties of the designated positions safely and competently, including those related to:

- a. operating policies and principles
- b. worker performance expectations
- c. radiation protection
- d. normal and abnormal operations
- e. abnormal incidents
- f. power reduction actions
- g. severe accident management

**21.1.3 Training and qualifying governance**

For each designated position referenced in the licence, the licensee shall document, retain, and make available to the CNSC upon request, the policies, standards, and procedures for training and qualifying the workers seeking a certification, and for training and maintaining the qualification of the workers holding a certification, including the procedures for:

- a. administering the initial and continuing training

- b. preparing and administering the formal learner evaluations administered as part of the initial and continuing training
- c. preparing and administering certification examinations and requalification tests
- d. managing work under supervision (WUS) periods
- e. preparing and administering management interviews
- f. maintaining comprehensive and accurate personnel records

#### **21.1.4 Trainer and examiner qualifications**

The licensee shall document, retain, and make available to the CNSC upon request, a record of the qualifications of the trainers and examiners referenced in this regulatory document.

### **21.2 Personnel records**

For each worker certified or seeking certification for employment in a designated position, the licensee shall retain, and make available to the CNSC upon request, adequate personnel records for a retention period equal to the duration of the employment of the worker, be it as an employee or a contractor, plus 5 years after the worker ceases to be employed in any capacity.

At a minimum, said personnel records shall encompass:

- a. Education or literacy level – The name and address of any educational institution or learning provider from which the worker obtained an accreditation, including any diploma, degree or certificate, and a copy of any diploma, degree or certificate required by the licensee's personnel selection program.
- b. Prior work experience – Comprehensive records of any employment period(s) required by the licensee's personnel selection program, or as part of the mandated plant familiarization training, including, in each case, the name of the employer, the address of the work site, and the effective start and end dates.
- c. Personnel selection interviews and tests – Comprehensive records of any personnel selection interview or test, including the effective date and results in each case, administered as part of the licensee's personnel selection program.
- d. Personnel transfer – Comprehensive records of any information required or collected as part of a personnel transfer.
- e. Advancement – Comprehensive records of any information required or collected as part an advancement to a shift supervisor or senior shift supervisor position.
- f. Training – Comprehensive records of the initial training and continuing training successfully completed by the worker, including the start and end dates of each distinct training period or milestone.
- g. Formal learner evaluations – Comprehensive records of the formal learner evaluations administered to the worker as part of their initial or continuing training, including, in each case, the dates on which the evaluations were conducted, the results, and the full legal name(s) of the evaluator(s).
- h. Work under supervision – Comprehensive records of any WUS performed by the worker, including, in each case, the associated requirement being met, the date of each shift worked under supervision, and the full legal name of, and the CNSC certification held by, the certified worker who supervised the worker.
- i. Management interviews – Comprehensive records of the management interviews undergone by the worker, including, in each case, the date of the interview, the full legal name(s) and position(s) of the interviewer(s), and a verbatim or summary description of the questions and answers exchanged during the interview.

- j. Certification examinations – The certification examination records referenced in the licence or any accompanying documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying documentation.
- k. Requalification tests – The requalification testing records referenced in the licence or any accompanying licensing documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying licensing documentation.
- l. Employment records – The employment records specified in subsection 3.3.
- m. Fitness for duty – Any information collected regarding the worker's fitness for duty, except for any sensitive or privileged information protected by privacy laws.
- n. Removals and reinstatements – Comprehensive records of all removals from, and reinstatements to, the duties of a designated position, including, in each case, the effective date of removal and the basis for the removal and, when applicable, the effective date of reinstatement and the actions taken to reinstate the worker.

**Guidance**

Adequacy – Adequate personnel records are accurate, comprehensive, and readily retrievable, and provide auditors and inspectors with reasonable assurance that the documentation preserved as proof of competency is genuine.



## **Subpart B – Physical Infrastructure**

The licensee shall ensure that the reactor facility is equipped or associated with the physical infrastructure necessary to administer the knowledge and performance-based training, certification examinations and requalification tests specified in this regulatory document, including, at a minimum, the facilities specified in subpart B.

### **22. Knowledge-Based Examination and Testing Facilities**

The licensee shall ensure that examiners have access to adequate facilities allowing for the administration of the pertinent knowledge-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures.

#### **Guidance**

Adequate facility – The knowledge-based examination and testing facilities referenced in this section do not have to be spaces entirely dedicated to examination and testing. Any room may be used that provides an adequate examination and testing environment, including sufficient heating, lighting and ventilation, and is temporarily or permanently arranged in such a manner as to ensure the security of any certification examination or requalification test conducted within.

### **23. Performance-Based Examination and Testing Facilities**

The licensee shall ensure that examiners have access to a full-scope simulator, or an alternate simulator acceptable to the CNSC, that permits the administration of the pertinent performance-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures. All performance-based certification examinations and requalification tests referenced in this regulatory document shall be administered in simulator facilities or using simulation systems acceptable to the CNSC.

#### **23.1 Simulation capabilities**

The simulator shall be capable of simulating, realistically and in real time, all significant plant manoeuvres and transients that may occur under normal and abnormal operating conditions, including:

- a. reactor start-up and shutdown
- b. major plant upsets and accident conditions
- c. all significant failures of systems and associated subsystems and equipment, and the consequences of such failures
- d. the system and equipment responses to operator actions

For conditions and failures that may vary in magnitude, such as pipe breaks, loss of inventory, loss of flow, loss of pressure and loss of vacuum, the simulator shall have adjustable rates to simulate all possible degrees of severity of a condition or failure that affect system responses or operator actions.

**Guidance**

Simulation should be autonomous once the simulated scenario has been initiated, requiring minimum intervention from the simulator operator or other personnel, except to control the evolution of the simulated scenario, including the introduction of scripted malfunctions and the potential need for pausing and resuming the simulation.

**23.2 Physical layout**

To the fullest extent possible, the simulator shall replicate the operating and monitoring systems and equipment available to certified workers in the main control room, as well as the spatial relationships linking these systems and equipment.

In cases where the CNSC has accepted the use of a simulator other than a full-scope simulator, either to complement or as an alternative to the full-scope simulator, the alternate simulator shall meet the requirements specified in this section to the fullest extent possible, within the physical restrictions or functional limitations inherent to the alternate simulator.

**23.3 Simulator operating room**

The simulator operating room shall be shielded from the main control room replica in such a manner as to prevent the candidate(s) who are being evaluated from seeing or hearing any data being recorded, any input entered in the simulator, or any communication between the simulator operator and the examiner(s) and other examination team members.

**Guidance**

Adequate facility – The simulator facility should allow for the monitoring of the actions and communications of the candidate(s) from the simulator operating room without interfering with the conduct of any certification examination or requalification test.

**23.4 Communication systems and equipment**

The simulator shall be equipped with functional replicates of the communication or warning system(s) or equipment used by certified workers in the main control room of the simulated reactor facility, including, as applicable:

- a. telephones or other two-way, internal communication system
- b. a radiation emergency warning system, including any visual or audible alarm
- c. a fire emergency warning system, including any visual or audible alarm
- d. a public address system

**23.5 Data-recording systems and equipment**

In order to facilitate the conduct and grading of the performance-based certification examinations and requalification tests referenced in this regulatory document, the simulator shall be equipped with adequate data-recording systems and equipment meeting the minimum requirements specified in this subsection.

### **23.5.1 Recording of operator actions**

The simulator shall allow for the recording, retrieval, and printing, in chronological order, along with the time of occurrence, of:

- a. all malfunctions initiated by the simulator operator
- b. all the operator actions performed by the candidate(s) via the simulated control panels and instrumentation

### **23.5.2 Recording of system parameters**

The simulator shall allow for:

- a. the recording, retrieval, and printing of all the system parameter values relevant to:
  - i. the evaluation of the operator actions performed by the candidate(s)
  - ii. the verification of the simulator fidelity
- b. the graphical representation and printing of the variation of said system parameter values in relation to time, based on an adequate sampling frequency, and for a minimum recording period of 2 hours

### **23.5.3 Audiovisual recording system**

The simulator shall be equipped with an audiovisual recording system allowing for:

- a. recording and replaying the actions performed by each candidate being evaluated
- b. recording and replaying all vocal communications, including telephone exchanges, between the candidate(s) being evaluated and the other members of the operating team
- c. the unequivocal identification of the voice of each candidate being evaluated
- d. the identification of the operating controls, instruments, and references used by the candidate(s) being evaluated
- e. the overlay of the time, real or simulated, on the audiovisual recordings

### **Guidance**

**Purpose** – In context, the primary purpose of the audiovisual recording system is to provide the examination team with added information at the time of grading, in the event that some operator actions and communications are not observed during the evaluation, or some of the observations made by the examiner(s) during the evaluation are contradictory or equivocal.

**Capability** – When cameras are installed to meet the requirements specified in this subsection, some of the cameras should be capable of remote operation, allowing an operator located in the simulator operating room to zoom the frame in and out and pan the viewing angle in all 3 dimensions, thereby allowing the operator, using a sufficient number of cameras, to follow the movements of the candidate(s) throughout the simulator and identify the instrumentation, operational procedures and technical drawings used by the candidate(s).

### **23.5.4 Control of audiovisual data**

The licensee shall establish and document effective policies and procedures to control the access to, and the use of, the audiovisual data collected during the design, development and conduct of certification examinations and requalification tests.

## **Part III – Worker Qualifications**

Part III specifies the prerequisites that reactor facility workers must meet to be eligible for the personnel certification processes described in Part I. These prerequisites apply to 2 distinct groups of certified workers: operations personnel and senior health physicists.

### **Subpart C – Operations Personnel**

#### **24. Operations Personnel Certification**

The requirements specified in this section pertain to workers employed or seeking employment in one of the following generic classes of designated positions:

- a. auxiliary systems operator (ASO)
- b. reactor operator (RO)
- c. shift supervisor

##### **24.1 Core qualifications for operations personnel**

Any worker referred to in this section shall meet, at the time of application for certification, the core qualifications for operations personnel specified in this subsection.

###### **24.1.1 Personnel selection**

The worker must have met, prior to the start of their initial training, the basic prerequisites specified in sub-subsection 14.2.1.

###### **24.1.2 General knowledge**

The worker must have successfully completed general training based on a training system and must consequently possess the fundamental knowledge, including the applied sciences and engineering principles, relevant to the design and operation of the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.

###### **24.1.3 Plant familiarization**

The worker must have successfully completed, prior to the start of the station-specific training specified in sub-subsection 24.1.4, plant familiarization training based on a training system and must consequently possess, at a minimum, a basic understanding of:

- a. the physical layout of the reactor facility identified in the licence, including the location and size of the major systems, subsystems, and equipment
- b. the management system and organizational infrastructure necessary to operate said reactor facility under normal, abnormal, and emergency conditions, including the mandate, roles and responsibilities of the key personnel and groups of personnel

###### **24.1.4 Station-specific knowledge**

The worker must have successfully completed station-specific training based on a training system and must consequently possess the detailed knowledge necessary to safely and competently

operate, under normal, abnormal, and emergency conditions, the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.

### **Guidance**

Clarification – The knowledge referenced in this sub-subsection is the detailed station-specific knowledge that, for ASO candidates, is required of a certified ASO, or, for RO and shift supervisor candidates, is required of a certified RO.

#### **24.1.5 Nuclear emergency management**

The worker must possess adequate knowledge of nuclear emergency response and the management of beyond-design-basis accidents, including the roles and responsibilities of certified workers regarding emergency operating procedures and severe accident management.

#### **24.1.6 On-the-job training**

The worker must have successfully completed on-the-job training (OJT) based on a training system covering, at a minimum, the relevant knowledge and skills (K&S) and safety-related attributes acquired or reinforced most effectively through OJT.

#### **24.1.7 Simulator-based training**

The worker must have successfully completed simulator-based training based on a training system covering, at a minimum, the relevant K&S and safety-related attributes acquired or reinforced most effectively through simulated scenarios.

#### **24.1.8 Knowledge-based general certification examination**

The worker must have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the general knowledge necessary to perform the duties of the pertinent designated position safely and competently.

#### **24.1.9 Knowledge-based station-specific certification examination**

The worker must have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently.

#### **24.1.10 Performance-based certification examination**

The worker must have successfully completed, within 2 years of the application for certification, a performance-based certification examination conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.

#### **24.1.11 Work under supervision**

The worker must have successfully performed a minimum number of hours of work under supervision (WUS) acceptable to the CNSC, in the pertinent designated position and under the supervision of a qualified worker certified to work in the pertinent designated position.

**Guidance**

Compliance scheme – Appendix B specifies the minimum number of WUS hours acceptable to the CNSC for the pertinent reactor facilities in service at the time of publication of the current version of this regulatory document.

**24.1.12 Management interview**

The worker must have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently.

The management interview shall be conducted after all the other requirements specified in subsection 24.1 have been met.

**24.2 Supplementary qualifications for shift supervisors**

In addition to the core qualifications for operations personnel specified in subsection 24.1, a worker seeking certification for employment as shift supervisor shall meet, at the time of application for certification, the supplementary requirements specified in this subsection.

**24.2.1 Supplementary personnel selection criteria**

The worker must have met the supplementary prerequisites specified in sub-subsection 14.2.2.

**24.2.2 Supplementary station-specific knowledge**

The worker must have successfully completed supplementary station-specific training based on a training system and must consequently possess the supplementary knowledge specifically required of shift supervisors concerning the design and operation, under normal, abnormal, and emergency conditions, of the reactor(s) and associated systems, subsystems and equipment installed in the reactor facility identified in the licence.

**Guidance**

Clarification – The supplementary station-specific training for shift supervisors covers any supplementary station-specific knowledge that is required of a certified shift supervisor, in addition to the baseline station-specific knowledge required of a certified RO.

**24.2.3 Supplementary knowledge-based station-specific certification examination**

The worker must have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the supplementary station-specific knowledge specifically required of shift supervisors to perform their duties safely and competently.

**24.3 Requalification of operations personnel**

Any worker referred to in this section seeking the renewal of their certification shall meet, at the time of application for certification renewal, the requirements specified in this subsection.

### **24.3.1 Continuing training**

The certified worker must have successfully completed, within the current certification period, suitable continuing training meeting the requirements specified in subsection 15.2.

### **24.3.2 Knowledge-based requalification testing**

The certified worker must have successfully completed, within 2 years of the application for certification renewal, a knowledge-based requalification test or series of tests providing sufficient evidence that the worker has retained the knowledge necessary to perform the duties of the pertinent designated position safely and competently.

### **24.3.3 Performance-based requalification testing**

The certified worker must have successfully completed, within 2 years of the application for certification renewal, and in a lead role, a performance-based requalification test or series of tests conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.

### **24.3.4 Minimum employment of operations personnel**

The certified worker must have been sufficiently employed in the pertinent designated position to maintain an adequate competency level.

### **Guidance**

Minimum employment – The CNSC does not prescribe a specific number of hours in relation to the minimum employment referred to in this sub-subsection. Notwithstanding, the licensee should ensure that, to the fullest extent possible, every certified shift worker is sufficiently exposed to the duties of the designated position by standing solo or supervised shifts on a regular or periodic basis, throughout the certification period.

Important note – The licensee should note that the pertinent regulations do not allow the CNSC or a DO to renew a certification unless the certified worker has “safely and competently performed the duties” of the pertinent designated position.

## **24.4 Qualifying for recertification within 5 years of a certificate expiry**

Any worker referred to in this section seeking a recertification within 5 years of the expiry of a prior certification for the same position shall meet, at the time of application for recertification, the requirements specified in this subsection.

### **24.4.1 Tailored training**

The worker must have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP).

At a minimum, this tailored training shall cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the certificate expiry and the application for recertification.

**24.4.2 Knowledge-based requalification testing**

The certified worker must have successfully completed, within 2 years of the application for recertification, a knowledge-based requalification test or series of tests providing sufficient evidence that the worker has retained the knowledge necessary to perform the duties of the pertinent designated position safely and competently.

**24.4.3 Performance-based requalification testing**

The certified worker must have successfully completed, within 2 years of the application for recertification, and in a lead role, a comprehensive performance-based requalification test conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.

**24.4.4 Work under supervision**

The worker must have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.

**24.4.5 Management interview**

The worker must have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently.

The management interview shall be conducted after all other requirements previously specified in subsection 24.4 have been met.

**24.5 Qualifying for recertification following decertification or certificate expiry after 5 years**

Any worker referred to in this section seeking a recertification following decertification by the CNSC, or following the expiry of a certificate that occurred more than 5 years before the date of application for recertification, shall meet, at the time of application for recertification, the requirements specified in this subsection.

**24.5.1 Decertification basis remediation**

When the worker is seeking recertification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker shall no longer exist or shall have been remedied by the licensee to the satisfaction of the CNSC.

**Guidance**

Depending on the basis for the decertification, remediation may involve any means or method used to rectify or remedy the cause of the decertification, including, but not limited to, administrative measures, remedial training, rehabilitation, or therapy.



**24.5.2 Tailored training**

The worker must have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP).

At a minimum, the tailored training referenced in this subsection shall cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the decertification or certificate expiry and the application for recertification.

**24.5.3 Knowledge-based station-specific certification examination**

The worker must have successfully completed, within 2 years of the application for recertification, a station-specific knowledge examination providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently.

When the worker is seeking certification as a shift supervisor, the licensee shall administer both baseline and supplementary station-specific examinations.

**24.5.4 Performance-based certification examination**

The worker must have successfully completed, within 2 years of the application for recertification, a performance-based certification examination conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.

**24.5.5 Work under supervision**

The worker must have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.

**24.5.6 Management interview**

The worker must have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently.

The management interview shall be conducted after all other requirements specified in subsection 24.5 have been met.

**Guidance**

Schedule – The management interview referenced throughout section 24 is the last activity conducted prior to any application for certification or recertification, as it is intended as the final worker competency evaluation.

Effective dates – The 2-year validity period applicable to the knowledge and performance-based certification examination and requalification test results referenced throughout section 24 starts on the date the examination or test is conducted, not the date on which the grading is finalized.

## **Subpart D – Senior Health Physicists**

### **25. Senior Health Physicist Certification**

The requirements specified in this section pertain to workers employed or seeking employment as senior health physicist (SHP).

#### **25.1 Qualifications for senior health physicists**

A worker seeking certification for employment as an SHP shall meet, at the time of application for certification, the requirements specified in this subsection.

##### **25.1.1 Personnel selection**

The worker must have met, prior to the start of their initial training, the basic and supplementary prerequisites specified in sub-subsections 14.2.1 and 14.2.2 respectively.

##### **25.1.2 Prior education**

The worker shall:

- a. hold a degree in health physics granted by a recognized university, or
- b. hold a baccalaureate in engineering or science granted by a recognized university, and have successfully completed a suitable series of courses offered by a recognized educational institution or learning provider covering current radiation protection principles and methods

##### **25.1.3 Prior work experience**

The worker shall possess, at a minimum, 4 years of relevant experience, including 2 years as a health physicist or an equivalent position at a reactor facility.

##### **25.1.4 Initial training**

The worker must have successfully completed initial training based on a training system covering the general and station-specific knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.

##### **25.1.5 Radiation protection expertise**

The worker must, in consequence of the education, work experience, and initial training previously specified in subsection 25.1, possess knowledge, to an extent commensurate with the duties of an SHP, of radiation theory, including radiation hazards, and of radiation protection theory and practices, including the radiation protection procedures relevant to the operation of the reactor facility identified in the licence under normal, abnormal, and emergency conditions.

##### **25.1.6 Management interview**

The worker must have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker

is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently.

The management interview shall be conducted after the worker has successfully completed the initial training referenced in sub-subsection 25.1.4, and before the certification examination specified in sub-subsection 25.1.7.

#### **25.1.7 Certification examination**

The worker must have successfully completed a knowledge-based examination administered by CNSC staff.

#### **Guidance**

Knowledge areas – Appendix C provides a summary of the key knowledge areas and topics sampled by CNSC staff during the SHP certification examinations and requalification tests.

### **25.2 Requalification of senior health physicists**

A worker seeking the renewal of a certification for employment as an SHP shall meet, at the time of application for certification renewal, the requirements specified in this subsection.

#### **25.2.1 Continuing training**

The worker must have successfully completed refresher and update training based on a training system covering the knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.

#### **25.2.2 Management interview**

The worker must have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently.

The management interview shall be conducted after the worker has successfully completed the continuing training referenced in sub-subsection 25.2.1, and before the requalification test specified in sub-subsection 25.2.3.

#### **25.2.3 Requalification testing**

The worker must have successfully completed a knowledge-based requalification test administered by CNSC staff.

## **Guidance**

Knowledge areas – Appendix C provides a summary of the key knowledge areas and topics sampled by CNSC staff during the SHP certification examinations and requalification tests.

### **25.3 Qualifying for recertification following decertification or certificate expiry**

A worker seeking certification for employment as an SHP following decertification by the CNSC, or following the expiry of the certificate, shall meet, at the time of application for recertification, the requirements specified in this subsection.

#### **25.3.1 Decertification basis remediation**

When the worker is seeking certification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker shall no longer exist or shall have been remedied by the licensee to the satisfaction of the CNSC.

## **Guidance**

Depending on the basis for the decertification, remediation may involve any means or method used to rectify or remedy the cause of the decertification, including, but not limited to, administrative measures, remedial training, rehabilitation, or therapy.

#### **25.3.2 Tailored training**

The worker must have successfully completed tailored training, comprising knowledge and performance-based refresher and update training, based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP).

At a minimum, the tailored training referenced in this subsection shall cover any scheduled knowledge refresher and knowledge update training that the worker missed during the interim period between decertification or the certificate expiry and the application for certification.

#### **25.3.3 Management interview**

The worker must have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently.

The management interview shall be conducted after the worker has successfully completed the tailored training referenced in sub-subsection 25.3.2, and before the certification examination specified in sub-subsection 25.3.4.

#### **25.3.4 Certification examination**

The worker must have successfully completed a knowledge-based examination administered by CNSC staff.

## Appendix A : Station-Specific Designated Positions

This appendix specifies which station-specific position(s) correspond(s) to each generic class of designated position referenced in this regulatory document for the pertinent reactor facility in operation at the time of publication of the current version of this regulatory document.

### A.1 Station-Specific Positions Requiring an Auxiliary Systems Operator (ASO) Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
ASO position	Unit 0 Control Room Operator	Unit 0 Control Room Operator	None	None	None

### A.2 Station-Specific Positions Requiring a Reactor Operator (RO) Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
RO position	Authorized Nuclear Operator	Authorized Nuclear Operator	None	Authorized Nuclear Operator	Control Room Operator

### A.3 Station-Specific Positions Requiring a Shift Supervisor Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
Shift Supervisor position	Control Room Shift Supervisor	Control Room Shift Supervisor	None	Control Room Shift Supervisor	Shift Supervisor
Senior Shift Supervisor position	Shift Manager	Shift Manager	None	Shift Manager	None

### A.4 Station-Specific Positions Requiring a Senior Health Physicist (SHP) Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
SHP position	Authorized Health Physicist	Responsible Health Physicist	Responsible technique de radioprotection	Responsible Health Physicist	Senior Health Physicist

## Appendix B : Compliance Schemes Acceptable to the CNSC

This appendix specifies schemes acceptable to the CNSC that the licensee must implement at the specified reactor facilities to be compliant with the referenced requirements for the pertinent reactor facilities in service at the time of publication of the current version of this regulatory document.

### Mandatory personnel certification schemes for CANDU reactor facilities

Reference	Description	Requirement(s)
Sub-subsection 24.1.11	Minimum number of hours of work under supervision (WUS) required for the certification of operations personnel.	The worker shall have successfully performed 360 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.
Sub-subsection 14.4.1	Minimum experience as shift supervisor prior to advancement to a senior shift supervisor position.	The worker shall have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a minimum of 80 complete shifts amounting to a minimum of 960 hours of shiftwork prior to being selected for advancement to the senior shift supervisor position.
Sub-subsection 20.2.1	Minimum shift requirements for operations personnel.	<p>Any worker certified for employment as ASO shall perform the duties of an ASO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as RO shall perform the duties of an RO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as shift supervisor, but not qualified as senior shift supervisor, shall perform the duties of a shift supervisor for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as shift supervisor who is duly qualified as senior shift supervisor shall perform the duties of a shift supervisor or senior shift supervisor for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p>

## **Appendix C : Senior Health Physicist Examination and Testing Topics**

The certification examinations and requalification tests administered by CNSC staff to workers seeking certification or the renewal of a certification for employment as senior health physicist cover topics divided into 3 parts, each covering a specific knowledge area, as exemplified in this appendix.

### **C.1 Regulations and Reactor Operating Licence**

The relevant topics include, but are not limited to:

- a. the relevant provisions of the NSCA
- b. the relevant regulations made pursuant to the NSCA, namely the:
  - i. *General Nuclear Safety and Control Regulations*
  - ii. *Radiation Protection Regulations*
  - iii. *Class I Nuclear Facilities Regulations*
  - iv. *Nuclear Substances and Radiation Devices Regulations*
  - v. *Packaging and Transport of Nuclear Substances Regulations*
- c. the reactor facility licence and the documentation referenced in the licence

### **C.2 Radiation Protection**

The relevant topics include, but are not limited to:

- a. safety culture
- b. reactor facility design, operation, and maintenance
- c. the relevant licensee and station-specific policies, standards, and procedures
- d. the radiation protection principles, methods and practices related to the operation of the reactor facility identified in licence
- e. the relevant Canadian, international and industry standards and conventions

### **C.3 Roles and Responsibilities**

The relevant topics include, but are not limited to:

- a. the responsibilities and authority of the senior health physicist
- b. the responsibilities and authority of the personnel who interact with the senior health physicist



## **Appendix D : Station-Specific Training Samples**

This appendix contains examples of station-specific knowledge areas covered by station-specific training programs initially implemented at CANDU reactor facilities and found acceptable by the CNSC. These examples are included as additional guidance to newly licensed reactor facility operators trying to establish suitable training programs. Notwithstanding this added guidance, a suitable training program is based on a reactor facility training system found acceptable by the CNSC.

### **D.1 Station-Specific Training for Reactor Operators**

The relevant training areas may include:

- a. design and operation of reactor facility systems
- b. integrated operation of reactor facility systems, including, where applicable, interfaces between the systems of a reactor unit and those of other reactor units and common and auxiliary systems
- c. expected response of reactor facility systems and units to abnormal and accident conditions
- d. technical bases for emergency operating procedures
- e. diagnosis of equipment failures and assessment of abnormal plant conditions
- f. phenomena that may significantly affect reactor core reactivity and neutron flux shape
- g. reactor fuelling, fuelling limitations, fuel handling and storage, and irradiated fuel cooling
- h. configuration of systems and equipment isolation required for maintenance activities
- i. safety culture
- j. principles of nuclear safety and their application
- k. the operating licence and the documents referenced in the operating licence
- l. situations that may result in the violation of the conditions of the operating licence and the operating policies and principles (OPP)
- m. administrative procedures related to reactor facility operation and maintenance
- n. the responsibilities and authority of a reactor operator, and of the other members of the reactor facility personnel who interface with the reactor operator

### **D.2 Supplementary Station-Specific Training for Control Room Shift Supervisors**

The relevant training areas may include, in addition to those relevant to station-specific training for reactor operators:

- a. reactor physics, principles of reactor operation and fuelling strategies
- b. phenomena that may significantly affect reactor core reactivity and neutron flux shape
- c. properties of irradiated fuel, principles of fuel cooling and physics of fuel failures
- d. operating constraints and limits associated with reactor fuelling and irradiated fuel cooling
- e. reactor safety, heat transfer mechanisms and fluid mechanics
- f. primary and back-up heat sinks
- g. conventional and radiation hazards to reactor facility personnel and to the public, including hazards from postulated accident conditions
- h. handling of conventional and radiation emergencies
- i. handling of an intruder or of a terrorist attack
- j. design requirements of safety-related equipment and systems
- k. design features and limitations of reactor facility equipment and systems
- l. chemical control of systems
- m. diagnosis of equipment failures and assessment of abnormal plant conditions
- n. expected response of reactor facility systems and units to abnormal and accident conditions

- o. operating strategies
- p. reactor facility safety analyses, including major assumptions in the reactor facility accident analyses and technical bases for emergency operating procedures
- q. configuration of systems and equipment isolation required for maintenance activities
- r. design and operation of reactor facility systems for which the reactor operators do not have direct operational control, including common systems and fuel handling systems
- s. the licensee's policies, standards, and procedures
- t. the operating licence and the documents referenced in the operating licence
- u. situations that may result in the violation of the conditions of the operating licence and the OPP
- v. requirements pertaining to reactor facility operation in federal and provincial acts and regulations, and any relevant standards and codes
- w. responsibilities and authority of the control room shift supervisor, of the plant shift supervisor, and of other members of the reactor facility personnel who report to, or interface with, the control room shift supervisor and the plant shift supervisor
- x. qualification requirements of the members of the reactor facility personnel who report to the control room shift supervisor and the plant shift supervisor

### **D.3 Station-Specific Training for Senior Health Physicists**

The relevant training areas may include:

- a. the relevant provisions of the NSCA
- b. the regulations made pursuant to the NSCA, including the:
  - i. *General Nuclear Safety and Control Regulations*
  - ii. *Radiation Protection Regulations*
  - iii. *Class I Nuclear Facilities Regulations*
  - iv. *Nuclear Substances and Radiation Devices Regulations*
  - v. *Packaging and Transport of Nuclear Substances Regulations*
- c. safety culture
- d. the responsibilities and authority of the senior health physicist
- e. the responsibilities and authority of the members of the reactor facility personnel who interact with the senior health physicist
- f. the responsibilities and authority of the members of external organizations who interact with the senior health physicist, notably in the nuclear emergency management context
- g. the operating licence and the documents referenced in the operating licence
- h. the licensee and reactor facility policies, standards, and procedures
- i. reactor facility design, operation, and maintenance

## Glossary

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. REGDOC-3.6 is provided for reference and information.

The following definitions are either new or are modified versions of terms already defined current definition for that term. Following public consultation, the final terms and definitions will be submitted for inclusion in the next version of REGDOC-3.6, *Glossary of CNSC Terminology*.

**(new)**

**candidate**

In the context of an application for certification, including a recertification or the renewal of a certification, the worker seeking certification and whose candidature is assessed by the CNSC; in the context of a certification examination or requalification test, the worker whose knowledge or performance is evaluated.

**(new)**

**certificate**

A printed proof of certification by the CNSC issued to each certified worker and signed by a Commission member or a designated officer acting on behalf of the Commission.

**(modified)**

**certification**

Attestation from the Commission, or from a designated officer authorized by the Commission, certifying that a person is qualified to carry out licensed activities on behalf of the licensee, including the duties of a designated position.

**(new)**

**certified shift worker**

A certified worker who performs shiftwork, normally in the main control room, as an integral part of the duties of the designated position, as opposed to certified workers whose duties are generally performed during normal working hours.

**(new)**

**certifying body**

The legal entity or association empowered or authorized to certify workers and to stipulate requirements for the certification of workers in relation to a given occupation or job; for the purpose of this regulatory document, the CNSC is the certifying body.

**(new)**

**complete shift**

A shift worked in a designated position as a member of the minimum staff complement consisting of a minimum of 4 consecutive hours, which is preceded by a formal turnover of the responsibilities for the shift with an outgoing counterpart and concluded by an equal turnover with an incoming counterpart.

**(new)**

**designated position**

A position of direct and immediate impact on nuclear safety that has been designated in a licence in relation to a personnel certification scheme or an alternate authorization process, and which must therefore be staffed with workers duly certified or authorized by the CNSC.

**(modified)**

**full-scope simulator**

A simulator that can perform detailed modelling of the response, under normal, abnormal, and design-basis accident conditions, of the reactor or group of reactors and associated systems and subsystems installed in a reactor facility. A full-scope simulator is equipped with a replica of the main control room instrumentation and allows users to monitor and operate in real time the simulated systems and subsystems in an environment duplicating the physical and functional characteristics of the instrumentation normally available to operations personnel.

**(new)**

**individual training needs analysis**

A systematic process whereby the training needs of a single worker are determined by identifying any gap in the knowledge, skills, and safety-related attributes required of the worker to safely and competently perform their duties.

**(new)**

**individual training plan**

The learning strategy, including learning objectives and learner evaluation(s), resulting from an individual training needs analysis, and serving as basis for the training of an individual learner, as opposed to a group of learners.

**(new)**

**knowledge-based (learner evaluation, certification examination, requalification test)**

Said of an evaluation designed to measure the retention of job-related knowledge by means of an oral or written question-and-answer methodology.

**(modified)**

**learner evaluation (see also trainee evaluation)**

The assessment of progress made by participants during an instructional program (formative evaluation) and of their achievement at the end of the program (summative evaluation).

**(new)**

**performance-based (learner evaluation, certification examination, requalification test)**

Said of an evaluation of job-related knowledge, skills and safety-related attributes based on the direct observation of the performance of a job-related task or series of tasks.

**(new)**

**senior shift supervisor**

A certified shift supervisor who exercises authority over any number of shift supervisors as an integral part of the management system and minimum staff complement; for example, shift managers employed at multi-unit CANDU reactor facilities are considered senior shift supervisors.

**(new)**

**simulator fidelity**

The degree to which a simulator replicates the physical aspect and behaviour of the simulated object.

**(new)**

**tailored training**

Training that is tailored to meet the specific training needs of an individual learner based on an individual training needs analysis (ITNA) and an individual training plan (ITP), as opposed to an established training program.

**(new)**

**worker competency**

Inferred ability of a worker or workforce to safely and competently perform the duties of their employment based on demonstrated knowledge, skills, and safety-related attributes.

### Abbreviations

Abbreviation	Meaning
ASO	auxiliary systems operator
CANDU	CANada Deuterium Uranium
CNSC	Canadian Nuclear Safety Commission
DO	designated officer
ITP	individual training plan
K&S	knowledge and skills
MCQ	multiple choice question
MEQ	modified essay question
MSC	minimum staff complement
NSCA	Nuclear Safety and Control Act
OJT	on-the-job training
OPP	operating policies and principles
RO	reactor operator
SHP	senior health physicist
ITNA	individual training needs analysis
WUS	work under supervision

### **Additional Information**

This document must be read in conjunction with complementary CNSC regulatory documents in the human performance management series and other safety and control areas. The documents listed in this section are the complementary regulatory documents relevant to the current version of REGDOC-2.2.3, Volume III.

1. REGDOC-2.1.1, *Management System*
2. REGDOC-2.1.2, *Safety Culture*
3. REGDOC-2.2.1, *Human Factors*
4. REGDOC-2.2.2, *Personnel Training*
5. REGDOC-2.2.4, *Fitness for Duty: Managing Worker Fatigue*
6. REGDOC-2.2.4, *Fitness for Duty, Volume II: Managing Alcohol and Drug Use*
7. REGDOC-2.2.5, *Minimum Staff Complement*
8. REGDOC-2.3.2, *Accident Management*
9. REGDOC-2.10.1, *Nuclear Emergency Preparedness and Response*
10. REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*

## CNSC Regulatory Document Series

Facilities and activities within the nuclear sector in Canada are regulated by the CNSC. In addition to the *Nuclear Safety and Control Act* and associated regulations, these facilities and activities may also be required to comply with other regulatory instruments such as regulatory documents or standards.

CNSC regulatory documents are classified under the following categories and series:

### 1.0 Regulated facilities and activities

Series	1.1	Reactor facilities
	1.2	Class IB facilities
	1.3	Uranium mines and mills
	1.4	Class II facilities
	1.5	Certification of prescribed equipment
	1.6	Nuclear substances and radiation devices

### 2.0 Safety and control areas

Series	2.1	Management system
	2.2	Human performance management
	2.3	Operating performance
	2.4	Safety analysis
	2.5	Physical design
	2.6	Fitness for service
	2.7	Radiation protection
	2.8	Conventional health and safety
	2.9	Environmental protection
	2.10	Emergency management and fire protection
	2.11	Waste management
	2.12	Security
	2.13	Safeguards and non-proliferation
	2.14	Packaging and transport

### 3.0 Other regulatory areas

Series	3.1	Reporting requirements
	3.2	Public and Indigenous engagement
	3.3	Financial guarantees
	3.4	Commission proceedings
	3.5	CNSC processes and practices
	3.6	Glossary of CNSC terminology

**Note:** The regulatory document series may be adjusted periodically by the CNSC. Each regulatory document series listed above may contain multiple regulatory documents. Visit the CNSC's website for the latest [list of regulatory documents](#).





# Gestion de la performance humaine

## **Accréditation du personnel, tome III :**

### **Accréditation des personnes qui travaillent dans des installations dotées de réacteurs**

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REGDOC-2.2.3, Version 2

Juin 2023



## **Accréditation du personnel, tome III : Accréditation des personnes qui travaillent dans des installations dotées de réacteurs**

Document d'application de la réglementation REGDOC-2.2.3, version 2

© Sa Majesté le Roi du chef du Canada, représenté par le ministre des Ressources naturelles, 20XX

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*Also available in English under the title: Personnel Certification, Volume III: Certification of Reactor Facility Workers*

### **Disponibilité du document**

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## Préface

Ce document d'application de la réglementation (REGDOC) fait partie de la série de documents d'application de la réglementation de la CCSN intitulée « Gestion de la performance humaine » qui porte sur la performance humaine, la formation du personnel et l'accréditation du personnel. La liste complète des séries de REGDOC figure à la fin du présent document; elle peut également être consultée sur le [site Web de la CCSN](#).

Le REGDOC-2.2.3, *Accréditation du personnel, tome III : Accréditation des personnes qui travaillent dans des installations dotées de réacteurs*, version 2, précise les exigences détaillées et fournit l'orientation relatives à l'accréditation des travailleurs dans les installations dotées de réacteurs en exploitation au Canada.

Ce document est la deuxième version du REGDOC-2.2.3, *Accréditation du personnel, tome III : Accréditation des personnes qui travaillent dans des centrales nucléaires*, publié en septembre 2019. Un document montrant les modifications apportées à la première version est disponible, sur demande, auprès de la CCSN.

### Documents d'application de la réglementation complémentaires

Les exigences et l'orientation documentées dans le présent REGDOC s'ajoutent aux exigences et aux orientations générales applicables aux travailleurs des installations dotées de réacteurs. Les travailleurs accrédités par la CCSN ou qui tentent de l'être ne sont donc pas exemptés des exigences applicables précisées dans d'autres REGDOC.

En particulier, ce document doit être lu conjointement avec les REGDOC complémentaires relevant du domaine de sûreté et de réglementation (DSR) « Gestion de la performance humaine » et des autres DSR cités en référence dans le permis ou dans les documents qui l'accompagnent, selon le cas. Une liste complète des REGDOC complémentaires pertinents figure à la dernière section de ce document, à titre de renseignement supplémentaire.

### Approche réglementaire

Pour en savoir plus sur la mise en œuvre des documents d'application de la réglementation et sur l'approche graduelle, consultez le REGDOC-3.5.3, *Principes fondamentaux de réglementation*.

Le terme « doit » est employé pour exprimer une exigence à laquelle le titulaire ou le demandeur de permis doit se conformer; le terme « devrait » dénote une orientation ou une mesure conseillée; le terme « pourrait » exprime une option ou une mesure conseillée ou acceptable dans les limites de ce document d'application de la réglementation; et le terme « peut » exprime une possibilité ou une capacité.

Aucun élément du présent document ne doit être interprété comme libérant le titulaire de permis des autres exigences pertinentes. Le titulaire de permis a la responsabilité de prendre connaissance de tous les règlements et de toutes les conditions de permis applicables et d'y adhérer.

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## Accréditation des personnes qui travaillent dans des installations dotées de réacteurs

### 1. Introduction

La Commission canadienne de sûreté nucléaire (CCSN) exige que les travailleurs des installations dotées de réacteurs qui occupent certains postes directement liés à la sûreté nucléaire soient accrédités par la CCSN comme étant qualifiés pour exercer les fonctions de leur poste. Aux fins du présent document d'application de la réglementation (REGDOC), ces postes sont appelés « postes désignés ».

#### 1.1 Objectif

Le présent REGDOC a pour but de préciser les exigences détaillées et de fournir une orientation applicable à l'accréditation des travailleurs dans les installations dotées de réacteurs qui occupent ou souhaitent occuper des postes désignés.

#### 1.2 Portée

Lorsqu'il est mentionné dans un permis, le présent REGDOC s'applique :

- a. à tous les travailleurs qui tentent d'obtenir une accréditation de la CCSN, ou qui souhaitent maintenir ou renouveler une telle accréditation, en vue d'occuper l'un des postes désignés indiqués dans le permis;
- b. au titulaire de permis qui exploite l'installation dotée de réacteurs mentionnée dans le permis;
- c. au personnel mentionné dans le présent REGDOC et participant à la formation et l'évaluation, ou aux examens d'accréditation et aux tests de requalification des travailleurs occupant ou souhaitant occuper des postes désignés dans l'installation dotée de réacteurs mentionnée dans le permis.

Le présent REGDOC comprend les trois parties suivantes :

- a. La Partie I décrit les mécanismes de réglementation et de procédure qui composent le plan d'accréditation du personnel de la CCSN applicable aux travailleurs des installations dotées de réacteurs.
- b. La Partie II décrit les infrastructures organisationnelles et physiques que le titulaire de permis doit mettre en place à l'appui du programme d'accréditation du personnel décrit à la Partie I et pour obtenir les qualifications des travailleurs précisées à la Partie III.
- c. La Partie III précise les conditions préalables que les travailleurs des installations dotées de réacteurs doivent satisfaire pour être admissibles aux processus d'accréditation du personnel précisés à la Partie I.

#### 1.3 Dispositions législatives pertinentes

Les dispositions de la Loi sur la sûreté et la réglementation nucléaires (LSRN) et des règlements connexes qui s'appliquent au présent document sont les suivantes :

- a. LSRN, alinéas 21(1)i), 37(2)b), 44(1)k) et 44(1)l)
- b. Règlement général sur la sûreté et la réglementation nucléaires (RGSRN), alinéas 12(1)a) et 12(1)b)

- c. *Règlement sur les installations nucléaires de catégorie I*, article 10, paragraphes 9(2), 9(3), 9(4), 11(1), 11(2), 12(1), 12(2), 13(1), 13(2) et 14(5), et alinéa 14(2)e)

#### **1.4 Normes nationales et internationales**

Les principes et les éléments clés utilisés dans l'élaboration du présent document sont conformes aux normes nationales et internationales. Les normes suivantes s'appliquent au présent REGDOC:

- a. Collection Énergie nucléaire de l'AIEA, NGT2.8, *Systematic Approach to Training for Nuclear Facility Personnel: Processes, Methodology and Practices*
- b. Collection Normes de sûreté de l'AIEA, NS-G-2.8, *Recruitment, Qualification and Training of Personnel for Nuclear Power Plants*
- c. AIEA, TECDOC 525, *Guidebook on training to establish and maintain the qualification and competence of NPP operations personnel*
- d. AIEA, TECDOC 1502, *Authorization of Nuclear Power Plant Control Room Personnel : Methods and Practices with Emphasis on the Use of Simulators*
- e. Norme internationale ISO/CEI 17000, *Évaluation de la conformité – Vocabulaire et principes généraux*
- f. Norme internationale ISO/CEI 17024, *Évaluation de la conformité – Exigences générales pour les organismes d'accréditation procédant à l'accréditation de personnes*

## **Partie I – Plan d'accréditation du personnel**

La Partie I décrit les mécanismes de réglementation et de procédure qui composent le plan d'accréditation du personnel de la CCSN applicable aux travailleurs des installations dotées de réacteurs.

### **2. Contexte**

La législation pertinente autorise la Commission et ses fonctionnaires désignés (FD) à délivrer aux travailleurs des accréditations attestant de leur qualification pour l'exercice de leurs fonctions, à renouveler ces accréditations ou à les retirer conformément à la procédure établie. Les travailleurs des installations dotées de réacteurs auxquels la CCSN a accordé une ou des accréditations reçoivent un certificat d'accréditation sur lequel est indiquée, notamment, une date d'expiration. Conformément à la réglementation, les accréditations accordées par la CCSN expirent cinq (5) ans après leur date de délivrance ou de renouvellement. Par conséquent, les demandeurs autorisés doivent soumettre des demandes au nom des travailleurs accrédités pour le renouvellement du ou des certificats de ces derniers avant la date d'expiration indiquée sur chaque certificat.

### **3. Dispositions en matière d'emploi**

#### **3.1 Emploi autorisé**

Les certificats délivrés par la CCSN aux travailleurs d'une installation dotée de réacteurs permettent au travailleur dont le nom apparaît sur le certificat de travailler :

- a. à temps plein, à temps partiel ou à titre temporaire;
- b. en tant qu'employé ou en tant qu'entrepreneur;
- c. auprès du titulaire de permis mentionné;
- d. à l'installation dotée de réacteurs mentionnée;
- e. pour le poste désigné mentionné.

#### **Orientation**

**Transférabilité du certificat** – Sauf indication contraire sur le certificat, les certificats délivrés par la CCSN aux travailleurs des installations dotées de réacteurs ne sont pas transférables ni entre installations ni entre titulaires de permis. Cependant, les candidats et les travailleurs accrédités peuvent travailler à d'autres installations dotées de réacteurs équipées de technologies similaires, conformément à ce qui est indiqué à la sous-section 14.5.

**Relation employé/employeur** – Le titulaire de permis demeure responsable de la compétence de tous les travailleurs employés à l'installation dotée de réacteurs qu'il est autorisé à exploiter, quel que soit l'accord contractuel liant les travailleurs, y compris tout travailleur accrédité, et le titulaire de permis, en tant qu'employeur.

**Accréditations multiples** – Les travailleurs accrédités peuvent occuper plusieurs postes désignés, sous réserve que, pour chacun d'entre eux, il soit titulaire d'un certificat valide, qu'il satisfasse

aux exigences minimales d'emploi et de formation continue applicables et qu'il puisse, avec compétence et en toute sécurité, exercer les fonctions correspondantes.

### **3.2 Statut relatif à l'emploi**

Le titulaire de permis doit attribuer un statut relatif à l'emploi pour chaque travailleur accrédité, conformément aux catégories ci-après :

- a. Un statut d'accréditation active est attribué à un travailleur qui :
  - i. détient un certificat valide;
  - ii. assiste à la formation continue prescrite;
  - iii. répond aux exigences minimales d'emploi applicables;
  - iv. continue d'être en mesure d'exercer les fonctions pertinentes du poste désigné avec compétence et en toute sécurité.
- b. Un statut d'accréditation inactive est attribué à tout travailleur accrédité qui détient un certificat valide, mais qui a été officiellement retiré de ses fonctions, conformément à ce qui est indiqué à la sous-section 20.3 ou 20.4.
- c. Un statut sans accréditation est attribué à un travailleur dont le certificat a expiré.
- d. Un statut d'accréditation retirée est attribué à un travailleur dont l'accréditation a été retirée par la CCSN.

### **Orientation**

**Validité du certificat** – Le certificat valide est celui qui a été dûment délivré par la Commission ou un fonctionnaire désigné et qui n'est pas expiré.

**Fin de l'emploi** – La CCSN ne retirera pas l'accréditation des travailleurs titulaires d'un certificat valide qui prennent leur retraite ou annoncent leur retraite ou, pour toute autre raison, cessent de travailler ou de suivre de la formation pour un poste désigné. Dans de tels cas, les critères de gestion d'une période prolongée d'absence et de retrait des fonctions précisés à la sous-section 20.3 s'appliquent jusqu'à l'expiration du certificat, à moins que le travailleur ne soit réintégré dans ses fonctions, conformément à la sous-section 20.5, avant l'expiration de son certificat.

**Accréditations multiples** – Lorsqu'un travailleur détient plusieurs accréditations, un statut distinct lui est attribué pour chaque poste désigné pertinent.

### **3.3 Dossier d'emploi**

Conformément à la sous-section 21.2, le titulaire de permis doit conserver, pour chaque travailleur accrédité par la CCSN, un dossier d'emploi continu et vérifiable comprenant, au minimum :

- a. le statut relatif à l'emploi attribué au travailleur;
- b. le nombre de quarts complets et d'heures de travail effectués dans un poste désigné par le travailleur, en précisant :
  - i. le poste désigné pertinent;
  - ii. la date à laquelle chaque quart de travail complet et chaque heure de travail ont été effectués.

**Orientation**

Applicabilité – Cette sous-section s’applique à tout travailleur accrédité, qu’il s’agisse d’un employé ou d’un entrepreneur, mais uniquement en rapport avec l’installation dotée de réacteurs indiquée sur le ou les certificats.

**4. Postes désignés**

Le présent REGDOC s’applique à l’accréditation des travailleurs dans les installations dotées de réacteurs qui occupent, ou souhaitent occuper, des postes désignés dans les catégories génériques suivantes :

- a. opérateur de systèmes auxiliaires (OSA)
- b. opérateur de réacteur (OR)
- c. chef de quart
- d. spécialiste principal en radioprotection (SPR)

**Orientation**

Système de gestion – Les catégories génériques de postes désignés indiquées dans l’ensemble du présent document reflètent les systèmes de gestion mis en œuvre par les titulaires de permis au moment de la publication. Cependant, rien dans ce document ne doit être interprété comme limitant la mise en place d’autres systèmes de gestion, y compris de nouveaux postes.

**4.1 Postes désignés propres à la centrale**

Les postes désignés propres à la centrale correspondant aux catégories génériques de postes désignés sont indiqués dans les permis applicables.

L’Annexe A précise quels postes désignés propres à la centrale correspondent à chaque classe générique de poste désigné et quelle accréditation de la CCSN est requise dans chaque cas.

**4.2 Dotation des postes désignés**

Les postes propres à la centrale mentionnés dans les permis d’installations dotées de réacteurs doivent être pourvus par des travailleurs accrédités par la CCSN comme étant qualifiés pour exercer les fonctions desdits postes désignés.

**4.3 Rôles et responsabilités des travailleurs accrédités**

Les travailleurs détenant un certificat d’accréditation valide sont réputés être qualifiés pour exercer avec compétence et en toute sécurité les fonctions des postes désignés pertinents propres

à la centrale, lesquels sont énumérés à l'Annexe A, et ce, conformément au système de gestion établi du titulaire de permis.

## **5. Dispositions générales applicables à l'ensemble des demandes**

### **5.1 Demandeur autorisé**

Les demandes effectuées en vertu des dispositions du présent REGDOC doivent être signées par un signataire officiellement autorisé par le titulaire de permis concerné à représenter ce dernier.

#### **Orientation**

Demander autorisé – Dans le contexte d'une installation dotée de réacteurs, le demandeur est le titulaire de permis qui doit nécessairement être représenté par un signataire autorisé appelé demandeur autorisé.

### **5.2 Demande complète**

Les demandeurs autorisés doivent s'assurer que les demandes soumises à la CCSN sont complètes. Les demandes incomplètes peuvent être rejetées par la CCSN sans autre analyse.

#### **Orientation**

Demande complète – Conformément aux exigences réglementaires, la Commission ou un FD ne peut accréditer un travailleur, ou renouveler l'accréditation d'un travailleur qu'après avoir reçu une demande. Le personnel de la CCSN ne peut pas faire de recommandations éclairées à la Commission ou à un FD sur la base de demandes incomplètes. Une demande est réputée complète lorsqu'elle contient tous les renseignements requis et ne comporte aucune erreur.

Omissions mineures et erreurs typographiques – La soumission de demandes incomplètes entraîne un fardeau administratif excessif et cause des retards de traitement. Néanmoins, les demandes jugées incomplètes en raison d'omissions et d'erreurs typographiques mineures seront traitées une fois que le demandeur autorisé aura soumis une demande révisée ou aura fourni des renseignements supplémentaires, à la satisfaction de la CCSN.

### **5.3 Renseignements généraux**

Les demandes faites aux termes des dispositions du présent REGDOC doivent contenir les informations suivantes :

- a. l'objet de la demande;
- b. le nom légal du travailleur, incluant son prénom, son nom de famille et, le cas échéant un deuxième prénom ou une initiale;
- c. le poste désigné qu'occupe ou qu'occupera le travailleur;
- d. l'installation dotée de réacteurs où le travailleur travaille ou travaillera, en indiquant, le cas échéant, un réacteur ou un groupe de réacteurs précis;
- e. la raison sociale du titulaire de permis exploitant ladite installation dotée de réacteurs;
- f. la date d'entrée en vigueur de la demande;
- g. le nom légal, le poste, les coordonnées et la signature du demandeur autorisé;
- h. une adresse postale ou un courriel de retour valide.



## **5.4 Transmission**

Un demandeur autorisé peut soumettre toute demande faite en vertu des dispositions du présent REGDOC au format papier ou électronique.

Les soumissions en format papier doivent être transmises à l'adresse suivante :

Commission canadienne de sûreté nucléaire  
280, rue Slater  
C.P. 1046, Succursale B  
Ottawa (Ontario) K1P 5S9

Les soumissions électroniques doivent être envoyées par courriel à [forms-formulaires@cnscccsn.gc.ca](mailto:forms-formulaires@cnscccsn.gc.ca) avec une copie conforme à [pcd-dap@cnscccsn.gc.ca](mailto:pcd-dap@cnscccsn.gc.ca).

## **6. Demande d'accréditation**

Outre les dispositions générales précisées à la section 5, une demande d'accréditation doit satisfaire aux exigences précisées à la présente section.

### **6.1 Déclaration de compétence du travailleur**

Conformément aux exigences réglementaires, la demande doit mentionner que le travailleur :

- a. satisfait aux exigences de qualification prévues dans le permis;
- b. a réussi le programme de formation et l'examen applicables prévus dans le permis;
- c. est capable, de l'avis du titulaire de permis, d'exercer les fonctions du poste.

### **6.2 Sélection du personnel**

La demande doit décrire comment les conditions préalables applicables du programme de sélection du personnel décrit dans la section 14 ont été satisfaites, y compris, au minimum :

- a. le niveau d'instruction ou de littératie du travailleur lors de sa sélection pour la formation initiale;
- b. toute équivalence de niveau d'instruction ou de littératie reconnue par le titulaire de permis;
- c. toute expérience professionnelle antérieure requise par la CCSN ou par le titulaire de permis;
- d. toute entrevue de sélection du personnel passée par le travailleur;
- e. tout test de sélection du personnel passé par le travailleur, notamment tout examen médical;
- f. toute dérogation explicitement autorisée dans le présent REGDOC utilisée par le titulaire du permis.

### **6.3 Sommaire des qualifications des travailleurs**

La demande doit fournir un résumé chronologique des qualifications obtenues par le travailleur couvrant les volets de la formation initiale, les examens d'accréditation et toutes les autres exigences d'accréditation du personnel franchies avec succès par le travailleur.

Le résumé des qualifications du travailleur doit fournir des preuves suffisantes que celui-ci possède toutes les qualifications applicables précisées dans la Partie III. Au minimum, ce résumé doit indiquer ce qui suit, selon le cas, en fonction du poste désigné :

- a. la date de chaque évaluation sommative de l'apprenant indiquant l'achèvement de chaque volet de la formation initiale;
- b. la date de chaque examen d'accréditation portant sur les connaissances;
- c. la date de l'examen d'accréditation basé sur les habiletés;
- d. toute mesure corrective requise par le personnel de la CCSN à la suite d'un examen d'accréditation que le personnel de la CCSN a fait passer;
- e. la date d'achèvement de toute période de travail effectué sous supervision (TSS), y compris le nombre total d'heures de TSS;
- f. la date de l'entrevue avec la direction.

### **Orientation**

Dates d'entrée en vigueur – Les dates mentionnées dans le résumé des qualifications du travailleur sont les dates auxquelles les évaluations, les examens et les entrevues ont eu lieu, et non les dates auxquelles il a reçu sa note.

### **6.4 Documents à l'appui**

Le titulaire de permis n'est pas tenu de joindre à la demande des documents à l'appui comme preuve de compétence. Cependant, des dossiers du personnel doivent être tenus à jour conformément à la sous-section 21.2 et mis à la disposition de la CCSN, sur demande, à des fins de vérification.

### **6.5 Calendrier d'une demande**

Le titulaire de permis peut présenter à tout moment une demande d'accréditation pour un travailleur qualifié.

### **6.6 Date d'entrée en vigueur de l'accréditation**

À moins que le titulaire de permis ne demande un report, la date d'entrée en vigueur de l'accréditation sera celle de la décision en matière d'accréditation prise par la Commission ou un FD.

### **6.7 Report de l'accréditation**

Le titulaire de permis peut demander que la date d'entrée en vigueur de l'accréditation soit retardée jusqu'à 60 jours civils à compter de la date d'entrée en vigueur de la demande d'accréditation.

### **Orientation**

Restriction – Afin d'offrir aux titulaires de permis une certaine souplesse en matière de calendrier, la CCSN tiendra compte de toute préférence exprimée par le demandeur autorisé concernant la date d'entrée en vigueur de l'accréditation, dans la mesure où la date de prédilection tombe dans la période de 60 jours indiquée. Néanmoins, la CCSN n'est pas tenue de se conformer à toute demande de report d'accréditation.

## **7. Demande de renouvellement de l'accréditation**

Outre les dispositions générales précisées à la section 5, une demande de renouvellement de l'accréditation doit satisfaire aux exigences précisées à la présente section.

### **7.1 Déclaration de compétence du travailleur**

Conformément aux exigences réglementaires, la demande doit mentionner que le travailleur :

- a. a exercé, avec compétence et en toute sécurité, les fonctions du poste pour lequel il a été accrédité;
- b. continue de recevoir la formation applicable prévue dans le permis;
- c. a réussi les tests de requalification applicables prévus dans le permis pour le renouvellement de l'accréditation;
- d. est capable, de l'avis du titulaire de permis, d'exercer les fonctions du poste.

### **7.2 Résumé de la requalification du travailleur**

La demande doit fournir un résumé chronologique des exigences de requalification satisfaites par le travailleur pendant la période d'accréditation en cours indiquant les volets de la formation continue, les tests de requalification et toutes les autres étapes d'accréditation du personnel franchies avec succès par le travailleur.

Ce résumé chronologique doit fournir des preuves suffisantes que le travailleur satisfait à toutes les exigences de requalifications applicables précisées dans la Partie III. Au minimum, ce résumé doit indiquer ce qui suit, selon le cas, en fonction du poste désigné :

- a. la confirmation que le travailleur a suivi une formation continue et a réussi les évaluations officielles de l'apprenant conformes aux exigences précisées à la section 15, y compris une formation appropriée de recyclage, de révision, sur simulateur et d'intervention en cas d'urgence nucléaire;
- b. les dates de tous les tests de requalification portant sur les connaissances passés avec succès;
- c. les dates de tous les tests de requalification basés sur les habiletés passés avec succès;
- d. le nombre total de quarts de travail complets et d'heures de travail par quart effectués par le travailleur dans le poste désigné au cours de la période d'accréditation en vigueur;
- e. toute mesure corrective requise par le personnel de la CCSN découlant d'un test de requalification administré par le personnel de la CCSN.

### **Orientation**

Dates d'entrée en vigueur – Les dates mentionnées dans le résumé de la requalification du travailleur sont les dates auxquelles les examens ont eu lieu, et non les dates auxquelles les notes sont reçues.

### **7.3 Documents à l'appui**

Le titulaire de permis n'est pas tenu de joindre à la demande des documents à l'appui comme preuve de compétence. Cependant, des dossiers du personnel doivent être tenus à jour conformément à la sous-section 21.2 et mis à la disposition de la CCSN, sur demande, à des fins de vérification.

## **Orientation**

Applicabilité – Les documents à l'appui mentionnés dans cette sous-section incluent tous les tests de requalification, quel que soit le type, passés par le travailleur pendant la période d'accréditation en vigueur, que ce soit dans un rôle de direction ou de soutien, et que le travailleur ait réussi ou non ledit test.

### **7.4 Calendrier d'une demande**

Le titulaire de permis doit présenter la demande de renouvellement de l'accréditation d'un travailleur ayant obtenu sa requalification, au plus tard à la date d'expiration indiquée sur le certificat.

## **Orientation**

Date limite de présentation d'une demande – La CCSN acceptera toute demande de renouvellement de l'accréditation, dûment signée et datée avant minuit le jour de l'expiration du certificat, à condition que la demande soit reçue par la CCSN avant minuit le même jour pour une soumission par voie électronique, ou dans un délai raisonnable pour une demande imprimée envoyée par la poste ou par un service de messagerie. Lorsque le titulaire de permis ne respecte pas ce délai, la section 8 s'applique en lieu et place de la section 7.

Délai de traitement normal – Afin d'éviter de devoir retirer le travailleur de ses fonctions conformément à la sous-section 20.4.4, puis de le réintégrer conformément à la sous-section 20.5 et à la sous-section 20.6.4, la demande doit être soumise bien avant la date d'expiration du certificat, de préférence en prévoyant un délai de traitement normal de 60 jours civils.

Demande incomplète – Lorsqu'une demande de renouvellement de l'accréditation, soumise avant la date limite, s'avère incomplète ou demeure incomplète après l'expiration du certificat, la demande sera acceptée, mais l'évaluation technique sera suspendue, jusqu'à ce qu'une demande révisée ou des renseignements supplémentaires soient soumis par le titulaire de permis à la satisfaction de la CCSN.

Emploi interdit – Lorsque l'accréditation expire pendant que la demande de renouvellement est en cours de traitement par le personnel de la CCSN, le travailleur est considéré comme n'étant plus qualifié pour occuper le poste désigné pertinent tant que l'accréditation n'a pas été officiellement renouvelée par la CCSN.

### **7.5 Date d'entrée en vigueur du renouvellement**

Lorsque la demande est signée et datée par un demandeur autorisé au plus tôt 90 jours civils avant l'expiration de la certification, la date d'entrée en vigueur du renouvellement de l'accréditation coïncidera avec la date d'expiration de l'accréditation existante.

### **7.6 Renouvellement anticipé de l'accréditation**

Lorsque la demande est signée et datée par un demandeur autorisé au plus tôt 90 jours civils avant l'expiration de la certification, la date d'entrée en vigueur du renouvellement de l'accréditation coïncidera avec la date d'expiration de l'accréditation existante.

## **Orientation**

Restriction – Afin d’offrir aux titulaires de permis une certaine flexibilité en matière de calendrier, la CCSN autorise le renouvellement de l’accréditation des travailleurs d’une installation dotée de réacteurs avant la fin de la période de validité du certificat. Cette tolérance est accordée parce que le raccourcissement de la période d’accréditation augmente la fréquence des tests de requalification. Cependant, afin de s’assurer que la preuve de la compétence du travailleur fournie au moment de la demande est relativement récente et donc valide, la CCSN ne reportera pas la date d’entrée en vigueur d’un renouvellement anticipé de l’accréditation au-delà du temps de traitement effectivement encouru. Les demandeurs autorisés doivent donc prévoir les contraintes de temps indiquées dans cette section et en tenir compte avant de soumettre des demandes de renouvellement de l’accréditation.

Expiration du certificat – Dans tous les cas, lorsque le certificat expire avant que la demande puisse être traitée par le personnel de la CCSN et qu’un certificat renouvelé soit émis par la CCSN, la date d’entrée en vigueur du renouvellement de l’accréditation coïncidera avec la date d’expiration de l’accréditation existante. La date d’expiration de l’accréditation est la dernière date de renouvellement, indépendamment de toute autre considération, étant donné que la Commission ou un FD peut seulement renouveler une accréditation existante.

## **8. Demande de récupération de l’accréditation dans les cinq ans suivant l’expiration d’un certificat**

Outre les dispositions générales précisées à la section 5, une demande de récupération de l’accréditation présentée au plus tard cinq (5) ans après l’expiration d’un certificat doit satisfaire aux exigences de la présente section.

### **Orientation**

Applicabilité – Cette section s’applique à la récupération de l’accréditation d’un travailleur qui occupera le même poste désigné que celui indiqué sur un certificat expiré, lorsque le demandeur autorisé n’a pas soumis une demande de renouvellement de l’accréditation avant la date limite de renouvellement précisée à la sous-section 7.4.

### **8.1 Déclaration de compétence du travailleur**

Conformément aux exigences réglementaires, la demande doit mentionner que le travailleur :

- a. satisfait aux exigences de qualification prévues dans le permis;
- b. a réussi le programme de formation et l’examen applicables prévus dans le permis;
- c. est capable, de l’avis du titulaire de permis, d’exercer les fonctions du poste.

### **Orientation**

Remarque importante – Pour satisfaire à la condition établie au paragraphe 9(2) du *Règlement sur les installations nucléaires de catégorie I*, la déclaration de compétence du travailleur qui convient dans le contexte d’une demande de récupération de l’accréditation est la même que celle requise pour une accréditation initiale.

## **8.2 Résumé de la requalification des travailleurs**

La demande doit fournir un résumé chronologique d'un processus approprié de réintégration, incluant la date d'achèvement de chaque étape, notamment :

- a. la formation personnalisée, y compris toute formation de révision et de recyclage portant sur les connaissances et sur les habiletés, suivie par le travailleur;
- b. le test de requalification portant sur les connaissances réussis par le travailleur;
- c. le test ou la série de tests de requalification basé sur les habiletés réussis par le travailleur;
- d. les heures de TSS effectuées par le travailleur;
- e. l'entrevue de la direction.

Les exigences applicables en matière de requalification des travailleurs sont précisées à la Partie III.

## **Orientation**

Nonobstant la déclaration de compétence du travailleur requise par les règlements pertinents, l'« examen » auquel il est fait référence dans la sous-section 8.1 est la série de tests de requalification indiqués dans les sous-sections 8.2 et 24.4. Ni le fondement législatif ni le permis ne font réellement référence à un examen pertinent; les permis applicables font plutôt référence à ce REGDOC en tant que source supplémentaire de spécificité. Par conséquent, selon l'approche graduelle, la CCSN considère suffisant qu'un travailleur dont le certificat a expiré il y a moins de 5 ans soit évalué au moyen de tests de requalification plutôt que de le soumettre à la série complète d'examens d'accréditation requis au moment de l'accréditation initiale.

## **8.3 Documents à l'appui**

Les documents à l'appui suivants doivent être joints à la demande :

- a. l'analyse des besoins en matière de formation individuelle ou un résumé de ladite analyse;
- b. le plan de formation individuel (PFI) ou un résumé dudit PFI;
- c. le test de requalification portant sur les connaissances réussis par le travailleur, incluant ses réponses et la note (en pourcentage) obtenue;
- d. le test ou la série de tests de requalification basés sur les habiletés réussis par le travailleur, y compris les actions notées du candidat;
- e. un document approprié, signé par un représentant autorisé du titulaire de permis, qui indique les heures de TSS effectuées par le travailleur;
- f. un enregistrement, une transcription ou le procès-verbal de l'entrevue de la direction prescrite.

## **8.4 Calendrier d'une demande**

Le titulaire de permis peut demander la récupération de l'accréditation d'un travailleur conformément à la section 8 au plus tard cinq (5) ans après la date d'expiration indiquée sur le certificat.

**Orientation**

Date limite de présentation de la demande – Lorsque le certificat a expiré plus de 5 ans avant la date d’entrée en vigueur de la demande de récupération de l’accréditation, la section 9 s’applique au lieu de la section 8.

**8.5 Date d’entrée en vigueur de l’accréditation**

La date d’entrée en vigueur de l’accréditation sera celle de la décision d’accréditation prise par la Commission ou un FD.

**9. Demande de récupération de l’accréditation à la suite du retrait de l’accréditation ou d’une expiration du certificat après cinq ans**

Outre les dispositions générales précisées à la section 5, une demande de récupération de l’accréditation d’un travailleur à la suite du retrait de l’accréditation par la CCSN, ou à la suite d’une expiration de certificat survenue plus de cinq (5) ans avant la date d’entrée en vigueur de la demande de récupération de l’accréditation, doit satisfaire aux exigences de la présente section.

**Orientation**

Applicabilité – Cette sous-section s’applique à la récupération de l’accréditation d’un travailleur qui occupera le même poste désigné que celui mentionné sur un certificat pour lequel l’accréditation du travailleur a déjà été retirée par la CCSN, ou qui a expiré plus de cinq (5) ans avant la date d’entrée en vigueur de la demande en cours.

**9.1 Déclaration de compétence du travailleur**

La demande doit mentionner que le travailleur :

- a. satisfait aux exigences de qualification prévues dans le permis;
- b. a réussi le programme de formation et l’examen applicables prévus dans le permis;
- c. est capable, de l’avis du titulaire de permis, d’exercer les fonctions du poste.

**Orientation**

Remarque importante – Pour satisfaire à la condition établie au paragraphe 9(2) du *Règlement sur les installations nucléaires de catégorie I*, la déclaration de compétence du travailleur qui convient dans le contexte d’une demande de récupération de l’accréditation est la même que celle requise pour une accréditation initiale.

**9.2 Justification de la récupération de l’accréditation**

La demande doit comporter un argument étayé à l’appui de la récupération de l’accréditation du travailleur, expliquant pourquoi la CCSN devrait accréditer de nouveau un travailleur à qui elle avait précédemment retiré l’accréditation, ou dont le certificat a expiré il y a plus de cinq (5) ans, y compris :

- a. une description des mesures correctives prises par le titulaire de permis, notamment en matière de formation de rattrapage, pour s’assurer que toute lacune dont on avait déterminé

- qu'elle constituait un des éléments du motif ayant mené au retrait de l'accréditation a été, le cas échéant, corrigée ou atténuée de manière adéquate;
- b. un résumé d'un processus de réintégration approprié et la date d'achèvement de chacune de ces étapes, incluant :
    - i. la formation personnalisée, y compris toute formation de révision et de recyclage portant sur les connaissances et sur les habiletés, suivie par le travailleur;
    - ii. l'examen d'accréditation portant sur les connaissances, réussi par le travailleur;
    - iii. l'examen d'accréditation basé sur les habiletés réussi par le travailleur;
    - iv. les heures de TSS effectuées par le travailleur;
    - v. l'entrevue de la direction.
  - c. une description de toute circonstance atténuante pertinente.

Les exigences applicables en matière de requalification des travailleurs sont précisées à la Partie III.

### **9.3 Documents à l'appui**

Les documents à l'appui suivants doivent être joints à la demande :

- a. l'analyse des besoins en matière de formation individuelle ou un résumé de ladite analyse;
- b. le plan de formation individuel (PFI) ou un résumé dudit PFI;
- c. l'examen d'accréditation portant sur les connaissances réussi par le travailleur, incluant ses réponses et la note (en pourcentage) obtenue;
- d. l'examen d'accréditation basé sur les habiletés réussi par le travailleur, y compris les actions notées du candidat;
- e. un document approprié, signé par un représentant autorisé du titulaire de permis, qui indique les heures de TSS effectuées par le travailleur;
- f. un enregistrement, une transcription ou le procès-verbal de l'entrevue de la direction prescrite.
- g. tout autre document jugé essentiel à l'appui de la demande.

### **9.4 Calendrier d'une demande**

Après qu'un titulaire de permis ait été informé de la décision de la Commission ou du FD de retirer l'accréditation d'un travailleur, le titulaire de permis peut demander à tout moment une nouvelle accréditation pour le travailleur.

Le titulaire de permis peut demander l'obtention d'une nouvelle accréditation pour un travailleur après l'expiration du certificat conformément à la section 9 au plus tôt cinq (5) ans après la date d'expiration effective indiquée sur le certificat du travailleur.

### **9.5 Date d'entrée en vigueur de l'accréditation**

La date d'entrée en vigueur de l'accréditation sera celle de la décision d'accréditation prise par la Commission ou un FD.

## **10. Demande d'examen ou de test de requalification pour un spécialiste principal en radioprotection**

Le demandeur autorisé peut demander à la CCSN de faire passer un examen d'accréditation ou un test de requalification à un travailleur qui souhaite obtenir une accréditation ou un renouvellement



de son accréditation pour un poste de spécialiste principal en radioprotection (SPR), une fois que le travailleur a satisfait aux conditions préalables pertinentes précisées à la Partie III.

La demande doit être soumise par écrit, conformément aux dispositions générales des processus de demande d'accréditation du personnel précisées à la section 5, et doit indiquer :

- a. que le travailleur « a suivi avec succès la formation applicable mentionnée dans le permis », en précisant la date de fin de la formation initiale ou de la formation continue mentionnée à la section 25;
- b. que le travailleur a réussi l'entrevue avec la direction prescrite à la section 25, en précisant la date à laquelle s'est déroulée l'entrevue.

### **Orientation**

Notification rapide – Compte tenu du temps nécessaire au personnel de la CCSN pour préparer, faire passer et noter chaque examen ou chaque test, le titulaire de permis devrait aviser la CCSN le plus tôt possible avant la demande officielle d'examen d'accréditation ou de test de requalification.

Disponibilité des candidats – Le titulaire de permis devrait préciser, dans sa notification préalable et dans sa demande officielle, d'autres dates possibles auxquelles le travailleur sera qualifié et disponible pour passer l'examen d'accréditation ou le test de requalification.

## **11. Refus d'accréditation et retrait de l'accréditation**

### **11.1 Renseignements généraux**

Conformément à la législation applicable, à la réception d'une demande d'accréditation ou de renouvellement d'accréditation, la Commission ou un fonctionnaire désigné peut refuser d'accorder ou de renouveler l'accréditation, et peut entreprendre de retirer de sa propre initiative, ou sur demande, l'accréditation d'un travailleur accrédité. Avant de prendre une décision finale, la Commission ou son fonctionnaire désigné avertira d'abord le titulaire de permis et le travailleur concerné relativement à la décision proposée et leur donnera la possibilité d'être entendus en faveur ou en défaveur de celle-ci.

### **11.2 Demandes de retrait de l'accréditation par un titulaire de permis**

Le titulaire de permis peut demander le retrait de l'accréditation d'un travailleur accrédité qui travaille à une installation dotée de réacteurs indiquée dans le permis. Toute demande de ce type doit être soumise par écrit conformément à la section 5.4 et contenir les renseignements suivants :

- a. l'objet de la demande;
- b. le nom légal de son titulaire, tel qu'il figure sur le plus récent certificat délivré au titulaire;
- c. le poste désigné pour lequel l'accréditation doit être retirée au travailleur;
- d. l'installation dotée de réacteurs où le candidat travaille, en indiquant, le cas échéant, un réacteur ou un groupe de réacteurs précis;
- e. la raison sociale du titulaire de permis exploitant ladite installation dotée de réacteurs;
- f. la raison dictant la demande;
- g. les documents à l'appui, s'il existe, établissant une justification suffisante pour un retrait;
- h. la date d'entrée en vigueur de la demande;

- i. le nom légal, le poste, les coordonnées et la signature d'un représentant autorisé du titulaire de permis;
- j. une adresse postale ou un courriel de retour valide.

### **11.3 Demande relative à la possibilité d'être entendu**

Un titulaire de permis ou un travailleur ayant reçu un avis de décision proposée peut demander d'être entendu dans les 30 jours civils suivant la réception de cet avis. Toute demande de ce type doit être soumise par écrit conformément à la sous-section 5.4.

### **11.4 Décision de la Commission ou du fonctionnaire désigné**

À l'issue d'une possibilité d'être entendu, le titulaire de permis et le travailleur concerné seront avisés, par écrit, de la décision de la Commission ou du FD, et de la justification de cette décision.

## **12. Processus administratifs**

### **12.1 Changement de nom légal**

Le titulaire de permis doit, dans les meilleurs délais :

- a. informer la CCSN de tout changement de nom légal de tout travailleur occupant un poste désigné ou en formation pour occuper un tel poste;
- b. demander à la CCSN de délivrer un certificat de remplacement, pour tout travailleur accrédité qui a officiellement changé de nom légal.

### **Orientation**

Objectif – La CCSN doit connaître l'identité légale de tous les travailleurs occupant un poste désigné ou en formation pour occuper un tel poste, afin de tenir à jour des dossiers exacts des accréditations du personnel et de délivrer des certificats aux bonnes personnes.

### **12.2 Certificats de remplacement**

Le titulaire de permis peut demander à la CCSN de délivrer à nouveau un certificat au nom d'un travailleur accrédité si :

- a. le certificat a été perdu;
- b. certains des renseignements figurant sur le certificat ne sont plus lisibles;
- c. le nom légal de la personne a été officiellement modifié, comme le prescrit la sous-section 12.1.

Toute demande de remplacement de certificat doit être soumise par écrit conformément à la sous-section 5.4 et contenir les renseignements suivants :

- a. l'objet et la justification de la demande;
- b. le nom légal de son titulaire, tel qu'il figure sur le plus récent certificat délivré au titulaire;
- c. le nouveau nom légal qui doit figurer sur le certificat de remplacement, le cas échéant;
- d. le titre de poste désigné apparaissant sur le certificat;
- e. la désignation sociale du titulaire de permis qui emploie le travailleur;

- f. le nom légal, le poste, les coordonnées et la signature d'un représentant autorisé du titulaire de permis;
- g. la date d'entrée en vigueur de la demande.

## **Partie II – Infrastructures organisationnelles et physiques du titulaire de permis**

La Partie II décrit les infrastructures organisationnelles et physiques que le titulaire de permis doit mettre en place à l'appui du programme d'accréditation du personnel décrit à la Partie I et pour obtenir les qualifications des travailleurs précisées à la Partie III.

### **Sous-partie A – Infrastructure organisationnelle**

#### **13. Politiques et procédures**

##### **13.1 Formation et qualification des travailleurs pour l'accréditation initiale**

Le titulaire de permis doit établir et documenter des politiques et des procédures efficaces pour former et qualifier les travailleurs qui souhaitent obtenir une accréditation pour occuper un poste désigné.

##### **13.2 Maintien de la qualification des travailleurs accrédités**

Le titulaire de permis doit établir et documenter des politiques et des procédures efficaces pour former et maintenir la qualification des travailleurs accrédités occupant des postes désignés.

#### **14. Programme de sélection du personnel**

Le titulaire de permis doit mettre en œuvre et documenter un programme de sélection du personnel garantissant la sélection de candidats appropriés pour la participation aux programmes de formation initiale cités en référence dans le présent REGDOC.

##### **14.1 Exigences du programme de sélection du personnel**

En tant que partie intégrante du programme de sélection du personnel et, pour chaque poste désigné figurant au permis, le titulaire de permis :

- a. doit fixer un niveau minimal de scolarité, ou des niveaux minimaux de littératie et de numératie, proportionnels aux fonctions du poste désigné et compatibles avec le niveau d'entrée dans un programme de formation initiale approprié;
- b. doit exiger que les candidats sélectionnés sur la base de leur scolarité fournissent un diplôme ou une autre preuve officielle de leur réussite dans un programme d'études approprié, délivré par un établissement d'enseignement ou par un organisme de formation reconnu;
- c. peut reconnaître des équivalences à tout niveau minimal de scolarité, de littératie ou de numératie qu'il a fixé;
- d. doit utiliser des épreuves normalisées et des méthodes éprouvées pour évaluer si oui ou non les candidats sélectionnés sur la base d'un niveau de littératie ou de numératie, ou d'une équivalence reconnue, satisfont réellement aux normes minimales applicables;
- e. doit déterminer si une expérience de travail antérieure peut être souhaitable ou essentielle et, lorsqu'elle est jugée essentielle, élaborer des plans et des procédures pour s'assurer que les candidats acquièrent une expérience de travail pertinente avant leur participation à un programme de formation initiale approprié;
- f. doit déterminer les qualités et les aptitudes jugées essentielles pour exécuter, avec compétence et en toute sécurité, les fonctions du poste désigné, y compris l'intégrité, le leadership et la résilience, selon le cas, et sélectionner les candidats en conséquence;

- g. peut utiliser des épreuves normalisées et des méthodes éprouvées, ou exiger une évaluation médicale effectuée par un médecin agréé, pour évaluer si le candidat possède ou non une limitation permanente, physique ou mentale qui l'empêcherait d'exercer les fonctions du poste désigné pertinent, avec compétence et en toute sécurité

### **Orientation**

Scolarité antérieure – Le titulaire de permis devrait établir des critères de sélection du personnel sur la base d'une justification réfléchie et éviter de fixer des exigences normatives simplement par facilité, notamment des conditions préalables particulières en matière de formation, si des candidats appropriés peuvent ainsi être indûment exclus. La CCSN est consciente du fait que les apprenants modernes peuvent acquérir des niveaux acceptables de connaissances préalables et de littératie par diverses méthodes et en empruntant diverses voies, en fonction de leur situation individuelle, notamment au moyen de l'apprentissage à distance et de l'enseignement à domicile, et auprès d'autorités compétentes autres que les autorités provinciales.

Expérience professionnelle – Dans le cadre du programme de sélection du personnel, une expérience professionnelle pertinente désigne tout emploi dans un rôle ou un poste de nature opérationnelle ou technique offrant au candidat et à l'équipe de direction les éléments ci-après :

- a. Pour le candidat :
  - i. une exposition notable à l'organisation et au fonctionnement quotidien d'une installation dotée de réacteurs, qui s'applique d'une manière ou d'une autre aux fonctions du poste désigné visé;
  - ii. une occasion d'acquérir des connaissances et des compétences transférables et des attributs liés à la sûreté qui lui seront éventuellement utiles s'il est retenu, lorsqu'il occupera un poste désigné;
- b. Pour l'équipe de direction : une occasion d'évaluer le candidat potentiel par rapport aux critères pertinents de sélection du personnel, en particulier tous attributs essentiels liés à la sûreté, y compris l'intégrité, le leadership et la résilience, le cas échéant

## **14.2 Critères de sélection du personnel**

### **14.2.1 Conditions préalables de base**

Les candidats sélectionnés pour participer à tout programme de formation initiale indiqué dans le présent REGDOC doivent :

- a. avoir démontré des niveaux de littératie et de numératie correspondant aux fonctions du poste désigné pertinent;
- b. avoir fourni une preuve suffisante de tout niveau de formation préalable requis par la CCSN ou le titulaire de permis;
- c. avoir acquis toute expérience professionnelle antérieure requise par la CCSN ou par le titulaire de permis;
- d. posséder toutes les aptitudes et tous les attributs liés à la sûreté jugés essentiels par le titulaire de permis;
- e. satisfaire à tous les autres critères de sélection applicables au poste, établis par le titulaire de permis.

#### **14.2.2 Conditions préalables supplémentaires pour les chefs de quart et les spécialistes principaux en radioprotection**

Outre la satisfaction aux conditions préalables de base applicables, les candidats à un poste de chef de quart et de spécialiste principal en radioprotection (SPR) doivent, à la connaissance du titulaire de permis :

- a. posséder des compétences ou un potentiel démontrés en matière de leadership;
- b. avoir fait preuve, de façon constante, d'un haut degré d'intégrité.

#### **14.3 Sélection d'opérateurs de réacteur admissibles à une formation de chefs de quart**

Un travailleur accrédité ou précédemment accrédité pour un poste d'opérateur de réacteur (OR) à l'installation dotée de réacteurs mentionnée dans le permis peut être sélectionné pour participer à un programme de formation initiale prévue pour les candidats au poste de chef de quart, conformément aux exigences précisées dans cette sous-section.

##### **14.3.1 Rendement à titre d'opérateur de réacteur**

Avant d'être sélectionné pour cette formation, le travailleur doit :

- a. avoir exercé les fonctions d'OR accrédité avec compétence et en toute sécurité;
- b. être reconnu pour posséder les attributs liés à la sûreté et les aptitudes requises d'un chef de quart.

##### **14.3.2 Exemption relative au processus de sélection du personnel**

Le titulaire de permis peut, si le travailleur a été régulièrement employé à titre d'OR accrédité pendant au moins quatre (4) trimestres civils, exempter celui-ci de toute exigence en matière de niveau d'études ou d'expérience professionnelle préalable normalement requise pour les chefs de quart.

##### **Orientation**

Intention réglementaire – Étant donné que le travailleur doit être exempté des préalables jugés essentiels par le titulaire de permis pour les autres candidats, le travailleur doit avoir démontré de façon constante sa capacité à titre de chef de quart, laquelle a été observée pendant une période utile.

Emploi régulier – L'expression « régulièrement employé » signifie que le travailleur a, au minimum, satisfait à l'exigence de quart de travail trimestriel minimale pertinente; cependant, il n'est pas nécessaire que les quatre (4) trimestres civils se suivent.

##### **14.3.3 Avis de sélection du candidat au poste de chef de quart**

Le titulaire de permis doit aviser la CCSN dans un délai raisonnable lorsqu'un travailleur visé par la présente sous-section participe à un programme de formation initiale pour les candidats au poste de chef de quart. Cette communication doit inclure :

- a. le nom légal complet du travailleur;

- b. une confirmation que le travailleur s'est acquitté des fonctions d'OR en toute sécurité et avec compétence;
- c. une confirmation que le travailleur possède les attributs liés à la sûreté et les aptitudes requises d'un chef de quart;
- d. un résumé de toute exemption explicitement autorisée dans la sous-sous-section 14.3.2 et utilisée dans le cadre de la sélection du travailleur, y compris les dates de début et de fin de la ou des périodes d'observation totalisant quatre (4) trimestres civils au total.

### **Orientation**

Conformément à la sous-section 6.2, la demande d'accréditation comprend un résumé de toute exemption utilisée dans le cadre de la sélection du travailleur pour la formation de chef de quart, en plus de la notification précisée dans cette sous-sous-section.

## **14.4 Promotion au poste de chef de quart principal**

Tout chef de quart accrédité qui, en tant que membre de l'effectif minimal, exerce une autorité sur un certain nombre de chefs de quart accrédités doit, avant d'être employé à un poste de chef de quart principal, avoir été sélectionné et formé par le titulaire de permis dans ce but précis au moyen d'un processus documenté répondant aux exigences précisées dans la présente sous-section.

Le titulaire de permis ne doit pas permettre à un travailleur d'agir comme chef de quart principal s'il n'est pas dûment qualifié pour exercer son autorité sur d'autres chefs de quart accrédités, conformément au processus susmentionné.

### **Orientation**

**Applicabilité** – Cette sous-section s'applique lorsque le système de gestion mis en place à l'installation dotée de réacteurs requiert, dans le cadre de l'effectif minimal, la présence d'au moins un chef de quart accrédité principal ayant autorité sur au moins un autre chef de quart accrédité.

**Circonstances spéciales** – La CCSN reconnaît que, dans les installations dotées de réacteurs qui emploient des chefs de quart principaux, le rôle et les responsabilités de tous les chefs de quart peuvent comprendre la prise de décisions importantes pour la sûreté ou urgentes pour d'autres raisons, lorsque le chef de quart principal de service est indisposé ou n'est pas disponible. Aucune disposition du REGDOC ne devrait être interprétée comme empêchant tout chef de quart accrédité agissant en tant que membre de l'effectif minimal, de prendre, lorsque la situation l'exige, des décisions opérationnelles ou essentielles sur le plan de la sûreté, faisant normalement partie des attributions d'un chef de quart principal.

### **14.4.1 Expérience minimale d'un chef de quart avant une promotion**

Le travailleur doit avoir exercé, avec compétence et en toute sécurité, les fonctions de chef de quart à l'installation dotée de réacteurs mentionnée au permis pendant un nombre minimal de quarts de travail complets acceptable pour la CCSN dont la durée représente un nombre minimal d'heures de travail par quart acceptable pour la CCSN.

## **Orientation**

Programme de conformité – L'annexe B précise les nombres minimaux de quarts complets et d'heures de travail par quart acceptables par la CCSN pour les installations dotées de réacteurs concernées et en service au moment de la publication de la version actuelle du présent REGDOC.

### **14.4.2 Formation supplémentaire**

Le travailleur doit avoir suivi avec succès une formation fondée sur un système de formation, y compris une formation en cours d'emploi (FCE), traitant des connaissances, des compétences et des attributs liés à la sûreté requis pour exécuter, avec compétence et en toute sécurité, les fonctions de chef de quart principal, telles que définies dans le système de gestion du titulaire de permis.

### **14.4.3 Travail sous supervision**

Le travailleur doit avoir exercé les fonctions de chef de quart principal sous la supervision d'un chef de quart principal qualifié pendant un nombre de quarts de travail complets que le titulaire de permis juge nécessaire pour confirmer que le travailleur peut exercer lesdites fonctions, avec compétence et en toute sécurité.

### **14.4.4 Avis de promotion d'un travailleur à titre de chef de quart principal**

Le titulaire de permis doit aviser la CCSN dans un délai raisonnable lorsqu'un travailleur accrédité comme chef de quart a obtenu une promotion à titre de chef de quart principal. Cette communication doit inclure :

- a. le nom légal complet du travailleur;
- b. un résumé indiquant la date réelle d'achèvement, dans chaque cas, des exigences que le travailleur a réussi à satisfaire dans le cadre du processus de promotion précisé dans la présente section.

## **14.5 Transfert de personnel**

Le titulaire de permis doit mettre en œuvre et documenter un processus efficace de transfert de personnel conforme aux exigences et à l'orientation précisées dans la présente sous-section.

## **Orientation**

Applicabilité – Cette sous-section s'applique au cas d'un travailleur souhaitant obtenir une accréditation pour occuper un poste désigné à l'installation dotée de réacteurs mentionnée au permis (l'installation dotée de réacteurs de destination) après avoir été transféré d'une autre installation dotée de réacteurs, de même conception ou de conception comparable (l'installation dotée de réacteurs d'origine). Lorsqu'un travailleur est transféré entre des installations dotées de réacteurs dont la conception ou le concept d'exploitation diffèrent considérablement, il devrait être embauché et formé comme tout autre candidat, conformément au processus de sélection du personnel établi, en participant au programme complet de formation initiale.



### **14.5.1 Processus de transfert de personnel**

En tant que partie intégrante du processus de transfert de personnel, le titulaire de permis de l'installation dotée de réacteurs de destination :

- a. doit obtenir du titulaire de permis de l'installation dotée de réacteurs d'origine :
  - i. les dossiers de formation et de qualification et, le cas échéant, l'historique des examens d'accréditation du travailleur, y compris une preuve suffisante de tout examen d'accréditation passé avec succès par le travailleur;
  - ii. la confirmation que le travailleur s'est acquitté de ses fonctions avec compétence et en toute sécurité, que ce soit dans un poste désigné ou non;
  - iii. la confirmation que le travailleur est digne de confiance;
- b. doit s'assurer que le travailleur satisfait à tous les critères de sélection du personnel applicables en vigueur à l'installation dotée de réacteurs de destination avant que le travailleur ne s'inscrive à l'un des programmes de formation initiale mentionnés dans le présent REGDOC;
- c. peut faire passer au travailleur un ou plusieurs tests normalisés portant sur les connaissances générales et s'appuyant sur des méthodes éprouvées, en vue de mettre en évidence d'éventuelles lacunes dans ses connaissances;
- d. peut, au cas par cas, utiliser les résultats du ou des tests de connaissances générales susmentionnés pour l'élaboration d'une analyse des besoins en matière de formation individuelle et d'un plan de formation individuel (PFI);
- e. peut faire passer au travailleur un examen d'accréditation portant les connaissances générales, en vue de s'assurer qu'il possède les connaissances générales adéquates;
- f. peut utiliser l'une ou les deux exemptions potentielles explicitement autorisées dans la présente sous-section.

### **Orientation**

Pratique exemplaire – La CCSN reconnaît que le titulaire de permis de l'installation de destination ne peut être tenu responsable du refus, de la part du titulaire de permis de l'installation d'origine, de partager les renseignements personnels concernant le travailleur et, par conséquent, la CCSN ne blâmera pas le titulaire de permis si l'installation d'origine refuse de transmettre les renseignements mentionnés à la section 14.5.1.a. Néanmoins, le titulaire de permis de l'installation dotée de réacteurs de destination devrait s'assurer, dans toute la mesure du possible, de la pertinence de la candidature du travailleur transféré au programme de formation initiale applicable.

### **14.5.2 Formation initiale**

À l'exception de l'exemption potentielle explicitement autorisée à la sous-section 14.5.3, le travailleur doit suivre avec succès la même formation initiale que celle dispensée à tous les travailleurs tentant d'obtenir une accréditation pour occuper le poste désigné pertinent dans l'installation dotée de réacteurs de destination.

### **14.5.3 Exemption relative à la formation portant sur les connaissances générales**

Le titulaire de permis n'est pas tenu de dispenser une formation portant sur les connaissances générales au travailleur si ce dernier en a déjà suivi une qui :

- a. est équivalente à la formation portant sur les connaissances générales dispensée à tous les travailleurs tentant d'occuper le même poste désigné à l'installation dotée de réacteurs de destination;
- b. a été dispensée conformément aux exigences applicables du présent REGDOC et des REGDOC connexes;
- c. est, dans tous ses autres aspects, acceptable pour le titulaire de permis de l'installation dotée de réacteurs de destination.

#### **Orientation**

Restriction – La formation portant sur les connaissances générales est la seule composante d'un programme quelconque de formation initiale, précisée dans le présent REGDOC, dont le travailleur transféré peut être exempté.

Candidats au poste de SPR – Le titulaire de permis peut exempter du programme de formation générale applicable les candidats au poste de SPR qui satisfont aux critères d'exemption précisés dans cette sous-section. Toutefois, ces candidats doivent avoir réussi une formation personnalisée portant, au minimum, sur les connaissances pertinentes propres à la centrale.

### **14.5.4 Examens d'accréditation**

À l'exception de l'exemption potentielle explicitement autorisée à la sous-section 14.5.5, le travailleur doit avoir réussi les mêmes examens d'accréditation que ceux administrés à tous les travailleurs tentant d'obtenir une accréditation pour occuper le poste désigné pertinent dans l'installation dotée de réacteurs de destination.

### **14.5.5 Exemption de l'examen d'accréditation portant sur les connaissances générales**

Le titulaire de permis n'est pas tenu de faire passer un examen d'accréditation portant sur les connaissances générales au travailleur, si ce dernier a déjà obtenu une note de passage à un examen portant sur les connaissances générales qui :

- a. est équivalent à l'examen portant sur les connaissances générales administré à tous les travailleurs tentant d'occuper le même poste désigné à l'installation dotée de réacteurs de destination;
- b. a été administré par des examinateurs qualifiés conformément aux conditions fixées dans le permis de l'installation dotée de réacteurs de destination ou dans le document à l'appui, y compris toute exigence détaillée indiquée dans les documents mentionnés dans le permis ou dans le document à l'appui;
- c. est, dans tous ses autres aspects, acceptable pour le titulaire de permis de l'installation dotée de réacteurs de destination.

#### **Orientation**

Restriction – L'examen d'accréditation portant sur les connaissances générales est le seul examen d'accréditation du personnel dont le travailleur transféré peut être exempté. En outre, les

candidats au poste de SPR ne peuvent pas bénéficier de l'exemption précisée dans cette sous-section, puisque le personnel de la CCSN fait passer les examens d'accréditation et les tests de requalification des SPR couvrant à la fois les connaissances générales et les connaissances propres à la centrale.

#### **14.5.6 Avis de transfert de personnel**

Le titulaire de permis doit aviser la CCSN dans un délai raisonnable lorsqu'un travailleur visé par la présente sous-section participe à un programme de formation initiale mentionné dans le présent REGDOC. Cette communication doit inclure :

- a. le nom légal complet du travailleur;
- b. un résumé de toute exemption explicitement autorisée dans la sous-section 14.5 et utilisée dans le cadre de la sélection du travailleur, y compris, suivant les besoins :
  - i. les dates de début et de fin de la formation générale utilisée pour justifier l'exemption, ainsi que le nom du titulaire de permis et de l'installation dotées de réacteurs responsables du programme de formation générale associé;
  - ii. la date à laquelle l'examen général d'accréditation utilisé pour justifier l'exemption a été mené et le nom du titulaire de permis et de l'installation dotés de réacteurs l'ayant fait passer.

#### **14.5.7 Informations supplémentaires lors de la demande d'accréditation**

Au moment de la demande d'accréditation, le travailleur doit satisfaire à toutes les exigences d'accréditation du personnel applicables à n'importe quel travailleur qui tente d'obtenir une accréditation pour occuper le poste désigné pertinent à l'installation dotée de réacteurs mentionnée au permis.

En plus des exigences précisées dans la sous-section 6.2 et de la notification indiquée dans la présente sous-section, la demande d'accréditation doit inclure un résumé de toute analyse des besoins en matière de formation individuelle et de tout plan de formation individuel (PFI) et examen d'accréditation utilisés dans le cadre du transfert du travailleur.

#### **Orientation**

Fondement d'exemption – Les exemptions potentielles mentionnées dans cette sous-section s'appuient sur l'hypothèse d'un degré d'équivalence adéquat entre la formation générale suivie et l'examen portant sur les connaissances générales réussi par le candidat et ceux administrés à l'installation dotée de réacteurs de destination. La CCSN n'est pas tenue d'accréditer un travailleur qui s'est déjà vu accorder une exemption par le titulaire de permis, si elle n'est pas convaincue qu'il existait réellement un degré suffisant d'équivalence au moment où l'exemption a été accordée. En cas de doute, le titulaire de permis devrait consulter le personnel de la CCSN.

Discretion du titulaire de permis – Les exemptions potentielles mentionnées dans cette sous-section ne sont pas obligatoires. Le titulaire de permis de l'installation dotée de réacteurs de destination reste libre d'exiger que le travailleur transféré suive une formation générale avec

succès et passe un examen portant sur les connaissances générales avec succès, indépendamment de toute formation générale ou de tout examen d'accréditation qu'il aurait précédemment réussi.

## **15. Programmes de formation**

### **15.1 Programmes de formation initiale**

Le titulaire de permis doit mettre en œuvre et documenter des programmes de formation initiale spécifiquement conçus pour préparer les travailleurs à occuper chacun des postes désignés figurant au permis et pour qualifier lesdits travailleurs en vue d'une accréditation par la CCSN, conformément aux qualifications des travailleurs applicables précisées à la Partie III.

### **15.2 Programmes de formation continue**

Le titulaire de permis doit mettre en œuvre et documenter des programmes de formation continue spécifiquement conçus pour maintenir la compétence des travailleurs occupant chacun des postes désignés figurant au permis et pour requalifier lesdits travailleurs avant le renouvellement de leur accréditation par la CCSN, conformément aux exigences applicables de requalification des travailleurs indiquées à la Partie III.

#### **Orientation**

Objectif – Le but des programmes de formation continue est de s'assurer que les travailleurs accrédités :

- a. conservent les connaissances et compétences ainsi que les attributs essentiels liés à la sûreté acquis lors de leur formation initiale;
- b. acquièrent, selon les besoins, de nouvelles connaissances et compétences et de nouveaux attributs leur permettant de composer avec les modifications procédurales et techniques pertinentes mises en œuvre au fil du temps.

#### **15.2.1 Formation de recyclage**

Les programmes de formation continue pertinents doivent inclure une formation de recyclage appropriée qui comprend des évaluations formelles des connaissances et des habiletés, lesquelles traitent de toute modification technique ou procédurale pertinente mise en œuvre à l'installation dotée de réacteurs figurant au permis, ainsi que des leçons pertinentes apprises par l'industrie au fil du temps, ce qui inclut sans s'y limiter :

- a. les modifications apportées aux systèmes et aux sous-systèmes de l'installation dotée de réacteurs;
- b. les changements apportés aux politiques, aux normes et aux procédures propres au titulaire de permis et à la centrale;
- c. les modifications des exigences réglementaires ou les exemptions de ces exigences;
- d. les modifications apportées au permis ou aux documents auquel il fait référence;
- e. l'expérience d'exploitation propre à la centrale et à l'industrie et les événements d'exploitation.

Le titulaire de permis doit rapidement dispenser la formation de recyclage portant sur les connaissances mentionnées dans le présent REGDOC suivant le changement ou l'événement

déclencheur, en ayant recours à des méthodes pédagogiques efficaces, y compris une formation appropriée sur simulateur, le cas échéant.

### **Orientation**

Attente en matière de réglementation – Afin de s’assurer que les travailleurs accrédités peuvent exécuter leurs tâches en toute sécurité et avec compétence en tout temps, une formation de recyclage doit être dispensée en temps opportun. Les travailleurs accrédités devraient suivre une formation de recyclage dès que possible en fonction des circonstances et de l’importance du ou des changements pour la sûreté. Les changements critiques pour la sûreté devraient être communiqués au personnel d’exploitation pendant les changements de quart si la formation de recyclage ne peut pas être dispensée à l’avance à l’équipe de quart.

#### **15.2.2 Formation de révision**

Les programmes de formation continue pertinents doivent inclure une formation de révision appropriée qui comprend des évaluations formelles portant sur les connaissances et sur les habiletés, lesquelles traitent des connaissances et compétences ainsi que des attributs essentiels liés à la sûreté que les travailleurs accrédités ont acquis au cours de leur formation initiale et qui doivent être périodiquement revus et appliqués pour qu’ils continuent de les maîtriser.

Le titulaire de permis doit dispenser la formation de révision portant sur les connaissances mentionnée dans le présent REGDOC régulièrement et selon un cycle de formation n’excédant pas cinq (5) ans, en ayant recours à des méthodes pédagogiques efficaces, y compris une formation appropriée sur simulateur lorsque cela s’avère pertinent.

### **Orientation**

Pratique exemplaire – En tenant compte des circonstances individuelles, les travailleurs accrédités devraient suivre une formation de révision suffisante pour passer en revue toutes les connaissances et compétences et tous les attributs applicables liés à la sûreté, au cours de chaque période d’accréditation de cinq (5) ans précédant le renouvellement de leur accréditation.

#### **15.2.3 Formation continue sur simulateur pour le personnel d’exploitation**

Les programmes de formation continue destinés au personnel d’exploitation, doivent inclure une formation appropriée sur simulateur, conçue pour garantir que le personnel d’exploitation maintient sa qualification, en appliquant ses connaissances et ses compétences ainsi que ses attributs liés à la sûreté, dans le cadre d’une formation récurrente basée sur les habiletés et traitant de divers scénarios simulés dans des conditions normales et anormales et, dans la mesure du possible, dans des conditions d’urgence.

La formation continue sur simulateur destinée au personnel d’exploitation doit, au minimum, comprendre :

- a. des exercices sur simulateur portant sur les manœuvres habituelles du réacteur et sur les évolutions de la centrale rarement exécutées par les travailleurs accrédités en service;
- b. des exercices sur simulateur traitant de divers scénarios qui :
  - i. sollicitent les capacités de diagnostic et de prise de décision des travailleurs accrédités;

- ii. permettent de garantir que les travailleurs accrédités conservent leur compétence de sélection et d'exécution des procédures opérationnelles, même dans des conditions anormales et d'urgence;
- c. des exercices et des entraînements garantissant que les travailleurs accrédités sont prêts à intervenir en cas d'accident et en situation d'urgence.

### **Orientation**

Pratique exemplaire – La formation continue sur simulateur devrait traiter plus particulièrement des situations nécessitant la prise de décisions importantes pour la sûreté et pour lesquelles le temps constitue un facteur prépondérant ainsi que leur mise en œuvre rapide, afin d'éviter tout préjudice pour les travailleurs, le public ou l'environnement.

#### **15.2.4 Formation sur l'intervention en cas d'urgence nucléaire**

Le titulaire de permis doit organiser, sur une base périodique, une formation sur l'intervention en cas d'urgence nucléaire afin de s'assurer que les travailleurs accrédités sont adéquatement préparés pour intervenir en cas d'accidents hors dimensionnement crédibles et pour gérer les urgences nucléaires, conformément aux procédures d'exploitation d'urgence et aux lignes directrices pour la gestion des accidents graves établies.

### **Orientation**

Stratégies et méthodes pédagogiques – La formation sur l'intervention en cas d'urgence nucléaire devrait mettre l'accent sur les rôles et les responsabilités des travailleurs accrédités et peut être dispensée par tout moyen efficace, allant des exercices sur table en salle de classe à la participation de travailleurs accrédités à des exercices d'intervention en cas d'urgence nucléaire de grande envergure.

Documents d'application de la réglementation complémentaires – D'autres exigences et orientations pertinentes à l'intention du personnel participant à la gestion des accidents, ainsi qu'à la préparation et à l'intervention en cas d'urgence nucléaire, se trouvent dans les REGDOC complémentaires pertinents indiqués dans la section Renseignements supplémentaires à la fin de ce REGDOC.

#### **15.3 Système de formation pour les installations dotées de réacteurs**

Les programmes de formation initiale et continue, mentionnés au présent REGDOC, doivent être conformes à un système de formation pour les installations dotées de réacteurs acceptable pour la CCSN.

Lorsque le titulaire de permis sous-traite, en tout ou en partie, tout aspect de la formation indiquée dans ce REGDOC, il doit s'assurer que les exigences et l'orientation précisées dans le présent document et dans tout autre document d'application de la réglementation complémentaire pertinent sont respectées par la ou les parties contractantes.

### **Orientation**

Stratégies et méthodes pédagogiques – Lors de la mise en œuvre et de la prestation de la formation initiale et continue mentionnée au présent REGDOC, le titulaire de permis est libre d'utiliser toutes les stratégies pédagogiques efficaces et toute combinaison de méthodes

pédagogiques reconnues, notamment l'apprentissage selon un rythme personnel, l'apprentissage à distance et l'apprentissage en ligne.

Document d'application de la réglementation complémentaire – D'autres exigences et orientations relatives à la formation du personnel, notamment les systèmes de formation, se trouvent dans les REGDOC complémentaires pertinents indiqués dans la section Renseignements supplémentaires à la fin de ce REGDOC.

Exemples de programme de formation – L'0 contient des exemples de programmes de formation initialement mis en œuvre dans les installations dotées de réacteurs CANadiens à Deutérium Uranium (CANDU) et jugés acceptables par la CCSN. Nonobstant cette orientation supplémentaire, un programme de formation approprié est fondé sur le système de formation de l'installation dotée de réacteurs, comme prescrit par la CCSN.

#### **15.4 Évaluations formelles de l'apprenant**

Tous les programmes de formation et toutes les formations personnalisées mentionnés dans le présent REGDOC doivent inclure des évaluations formelles de l'apprenant portant, selon le cas, sur les connaissances ou sur les habiletés, conçues pour évaluer les progrès de chaque apprenant durant la formation en question.

Le titulaire de permis doit réaliser toutes ces évaluations formelles de l'apprenant conformément à un processus documenté indiquant :

- a. le nombre et la portée des évaluations formatives et sommatives jugées nécessaires pour suivre les progrès des candidats en fonction des volets et des jalons pertinents de la formation;
- b. les exigences et les procédures relatives à la conception, à l'élaboration, à la tenue et à la notation des évaluations;
- c. les exigences de qualification du personnel responsable de la conception, de l'élaboration, de la tenue et de la notation des évaluations.

Toutes les évaluations formelles de l'apprenant doivent être dispensées par des formateurs qualifiés ou des examinateurs qualifiés, dans le cadre d'une stratégie pédagogique documentée.

#### **Orientation**

Objectif – L'objectif des évaluations formelles de l'apprenant diffère de celui des examens d'accréditation et des tests de requalification; les premières fournissent une mesure actualisée de la progression de l'apprenant tout au long de la formation, tandis que les seconds servent de preuve formelle de la compétence du travailleur dans le but d'obtenir l'accréditation de la CCSN. Les résultats des évaluations de l'apprenant peuvent également servir à fournir une rétroaction à ces derniers et à aider les gestionnaires et les formateurs à déterminer le moment approprié où les examinateurs devraient faire passer à un groupe ou à un individu les examens d'accréditation et les tests de requalification du personnel requis par le CCSN.

#### **15.5 Qualifications des formateurs**

Le titulaire de permis doit s'assurer que le personnel est dûment qualifié pour dispenser la formation et les évaluations formelles de l'apprenant mentionnées au présent REGDOC auprès des travailleurs accrédités par la CCSN ou qui souhaitent obtenir une accréditation.

## **16. Examen d'accréditation et test de requalification**

### **16.1 Séparation des fonctions de formation et d'examen**

Le titulaire de permis doit s'assurer, dans la mesure du possible, qu'une séparation adéquate et qu'une relation sans lien de dépendance sont maintenues entre les formateurs qui dispensent la formation mentionnée au présent REGDOC et les examinateurs qui font passer les examens d'accréditation et les tests de requalification au nom de la CCSN. Dans ce cadre, au minimum :

- a. aucun examen d'accréditation ou test de requalification portant sur les connaissances ou sur les habiletés, administré conformément aux exigences du présent REGDOC, ne doit être conçu, élaboré, mené ou noté, en tout ou en partie, par un examinateur agissant à titre de formateur pour l'un ou l'autre des candidats subissant l'examen ou le test;
- b. aucun formateur ni aucun examinateur ne doit bénéficier, financièrement ou autrement, du taux de réussite des candidats aux évaluations formelles de l'apprenant, aux examens d'accréditation ou aux tests de requalification mentionnés dans le présent REGDOC.

### **Orientation**

Objectif – Le maintien d'une séparation suffisante entre les formateurs et les examinateurs a pour but de s'assurer que la principale preuve de compétence exigée par la CCSN au moment de l'accréditation ou du renouvellement d'une accréditation, à savoir les résultats de l'examen d'accréditation ou du test de requalification, a été obtenue par des examinateurs qualifiés, indépendamment des formateurs concernés. Dans le contexte de l'accréditation du personnel, l'opinion des examinateurs sur la compétence des travailleurs doit constituer une vérification indépendante de l'opinion des formateurs en la matière, les examinateurs étant chargés de représenter l'organisme d'accréditation plutôt que l'employeur. Cette séparation constitue un aspect fondamental des pratiques exemplaires des organismes d'accréditation. La Commission ou le FD exige une preuve satisfaisante de compétence afin de se faire une opinion étayée de la compétence du travailleur, avant de prendre toute décision d'accréditation du personnel.

Pratique exemplaire – Idéalement, le personnel chargé de la formation et des examens devrait appartenir à des équipes distinctes, dirigées par des gestionnaires différents; cependant, la CCSN reconnaît que ce niveau de séparation n'est ni essentiel ni toujours réalisable dans la pratique.

### **16.2 Examens d'accréditation**

Le titulaire de permis doit s'assurer que les examens d'accréditation portant sur les connaissances et portant sur les habiletés mentionnés dans le présent REGDOC sont conçus, élaborés, menés et notés par des examinateurs qualifiés, conformément aux exigences applicables de la CCSN précisées ou référencées dans le permis ou dans les documents qui l'accompagnent.

### **16.3 Tests de requalification**

Le titulaire de permis doit s'assurer que les tests de requalification portant sur les connaissances et basés sur les habiletés mentionnés dans le présent REGDOC sont conçus, élaborés, menés et notés par des examinateurs qualifiés, conformément aux exigences applicables de la CCSN précisées ou référencées dans le permis ou dans les documents qui l'accompagnent.



#### **16.4 Mesures de sécurité associées à l'administration d'examens d'accréditation et de tests de requalification**

Le titulaire de permis doit mettre en œuvre et documenter des politiques et des procédures efficaces pour contrôler l'accès et l'utilisation des évaluations formelles de l'apprenant, des examens d'accréditation et des tests de requalification mentionnés dans le présent REGDOC.

Les mesures de sécurité associées doivent répondre aux exigences minimales suivantes :

- a. seul le personnel ayant un « besoin de savoir » valide doit avoir accès aux évaluations formelles de l'apprenant, aux examens d'accréditation et aux tests de requalification, ainsi qu'à tout document ou matériel connexe qui fournissent un indice direct de leur contenu;
- b. les formateurs ne doivent pas avoir accès au contenu précis d'un examen d'accréditation ou d'un test de requalification administré à leurs apprenants ni en avoir une connaissance préalable;
- c. les réponses aux questions à développement (QAD) des examens et des tests doivent être protégées contre tout accès non autorisé;
- d. les clés de correction des questions à choix multiple (QCM) des examens et des tests doivent être protégées contre tout accès non autorisé;
- e. tout dépôt, physique ou virtuel, contenant les QAD et les QCM des examens et des tests doit être protégé contre tout accès non autorisé;
- f. afin de s'acquitter de ses fonctions, le personnel de la CCSN participant aux activités de vérification de la conformité doit être exempté de toute mesure de sécurité établie par le titulaire de permis, conformément aux exigences précisées à la présente sous-section.

#### **Orientation**

Accès du personnel de la CCSN – Le personnel de la CCSN prendra les précautions appropriées, conformément aux normes de sécurité applicables aux employés fédéraux et aux mesures de sécurité précisées dans cette sous-section. De plus, le personnel de la CCSN respectera, dans toute la mesure du possible, les procédures pertinentes des titulaires de permis. Toutefois, aucun inspecteur de la CCSN ni aucun autre membre d'une équipe d'inspection ne peut se voir refuser l'accès à l'information requise par les membres du personnel de la CCSN pour s'acquitter de ses fonctions en vertu de la LSRN.

#### **16.5 Qualifications des examinateurs**

Le titulaire de permis doit s'assurer que le personnel chargé de faire passer les examens d'accréditation et les tests de requalification mentionnés dans le présent REGDOC a suivi, avec succès, la formation appropriée et est dûment qualifié pour faire passer ces examens et tests aux travailleurs accrédités par la CCSN ou qui souhaitent obtenir une accréditation.

### **17. Travail sous supervision**

Le titulaire de permis doit établir et documenter, pour chaque poste désigné pertinent indiqué au permis, des procédures efficaces pour mener le TSS mentionné dans le présent REGDOC.

Toutes les périodes de TSS prescrites doivent répondre aux objectifs suivants :

- a. le TSS doit offrir au travailleur évalué une réelle occasion de démontrer un niveau fonctionnel de compétence et la capacité à assurer seul des quarts de travail, en tant qu'opérateur principal ou en tant que chef de quart;
- b. le TSS doit fournir aux gestionnaires de l'exploitation une période d'observation suffisante pour confirmer qu'il est possible de faire confiance au travailleur évalué pour assurer seul des quarts de travail, en tant qu'opérateur principal ou en tant que chef de quart, et pour exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

Lorsqu'il est mis en œuvre dans le cadre d'un programme de formation initiale, le TSS ne doit pas commencer tant que la responsabilité du rendement de l'apprenant n'a pas été transférée de l'autorité responsable de la formation à celle responsable de l'exploitation.

### **Orientation**

Autorité de supervision – Étant donné que le TSS remplit principalement une fonction d'évaluation du rendement, plutôt qu'une fonction de formation, les périodes de TSS sont supervisées par du personnel d'exploitation accrédité, sous l'autorité de l'équipe de gestion de l'exploitation. Lors de la participation à un programme de formation initiale, l'apprenant devrait avoir acquis un niveau fonctionnel de compétence, avant le début de la période de TSS.

Formation en cours d'emploi – Nonobstant l'objectif principal du TSS prescrit, le titulaire de permis peut mettre en œuvre une FCE et du mentorat pendant toute période de TSS, notamment dans le cadre d'un programme de formation initiale.

## **18. Entrevues de la direction**

Le titulaire de permis doit établir et documenter des procédures efficaces pour préparer et mener les diverses entrevues de la direction mentionnées dans le présent REGDOC.

Chaque entrevue obligatoire de la direction remplit une fonction d'évaluation et doit :

- a. être menée oralement par au moins un gestionnaire autorisé à représenter le titulaire de permis et à mener l'entrevue;
- b. fournir au travailleur évalué une réelle occasion de démontrer un niveau de compétence adéquat;
- c. fournir à au moins un membre de l'équipe de gestion de l'exploitation une réelle occasion de prendre une décision finale sur la compétence du travailleur;
- d. être consignée par écrit ou sur tout autre support récupérable, ce document devant être conservé et mis à la disposition de la CCSN, sur demande.

### **Orientation**

Objectif – Le but de l'entrevue de la direction est de s'assurer que la décision prise par le titulaire de permis et par l'équipe de gestion de l'exploitation quant à la compétence adéquate des travailleurs est définitive et que chacun d'entre eux est pris en compte individuellement avant sa

présentation à l'accréditation par la CCSN ou sa réintégration dans ses fonctions, à la suite d'un retrait de poste pour un motif valable.

## **19. Politiques et procédures administratives applicables aux travailleurs en formation**

Les politiques et procédures précisées à la présente section s'appliquent à tout travailleur, accrédité ou non, qui suit l'un des programmes de formation initiale mentionnés dans le présent REGDOC, dans le cadre de cette formation et en relation avec elle.

### **19.1 Réintégration d'un travailleur en formation suite à une interruption prolongée de la formation**

Le titulaire doit établir et documenter un processus efficace pour gérer le cas d'un travailleur réintégrant un programme de formation initiale, après une interruption prolongée de sa formation. Dans le cadre de ce processus, le titulaire de permis doit :

- a. déterminer la nécessité d'une évaluation formelle de l'apprenant, et l'effectuer si la situation le justifie, y compris des tests portant sur les connaissances et sur les habiletés pour évaluer la rétention par le travailleur des connaissances et compétences acquises en formation et pour mettre en évidence toute lacune en la matière pouvant être apparue pendant la période d'interruption de la formation;
- b. déterminer le besoin d'une formation personnalisée, sur la base d'une analyse des besoins en matière de formation individuelle, en tenant compte de l'ensemble des connaissances et compétences éventuellement oubliées par le travailleur, ainsi que de toute modification ou actualisation des connaissances, des compétences et des attributs essentiels liés à la sûreté survenue pendant sa période d'absence;
- c. formuler et mettre en œuvre, si nécessaire, un plan de formation individuel;
- d. s'assurer qu'au minimum, le travailleur réussit l'ensemble des formations et des évaluations formelles de l'apprenant qu'il aurait manquées pendant sa période d'absence;
- e. déterminer un moment de réintégration approprié dans le programme de formation initiale concerné.

Tout travailleur qui s'absente d'un programme de formation initiale pour une période de six (6) mois ou plus doit, au minimum, suivre un processus formel de réintégration satisfaisant aux exigences de la présente sous-section.

#### **Orientation**

Pratique exemplaire – Le titulaire de permis devrait s'assurer, au cas par cas, que tous les travailleurs qui s'absentent de la formation initiale pendant une période prolongée sont évalués pour assurer une rétention adéquate des connaissances et compétences acquises, avant leur réintégration dans un programme de formation initiale. Toutefois, lorsque l'absence est inférieure à six (6) mois, la réintégration formelle est à la discrétion du titulaire de permis.

## **20. Politiques et procédures administratives applicables aux travailleurs accrédités**

Les politiques et procédures précisées dans cette section s'appliquent à tous les travailleurs accrédités, dans le contexte du ou des postes désignés qu'ils occupent.

## **20.1 Aptitude au travail**

Le titulaire de permis doit mettre en œuvre et documenter des politiques et des procédures efficaces en matière d'aptitude au travail afin de fournir à la CCSN une assurance raisonnable que les travailleurs accrédités sont exempts de toute déficience physique ou mentale qui pourrait nuire à leur capacité d'exercer les fonctions du ou des postes désignés pertinents avec compétence et en toute sécurité.

Les politiques et les procédures en matière d'aptitude au travail applicables aux travailleurs accrédités doivent être mises en œuvre, conformément aux exigences et à l'orientation mentionnées dans le présent REGDOC, ainsi que dans les REGDOC complémentaires traitant de l'aptitude au travail, notamment celles liées à la gestion de la fatigue des travailleurs et à la gestion de la consommation d'alcool et de drogues.

### **Orientation**

Documents d'application de la réglementation complémentaires – D'autres exigences et orientations relatives à la gestion de la fatigue des travailleurs et à la gestion de la consommation d'alcool et de drogues, notamment en matière de tests de dépistage, se trouvent dans les REGDOC complémentaires pertinents indiqués dans la section Renseignements supplémentaires à la fin de ce REGDOC.

## **20.2 Occupation minimale des travailleurs accrédités**

Le titulaire de permis doit s'assurer que les travailleurs accrédités occupent le(s) poste(s) désigné(s) précisé(s) sur leur(s) certificat(s) dans la mesure nécessaire, de façon qu'ils puissent maintenir un niveau de compétence adéquat pendant toute la durée de leur accréditation.

### **20.2.1 Exigence minimale de quart de travail pour le personnel d'exploitation**

Les chefs de quart accrédités doivent exercer les fonctions du ou des postes désignés pertinents pendant un nombre minimal de quarts de travail complets par trimestre civil, acceptable pour la CCSN, et dont la durée représente un nombre minimal d'heures de travail par quart par trimestre civil, acceptable pour la CCSN.

Chaque chef de quart accrédité doit occuper le poste concerné selon le minimum requis, en tant que membre de l'effectif minimal, et non pas comme remplaçant ou à titre surnuméraire et, dans toute la mesure du possible, en relation avec un réacteur ou un groupe de réacteurs chargés en combustible et en exploitation.

### **Orientation**

Objectif – L'exigence d'occupation minimale vise à s'assurer que les travailleurs accrédités effectuant un travail par quart sont exposés aux fonctions du poste désigné concerné à une fréquence suffisante pour maintenir un niveau de compétence adéquat. Cette exigence vise principalement les tâches routinières qui ne sont pas importantes pour la sûreté et pour lesquelles le temps ne constitue pas un facteur prépondérant, et qui peuvent donc être effectuées pendant le service sans avoir de répercussions négatives sur la sûreté nucléaire. Les connaissances et les

compétences importantes pour la sûreté et pour lesquelles le temps constitue un facteur prépondérant devraient être systématiquement traitées lors de la formation continue.

**Exigence minimale** – Le titulaire de permis n'est pas obligé de s'assurer que chaque quart de travail effectué par des travailleurs de quart accrédités satisfait aux exigences et à l'orientation de la présente sous-section, tant que chaque travailleur de quart accrédité travaille suffisamment pour répondre, sur une base trimestrielle, à l'exigence en matière d'occupation minimale applicable.

**Programme de conformité** – L'annexe B précise les exigences relatives au nombre minimal d'heures de quart, acceptable pour la CCSN, pour les installations dotées de réacteurs concernées et en service au moment de la publication de la dernière version du présent REGDOC.

**Quart complet** – Un quart complet signifie une période minimale de quatre (4) heures consécutives de travail dans un poste désigné, en tant qu'opérateur ou que chef de quart, précédée d'un transfert officiel des responsabilités du quart de la part d'un homologue ayant terminé son quart, et suivi d'un transfert équivalent, à un homologue débutant son quart, lors du changement de quart suivant.

**Durée normale des quarts** – La CCSN reconnaît que le titulaire de permis peut mettre en œuvre, soit comme norme, soit pour gérer les horaires de travail sur une base individuelle, des rotations et des durées de quarts différentes, mais tout aussi efficaces, notamment, une durée normale de quart de 12 heures.

**Durée minimale de quart de travail** – Compte tenu des préoccupations connues et des limites existantes concernant la fatigue des travailleurs, la CCSN ne déterminera pas de durée minimale de quart de travail, autre que la durée minimale susmentionnée de quatre (4) heures consécutives. Cette durée minimale est établie simplement pour s'assurer que chaque quart de travail complet, consigné dans le but de satisfaire à une exigence minimale en matière de quart de travail, constitue en fait une réelle exposition aux fonctions du poste désigné pertinent.

**Aménagement raisonnable** – Afin de fournir au titulaire de permis une flexibilité suffisante pour gérer les circonstances individuelles, notamment les travailleurs souffrant de maladies ou de douleurs chroniques, les travailleurs de quart accrédités sont libres d'effectuer des quarts de travail complets de toute durée minimale acceptable, tant que le nombre minimal de quarts complets et le nombre total d'heures de travail par quart applicables sont atteints, sur une base trimestrielle.

**Chefs de quart principaux** – Une fois dûment qualifiés, les chefs de quart principaux sont autorisés à exercer les fonctions de tout poste de chef de quart applicable, propre à la centrale, indiqués à l'Annexe A et peuvent donc effectuer des quarts de travail à titre de chef de quart ou de chef de quart principal, de manière interchangeable, afin de satisfaire à l'exigence de quart de travail minimal trimestriel applicable.

### **20.2.2 Report de l'exigence relative au nombre minimal de quarts de travail**

Lorsqu'un chef de quart accrédité ne satisfait pas, au cours d'un trimestre civil donné, à une exigence applicable relative au nombre minimal de quarts, le nombre de quarts complets et d'heures de travail par quart non exécutés doit être effectué au cours du trimestre civil suivant, en plus de l'exigence relative au nombre minimal de quarts strictement applicable trimestre en question.

### **20.2.3 Occupation minimale des spécialistes principaux en radioprotection**

Le titulaire de permis doit s'assurer que les travailleurs accrédités pour le poste de spécialiste principal en radioprotection exécutent régulièrement les tâches dudit poste pendant toute la durée de leur accréditation.

### **20.3 Gestion d'une période prolongée de non-emploi**

Tout travailleur accrédité doit être officiellement retiré des fonctions du poste désigné pertinent et se voir attribuer un statut d'emploi inactif si, pour une période minimale de six (6) mois consécutifs, il n'est pas ou ne sera pas en mesure, indépendamment du motif :

- a. de suivre la formation continue prescrite;
- b. de satisfaire à une exigence applicable en matière de nombre de quarts de travail par trimestre.

#### **Orientation**

Applicabilité – Cette sous-section s'applique à tout travailleur accrédité qui satisfait à l'un des critères de non-emploi ou aux deux, quelles que soient les circonstances. Les circonstances pertinentes comprennent, mais sans s'y limiter, toute affectation de travail concurrente, notamment une réaffectation temporaire ou permanente, à l'intérieur ou à l'extérieur de l'installation dotée de réacteurs, ou un congé prolongé, par exemple un congé sabbatique, une absence pour raison médicale, un congé parental ou un congé de maternité. En outre, tout travailleur titulaire d'un certificat en vigueur qui cesse de suivre une formation continue ou de satisfaire à l'exigence applicable en matière d'occupation minimale, que ce soit volontairement ou non, y compris en raison d'un départ à la retraite, devrait être officiellement retiré de ses fonctions conformément à cette sous-section, et peut subséquemment être réintégré dans ses fonctions, conformément au processus de réintégration indiqué à la sous-section 20.5, si la situation le justifie.

### **20.4 Retrait des fonctions pour un motif valable**

Tout travailleur accrédité satisfaisant à l'un des critères précisés dans cette sous-section doit être officiellement retiré des fonctions du poste désigné pertinent pour un motif valable et se voir attribuer un statut d'emploi inactif ou non accrédité, selon le cas.

#### **20.4.1 Non-respect d'une exigence en matière d'occupation minimale**

Le travailleur n'a pas satisfait à une exigence applicable relative au nombre minimal de quarts de travail trimestriels pendant deux (2) trimestres civils consécutifs.

#### **Orientation**

Applicabilité – Ce critère s'applique à un travailleur de quart accrédité qui devait satisfaire à une exigence applicable relative au nombre minimal de quarts et qui n'y a pas satisfait pendant deux (2) trimestres civils consécutifs. Les cas de travailleurs incapables d'effectuer un nombre suffisant de quarts de travail en raison d'une absence prolongée ou d'une affectation de travail

concurrente doivent être traités en vertu des dispositions relatives à une période prolongée de non-emploi précisées à la sous-section 20.3.

#### **20.4.2 Échec au test de requalification**

Le travailleur a échoué à un test de requalification, que ce soit dans un rôle principal ou de soutien.

#### **20.4.3 Incapacité à travailler avec compétence et en toute sécurité**

Le travailleur a fait l'objet d'un test de dépistage de drogue ou d'alcool positif, administré conformément au programme d'aptitude au travail prescrit par la CCSN, ou est autrement jugé inapte, par le titulaire de permis, à exercer les fonctions d'un poste désigné avec compétence et en toute sécurité, pour quelque raison que ce soit, notamment, mais sans s'y limiter :

- a. un problème médical ou physique, qu'il soit permanent ou temporaire;
- b. un problème de santé mentale, qu'il soit permanent ou temporaire;
- c. un rendement inadéquat en service, y compris toute intervention ou décision mettant en danger la santé et la sécurité des travailleurs ou du public, ainsi que l'environnement;
- d. une réticence démontrée à prendre les précautions nécessaires pour protéger la santé et la sécurité des travailleurs ou du public, ainsi que l'environnement, ou un manquement manifeste en la matière;
- e. un manque démontré d'intégrité ou de fiabilité.

#### **Orientation**

Applicabilité – En ce qui concerne toute condition médicale, physique ou de santé mentale, le critère de retrait des fonctions s'applique au cas d'un travailleur accrédité qui doit être retiré de ses fonctions par le titulaire de permis, avec ou sans le consentement du travailleur, parce que les troubles physiques ou physiologiques ou l'incapacité mentale résultant du problème sous-jacent interfèrent avec la capacité du travailleur à exécuter les fonctions du poste désigné concerné, avec compétence et en toute sécurité, quelle que soit la durée prévue de la condition.

#### **20.4.4 Expiration d'un certificat**

Le certificat du travailleur a expiré.

#### **20.4.5 Décision proposée de ne pas accréditer un travailleur ou de lui retirer son accréditation**

Le travailleur a été visé par une décision proposée par la CCSN de refuser l'accréditation ou de retirer l'accréditation, alors qu'une décision définitive par la Commission ou par un FD est toujours en attente.

#### **Orientation**

Justification du retrait – Conformément à la section 11, le travailleur et le titulaire de permis disposent de 30 jours civils pour demander la possibilité d'être entendu. Lorsque, en plus de ce délai minimal, une possibilité d'être entendu est demandée, la décision finale de la Commission ou d'un FD peut être considérablement retardée. Comme le travailleur conserve son accréditation pendant toute la durée de la procédure, alors que la Commission ou un FD a des raisons de la lui

retirer ou de la lui refuser, le travailleur doit être relevé des fonctions du poste désigné pertinent jusqu'à ce que la Commission ou un FD ait rendu une décision finale.

## **20.5 Processus de réintégration de base**

Aucun travailleur accrédité qui a été retiré officiellement des fonctions d'un poste désigné ne doit être autorisé à exercer ces fonctions tant qu'il n'aura pas réussi un processus de réintégration de base approprié, conforme aux exigences précisées dans la présente sous-section.

### **Orientation**

Applicabilité – Le processus de réintégration de base s'applique à tous les travailleurs accrédités retirés de leurs fonctions, quelle qu'en soit la raison. Le processus correctif, précisé ensuite à la sous-section 20.6, s'ajoute au processus de réintégration de base, mais ne s'applique qu'aux travailleurs accrédités retirés de leurs fonctions pour un motif valable.

### **20.5.1 Formation de recyclage**

Le travailleur doit avoir suivi une formation de recyclage appropriée traitant de tous les changements techniques ou opérationnels pertinents mis en œuvre, et de toutes les leçons apprises pertinentes, pendant qu'il était officiellement retiré de ses fonctions du poste désigné, y compris, mais sans s'y limiter :

- a. les modifications apportées aux systèmes et aux sous-systèmes de l'installation dotée de réacteurs;
- b. les changements apportés aux politiques, aux normes et aux procédures propres au titulaire de permis et à la centrale;
- c. les modifications des exigences réglementaires ou les exemptions de ces exigences;
- d. les modifications apportées au permis ou aux documents auquel il fait référence;
- e. l'expérience d'exploitation propre à la centrale et à l'industrie et les événements d'exploitation.

### **20.5.2 Formation de révision**

Le travailleur doit réussir une formation de révision appropriée, en rapport avec la durée de sa période d'absence ou du retrait de ses fonctions.

Au minimum, cette formation de révision doit englober toute formation de révision planifiée à laquelle le travailleur n'a pas assisté pendant qu'il était officiellement retiré de ses fonctions.

### **20.5.3 Formation sur simulateur**

Le travailleur doit avoir suivi, avec succès, une formation appropriée sur simulateur traitant d'un nombre et d'une variété de scénarios proportionnelle à la durée de sa période d'absence ou du retrait de ses fonctions.

Au minimum, cette formation sur simulateur doit mettre à l'épreuve les compétences de diagnostic et de prise de décision du travailleur et englober toute formation planifiée sur simulateur à laquelle le travailleur n'a pas assisté pendant sa période d'absence ou de retrait de ses fonctions.



#### **20.5.4 Travail sous supervision**

Le travailleur doit avoir exercé, avec succès, les fonctions du poste désigné applicable sous la supervision d'un travailleur accrédité qualifié pour le même poste désigné et pour un nombre de quarts complets jugés suffisants par le titulaire de permis afin de confirmer que le travailleur peut exercer lesdites fonctions avec compétence et en toute sécurité.

#### **20.5.5 Entrevue de la direction**

Lorsqu'il est retiré de ses fonctions pour un motif valable, le travailleur doit avoir passé avec succès une entrevue menée en bonne et due forme par la direction.

#### **Orientation**

Applicabilité – L'entrevue de la direction n'est pas obligatoire pour les travailleurs réintégrés dans leurs fonctions à l'issue d'une période prolongée de non-emploi.

#### **20.6 Mesures correctives à la suite d'un retrait pour motif valable**

En plus du processus de réintégration de base précisé à la sous-section 20.5, aucun travailleur accrédité retiré de ses fonctions pour un motif valable, sur la base de l'un des critères définis à la sous-section 20.4, ne doit être autorisé à exercer les fonctions du poste désigné concerné jusqu'à ce qu'il ait suivi, avec succès, une formation de rattrapage appropriée qui est conforme au motif applicable du retrait, comme indiqué à la présente sous-section.

##### **20.6.1 Non-respect d'une exigence en matière d'occupation minimale**

Le titulaire de permis peut réintégrer un travailleur dans les fonctions du poste désigné pertinent, à la suite d'un manquement à une exigence d'occupation minimale si :

- a. les circonstances qui ont empêché le travailleur d'exercer les fonctions du poste désigné pertinent n'existent plus;
- b. le travailleur a effectué un nombre de quarts complets et d'heures de travail par quart sous la supervision d'un travailleur accrédité qualifié pour le poste désigné, correspondant au minimum au nombre de quarts complets et d'heures de travail par quart qu'il n'a pas effectué au cours du trimestre précédant le retrait de ses fonctions.

##### **20.6.2 Échec au test de requalification**

Le titulaire de permis peut réintégrer un travailleur dans les fonctions du poste désigné pertinent, à la suite d'un échec à un test de requalification, une fois que le travailleur a réussi un test de requalification de reprise équivalent à celui auquel il avait échoué.

Ce test de requalification de reprise doit être équivalent en tous points, mais ne doit être identique ni au test de requalification échoué par le candidat ni à aucun autre test de reprise qu'il aurait raté, dans le cadre du processus de réintégration. En outre, toute restriction établie dans des documents complémentaires concernant le chevauchement autorisé de sujets entre les tests de requalification doit s'appliquer.

### **20.6.3 Incapacité à travailler avec compétence et en toute sécurité**

Le titulaire de permis peut réintégrer un travailleur dans les fonctions du poste désigné pertinent à la suite d'un retrait en raison d'une incapacité à travailler avec compétence et en toute sécurité si le motif du retrait des fonctions a été corrigé ou atténué de manière adéquate, ou n'existe plus.

### **20.6.4 Expiration d'un certificat**

Le titulaire de permis peut réintégrer un travailleur dans les fonctions du poste désigné pertinent, à la suite de l'expiration d'un certificat, une fois qu'il a été officiellement informé de la décision de la Commission ou du FD d'accréditer à nouveau le travailleur.

#### **Orientation**

Lorsque la Commission ou le FD n'a pas l'intention de redonner son accréditation au travailleur, une décision proposée à cet égard sera prise, auquel cas la sous-sous-section 20.4.5 s'applique.

### **20.6.5 Décision proposée de ne pas accréditer un travailleur ou de lui retirer son accréditation**

Le titulaire de permis peut réintégrer dans les fonctions du poste désigné pertinent un travailleur ayant fait l'objet d'une décision proposée de ne pas l'accréditer ou de lui retirer son accréditation, une fois qu'il a été officiellement informé de la décision de la Commission ou du FD d'accréditer le travailleur ou de ne pas lui retirer son accréditation.

#### **Orientation**

Lorsque la décision finale de la Commission ou du FD est de ne pas accréditer le travailleur ou de lui retirer son accréditation, celui-ci n'est plus accrédité par la CCSN comme étant qualifié pour exercer les fonctions du poste réglementé pertinent, et la restriction en matière de dotation établie à la sous-section 4.2 s'applique.

## **20.7 Avis de changement de statut d'emploi**

### **20.7.1 Avis de retrait des fonctions**

Le titulaire de permis doit informer sans délai la CCSN de tout travailleur accrédité retiré des fonctions d'un poste désigné, en précisant notamment les renseignements suivants :

- a. le nom légal complet du travailleur;
- b. le poste désigné pertinent;
- c. le statut d'emploi qui en résulte attribué au travailleur conformément à la section 3.2
- d. le motif du retrait des fonctions conformément à la section 20.3 ou 20.4, suivant les besoins.

### **20.7.2 Avis de réintégration dans les fonctions**

Le titulaire de permis doit informer sans délai la CCSN de tout travailleur accrédité réintégré dans les fonctions d'un poste désigné, en précisant notamment les renseignements suivants :

- a. le nom légal complet du travailleur;
- b. le poste désigné pertinent;

- c. le statut d'emploi qui en résulte attribué au travailleur conformément à la section 3.2
- d. le motif du retrait antérieur des fonctions et une confirmation que ledit motif n'existe plus ou qu'il a été adéquatement résolu ou atténué, selon le cas;
- e. un résumé du processus de réintégration de base réussi par le travailleur;
- f. à la suite d'un retrait motivé, un résumé de toute mesure corrective prise pour satisfaire aux exigences applicables précisées à la section 20.6.

### **Orientation**

Applicabilité – Les éléments indiqués aux sections 20.7.2.e et 20.7.2.f ne sont pas obligatoires à la suite d'une récupération de l'accréditation suivant un retrait de l'accréditation, puisque la CCSN est informée des détails du cas par le biais du processus de récupération de l'accréditation.

## **21. Gestion de l'information**

Le titulaire de permis doit mettre en œuvre et documenter des politiques et des procédures efficaces de gestion de l'information garantissant :

- a. la conservation et la récupération rapide de la documentation organisationnelle et des dossiers de preuve de compétence liés à l'accréditation du personnel;
- b. la protection et le contrôle des renseignements de nature délicate relatifs à l'accréditation du personnel;
- c. l'accès illimité, par le personnel autorisé de la CCSN, à la documentation organisationnelle et aux dossiers du personnel précisés à la présente section.

### **21.1 Documents organisationnels**

#### **21.1.1 Rôles et responsabilités**

Le titulaire de permis doit documenter, conserver et mettre à la disposition de la CCSN, sur demande, les rôles et les responsabilités :

- a. des travailleurs accrédités;
- b. de tout le personnel, y compris la direction, participant à la formation et la qualification des travailleurs qui tentent d'obtenir ou qui détiennent déjà une accréditation, notamment les formateurs, les examinateurs et les gestionnaires auxquels ont été délégués des pouvoirs d'approbation pertinents.

#### **21.1.2 Procédures opérationnelles**

Le titulaire de permis doit conserver et mettre à la disposition de la CCSN, sur demande, un exemplaire de la dernière version des politiques, des procédures et des schémas techniques, propres au titulaire de permis et à la centrale, consultés par les travailleurs accrédités pour exécuter les fonctions des postes désignés, avec compétence et en toute sécurité, notamment ceux liés :

- a. aux Lignes de conduite pour l'exploitation;
- b. aux attentes en matière de rendement des travailleurs;
- c. à la radioprotection;
- d. aux opérations normales et anormales;
- e. aux incidents anormaux;

- f. aux mesures de réduction de la puissance;
- g. à la gestion des accidents graves.

### **21.1.3 Gouvernance en matière de formation et de qualification**

Pour chaque poste désigné mentionné dans le permis, le titulaire de permis doit documenter, conserver et mettre à la disposition de la CCSN, sur demande, les politiques, normes et procédures pour la formation et la qualification des travailleurs demandant une accréditation, et pour la formation et le maintien de la qualification des travailleurs titulaires d'une accréditation, y compris les procédures pour :

- a. gérer la formation initiale et continue;
- b. préparer et administrer les évaluations formelles de l'apprenant dispensées dans le cadre de la formation initiale et continue;
- c. préparer et faire passer les examens d'accréditation et les tests de requalification;
- d. gérer les périodes de TSS;
- e. préparer et mener les entrevues de la direction;
- f. tenir à jour des dossiers du personnel complets et exacts.

### **21.1.4 Qualifications des formateurs et des examinateurs**

Le titulaire de permis doit documenter, conserver et mettre à la disposition de la CCSN, sur demande, un dossier des qualifications des formateurs et des examinateurs mentionné dans le présent REGDOC.

## **21.2 Dossiers du personnel**

Pour chaque travailleur accrédité ou souhaitant obtenir une accréditation pour occuper un poste désigné, le titulaire de permis doit conserver et mettre à la disposition de la CCSN, sur demande, un dossier du personnel adéquat qui est conservé pendant toute la durée d'emploi du travailleur, que ce soit à titre d'employé ou d'entrepreneur, à laquelle s'ajoute une période de cinq (5) ans après la fin de l'emploi du travailleur à quelque titre que ce soit.

Au minimum, ces dossiers du personnel doivent comprendre ce qui suit :

- a. Niveau de scolarité ou de littératie – Le nom et l'adresse de tout établissement d'enseignement ou organisme de formation auprès duquel le travailleur a obtenu une accréditation, notamment un diplôme, un grade ou un certificat, et une copie de tout diplôme, grade ou certificat, exigé pour le programme de sélection du personnel du détenteur de permis.
- b. Expérience professionnelle – Un historique complet détaillé de toute période d'emploi requise par le programme de sélection du personnel du détenteur de permis, ou dans le cadre de la formation prescrite de familiarisation avec la centrale, incluant, dans chaque cas, le nom de l'employeur, l'adresse du lieu de travail et les dates de début et de fin d'emploi.
- c. Entrevues et épreuves de sélection du personnel – Un historique complet de toutes entrevues et épreuves de sélection du personnel, y compris la date et les résultats réels dans chaque cas, passées dans le cadre du programme de sélection du personnel du titulaire de permis.
- d. Transfert de personnel – Tous les renseignements détaillés, requis ou recueillis, dans le cadre d'un transfert de personnel.
- e. Promotion – Tous les renseignements détaillés, requis ou recueillis, dans le cadre d'une promotion à un poste de chef de quart ou de chef de quart principal.

- f. Formation – Un historique complet de la formation initiale et de la formation continue suivies, avec succès, par le travailleur, incluant les dates de début et de fin de chaque période distincte ou jalon de formation.
- g. Évaluations formelles de l'apprenant – Un historique complet des évaluations formelles de l'apprenant dont le travailleur a fait l'objet, dans le cadre de sa formation initiale ou continue, incluant, dans chaque cas, la date à laquelle l'évaluation s'est déroulée, son résultat, ainsi que le nom légal du ou des évaluateurs.
- h. Travail sous supervision – Un historique complet de tout travail effectué sous supervision par le travailleur, y compris, dans chaque cas, l'exigence ainsi satisfaite, la date de chaque quart de travail effectué sous supervision, ainsi que le nom légal complet du travailleur accrédité qui supervisait le travailleur, et l'accréditation de la CCSN qu'il détenait.
- i. Entrevues de la direction – Un historique complet des entrevues de la direction passées par le travailleur, incluant, pour chacune d'entre elles, la date, ainsi que le ou les noms légaux complets et le ou les titres de poste du ou des intervieweurs, ainsi qu'un compte rendu mot à mot ou un résumé des questions et des réponses échangées pendant l'entrevue.
- j. Examens d'accréditation – Les dossiers d'examen d'accréditation cités en référence dans le permis ou dans tout document connexe, ou encore dans tout REGDOC complémentaire mentionné dans ce REGDOC, dans le permis ou dans tout document connexe.
- k. Tests de requalification – Les dossiers des tests de requalification cités en référence dans le permis ou les documents de permis qui l'accompagnent, ou tout REGDOC complémentaire mentionné dans le présent REGDOC, le permis ou les documents de permis qui l'accompagnent.
- l. Dossiers d'emploi – Les dossiers d'emploi mentionnés à la sous-section 3.3.
- m. Aptitude au travail – Tout renseignement recueilli concernant l'aptitude au travail du travailleur, à l'exception des renseignements de nature délicate ou privilégiés protégés par les lois sur la confidentialité.
- n. Retraits et réintégrations – Un historique complet de tous les retraits des fonctions et de toutes les réintégrations dans les fonctions d'un poste désigné, y compris dans chaque cas, la date d'entrée en vigueur du retrait des fonctions et son motif et, le cas échéant, la date d'entrée en vigueur de la réintégration, ainsi que les mesures prises pour réintégrer le travailleur.

### **Orientation**

Adéquation – Les dossiers du personnel adéquats sont exacts, complets, facilement accessibles et fournissent aux vérificateurs et aux inspecteurs une assurance raisonnable que la documentation conservée comme preuve de compétence est authentique.

## Sous-partie B – Infrastructure physique

Le titulaire de permis doit s'assurer que l'installation dotée de réacteurs est équipée de l'infrastructure physique nécessaire pour dispenser la formation et faire passer les examens d'accréditation et les tests de requalification portant sur les connaissances et sur les habiletés, précisés dans le présent REGDOC, y compris, au minimum, les installations mentionnées dans la sous-partie B.

### 22. Installations pour la tenue des examens et des tests portant sur les connaissances

Le titulaire de permis doit s'assurer que les examinateurs ont accès à des installations adéquates permettant l'administration des examens d'accréditation et des tests de requalification pertinents portant sur les connaissances, conformément aux exigences applicables de la CCSN qui figurent sur le permis ou dans les documents qui l'accompagnent, y compris les mesures de sécurité requises.

#### Orientation

Installation adéquate – Les installations mentionnées dans cette section pour l'examen et le test portant sur les connaissances n'ont pas besoin d'être des espaces entièrement réservés aux examens ou aux tests. Toute salle peut être utilisée, si elle offre un environnement adéquat doté de systèmes d'éclairage, de chauffage et de ventilation suffisants pour l'administration d'examens et de tests, et si elle est temporairement, ou en permanence, aménagée de manière à assurer la sécurité de tout examen d'accréditation ou test de requalification qui s'y déroule.

### 23. Installations pour la tenue des examens et des tests portant sur les habiletés

Le titulaire de permis doit s'assurer que les examinateurs ont accès à un simulateur pleine échelle ou à un autre simulateur acceptable par la CCSN, permettant l'administration des examens d'accréditation et des tests de requalification pertinents portant sur les habiletés, conformément aux exigences applicables de la CCSN qui figurent sur le permis ou dans les documents qui l'accompagnent, notamment les mesures de sécurité requises. Tous les examens d'accréditation et tous les tests de requalification portant sur les habiletés mentionnés dans le présent REGDOC, doivent être administrés dans des installations ou sur des systèmes jugés acceptables par la CCSN.

#### 23.1 Capacités de simulation

Le simulateur doit permettre de simuler, de façon réaliste et en temps réel, toutes les manœuvres importantes et tous les phénomènes transitoires importants qui peuvent se dérouler lorsque la centrale fonctionne dans des conditions normales et anormales, notamment :

- a. les démarrages et les arrêts du réacteur;
- b. les perturbations majeures de la centrale et les conditions d'accident;
- c. toutes les défaillances importantes des systèmes et des sous-systèmes associés, ainsi que les conséquences de ces défaillances;
- d. les réactions du système et de l'équipement aux interventions de l'opérateur.

Dans le cas de conditions et de défaillances dont l'amplitude peut varier, comme un bris de conduite, une perte d'inventaire ou de débit, une chute de pression ou une détérioration du vide,

le simulateur doit pouvoir simuler tous les degrés de gravité d'une condition ou d'une défaillance qui ont une incidence sur la réaction des systèmes ou sur les interventions de l'opérateur.

### **Orientation**

La simulation doit être autonome une fois que le scénario simulé a été lancé, nécessitant une intervention minimale de l'opérateur du simulateur ou d'autres membres du personnel, sauf pour contrôler l'évolution du scénario simulé, y compris l'introduction de dysfonctionnements scénarisés et le besoin potentiel d'interrompre et de reprendre la simulation.

### **23.2 Aménagement physique**

Dans la mesure du possible, le simulateur doit reproduire les systèmes et équipements d'exploitation et de surveillance mis à la disposition des travailleurs accrédités dans la salle de commande principale, ainsi que leurs relations dans l'espace.

Dans les cas où la CCSN a accepté l'utilisation d'un simulateur autre qu'un simulateur pleine échelle, soit en complément, soit en remplacement d'un simulateur pleine échelle, ce simulateur de remplacement doit, dans la mesure du possible, satisfaire aux exigences de cette sous-section, dans les limites physiques ou fonctionnelles inhérentes du simulateur.

### **23.3 Salle des opérations du simulateur**

La salle des opérations du simulateur doit être isolée de la réplique de la salle de commande principale de manière à empêcher le ou les candidats évalués de voir ou d'entendre l'enregistrement de données ou la saisie d'entrées dans le simulateur, ainsi que toute communication entre l'opérateur du simulateur, le ou les examinateurs et les autres membres de l'équipe d'examen.

### **Orientation**

Installation adéquate – L'installation du simulateur doit permettre de surveiller les interventions et les communications du ou des candidats, depuis la salle des opérations du simulateur, sans interférer avec le déroulement d'un examen d'accréditation ou d'un test de requalification.

### **23.4 Systèmes et équipement de communication**

Le simulateur doit être équipé de répliques fonctionnelles du ou des systèmes ou de l'équipement de communication ou d'avertissement utilisés par les travailleurs accrédités dans la salle de commande principale de l'installation dotée de réacteurs simulée, y compris, selon le cas :

- a. des téléphones ou tout autre système de communication interne bidirectionnel;
- b. un système d'avertissement d'urgence radiologique avec ses alertes visuelles et sonores;
- c. un système d'avertissement d'urgence en cas d'incendie avec ses alertes visuelles et sonores;
- d. un système de diffusion publique.

### **23.5 Systèmes et équipement d'enregistrement de données**

Afin de faciliter la tenue et la notation des examens d'accréditation et des tests de requalification basés sur les habiletés mentionnés dans le présent REGDOC, le simulateur doit être équipé de

systèmes et d'équipements d'enregistrement de données adéquats satisfaisant aux exigences minimales précisées dans la présente sous-section.

### **23.5.1 Enregistrement des interventions de l'opérateur**

Le simulateur doit permettre l'enregistrement, la récupération et l'impression, dans l'ordre chronologique, avec l'heure de leur occurrence :

- a. de tous les dysfonctionnements provoqués par l'opérateur du simulateur;
- b. de toutes les interventions de l'opérateur effectuées par le ou par les candidats, en utilisant les panneaux de commande et l'instrumentation simulés.

### **23.5.2 Enregistrement des paramètres des systèmes**

Le simulateur doit permettre :

- a. l'enregistrement, la récupération et l'impression de toutes les valeurs des paramètres des systèmes pertinents :
  - i. l'évaluation des interventions de l'opérateur effectué par le ou les candidats;
  - ii. la vérification de la fidélité du simulateur;
- b. la représentation graphique et l'impression de la variation des valeurs des paramètres du système en fonction du temps, sur la base d'une fréquence d'échantillonnage adéquate, et pour une durée d'enregistrement minimale de deux (2) heures.

### **23.5.3 Système d'enregistrement audiovisuel**

Le simulateur doit être équipé d'un système d'enregistrement audiovisuel permettant :

- a. d'enregistrer et de revoir les interventions effectuées par chaque candidat évalué;
- b. d'enregistrer et de réécouter toutes les communications orales, y compris les échanges téléphoniques, entre le candidat ou les candidats évalués et les autres membres de l'équipe d'exploitation;
- c. d'identifier, sans équivoque, la voix de chaque candidat évalué;
- d. d'identifier les commandes d'exploitation, les instruments et les références utilisés par le ou les candidats évalués;
- e. la superposition chronologique, réelle ou simulée, sur les enregistrements audiovisuels.

## **Orientation**

**Objectif** – En contexte, l'objectif principal du système d'enregistrement audiovisuel est de fournir à l'équipe d'examineurs des informations supplémentaires au moment de la notation, dans le cas où certaines actions et communications de l'opérateur ne sont pas observées pendant la conduite de l'examen, ou dans le cas où certaines des observations faites par le ou les examinateur(s) pendant la conduite de l'examen sont contradictoires ou équivoques.

**Capacité** – Lorsque des caméras sont installées pour satisfaire aux exigences de la présente sous-section, certaines des caméras devraient pouvoir fonctionner à distance, permettant à un opérateur situé dans la salle d'opération du simulateur d'effectuer des zooms et d'offrir une vue panoramique du cadre, en avant, en arrière et dans les trois dimensions, permettant ainsi à l'opérateur, au moyen d'un nombre suffisant de caméras, de suivre les mouvements du ou des



candidats dans l'ensemble du simulateur et de mettre en évidence l'instrumentation, les procédures opérationnelles et les dessins techniques utilisés par le ou les candidats.

#### **23.5.4 Contrôle des données audiovisuelles**

Le titulaire de permis doit établir et documenter des politiques et des procédures efficaces pour contrôler l'accès aux données audiovisuelles et leur utilisation, lors de la conception, de l'élaboration et du déroulement des examens d'accréditation et des tests de requalification.

### **Partie III – Qualifications des travailleurs**

La Partie III précise les conditions préalables que les travailleurs des installations dotées de réacteurs doivent satisfaire pour être admissibles aux processus d'accréditation du personnel décrits à la Partie I. Ces conditions préalables s'appliquent à deux (2) groupes distincts de travailleurs accrédités : le personnel d'exploitation et les spécialistes principaux en radioprotection.

#### **Sous-partie C – Personnel d'exploitation**

### **24. Accréditation du personnel d'exploitation**

Les exigences précisées à la présente section s'appliquent aux travailleurs qui occupent, ou souhaitent occuper, l'un des postes désignés des catégories génériques suivantes :

- a. opérateur de systèmes auxiliaires (OSA);
- b. opérateur de réacteur (OR);
- c. chef de quart.

#### **24.1 Qualifications de base pour le personnel d'exploitation**

Tout travailleur auquel il est fait référence dans cette section doit satisfaire, au moment de la demande d'accréditation, aux qualifications de base prévues pour le personnel d'exploitation et précisées à la présente sous-section.

##### **24.1.1 Sélection du personnel**

Le travailleur doit avoir satisfait, avant le début de sa formation initiale, aux conditions préalables de base précisées à la sous-section 14.2.1.

##### **24.1.2 Connaissances générales**

Le travailleur doit avoir réussi une formation générale fondée sur un système de formation et doit par conséquent posséder les connaissances fondamentales, y compris les principes de science appliquée et d'ingénierie, pertinentes pour la conception et le fonctionnement du ou des réacteurs, ainsi que des systèmes, des sous-systèmes et des équipements associés faisant partie de l'installation dotée de réacteurs mentionnée au permis.

### **24.1.3 Familiarisation avec la centrale**

Avant le début de la formation propre à la centrale indiquée à la sous-section 24.1.4, le travailleur doit avoir réussi une formation de familiarisation propre à la centrale fondée sur un système de formation et doit posséder, au minimum, une compréhension de base :

- a. de l'aménagement physique de l'installation dotée de réacteurs figurant au permis, y compris l'emplacement et la taille des principaux systèmes, sous-systèmes et équipements;
- b. du système de gestion et de l'infrastructure organisationnelle nécessaire au fonctionnement de ladite installation dotée de réacteurs dans des conditions normales, anormales et d'urgence, y compris le mandat, les rôles et les responsabilités du personnel clé et des groupes de personnel.

### **24.1.4 Connaissances propres à la centrale**

Le travailleur doit avoir réussi une formation propre à la centrale fondée sur un système de formation et doit, par conséquent, posséder les connaissances détaillées nécessaires pour exercer les fonctions avec compétence et en toute sécurité, dans des conditions normales, anormales et d'urgence, du ou des réacteurs, ainsi que des systèmes, des sous-systèmes et des équipements associés faisant partie de l'installation dotée de réacteurs mentionnée au permis.

#### **Orientation**

Précision – Les connaissances mentionnées dans cette sous-section sont les connaissances propres à la centrale qui, pour les candidats à un poste d'OSA, sont requises d'un OSA accrédité ou qui, pour les candidats à un poste d'OR et de chef de quart, sont requises d'un OR accrédité.

### **24.1.5 Gestion des urgences nucléaires**

Le travailleur doit posséder une connaissance adéquate de l'intervention en cas d'urgence nucléaire et de la gestion des accidents hors dimensionnement, notamment des rôles et des responsabilités des travailleurs accrédités à l'égard des procédures d'exploitation d'urgence et de la gestion des accidents graves.

### **24.1.6 Formation en cours d'emploi**

Le travailleur doit avoir réussi une formation en cours d'emploi (FCE) fondée sur un système de formation traitant, au minimum, des connaissances et compétences pertinentes et des attributs liés à la sûreté acquis ou renforcés le plus efficacement par la FCE.

### **24.1.7 Formation sur simulateur**

Le travailleur doit avoir réussi une formation sur simulateur fondée sur un système de formation traitant, au minimum, des connaissances et compétences pertinentes et des attributs liés à la sûreté acquis ou renforcés le plus efficacement au moyen de scénarios simulés.

### **24.1.8 Examen d'accréditation portant sur les connaissances générales**

Le travailleur doit avoir réussi un examen portant sur les connaissances qui prouve de manière suffisante qu'il possède les connaissances générales requises pour exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

**24.1.9 Examen d'accréditation portant sur les connaissances propres à la centrale**

Le travailleur doit avoir réussi un examen portant sur les connaissances qui prouve de manière suffisante qu'il possède les connaissances propres à la centrale requises pour exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

**24.1.10 Examen d'accréditation basé sur les habiletés**

Le travailleur doit avoir réussi, dans les deux (2) ans suivant la demande d'accréditation, un examen d'accréditation portant sur les habiletés effectué au moyen d'un simulateur pleine échelle ou d'un autre système approuvé, qui prouve de manière suffisante qu'il peut exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

**24.1.11 Travail sous supervision**

Le travailleur doit avoir effectué, avec succès, un nombre minimal d'heures de travail sous supervision (TSS) acceptable par la CCSN, dans le poste désigné pertinent et sous la supervision d'un travailleur qualifié accrédité pour occuper le poste désigné pertinent.

**Orientation**

Programme de conformité – L'annexe B précise le nombre minimal d'heures de TSS acceptable pour la CCSN, en ce qui concerne les installations dotées de réacteurs concernées et en service au moment de la publication de la dernière version du présent REGDOC.

**24.1.12 Entrevue de la direction**

Le travailleur doit avoir passé avec succès une entrevue de la direction menée en bonne et due forme par un gestionnaire autorisé par le titulaire de permis à représenter ce dernier, et qui a ainsi vérifié que le travailleur peut, de l'avis du titulaire de permis, accomplir les fonctions du poste désigné pertinent, avec compétence et en toute sécurité.

L'entrevue de la direction doit être menée après que toutes les autres exigences précisées à la sous-section 24.1 ont été satisfaites.

**24.2 Qualifications supplémentaires relatives au poste de chef de quart**

Outre les qualifications de base pour le personnel d'exploitation précisées à la sous-section 24.1, le travailleur qui souhaite obtenir une accréditation pour un poste de chef de quart doit satisfaire, au moment de sa demande d'accréditation, aux exigences supplémentaires précisées dans cette sous-section.

**24.2.1 Critères supplémentaires de sélection du personnel**

Le travailleur doit avoir rempli les conditions préalables supplémentaires mentionnées dans la sous-section 14.2.2.

**24.2.2 Connaissances supplémentaires propres à la centrale**

Le travailleur doit avoir réussi une formation supplémentaire portant sur les connaissances propres à la centrale fondée sur un système de formation, et doit, par conséquent, posséder les connaissances supplémentaires spécifiquement requises des chefs de quart concernant la

conception et le fonctionnement, dans des conditions normales, anormales et d'urgence, du ou des réacteurs, ainsi que des systèmes, des sous-systèmes et de l'équipement en place à l'installation dotée de réacteurs indiquée au permis.

### **Orientation**

Précision – La formation supplémentaire sur les connaissances propres à la centrale pour les chefs de quart couvre toutes les connaissances supplémentaires propres à la centrale qui sont requises d'un chef de quart accrédité, en plus des connaissances propres à la centrale de base requises d'un OR accrédité.

### **24.2.3 Examen d'accréditation supplémentaire des connaissances propres à la centrale**

Le travailleur doit avoir réussi un examen portant sur les connaissances qui prouve de manière suffisante qu'il possède les connaissances supplémentaires propres à la centrale précisément requises pour permettre aux chefs de quart d'exercer leurs fonctions avec compétence et en toute sécurité.

### **24.3 Requalification du personnel d'exploitation**

Tout travailleur visé à la présente section qui demande le renouvellement de son accréditation doit satisfaire, au moment de la demande de renouvellement d'accréditation, aux exigences précisées dans la présente sous-section.

#### **24.3.1 Formation continue**

Le travailleur accrédité doit avoir suivi avec succès, au cours de la période d'accréditation actuelle, une formation continue appropriée répondant aux exigences mentionnées à la sous-section 15.2.

#### **24.3.2 Tests de requalification portant sur les connaissances**

Le travailleur accrédité doit avoir réussi, dans les deux (2) ans qui suivent la demande de renouvellement de l'accréditation, un test ou une série de tests de requalification portant sur les connaissances qui prouvent de manière suffisante qu'il a conservé les connaissances requises pour exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

#### **24.3.3 Tests de requalification portant sur les habiletés**

Le travailleur accrédité occupant un rôle prépondérant doit avoir réussi, dans les deux (2) ans suivant la demande de renouvellement de l'accréditation, un test ou une série de tests de requalification portant sur les habiletés effectué au moyen d'un simulateur pleine échelle ou d'un autre système approuvé, fournissant des preuves suffisantes qu'il peut exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

#### **24.3.4 Durée minimale d'emploi du personnel d'exploitation**

Le travailleur accrédité doit avoir occupé pendant une durée suffisante le poste désigné pertinent, en vue de maintenir un niveau de compétence adéquat.

## **Orientation**

Durée minimale d'emploi – La CCSN ne prescrit pas un nombre précis d'heures en ce qui concerne la durée minimale d'emploi mentionnée dans cette sous-section. Néanmoins, le titulaire de permis devrait s'assurer que, dans toute la mesure du possible, chaque chef de quart accrédité est suffisamment exposé aux fonctions du poste désigné, soit en travaillant seul, soit dans le cadre de quarts supervisés, sur une base régulière ou périodique, tout au long de la période d'accréditation.

Remarque importante – Le titulaire de permis devrait prendre note du fait que les règlements d'application pertinents n'autorisent ni la CCSN ni un FD à renouveler une accréditation, si le travailleur accrédité n'a pas « exercé de façon compétente et en toute sécurité les fonctions » du poste désigné concerné.

### **24.4 Qualification pour la récupération de l'accréditation dans les cinq ans suivant l'expiration d'un certificat**

Tout travailleur visé dans la présente section qui demande une récupération de son accréditation dans les cinq (5) ans suivant l'expiration d'une accréditation antérieure pour le même poste doit satisfaire, au moment de la demande de récupération de l'accréditation, aux exigences mentionnées dans la présente sous-section.

#### **24.4.1 Formation personnalisée**

Le travailleur doit avoir réussi une formation personnalisée, comprenant une formation de révision et de recyclage portant sur les connaissances et sur les habiletés, fondée sur une analyse des besoins en matière de formation individuelle et documentée et sur un plan de formation individuel documenté.

Au minimum, cette formation adaptée doit comprendre toute formation de révision et de recyclage programmée, notamment toute formation sur simulateur, que le travailleur a manquée pendant la période intermédiaire entre l'expiration du certificat et la demande de récupération de l'accréditation.

#### **24.4.2 Tests de requalification portant sur les connaissances**

Le travailleur accrédité doit avoir réussi, dans les deux (2) ans qui suivent la demande de récupération de l'accréditation, un test ou une série de tests de requalification portant sur les connaissances qui prouvent de manière suffisante qu'il a conservé les connaissances requises pour exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

#### **24.4.3 Tests de requalification portant sur les habiletés**

Le travailleur accrédité occupant un rôle prépondérant doit avoir réussi, dans les deux (2) ans suivant la demande de récupération de l'accréditation, un test de requalification exhaustif portant sur les habiletés effectué au moyen d'un simulateur pleine échelle ou d'un autre système approuvé, confirmant qu'il peut exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

#### **24.4.4 Travail sous supervision**

Le travailleur doit avoir exercé, avec succès, les fonctions du poste désigné pertinent sous la supervision d'un travailleur qualifié accrédité qui occupe le même poste désigné, et pour un nombre de quarts de travail complets jugé suffisant par le titulaire de permis pour confirmer que le travailleur peut exercer les tâches du poste désigné pertinent avec compétence et en toute sécurité.

#### **24.4.5 Entrevue de la direction**

Le travailleur doit avoir passé avec succès une entrevue de la direction menée en bonne et due forme par un gestionnaire autorisé par le titulaire de permis à représenter ce dernier, et qui a ainsi vérifié que le travailleur peut, de l'avis du titulaire de permis, accomplir les fonctions du poste désigné pertinent, avec compétence et en toute sécurité.

L'entrevue avec la direction doit être menée après que toutes les autres exigences précisées précédemment dans la sous-section 24.4 ont été satisfaites.

### **24.5 Qualification pour la récupération de l'accréditation à la suite d'un retrait de l'accréditation ou de l'expiration d'un certificat après cinq ans**

Tout travailleur visé dans la présente section qui demande la récupération de son accréditation à la suite d'un retrait de celle-ci par la CCSN, ou à la suite de l'expiration d'un certificat survenu plus de cinq (5) ans avant la date de la demande, doit satisfaire, au moment de la demande de récupération de l'accréditation, aux exigences mentionnées dans la présente sous-section.

#### **24.5.1 Mesures correctives en réponse au retrait de l'accréditation**

Lorsque le travailleur demande la récupération de son accréditation à la suite d'un retrait d'accréditation, toute lacune identifiée comme faisant partie du motif fourni par la CCSN justifiant le retrait de l'accréditation du travailleur ne doit plus exister ou doit avoir été corrigée par le titulaire de permis à la satisfaction de la CCSN.

#### **Orientation**

En fonction du motif du retrait de l'accréditation, la rectification peut inclure toute méthode ou tout moyen utilisé pour rectifier ou corriger la cause du retrait de l'accréditation, y compris, mais sans s'y limiter, des mesures administratives, une formation corrective, une réhabilitation ou une thérapie.

#### **24.5.2 Formation personnalisée**

Le travailleur doit avoir réussi une formation personnalisée, comprenant une formation de révision et de recyclage portant sur les connaissances et sur les habiletés, fondée sur une analyse des besoins en matière de formation individuelle et documentée et sur un plan de formation individuel documenté.

Au minimum, la formation personnalisée mentionnée à la présente sous-section doit inclure toute formation de révision et de recyclage planifiée, y compris sur simulateur, que le travailleur a manquée pendant la période intermédiaire entre le retrait de l'accréditation ou l'expiration du certificat et la demande de récupération de l'accréditation.

### **24.5.3 Examen d'accréditation portant sur les connaissances propres à la centrale**

Le travailleur doit avoir réussi, dans les deux (2) années précédant la demande de récupération de l'accréditation, un examen portant sur les connaissances propres à la centrale, qui prouve de manière suffisante qu'il possède les connaissances propres à la centrale requises pour exécuter les fonctions du poste désigné pertinent avec compétence et en toute sécurité.

Lorsque le travailleur sollicite une accréditation de chef de quart, le titulaire de permis doit lui faire passer les examens de base et supplémentaire propres à la centrale.

### **24.5.4 Examen d'accréditation portant sur les habiletés**

Le travailleur doit avoir réussi, dans les deux (2) ans suivant la demande de récupération de l'accréditation, un examen d'accréditation portant sur les habiletés effectué au moyen d'un simulateur pleine échelle ou d'un autre système approuvé, qui prouve de manière suffisante qu'il peut exercer avec compétence et en toute sécurité les fonctions du poste désigné pertinent.

### **24.5.5 Travail sous supervision**

Le travailleur doit avoir exercé, avec succès, les fonctions du poste désigné pertinent sous la supervision d'un travailleur qualifié accrédité qui occupe le même poste désigné, et pour un nombre de quarts de travail complets jugé suffisant par le titulaire de permis pour confirmer que le travailleur peut exercer les tâches du poste désigné pertinent avec compétence et en toute sécurité.

### **24.5.6 Entrevue de la direction**

Le travailleur doit avoir passé avec succès une entrevue de la direction menée en bonne et due forme par un gestionnaire autorisé par le titulaire de permis à représenter ce dernier, et qui a ainsi vérifié que le travailleur peut, de l'avis du titulaire de permis, accomplir les fonctions du poste désigné pertinent, avec compétence et en toute sécurité.

L'entrevue de la direction doit être menée après que toutes les autres exigences précisées à la sous-section 24.5 ont été satisfaites.

### **Orientation**

Calendrier – L'entrevue de la direction mentionnée dans la section 24 est la dernière activité effectuée avant toute demande d'accréditation ou de récupération de l'accréditation, car elle vise à être la dernière étape de l'évaluation des compétences du travailleur.

Dates d'entrée en vigueur – La période de validité de deux (2) ans applicable aux résultats de l'examen d'accréditation et du test de requalification portant sur les connaissances et sur les habiletés mentionnée dans la section 24 commence à la date à laquelle l'examen ou le test est effectué, et non à la date à laquelle la note est reçue.

## **Sous-partie D – Spécialistes principaux en radioprotection**

### **25. Accréditation des spécialistes principaux en radioprotection**

Les exigences précisées dans cette section concernent les travailleurs qui occupent un poste de spécialiste principal en radioprotection (SPR) ou qui souhaitent occuper un tel poste.

#### **25.1 Qualifications des spécialistes principaux en radioprotection**

Un travailleur qui sollicite une accréditation pour un poste de SPR doit satisfaire, au moment de la demande d'accréditation, aux exigences de la présente sous-section.

##### **25.1.1 Sélection du personnel**

Le travailleur doit avoir satisfait, avant le début de sa formation initiale, aux conditions préalables de base précisées aux sous-sections 14.2.1 et 14.2.2 respectivement.

##### **25.1.2 Scolarité antérieure**

Le travailleur doit :

- a. détenir un diplôme en radioprotection délivré par une université reconnue;
- b. être titulaire d'un baccalauréat en génie ou en sciences délivré par une université reconnue et avoir suivi, avec succès, une série de cours appropriés offerts par un établissement d'enseignement ou un organisme de formation reconnu portant sur les méthodes et les principes actuels de radioprotection.

##### **25.1.3 Expérience professionnelle antérieure**

Le travailleur doit posséder au moins quatre (4) années d'expérience pertinente, dont deux (2) à titre de spécialiste en radioprotection ou dans un poste équivalent, à une installation dotée de réacteurs.

##### **25.1.4 Formation initiale**

Le travailleur doit avoir réussi une formation initiale fondée sur un système de formation portant sur les connaissances générales et propres à la centrale, les habiletés et les attributs liés à la sûreté requis pour exécuter, avec compétence et en toute sécurité, les fonctions d'un SPR travaillant à l'installation dotée de réacteurs mentionnée au permis.

##### **25.1.5 Expertise en radioprotection**

Le travailleur doit, suivant la scolarité, l'expérience professionnelle et la formation initiale précisées précédemment à la sous-section 25.1, posséder une connaissance de la théorie des rayonnements, dans une mesure proportionnelle aux fonctions d'un SPR, y compris des risques radiologiques, et de la théorie et des pratiques de la radioprotection, y compris les procédures de radioprotection applicables à l'exploitation de l'installation dotée de réacteurs indiquée au permis, dans des conditions normales, anormales et d'urgence.



### **25.1.6 Entrevue de la direction**

Le travailleur doit avoir passé avec succès une entrevue de la direction menée en bonne et due forme par un gestionnaire autorisé par le titulaire de permis à le représenter, qui a ainsi vérifié que le travailleur peut, de l'avis du titulaire de permis, accomplir les fonctions d'un SPR avec compétence et en toute sécurité.

L'entrevue de la direction doit avoir lieu une fois que le travailleur a réussi la formation initiale mentionnée à la sous-section 25.1.4, et avant l'examen d'accréditation précisé à la sous-section 25.1.7.

### **25.1.7 Examen d'accréditation**

Le travailleur doit avoir réussi un examen portant sur les connaissances, administré par le personnel de la CCSN.

### **Orientation**

Domaines de connaissances – L'annexe C fournit un résumé des principaux domaines de connaissances et des sujets choisis par le personnel de la CCSN lors des examens d'accréditation et des tests de requalification d'un SPR.

## **25.2 Requalification des spécialistes principaux en radioprotection**

Un travailleur qui sollicite le renouvellement d'une accréditation pour un poste de SPR doit satisfaire, au moment de la demande de renouvellement d'accréditation, aux exigences précisées dans les sous-sections qui suivent.

### **25.2.1 Formation continue**

Le travailleur doit avoir réussi une formation de révision et de recyclage fondée sur un système de formation portant sur les connaissances, les habiletés et les attributs liés à la sûreté requis pour exécuter, avec compétence et en toute sécurité, les fonctions d'un SPR à l'installation dotée de réacteurs mentionnée au permis.

### **25.2.2 Entrevue de la direction**

Le travailleur doit avoir passé avec succès une entrevue de la direction menée en bonne et due forme par un gestionnaire autorisé par le titulaire de permis à le représenter, qui a ainsi vérifié que le travailleur peut, de l'avis du titulaire de permis, accomplir les fonctions d'un SPR avec compétence et en toute sécurité.

L'entrevue de la direction doit avoir lieu une fois que le travailleur a réussi la formation continue mentionnée à la sous-section 25.2.1, et avant le test de requalification précisé à la sous-section 25.2.3.

### **25.2.3 Tests de requalification**

Le travailleur doit avoir réussi un test de requalification portant sur les connaissances mené par le personnel de la CCSN.

## **Orientation**

Domaines de connaissances – L'annexe C fournit un résumé des principaux domaines de connaissances et des sujets choisis par le personnel de la CCSN lors des examens d'accréditation et des tests de requalification d'un SPR.

### **25.3 Qualification pour la récupération de l'accréditation après un retrait de l'accréditation ou l'expiration du certificat**

Un travailleur qui sollicite une accréditation pour un emploi de SPR, à la suite du retrait de son accréditation par la CCSN ou de l'expiration de son certificat, doit satisfaire, au moment de la demande de récupération de l'accréditation, aux exigences précisées dans les sous-sections qui suivent.

#### **25.3.1 Mesures correctives en réponse au retrait de l'accréditation**

Lorsque le travailleur demande une accréditation à la suite d'un retrait de l'accréditation, toute lacune identifiée comme faisant partie du motif fourni par la CCSN justifiant le retrait de l'accréditation du travailleur ne doit plus exister ou doit avoir été corrigée par le titulaire de permis à la satisfaction de la CCSN.

## **Orientation**

En fonction du motif du retrait de l'accréditation, la rectification peut inclure toute méthode ou tout moyen utilisé pour rectifier ou corriger la cause du retrait de l'accréditation, y compris, mais sans s'y limiter, des mesures administratives, une formation corrective, une réhabilitation ou une thérapie.

#### **25.3.2 Formation personnalisée**

Le travailleur doit avoir réussi une formation personnalisée, comprenant une formation de révision et de recyclage portant sur les connaissances et sur les habiletés, fondée sur une analyse des besoins en matière de formation individuelle et documentée et sur un plan de formation individuel (PFI) documenté.

Au minimum, la formation personnalisée mentionnée à la présente sous-section doit inclure toute formation planifiée de révision et de recyclage des connaissances que le travailleur a manquée pendant la période intermédiaire entre le retrait de l'accréditation ou l'expiration du certificat et la demande d'accréditation.

#### **25.3.3 Entrevue de la direction**

Le travailleur doit avoir passé avec succès une entrevue de la direction menée en bonne et due forme par un gestionnaire autorisé par le titulaire de permis à le représenter, qui a ainsi vérifié que le travailleur peut, de l'avis du titulaire de permis, accomplir les fonctions d'un SPR avec compétence et en toute sécurité.

L'entrevue de la direction doit avoir lieu une fois que le travailleur a réussi la formation personnalisée mentionnée à la sous-section 25.3.2, et avant l'examen d'accréditation précisé à la sous-section 25.3.4.

#### **25.3.4 Examen d'accréditation**

Le travailleur doit avoir réussi un examen portant sur les connaissances, administré par le personnel de la CCSN.

## Annexe A : Postes désignés propres à la centrale

La présente annexe précise les postes désignés propres à la centrale qui correspondent à chaque catégorie générique de postes désignés mentionnés dans le présent REGDOC, pour l'installation dotée de réacteurs concernée et en service au moment de la publication de la version actuelle du présent REGDOC.

### A.1 Postes propres à la centrale nécessitant une accréditation d'opérateur de système auxiliaire (OSA)

Installations dotées de réacteurs CANDU					
Installation	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
Poste d'OSA	Opérateur de la salle de commande de la tranche 0	Opérateur de la salle de commande de la tranche 0	Aucun	Aucun	Aucun

### A.2 Postes propres à la centrale nécessitant une accréditation d'opérateur de réacteur (OR)

Installations dotées de réacteurs CANDU					
Installation	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
Poste d'OR	Opérateur nucléaire autorisé	Opérateur nucléaire autorisé	Aucun	Opérateur nucléaire autorisé	Opérateur de la salle de commande

### A.3 Postes propres à la centrale nécessitant une accréditation de chef de quart

Installations dotées de réacteurs CANDU					
Installation	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
Poste de chef de quart	Chef de quart de la salle de commande	Chef de quart de la salle de commande	Aucun	Chef de quart de la salle de commande	Chef de quart
Poste de chef de quart principal	Gestionnaire de quart	Gestionnaire de quart	Aucun	Gestionnaire de quart	Aucun

#### A.4 Postes propres à la centrale nécessitant une accréditation de spécialiste principal en radioprotection (SPR)

Installations dotées de réacteurs CANDU					
Installation	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
Poste de SPR	Spécialiste en radioprotection autorisé	Responsable technique de la radioprotection	Responsable technique de la radioprotection	Responsable technique de la radioprotection	Spécialiste principal en radioprotection

## Annexe B : Programmes de conformité acceptables pour la CCSN

La présente annexe précise les programmes acceptables pour la CCSN que le titulaire de permis doit mettre en œuvre dans les installations dotées de réacteurs visées, en vue de se conformer aux exigences citées en référence, pour les installations dotées de réacteurs concernées et en service au moment de la publication de la version actuelle du présent REGDOC.

### Programmes obligatoires d'accréditation du personnel pour les installations dotées de réacteurs CANDU

Référence	Description	Exigence
Sous-section 24.1.11	Nombre minimal d'heures de TSS requis pour l'accréditation du personnel d'exploitation	Le travailleur doit avoir effectué, avec succès, 360 heures de TSS dans le poste désigné concerné, sous la supervision d'un travailleur qualifié accrédité pour occuper le poste désigné.
Sous-section 14.4.1	Expérience minimale comme chef de quart avant une promotion à un poste de chef de quart principal	Le travailleur doit avoir exercé, avec compétence et en toute sécurité les fonctions de chef de quart à l'installation dotée de réacteurs mentionnée au permis pendant au moins 80 quarts de travail complets totalisant au moins 960 heures de travail avant d'être sélectionné pour une promotion au poste de chef de quart principal.
Sous-section 20.2.1	Exigence minimale de quart de travail pour le personnel d'exploitation	<p>Tout travailleur accrédité pour un poste d'OSA doit exercer les fonctions d'un OSA pour un nombre minimal de quatre (4) quarts de travail complets par trimestre civil, ce qui équivaut à un nombre minimal de 48 heures de travail.</p> <p>Tout travailleur accrédité pour un poste d'OR doit exercer les fonctions d'un OR pour un nombre minimal de quatre (4) quarts de travail complets par trimestre civil, ce qui équivaut à un nombre minimal de 48 heures de travail.</p> <p>Tout travailleur accrédité pour un poste de chef de quart, mais non qualifié comme chef de quart principal, doit exercer les fonctions d'un chef de quart pour un nombre minimal de quatre (4) quarts de travail complets par trimestre civil, ce qui équivaut à un nombre minimal de 48 heures de travail.</p> <p>Tout travailleur accrédité pour un poste de chef de quart qui est dûment qualifié comme chef de quart principal doit exercer les fonctions de chef de quart ou de chef de quart principal pour un nombre minimal de quatre (4) quarts de travail complets par trimestre civil, équivalant à un nombre minimal de 48 heures de travail par quart, par trimestre civil.</p>

## **Annexe C : Sujets des examens et des tests pour le poste de spécialiste principal en radioprotection**

Les examens d'accréditation et les tests de requalification administrés par le personnel de la CCSN aux travailleurs qui souhaitent obtenir une accréditation ou le renouvellement d'une accréditation pour un poste de spécialiste principal en radioprotection couvrent des sujets divisés en trois (3) parties, chacune portant sur un domaine de connaissances spécifique, comme indiqué dans la présente annexe.

### **C.1 → Règlements et permis d'exploitation d'un réacteur de puissance**

Les sujets pertinents comprennent, sans s'y limiter :

- a. dispositions pertinentes de la LSRN;
- b. règlements pertinents pris en vertu de la LSRN, à savoir :
  - i. *Règlement général sur la sûreté et la réglementation nucléaires*;
  - ii. *Règlement sur la radioprotection*;
  - iii. *Règlement sur les installations nucléaires de catégorie I*;
  - iv. *Règlement sur les substances nucléaires et les appareils à rayonnement*;
  - v. *Règlement sur l'emballage et le transport des substances nucléaires*;
- c. permis de l'installation dotée de réacteurs et les documents qui y sont cités en référence.

### **C.2 → Radioprotection**

Les sujets pertinents comprennent, sans s'y limiter :

- a. culture de sûreté;
- b. conception, exploitation et entretien de l'installation dotée de réacteurs;
- c. politiques, normes et procédures propres au titulaire de permis et à la centrale;
- d. principes, méthodes et pratiques de radioprotection liés à l'exploitation de l'installation dotée de réacteurs mentionnée au permis;
- e. normes et conventions canadiennes, internationales et industrielles pertinentes.

### **C.3 → Rôles et responsabilités**

Les sujets pertinents comprennent, sans s'y limiter :

- a. responsabilités et autorité du spécialiste principal en radioprotection;
- b. responsabilités et autorité des travailleurs qui interagissent avec le spécialiste principal en radioprotection.

## **Annexe D : Exemples de formation propre à la centrale**

La présente annexe contient des exemples de domaines de connaissances propres à la centrale couverts dans les programmes de formation propres à la centrale, initialement mis en œuvre dans les installations dotées de réacteurs CANDU et jugés acceptables par la CCSN. Ces exemples sont inclus à titre d'orientation supplémentaire pour les exploitants d'installations dotées de réacteurs nouvellement autorisées qui tentent d'établir des programmes de formation appropriés. Nonobstant cette orientation supplémentaire, un programme de formation approprié est fondé sur un système de formation pour l'installation dotée de réacteurs, jugé acceptable par la CCSN.

### **D.1 → Formation propre à la centrale pour les opérateurs de réacteur**

Les domaines de formation pertinents peuvent inclure :

- a. conception et exploitation des systèmes de l'installation dotée de réacteurs;
- b. exploitation intégrée des systèmes de l'installation dotée de réacteurs, y compris, le cas échéant, les interfaces entre les systèmes d'une tranche de réacteur et ceux d'autres tranches de réacteur, ainsi que les systèmes communs et auxiliaires;
- c. réaction attendue des systèmes et des tranches de l'installation dotée de réacteurs dans des conditions anormales et d'accidents;
- d. fondement technique des procédures d'exploitation d'urgence;
- e. diagnostic des pannes d'équipement et évaluation des conditions anormales de la centrale;
- f. phénomènes susceptibles de se répercuter de manière importante sur la réactivité et la forme du flux neutronique dans le cœur du réacteur;
- g. rechargement en combustible, limites à respecter lors du rechargement, manutention et entreposage du combustible, et refroidissement du combustible utilisé;
- h. configuration des systèmes et isolement de l'équipement requis pour les activités d'entretien;
- i. culture de sûreté;
- j. principes de la sûreté nucléaire et leur application;
- k. permis d'exploitation et documents qui y sont mentionnés;
- l. situations pouvant entraîner la violation des conditions du permis d'exploitation et des Lignes de conduite pour l'exploitation;
- m. procédures administratives liées à l'exploitation et à l'entretien de l'installation dotée de réacteurs;
- n. responsabilités et autorité d'un opérateur de réacteur, et des autres membres du personnel de l'installation dotée de réacteurs qui interagissent avec l'opérateur de réacteur.

### **D.2 → Formation supplémentaire propre à la centrale pour les chefs de quart de la salle de commande**

Les domaines de formation pertinents peuvent inclure, en plus de ceux applicables à la formation propre à la centrale pour les opérateurs de réacteur :

- a. physique des réacteurs, principes de fonctionnement des réacteurs et stratégies de rechargement du combustible;
- b. phénomènes susceptibles de se répercuter de manière importante sur la réactivité et la forme du flux neutronique dans le cœur du réacteur;
- c. propriétés du combustible utilisé, principes de refroidissement du combustible et physique des défaillances du combustible;
- d. limites et contraintes d'exploitation associées au rechargement du combustible et au refroidissement du combustible utilisé;



- e. sûreté des réacteurs, mécanismes des échanges thermiques et mécanique des fluides;
- f. sources froides principales et de secours;
- g. risques conventionnels et radiologiques pour le personnel de l'installation dotée de réacteurs et pour le public, incluant les risques associés aux conditions d'accident hypothétiques;
- h. gestion des urgences classiques et radiologiques;
- i. gestion d'une entrée par effraction ou d'un attentat terroriste;
- j. exigences de conception de l'équipement et des systèmes liés à la sûreté;
- k. caractéristiques de conception et limites de l'équipement et des systèmes de l'installation dotée de réacteurs;
- l. contrôle chimique des systèmes;
- m. diagnostic des pannes d'équipement et évaluation des conditions anormales de la centrale;
- n. réaction attendue des systèmes et des tranches de l'installation dotée de réacteurs dans des conditions anormales et d'accidents;
- o. stratégies d'exploitation;
- p. analyses de la sûreté de l'installation dotée de réacteurs, y compris les principales hypothèses utilisées dans les analyses d'accident et les fondements techniques des procédures d'exploitation d'urgence;
- q. configuration des systèmes et isolement de l'équipement requis pour les activités d'entretien;
- r. conception et exploitation des systèmes de l'installation dotée de réacteurs pour lesquels les opérateurs de réacteur n'ont pas de contrôle opérationnel direct, y compris les systèmes communs et les systèmes de manutention du combustible;
- s. politiques, normes et procédures du titulaire de permis;
- t. permis d'exploitation et documents qui y sont mentionnés;
- u. situations pouvant entraîner la violation des conditions du permis d'exploitation et des Lignes de conduite pour l'exploitation;
- v. exigences relatives à l'exploitation de l'installation dotée de réacteurs inscrites dans les lois et les règlements fédéraux et provinciaux, ainsi que dans les normes et les codes pertinents;
- w. responsabilités et autorité du chef de quart de la salle de commande, du chef de quart de la centrale et des autres membres du personnel de l'installation dotée de réacteurs qui rendent compte au chef de quart de la salle de commande et au chef de quart de la centrale ou qui interagissent avec eux;
- x. exigences de qualification des membres du personnel de l'installation dotées de réacteurs qui rendent compte au chef de quart de la salle de commande et au chef de quart de la centrale.

### **D.3 → Formation propre à la centrale pour les spécialistes principaux en radioprotection**

Les domaines de formation pertinents peuvent inclure :

- a. dispositions pertinentes de la LSRN;
- b. règlement pris en vertu de la LSRN, y compris :
  - i. *Règlement général sur la sûreté et la réglementation nucléaires;*
  - ii. *Règlement sur la radioprotection;*
  - iii. *Règlement sur les installations nucléaires de catégorie I;*
  - iv. *Règlement sur les substances nucléaires et les appareils à rayonnement;*
  - v. *Règlement sur l'emballage et le transport des substances nucléaires;*
- c. culture de sûreté;
- d. responsabilités et autorité du spécialiste principal en radioprotection;
- e. responsabilités et autorité des membres du personnel de l'installation dotée de réacteurs qui interagissent avec le spécialiste principal en radioprotection;
- f. responsabilités et autorité des membres d'organismes externes qui interagissent avec le spécialiste principal en radioprotection, notamment dans le contexte de la gestion des urgences nucléaires;
- g. permis d'exploitation et documents qui y sont mentionnés;
- h. politiques, normes et procédures du titulaire de permis et de l'installation dotée de réacteurs;

- i. conception, exploitation et entretien de l'installation dotée de réacteurs;

## Glossaire

Les définitions des termes utilisés dans le présent document figurent dans le [REGDOC-3.6, Glossaire de la CCSN](#), qui comprend des termes et des définitions tirés de la [Loi sur la sûreté et la réglementation nucléaires](#), de ses règlements d'application ainsi que des documents d'application de la réglementation et d'autres publications de la CCSN. Le REGDOC-3.6 est fourni à titre de référence et pour information.

Les définitions suivantes sont soit nouvelles, soit des versions modifiées de termes déjà définis. Après une consultation publique, la version définitive des termes et de leur définition sera soumise aux fins d'intégration dans la prochaine édition du REGDOC-3.6, *Glossaire de la CCSN*.

**(modifié)**

**accréditation (*certification*)**

Attestation de la Commission, ou d'un fonctionnaire désigné autorisé par la Commission, attestant qu'une personne est qualifiée pour exercer les activités autorisées pour le compte du titulaire de permis, y compris les fonctions d'un poste désigné.

**(nouveau)**

**analyse des besoins en matière de formation individuelle (*individual training needs analysis*)**

Processus systématique par lequel les besoins de formation d'un seul travailleur sont déterminés en identifiant toute lacune dans les connaissances, les compétences et les attributs liés à la sûreté requis pour que le travailleur accomplisse ses fonctions avec compétence et en toute sécurité.

**(nouveau)**

**candidat (*candidate*)**

Dans le cadre d'une demande d'accréditation, y compris la récupération d'une accréditation ou le renouvellement d'une accréditation, il s'agit du travailleur qui demande une accréditation et dont la candidature est évaluée par la CCSN; dans le cadre d'un examen d'accréditation ou d'un test de requalification, il s'agit du travailleur dont les connaissances ou les habiletés sont évaluées.

**(nouveau)**

**chef de quart accrédité (*certified shift worker*)**

Travailleur accrédité qui effectue un travail par quart, normalement dans la salle de commande principale, comme partie intégrante des fonctions du poste désigné, par opposition aux travailleurs accrédités dont les fonctions sont généralement exercées pendant les heures normales de travail.

**(nouveau)**

**chef de quart principal (*senior shift supervisor*)**

Chef de quart accrédité qui exerce une autorité sur un certain nombre de chefs de quart comme partie intégrante du système de gestion et de l'effectif minimal; par exemple, les gestionnaires de quart employés dans des installations dotées de réacteurs CANDU à tranches multiples sont considérés comme des chefs de quart principaux.

**(nouveau)**

**certificat (*certificate*)**

Preuve d'accréditation imprimée par la CCSN délivrée à chaque travailleur accrédité et signée par un membre de la Commission ou un fonctionnaire désigné agissant au nom de la Commission.

**(nouveau)**

**compétence des travailleurs (*worker competency*)**

Capacité déduite d'un travailleur ou d'un effectif à exécuter les tâches de son poste avec compétence et en toute sécurité sur la base de connaissances, de compétences et d'attributs liés à la sûreté démontrés.

**(modifié)**

**évaluation de l'apprenant (*learner evaluation*)**

Évaluation des progrès réalisés par les participants au cours d'un programme d'enseignement (évaluation formative) et de leur réussite à la fin du programme (évaluation sommative).

**(nouveau)**

**fidélité du simulateur (*simulator fidelity*)**

Niveau auquel un simulateur reproduit l'aspect physique et le comportement de l'objet simulé.

**(nouveau)**

**formation personnalisée (*tailored training*)**

Formation adaptée pour répondre aux besoins de formation spécifiques d'un apprenant individuel sur la base d'une analyse des besoins en matière de formation individuelle et d'un plan de formation individuel, par opposition à un programme de formation établi.

**(nouveau)**

**organisme d'accréditation (*certifying body*)**

L'entité juridique ou l'association habilitée ou autorisée à accréditer les travailleurs et à établir les exigences d'accréditation des travailleurs en rapport avec une profession ou un emploi donné; aux fins du présent document d'application de la réglementation, la CCSN agit comme organisme d'accréditation.

**(nouveau)**

**plan de formation individuel (*individual training plan*)**

Stratégie de formation, y compris les objectifs d'apprentissage et la ou les évaluations de l'apprenant, résultant d'une analyse des besoins en matière de formation individuelle et servant de base à la formation d'un seul apprenant, par opposition à celle d'un groupe d'apprenants.

**(nouveau)**

**portant sur les connaissances (*knowledge-based*) [évaluation de l'apprenant, examen d'accréditation, test de requalification]**

Se dit d'une évaluation visant à mesurer la rétention des connaissances liées à l'emploi au moyen d'une méthode de questions-réponses orales ou écrites.

**(nouveau)**

**portant sur les habiletés (*performance-based*) (évaluation de l'apprenant, examen d'accréditation, test de requalification)**

Se dit d'une évaluation des connaissances et des compétences liées à l'emploi et des attributs liés à la sûreté, basée sur l'observation directe de l'exécution d'une tâche ou d'une série de tâches liées à l'emploi.

**(nouveau)**

**poste désigné (*designated position*)**

Poste ayant une incidence directe et immédiate sur la sûreté nucléaire et qui a été désigné dans un permis en ce qui concerne un programme d'accréditation du personnel ou un autre processus d'autorisation, et qui doit donc être doté de travailleurs dûment accrédités ou autorisés par la CCSN.

**(nouveau)**

**quart de travail complet (*complete shift*)**

Quart de travail effectué dans un poste désigné en tant que membre de l'effectif minimal consistant en une période minimale de quatre (4) heures consécutives de travail, précédée d'un transfert officiel des responsabilités du quart de la part d'un homologue ayant terminé son quart, et suivi d'un transfert équivalent, à un homologue débutant son quart.

**(modifié)**

**simulateur pleine échelle (*full-scope simulator*)**

Simulateur capable d'effectuer une modélisation détaillée de la réponse, dans des conditions normales, anormales et d'accident de dimensionnement, du réacteur ou du groupe de réacteurs et des systèmes et sous-systèmes associés installés dans une installation dotée d'un réacteur. Un simulateur pleine échelle est équipé d'une réplique de l'instrumentation de la salle de commande principale et permet aux utilisateurs de surveiller et de faire fonctionner en temps réel les systèmes et les sous-systèmes simulés dans un environnement reproduisant les caractéristiques physiques et fonctionnelles de l'instrumentation normalement disponible pour le personnel d'exploitation.

**Abréviations**

<b>Abréviation</b>	<b>Signification</b>
CANDU	réacteur CANadien à Deutérium-Uranium
CCSN	Commission canadienne de sûreté nucléaire
FCE	formation en cours d'emploi
FD	fonctionnaire désigné
LSRN	<i>Loi sur la sûreté et la réglementation nucléaires</i>
OR	opérateur de réacteur
OSA	opérateur de système auxiliaire
PFI	plan de formation individuel
QAD	questions à développement
QCM	questions à choix multiples
SPR	spécialiste principal en radioprotection
TSS	travail effectué sous supervision

## Renseignements supplémentaires

Ce document doit être lu conjointement avec les REGDOC complémentaires de la CCSN qui font partie de la série sur la gestion de la performance humaine et d'autres DSR. Les documents énumérés dans cette section sont les REGDOC complémentaires applicables à la version actuelle du REGDOC-2.2.3, tome III.

1. REGDOC-2.1.1, *Système de gestion*
2. REGDOC-2.1.2, *Culture de sûreté*
3. REGDOC-2.2.1, *Facteurs humains*
4. REGDOC-2.2.2, *La formation du personnel*
5. REGDOC-2.2.4, *Aptitude au travail : Gérer la fatigue des travailleurs*
6. REGDOC-2.2.4, *Aptitude au travail, tome 2 : Gérer la consommation d'alcool et de drogues*
7. REGDOC-2.2.5, *Effectif minimal*
8. REGDOC-2.3.2, *Gestion des accidents*
9. REGDOC-2.10.1, *Préparation et intervention relatives aux urgences nucléaires*
10. REGDOC-3.1.1, *Rapports à soumettre par les exploitants de centrales nucléaires*

## Séries de documents d'application de la réglementation de la CCSN

Les installations et les activités du secteur nucléaire du Canada sont réglementées par la CCSN. En plus de la *Loi sur la sûreté et la réglementation nucléaires* et de ses règlements d'application, ces installations et activités pourraient devoir se conformer à d'autres outils de réglementation, comme les REGDOC ou les normes.

Les documents d'application de la réglementation préparés par la CCSN sont classés en fonction des catégories et des séries suivantes :

### 1.0 Installations et activités réglementées

#### Séries 1.1 Installations dotées de réacteurs

- 1.2 Installations de catégorie IB
- 1.3 Mines et usines de concentration d'uranium
- 1.4 Installations nucléaires de catégorie II
- 1.5 Homologation d'équipement réglementé
- 1.6 Substances nucléaires et appareils à rayonnement

### 2.0 Domaines de sûreté et de réglementation

#### Séries 2.1 Système de gestion

- 2.2 Gestion de la performance humaine
- 2.3 Conduite de l'exploitation
- 2.4 Analyse de la sûreté
- 2.5 Conception matérielle
- 2.6 Aptitude fonctionnelle
- 2.7 Radioprotection
- 2.8 Santé et sécurité classiques
- 2.9 Protection de l'environnement
- 2.10 Gestion des urgences et protection-incendie
- 2.11 Gestion des déchets
- 2.12 Sécurité
- 2.13 Garanties et non-prolifération
- 2.14 Emballage et transport

### 3.0 Autres domaines de réglementation

#### Séries 3.1 Exigences relatives à la production de rapports

- 3.2 Mobilisation du public et des Autochtones
- 3.3 Garanties financières
- 3.4 Délibérations de la Commission
- 3.5 Processus et pratiques de la CCSN
- 3.6 Glossaire de la CCSN

**Remarque :** Les séries de documents d'application de la réglementation pourraient être modifiées périodiquement par la CCSN. Chaque série susmentionnée peut comprendre plusieurs documents d'application de la réglementation. Pour obtenir la plus récente [liste de documents d'application de la réglementation](#), veuillez consulter le site Web de la CCSN.



Detailed comments table for public consultation on REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2

Tableau des commentaires sur le REGDOC-2.2.3, Accréditation du personnel, tome III : Accréditation des personnes qui travaillent dans des installations dotées de réacteurs, version 2

Table A - Consultation period: July 4th to October 18, 2022  
Comments received: 139 comments from 6 reviewers

Table B – February 16, 2023 Workshop

Tableau A - Période de consultation: 4 juillet au 18 octobre 2022  
Commentaires reçus : 139 commentaires reçus de 6 examinateurs

Tableau B – Atelier du 16 février 2023

Table A - Consultation period/Tableau A - Période de consultation

#	Section	Organisation	Comments Commentaires	CNSC staff responses Réponses du personnel de la CCSN
1.	General	Bruce Power, CNA, OPG, NB Power	The nuclear power plant facilities (Industry) appreciate the opportunity to provide feedback on this important document, which impacts the effectiveness and timeliness of the training programs for certifying workers at nuclear power plants. We further recognize the many improvements this version already incorporates from the past versions, of note: better definition of information required for application for certification and renewal of certification; direction on requirements for certified staff transferring to other facilities; validity periods and sequencing of written/simulator examinations removed/extended; revised certification of SM to a licensee managed qualification; and revised lists of station specific topic areas to guidance, allowing licensees to fully implement Systematic-Approach-to-Training (SAT) based training programs.	<p>CNSC staff acknowledges the industry’s general comments and thanks the organizations that contributed to the joint feedback. CNSC staff will host a follow-up workshop to ensure that both the licensees’ concerns and the proposed regulatory changes are fully understood by all the stakeholders involved. In the interim, the following are intended as initial responses.</p> <p><b>Topic 1</b></p> <p>CNSC staff aims to produce a regulatory tool that allows designated officers (DO) and Examination and Certification Officers (ECO) to carry out their duties under the Act effectively, not merely in context of the current CANDU reactor fleet, but also in relation to future operations, including small modular reactors (SMR). Accordingly, CNSC staff may rely on qualitative metrics when quantitative metrics are unavailable or undesirable, repeat content in order to minimize ambiguity, and modernize terminology as warranted.</p>

#	Section	Organisation	Comments Commentaires	CNSC staff responses Réponses du personnel de la CCSN
			<p>Given this, ensuring this version of the REGDOC's structure, requirements and guidance are as clear as possible will avoid confusion on expectations, internal churn and the potential for errors during implementation. The intent of our feedback is to share the practical challenges of applying the proposed text as currently written. The majority of our comments focus on improving the clarity of the final document, while a few of the comments identify inconsistencies or conflicts with other REGDOCs, CNSC guidance, or Industry best practices.</p> <p>Following a collective review by personnel with extensive experience developing SAT based programs, licensees have identified several areas where misunderstanding may be possible and detailed them in this table of comments. To ensure the intent and impacts of these proposals are fully understood, Industry requests the CNSC host a workshop with all impacted stakeholders before this draft is revised and submitted to the Commission for approval. Licensees suggest the following topics for discussion:</p> <ol style="list-style-type: none"> <li><b>1. Presence of subjective or ambiguous wording or wording repetitive of or inconsistent with other REGDOCs</b> <ul style="list-style-type: none"> <li>○ Causes regulatory uncertainty and may lead to inconsistent implementation amongst industry.</li> <li>○ To the extent possible, the wording of the REGDOC should be explicit and not be susceptible to subjective interpretation.</li> <li>○ Confusion on, or misinterpretation of, the REGDOC expectations between Industry and CNSC staff will create additional, possibly excessive, discussions to address this uncertainty.</li> </ul> </li> <li><b>2. Over-prescription of requirements</b> <ul style="list-style-type: none"> <li>○ By retaining too fine a level of detail in the requirements, the effectiveness of the licensees' training system (SAT) process is diminished.</li> </ul> </li> <li><b>3. Applicability to and/or ability to implement at new facilities</b> <ul style="list-style-type: none"> <li>○ Many of the requirements are based on roles, responsibilities, and functions at a CANDU facility, which may or may not be transferable to future nuclear power facilities.</li> </ul> </li> </ol>	<p><b>Topic 2</b> The proposed REGDOC is consistent with the training systems for nuclear facilities mandated in REGDOC 2.2.2, <i>Personnel Training</i>, including the Systematic Approach to Training (SAT). CNSC staff aims to reach an appropriate balance between a performance-based regulatory approach and the establishment of a standardized, hence fair, personnel certification scheme for all trainees and certified workers. The requirements applicable to certified workers are in addition to the requirements applicable to all workers, including those specified in REGDOC-2.2.2. This added regulatory oversight is the very purpose of personnel certification.</p> <p><b>Topic 3</b> The CNSC cannot specify requirements for hypothetical personnel whose roles and responsibilities are currently unknown. The proposed REGDOC can be applied to future concept of operation (COO) as per the CNSC's graded approach. Once known, future designated positions and compliance schemes may be specified, either in future versions of REGDOC-2.2.3 Volume III, or by means of alternate regulatory instruments.</p> <p><b>Topic 4</b> The proposed REGDOC does not set requirements that would apply strictly to contractors, and therefore does not duplicate regulatory oversight. On the contrary, all workers referenced in this REGDOC are treated the same, regardless of their contractual agreement. The proposed REGDOC clarifies the CNSC position on contractor utilization in designated positions, opening the door, subject to CNSC approval during licensing, for management systems and staffing options previously assumed to be prohibited. This change was made in preparation for future operations, including SMRs, which may rely on contractors and third-party services. The proposed REGDOC is consistent with REGDOC-3.6, <i>Glossary of CNSC Terminology</i>, which already defines the term <i>worker</i> as encompassing contractors and subcontractors (see the note under the definition). References to contractors made in the proposed REGDOC neither differ from, duplicate, nor contradict, similar mentions in other REGDOCs, including those related to the management system, safety culture, human performance, and worker fatigue.</p> <p>The following details are added in response to the specific considerations and requests for clarification that follow the general comments.</p>

#	Section	Organisation	Comments Commentaires	CNSC staff responses Réponses du personnel de la CCSN
			<p><b>4. Oversight of contracting out</b></p> <ul style="list-style-type: none"> <li>○ Contractor oversight is governed by other management system processes and should not be included in this REGDOC.</li> <li>○ Inclusion may result in a reduction in safety due to delays in conduct of training programs.</li> </ul> <p>Lastly, Industry highlights and reiterates the following request for clarification:</p> <ul style="list-style-type: none"> <li>○ CNSC will consider for inclusion in the next revision, the ability for licensees to conduct science fundamentals and equipment principles training prior to commencing the initial certification training program.</li> <li>○ In October 2021, Industry recommended the CNSC allow the licensees to conduct science fundamentals, equipment principles prior to commencing the initial certification training program, and the requirement to conduct a separate general examination be removed.</li> </ul>	<p><b>Request 1</b></p> <p>Save the simulator-based examination and management interview, which are treated differently for fundamental reasons, the proposed REGDOC allows licensees to administer initial training and certification examinations in any sequence, any number of times, and according to any schedule deemed most effective for individual candidates and groups of candidates. General training cannot be delivered “before” the start of a SAT-based initial training program, since candidates begin (by definition) their initial training as soon as they attend general training designed to prepare them for employment in a designated position. The proposed REGDOC, like the previous version as well as RD-204, makes no reference to any program explicitly named “initial certification training program”, which is a licensee-owned title and self-imposed constraint. The CNSC merely requires that all candidates attend an initial training program based on a training system, which includes general training, and meet other qualification requirements, including certification examinations, before seeking certification by the CNSC.</p> <p><b>Request 2</b></p> <p>Certification examinations serve a distinct function from the formal learner evaluations administered by trainers. The purpose of certification examinations and tests is to provide satisfactory proof of competency to the CNSC, as independent regulator and certifying body, not the licensee. Furthermore, the CNSC does not rely on any one examination or subset of evaluations, but infers adequate worker competency from the sum of all the activities relevant to personnel certification. The nuclear industry’s safety record is proof that the Canadian regulatory approach works. Again, the proposed REGDOC already allows licensees to administer the general certification examination to any candidate, at any time, and any number of times. The prior mandated training and examination sequence and most examination validity periods were removed from the proposed REGDOC for that very purpose. Given the purpose of personnel certification examinations, the general training schedule has no bearing on whether or not a “separate general examination” should be administered.</p>

#	Section	Organisation	Comments Commentaires	Suggested changes Modifications proposées	CNSC staff responses Réponses du personnel de la CCSN
2.	General	GE-Hitachi Nuclear Energy	GEH staff acknowledge the specific modifications proposed by CNSC staff to Draft REGDOC2.2.3 Personnel Certification, Volume III: Certification		CNSC staff acknowledges GH-Hitachi’s general comments and thanks GE-Hitachi for submitting feedback.

#	Section	Organisation	Comments Commentaires	Suggested changes Modifications proposées	CNSC staff responses Réponses du personnel de la CCSN
			<p>of Reactor Facility Workers, Version 2 to facilitate the incorporation of Small Modular Reactors (SMRs) into certification programs within the Canadian regulatory framework.</p> <p>The Version 2 document layout and the inclusion of the Guidance notes provide a substantial improvement in basis and clarity of the requirements. GEH appreciates the opportunity to provide comments on the draft REGDOC-2.2.3 Vol III, Version 2.</p> <p>GEH staff have noted that language in certain sections of the draft REGDOC-2.2.3 remain restrictive and may hinder the timely certification of personnel required to support the commissioning of SMRs in Canada, including deployment of the first BWRX-300.</p> <p>While aspects of GEH staff's concerns with the certification requirements may also be addressed under REGDOC-1.1.2, Licence Application Guide: Licence to Construct A Reactor Facility, GEH as the Plant Designer and Original Equipment Manufacturer is not the licensee for the Darlington New Nuclear Project (DNNP), but is responsible for the analysis, design and development of the BWRX-300</p>		

#	Section	Organisation	Comments Commentaires	Suggested changes Modifications proposées	CNSC staff responses Réponses du personnel de la CCSN
			training programs for key plant personnel		
3.	General comment	GE-Hitachi Nuclear Energy	While Revision 2 does offer a degree of flexibility in demonstrating compliance with CSNC Regulatory Requirements and opens the door to other than CANDU Nuclear Power Plants there are many areas of the current draft where the legacy of the CANDU related requirements persists, and sufficient provision is not provided for Small Modular Reactors and the unique characteristics of certifying workers for new First-of-a-Kind (FOAK) reactor designs.	Global solution is one, the inclusion of “or an approved alternative” for either each major section or in an opening preamble to cover all future non CANDU reactor designs. And two, guidance language must be included that outlines the foundational principle(s) which support the specific requirement and how these principles can be applied in a proportional manner to all future non-CANDU reactor designs.	<p>The proposed REGDOC, as with the previous version and the original RD-204, will be referenced in the applicable operating licences and therefore assumes a reactor facility operating under an established management system and mature support programs. It documents best practice and the most stringent personnel certification requirements.</p> <p>These requirements may be applied in accordance with the graded approach documented in REGDOC-3.5.2 Subsection 5.4 throughout the life cycle of future reactor facilities. The graded approach may be applied via the relevant Licence Condition Handbooks (LCH) on a site or fleet basis.</p> <p>Canada does not set detailed personnel certification requirements applicable to the personnel involved in the site preparation and construction phases, allowing applicants to propose alternatives to existing requirements in accordance with REGDOC-3.5.3, <i>Regulatory Fundamentals</i>, Section 3 and REGDOC-1.1.5, <i>Supplemental Information for Small Modular Reactor Proponents</i>, Subsection 3.2.</p> <p>Certification schemes for first-of-a-kind (FOAK) reactor personnel and initial cohorts of certified workers will be developed during the licensing process, as per the licence application guides REGDOC-1.1.2 and REGDOC-1.1.3. While this performance-based approach may entail some uncertainty in the early licensing stages, as opposed to more prescriptive approaches, it also offers added flexibility in adapting the regulatory framework to meet the challenges posed by FOAK designs.</p> <p>Since the pertinent regulatory principles are sufficiently documented in other parts of the CNSC regulatory framework, they will not be duplicated in REGDOC-2.2.3.</p>
4.	Section 3.1 Permitted Employment Guidance, Certificate Transferability language applies to single or multi-unit plants at a site/facility	GE-Hitachi Nuclear Energy	This section does not provide specific language to cover multiple single separate reactor unit plants at the same site, i.e., two or more identical Small Modular Reactors located at the same site and operated by a single licensee.	Consider incorporating a “fleet or type” related certification tied to the reactor design.	<p>CNSC staff amended Subsection 3.1 to add clarity and eliminate undue restrictions.</p> <p>That said, the proposed REGDOC explicitly documents certification conditions already implied in the existing certificate language. Multi-unit operations is already sanctioned by specifying the appropriate information on the certificates issued to certified workers. Fleet or type certification schemes can likewise be accomplished without adding extraneous language to the REGDOC, by specifying, for example, a specific</p>

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					reactor technology on certificates and including adequate provisos in LCHs. There remains uncertainties regarding FOAK reactor facility operations; exceptional circumstances can be addressed in the applicable LCHs or future regulatory tools.
5.	Section 5.2.4 (e) and Appendix B Sub-subsection 9.1.119.1.11 – 360 hours of Work Under Supervision (WUS) being an existing CANDU criteria is related to the complexity of the plant.	GE-Hitachi Nuclear Energy	Two issues: One, for Small Modular Reactors this must be scalable based upon plant complexity and factoring in the presence of passive safety systems and hence the complexity of the specific role. Two, no allowance for alternatives when plant commissioning is taking place, not possible to perform WUS until after plant is in service.	Accommodation required for “Cold License Class(es) vs Hot License Classes” and scalability need to be included for this requirement.	<b>Issue 1</b> As stated under 9.1.11, the number of hours of work under supervision must be acceptable to the CNSC, but is left undefined, since the appropriate number depends on multiple factors, including technology and COO. The 360 hours currently specified in Appendix B are applicable to CANDU reactor facilities only, as explicitly stated in Appendix B. Other acceptable compliance schemes, including those applicable to SMRs, will be decided upon, and eventually appended to Appendix B, if and when sufficient information is provided by an applicant to make a final determination possible. As for paragraph 5.2.4.e, the requirement is generic, not CANDU-centric, and will apply to all candidates irrespective of technology and COO.  <b>Issue 2</b> There are no explicit “cold versus hot licensing” regulations or requirements in Canada; neither does the CNSC issue licences to workers; certificates differ from licences. As previously mentioned, a risk-informed, graded approach will be applied during construction and commissioning. REGDOC-1.1.2 and REGDOC-1.1.3 specify the information to be provided by the applicant, for CNSC staff analysis, during these early lifecycle phases. Incidentally, CNSC staff believes there may be alternate means to conduct work under supervision (WUS) during commissioning, in accordance with the graded approach, that have not yet been considered.
6.	Appendix B Sub-subsection 18.2.1 – 4 shifts/48hrs per quarter is an increase from Rev 1 Section 14.1.1 and 3 shifts per quarter with 50 over 3 years.	GE-Hitachi Nuclear Energy	Two issues: One, again the number of shifts was based upon CANDU technology and therefore linked to plant/job complexity and the recency effect, and this again does not factor in the reduced complexity and passive safety systems of SMRs. Two, this provides less flexibility for individuals/organizations while only simplifying compliance monitoring by	Proportionality and scalability need to be included for this requirement.	<b>Issue 1</b> As in the previous case, subsection 18.2.1 references an undefined minimum number acceptable to the CNSC of complete shifts and hours of shiftwork per calendar quarter precisely to accommodate non-CANDU reactor facility operations. Appendix B documents the CANDU case only, and will be updated as needed, if and when alternate compliance schemes are accepted.  The proposed four (4) shifts per quarter amounts to a minor reduction (48 shifts) in regulatory burden over the course of the baseline three-year period (currently 50 shifts). In actuality, from a nuclear safety perspective, the two schemes are equivalent, but the simpler, revised scheme proposed in this REGDOC version represents a reduction in regulatory and administrative burden compared to the current, multi-

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			the CNSC.		<p>stream, two-tier compliance scheme. In addition, for a minority of certified workers temporarily employed in non-operational, non-designated positions, the proposed change represents a decrease in burden without negatively impacting worker competency.</p> <p>Furthermore, of particular relevance to SMR operations, including those potentially located in remote areas, the revised approach provides licensees with added operational flexibility by allowing licensees to select an optimum shift duration, either as a standard operating basis for crews of certified workers, or individually as a form of reasonable accommodation.</p> <p>In addition, while the commenter makes an argument based on the premise that CANDU reactor facilities are more complex than the anticipated SMRs, it is important to consider that future operations may include reactor facilities other than SMRs. In any case, while CANDU technology is relatively complex, the continued training programs established at CANDU sites are both mature and proportionally more complex, providing sufficient assurance of continued worker competency without a minimum employment frequency greater than 48 hours of shiftwork per quarter.</p> <p>However, it is not self-evident to CNSC staff that the minimum work exposure required to maintain competency varies in direct proportion with reactor complexity, independently of the management and training systems in place.</p> <p>Finally, the existing CANDU-based requirements are largely based on empirical data and no such data exist for FOAK reactor facilities. As previously stated, a risk-informed, graded approach will be adopted when requirements set in REGDOC-2.2.3 Volume III may be overly restrictive or otherwise unsuitable.</p> <p><b>Issue 2</b> While minimally reducing operational flexibility in each quarter, the revised compliance scheme offers added operational flexibility overall, when all changes are considered as a whole.</p> <p>Another objective of the revised quarterly minimum employment requirements was to redistribute, in the direction of accrued nuclear safety, the employment of certified</p>

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					<p>workers more evenly over the full five-year certification period. Among other advantages, this approach eliminates the need for licensees to intensify the employment of certified workers closer to the end of the baseline period (be it three or five years) in an attempt to “catch-up” with the baseline requirement. Part of the reason d’être of the quarterly minimum employment requirements is to achieve regular employment throughout the certification period, while avoiding worker fatigue at any given time.</p> <p>Finally, the simplification of the compliance scheme will result in reduction in regulatory and administrative burden for both CNSC staff and licensee staffs, since tracking shifts worked over continuous three-year cycles for each certified worker across three distinct groups of workers (full-time, operational part-time, non-operational part-time) will no longer be required.</p>
7.	Section 9.1.6 On-the job Training addresses OJT but Sections 9.1.10 Performance-based Certification Examination / Section 9.3.3 Performance-based Requalification Testing / Section 9.5.4 Performance based Certification Examination only mentions Full-Scope Simulator Examination or an “approved alternative” but no definition of what the scope of “approved alternative acceptable to the CNSC” may	GE-Hitachi Nuclear Energy	BWRX-300 SMR requires the adoption of “Licensing/Certification Job Performance Measure” for safety critical tasks that are discrete and insufficient in and of themselves to construct a dynamic simulator-based evaluation event. Given the level of plant automation and passive safety systems inherent in the BWRX-300 SMR the design of the Initial and Recertification Examinations will have to be substantially different. Note also that there is currently no flexibility or provision for alternative evaluation methodologies for SMRs in either CNSC Exam Guide 1 or Exam Guide 2 (REGDOC 2.2.3 Vol IV draft).	Formal mechanism required for SMR Initial Certification Examinations that meets the intent of the performance-based requirements but accommodates the differences in plant design and role duties for the BWRX-300 SMR. A possible venue is a BWRX-300 specific CNSC TECDOC.	<p><b>Issue 1</b></p> <p>The purpose of allowing alternatives to the full-scope simulator is to provide licensees and vendors with added flexibility going forward. Specifying acceptable alternatives in this REGDOC would be self-contradictory. Future applicants will have to present substantiated proposals for suitable alternatives, which CNSC staff will analyse as part of the previously referenced licensing processes. This performance-based approach offers maximum flexibility to applicants and vendors in leveraging modern simulator technologies and implementing best training practices, while achieving a suitable certification examination and requalification testing environment. Section 21 specifies the regulatory expectations relevant to simulators, full or partial-scope. Generally, these requirements would remain relevant under static or dynamic conditions in a partial or full-scope simulator.</p> <p><b>Issue 2</b></p> <p>The detailed certification examination and requalification testing requirements are considerations out of scope, since REGDOC-2.2.3 Volume III does not address how the mandatory certification examinations and requalification tests must be administered.</p>



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	encompass (Section 21).				
8.	Current document in locked in multi-unit or multi-role certification model from large CANDU plants – Section 9.1 Core Qualifications for Operations Personnel vs Section 9.2 Supplementary Qualifications for Shift Supervisors and Section 3.2 Employment Status Guidance Multiple Certifications. Section 4 The Designated Positions, Section 4.2 Designated Position Staffing, Section 9 Operations Personnel Certification and Section 13.1 Initial Training Programs and Section 13.2 Continuing Training Programs separate the shift supervisor and reactor operator certifications and require “distinct XXX	GE-Hitachi Nuclear Energy	For the BWRX-300 SMRs there will be a single Control Room Certification Program for the Shift Supervisors and Control Room Operators thus furthering the safety goal that either one can act in any required role in an emergency. Which role an individual will fill on a particular shift should not require a unique specific or multiple certification(s) – Lead vs Right Hand and Left Hand Assisting Authorized Nuclear Operators, Lead vs Assisting Unit 0 Control Room Operators. This concept has been recognized by the CNSC via the new language addressing Control Room Shift Supervisors and Shift Managers at multi-unit CANDU plants including the issuance of multiple certifications.	Multiple possible solutions including; single Control Room Certification for both Control Room Operators and Shift Supervisors, only certifying the Control Room Operators with Shift Supervisors maintaining a Control Room Operator Certification, or issuing Multiple Certifications to individuals for both positions.	<p><b>Issue 1</b> Worker qualifications have been regrouped in a generic and tiered manner in order to avoid overlapping the reactor operator (RO) and shift supervisor requirements. Shift supervisors are already expected to possess the knowledge required of ROs, and the higher qualifications are specified as additional requirements compared to the baseline RO qualifications. Therefore, all pertinent qualifications would apply to any worker seeking certification for employment as both RO and shift supervisor, assuming such need arises, whether one or multiple certificates are ultimately required. Licensees who wish to train shift supervisors capable of operating instrumentation previously manipulated by ROs alone merely have to establish corresponding management systems and training programs. Delegations of authority, be it under normal or abnormal conditions and emergency situations, are likewise components of the management system, not elements of the personnel certification scheme. In the event that future COOs depart significantly from current norms, this REGDOC can be applied in a risk-informed, graded-approach, and alternate or supplementary regulatory tools can be developed over time.</p> <p><b>Issue 2</b> Licensees must establish programs and processes in support of CNSC certification, including training programs. However, strictly speaking, personnel certification is a CNSC process, not a licensee program. The reviewer is describing an anticipated COO relying on a common training program for all operations personnel. REGDOC-2.2.3 Volume III can be applied in a risk-informed, graded-approach, regardless of the specifics of the COO ultimately implemented. Personnel certification aims to ensure that certified workers are qualified to perform the duties of designated positions as described in the management system accepted by the CNSC as part of the licensing basis. Licensees are free to train operations personnel to the highest standard and may propose any COO for CNSC staff analysis.</p> <p><b>Issue 3</b> CNSC staff will investigate further to determine the exact manner in which the referenced terminology may be causing an issue. However, the proposed REGDOC does not set any requirement entailing separate certificates for specific operator roles</p>

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	training programs”.				(left or right, assistant versus lead). The proposed REGDOC mandates a minimum employment whereby all certified workers – regardless of their employment at other times – must stand four (4) complete shifts in the relevant lead role every three (3) months; in other words, 16 shifts annually totalling 80 shifts every five years. As per the guidance included under Subsection 18.2.1, the licensee would be free to employ certified workers in assisting or supernumerary roles for all shifts outside of the mandatory four (4) complete shifts per quarter. Regulations do not allow the Commission or a DO to renew the certification of a certified worker unless the latter has safely performed the duties of the relevant position some minimum number of times. The proposed REGDOC, like its predecessors, defines a minimum employment for consistency, but licensees may exceed this minimum requirement as warranted on an individual or group basis. Finally, the revised requirement represents a reduction in burden since the prevalent (and current) regulatory interpretation was that absolutely all shifts performed by certified workers had to be 12 hours in duration.
9.	Section 10.1.3 Prior Work Experience (Health Physicist), Section 12.1 Personnel Selection Program Requirements (Prior Work Experience) and Section 12.2.1 (c) Work Experience are all problematic for “Cold Start Up” of the first BWRX-300 Unit in Canada.	GE-Hitachi Nuclear Energy	Not feasible to meet these prior work experience requirements for the “First-of-a-Kind” Plant Design.	Require accommodation for “First of Kind” Plant Design and Commissioning of First Unit for any NPP Licensee.	Concerns over FOAK technology and new build commissioning have already been sufficiently addressed – see item #3. REGDOC-2.2.3 Volume III is referenced in operating licences.
10.	Section 14.1 (a) separation between Trainers and Examiners is too restrictive for a First-	GE-Hitachi Nuclear Energy	This requirement is appropriate only for a mature plant design with a full complement of training and examination staff.	For new plants the previous standard of prohibiting trainer/examiner contact with students once the examination development is initiated. is more	<b>Issue 1</b> Concerns over FOAK technology and new build commissioning have already been sufficiently addressed – see item #3. REGDOC -2.2.3 Volume III is referenced in operating licences.

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	of-a-Kind (FOAK) reactor design and associated certification training program.			appropriate and this flexibility must be reflected in the requirements.	<p><b>Issue 2</b> CNSC staff will investigate further to ensure compliance with the training versus examination separation, as currently stated in the draft REGDOC, is possible.</p> <p>The separation of training and examination is fundamental, since the examiners are expected to act independently of the employer and trainers, on behalf of the certifying body, in this case the CNSC. The revised requirement represents a high-level standardization and reinforcement of current norms and regulatory expectations.</p> <p>However, complete separation is mentioned as best practice under a guidance header, allowing licensees to implement the separation to the extent feasible on a case-by-case basis.</p> <p>Finally, this version of REGDOC-2.2.3 Volume III, like prior pertinent documents, assumes that the trainers and examiners are employed by the same licensee. In the event that the CNSC agrees to training being administered by a third party, an alternate approach may be considered.</p>
11.	<b>General</b>	Froats and Froats Associates	<p>This document provides thoughts and input in response to the request from Brian Torrie in May 2022. The request asked to provide some independent thought / perspective for consideration as the CNSC works to evolve the REGDOC-2.2.3 governing the certification of licenced positions for Class IA nuclear facilities in Canada.</p> <p><b>Context of the Review</b> In conducting the review, no discussion was initiated with any of the licensees. The request was to</p>		<p>CNSC staff would like to thank Mr. Froats and his team for their independent review and feedback. As a general comment, CNSC staff notes that nothing stated in the report produced by the review team appears to contradict any CNSC staff position or recommendation documented in REGDOC-2.2.3, Volume III, Version 2. The following is offered in response to specific comments.</p> <p><b>Gender-Based Analysis (GBA) +</b> This REGDOC has undergone a GBA+. The said analysis provided an added rationale for regulatory modernization already considered for several reasons. Consequently, CNSC staff is proposing the removal of potential barriers to candidate recruitment and retention that were deemed unnecessary. Nevertheless, CNSC staff confirms that competency standards have been maintained and would add that, overall, the proposed changes result in a strengthening of the regulatory framework.</p> <p><b>Potential Over-reliance on the SAT</b> CNSC staff does not rely exclusively on licensee compliance with the SAT or any alternate training system. Personnel certification requirements encompass a series of</p>

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			<p>provide some independent perspective. The thoughts and comments that follow are solely based on the experience of John Froats plus a consultation with four university educators on examination methods and perspectives on the subject of licenced staff.</p> <p>In the briefing for this review, the objectives driving the changes were stated to be:</p> <ul style="list-style-type: none"> <li>• To address opportunities to reduce barriers to access to the licenced roles</li> <li>• To prepare for the application in the context of SMR's</li> </ul> <p>The stated intent of reducing barriers to access to licenced roles was shared as a positive objective by all. It is important to emphasize that all in this review were very quick to say as long</p>		<p>mandatory activities providing a continued proof of competency at the individual worker level, including certification examination and requalification test results. The CNSC maintains regulatory control over the knowledge areas and skills evaluated during these examinations and tests by setting detailed requirements in complementary documents. In addition, CNSC staff periodically inspects training and other pertinent programs, including certification examination and requalification testing, to ensure continued licensee compliance. The CNSC's compliance verification program is a distinct topic which is not addressed in REGDOC-2.2.3 Volume III.</p> <p><b>Evolving Roles and Responsibilities</b> The fact that roles and responsibilities evolve is part of the rationale for abandoning the prior prescriptive regulatory approach, which could not cope effectively with change. Moreover, the expected SMR operations poses a particular challenge precisely because there exists little to no past experience that would allow the regulator to prescribe training program requirements; some degree of reliance on training systems analysis is in that case unavoidable.</p> <p><b>Fundamental and Plant Layout Knowledge</b> This version of REGDOC-2.2.3 Volume III continues to mandate the administration of a general examination covering fundamental knowledge, but it also introduces a new plant familiarization training covering physical plant layout and organizational infrastructure, in order to address some of the concerns raised by the commenter. Likewise, explicit references to nuclear emergency preparedness and beyond-design-basis accident (BDBA) training are made for the first time, post-Fukushima. Finally, the omission of an appendix on general knowledge was indeed deliberate because such guidance was deemed non-essential – even the inclusion of Appendix D was deemed merely desirable, primarily for the benefit of future licensees which may be unfamiliar with training systems and personnel certification. The rationale for this approach is that REGDOC-2.2.3 Volume III sets high-level requirements, while the detailed requirements related to examination and testing, including fundamental knowledge areas, are specified in other, complementary documents.</p> <p><b>Preparation for SMRs</b> It should be noted that it is the certificates, not the personnel, which cannot be transferred between licensees. This version of REGDOC 2.2.3 Volume III specifies a</p>

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			<p>as the high standard of competency in these roles is maintained.</p> <p><b>Definition and Control Of Knowledge, Skill and Attitudinal Aspects (Competency)</b></p> <p>As an overarching comment, there are many ways to evaluate and check competency. Basing the confirmatory processes on a rigorous SAT assessment process is a sound approach. However, if there are knowledge, skill or attitudinal (cultural) elements omitted from the defined content requirements then any assessment process fails. It would seem prudent that considerable thought be given to how the CNSC is going to exert oversight and Regulatory control (authority) over the definition of the competency requirements that need to be met. Some form of approval / change control process would seem needed / prudent.</p> <p>I was licenced as a shift supervisor (albeit many years ago) and was able to meet the requirements over a 2-year period of very intensive learning and experience. Requirements and roles have changed / evolved since</p>		<p>personnel transfer process to ensure that trainees and certified workers transferred between reactor facilities (equipped with similar technologies) are ultimately qualified to work at their new place of employment. It should also be noted that the CNSC does not issue operating licences to workers; rather, the CNSC issues certificates (as proof of certification) to qualified workers, resulting in important procedural differences. Regulatory oversight of personnel transfer is partially achieved by setting certificate restrictions. However, it is already established practice to issue multiple certificates to personnel qualified to work at multiple sites. In addition, class or fleet-level certification could readily be accomplished by issuing certificates showing the appropriate information, and by specifying further details and conditions in Licence Conditions Handbooks (LCH) as may be warranted. Nonetheless, CNSC staff revised and added guidance to subsection 3.1.</p> <p><b>Specific Observation 1</b></p> <p>Appendix C is included in this REGDOC as guidance to applicants and candidates because CNSC staff administers the certification examinations and requalification tests to senior health physicists (SHP). In contrast, operations personnel are examined and tested by licensee staff members. Consequently, the examination and testing topics relevant to operations personnel, including safety culture, are specified in complementary documents referenced in the relevant LCHs.</p> <p><b>Specific Observation 2</b></p> <p>Multiple-choice questions (MCQ) represent a proven methodology, and CNSC staff verifies compliance with minimum requirements and best practice. However, the CNSC does not rely exclusively on the MCQ methodology. Diagnostic skills and knowledge application are evaluated by means of a suite of comprehensive, performance-based examinations and tests conducted under dynamic conditions in full-scope simulators.</p> <p><b>Specific Observation 3</b></p> <p>CNSC staff has conducted a literature review of knowledge retention science. This review indicated that, without frequent application or refresher, semantic knowledge is forgotten within hours to months, not years, which are the timescales covered by the examination validity periods. In addition, studies showed that, despite significant knowledge decay, a relatively constant knowledge base persists between six (6) and 25-30 years after learning, forming a semi-permanent store of useful knowledge</p>

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			<p>that time in very significant ways — so of course the knowledge and skills (competency) requirements has evolved as the roles changed.</p> <p>The thinking has changed considerably with respect to the adherence to procedures and procedures have improved dramatically. Over the same period, we have had events that resulted in the emergence of a focus on beyond design basis events. While some procedural guidance can be provided for these kinds Of situations, experience to date suggests that response will require ability to apply knowledge (including science fundamental knowledge and knowledge of plant physical layout) to successfully manage the challenges at the Level 4 defence in depth response level and in beyond design base events. There is relevant OPEX from events like the 2003 blackout that provide 'food for thought' on this aspect of knowledge and skill requirements.</p> <p>So, while the document provides a high-level list of Station Specific</p>		<p>predicated on need. Based on available science, CNSC staff concluded that the existing validity periods did not constitute an effective means of knowledge decay prevention. While tight regulatory control over the initial training duration promotes, in principle, frequent knowledge application, the resulting lack of flexibility also caused candidate recruitment and retention issues. In addition, the efforts deployed in preparing candidates for examination retakes after results expired served to delay the integration of the said candidates in the continued training programs designed to ensure that knowledge is continually refreshed and applied. Ultimately, CNSC staff removed the validity periods from knowledge-based examinations as unnecessary barriers, after careful consideration. This change was deemed acceptable given the fact that candidates cannot successfully complete their final, in-simulator, performance-based examination without having retained the essential general and station-specific knowledge. Conversely, given their importance, a two-year validity period was maintained for all simulator-based examinations, after which time unsuccessful candidates must retake the said examinations. Further mitigating the residual risk, and acting as a self-regulating incentive, the licensees know that it is in their best interest, financially and operationally, to ensure that candidates are adequately prepared for the mandated simulator-based examinations and tests. That objective is most readily achieved by minimizing delays between station-specific and simulator-based training, and likewise between the end of initial training and the start of continued training. Finally, as added mitigating action, the proposed REGDOC prescribes, for the first time, the implementation of a return-to-training process applicable to trainees who reintegrate their initial training after a prolonged absence.</p> <p><b>Specific Observation 4</b></p> <p>The risk posed by societal and financial drivers is well understood by CNSC staff. In addition, whenever a valid need for collaboration with external organizations and subject matter experts becomes evident, CNSC staff does not hesitate to leverage external resources. CNSC staff does not presently see the need for such collaboration in the present context, but notes the proposal for future consideration.</p>

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			<p>knowledge requirements in Appendix Delta, it does not provide any similar guidance for the 'general knowledge requirements' — the subject of the most substantive change in approach. This may be deliberate, leaving the discussion of required competency base knowledge to some other process. It just strikes me as an independent reviewer to be an inconsistency that warrants reflection. So as an independent reviewer, I'd have to summarize my overall conclusion as that without any detail of the definition of specifics of required content, control of content definition and change control at the front end, or without understanding of the CNSC approach to independent oversight to ensure front end definition is correct and that confirmation of adequacy of implementation (the back end) is effectively done, all I can say is that the changes could work if correctly implemented and controlled.</p> <p><b>Preparation for SMR's</b></p> <p>In looking at the document with the lens of application to SMR's, most of the document is at a high</p>		

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			<p>enough level that it could be applied to any technology. Of course, the Appendix Alpha would need to be updated to include whatever structure merges for the SMR. The application to SMR will very much depend on the SAT based evaluation of what the knowledge requirements are for new machines.</p> <p>The only other place in the document that may warrant reflection is section 3.1. In section 3.1, it explicitly requires a unique licence for each site (not transferrable). I have ben of the view for some time that to make the vision of SMR's economically feasible, industry will need to deploy series of 'identical' machines. If a machine in Ontario was 'identical' to a machine in Saskatchewan for example, then just like a pilot gets certified to fly a specific aircraft, we might envision a transferable licence between facilities as long as the facilities are 'identical'.</p> <p>A Few Specific Observations</p>		



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			<p>1. In the draft, safety culture is listed in Appendix Charlie 2 as a requirement for being a licensed Health Physicist but is not mentioned anywhere in the context of a requirements for the other licensed positions.</p> <p>2. In discussions with academic colleagues about methods to confirm student comprehension there was general consensus that:</p> <p>Multiple choice questions can be effective in confirming specific details of required knowledge.</p> <p>Multiple choice questions are less effective at confirming ability to diagnose or apply specific knowledge.</p> <p>3. There was general agreement that the longer the time interval between the study of a subject and the application of the subject knowledge the more likely the recollection of the knowledge has diminished. The relaxation of time limits for EDI concerns has merit, but success will be dependent on the processes to confirm knowledge retention — particularly after an absence for any reason.</p>		

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			<p>4. During the discussion with academic colleagues, all expressed the importance of being able to explain to the public how independent regulatory oversight would remain effective in providing public assurance / confidence that licensed personnel have the required competency (knowledge, skills and attitude) in whatever scheme is being used. It is clear that there are both societal drivers (EDI) and huge cost and production drivers that would tend to drive toward reducing requirements. As is often quoted 'safety must remain the overriding requirement'. One thought was that there may be an opportunity to blend in some kind of 3rd party review process to the change control process of defining required content and/or evaluation of conformance to requirements.</p>		
12.	Entire Document	Bruce Power, CNA, OPG, NB Power	<p>Title change from “<i>Certification of Persons Working at Nuclear Power Plants</i>” to “<i>Certification of Reactor Facility Workers</i>” will require document revisions of licensees’ documentation, such as training materials where this may be the only update required.</p> <p><b>MAJOR</b></p>	Return title to “Certification of Persons Working at Nuclear Power Plants”.	The new title realigns REGDOC-2.2.3 Volume III, which has remained essentially unchanged since 2008, with the current regulatory framework. <i>Reactor facility</i> has been adopted by the CNSC as technologically-neutral term encompassing both nuclear power plants (NPP) and small modular reactors (SMR). Likewise, the term <i>worker</i> was preferred to <i>person</i> : (a) because it is more precise, since this REGDOC pertains to the certification of workers, as defined in the Regulations; (b) in order to leverage the legal meaning of <i>worker</i> ; and (c) to align personnel certification with the other special areas of the <i>human performance</i> safety control area (SCA), which all refer to <i>workers</i> . Since the term <i>person</i> does not appear in the proposed REGDOC, it no longer constitutes a

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			<b>Impact:</b> This is an administrative burden with no obvious or corresponding improvement to nuclear safety.		suitable choice of word for the revised title. Modernization and standardization, including that of terminology, were among the key objectives of the revision.
13.	<b>Several sections</b>  <b>9.1.11 &amp; Guidance, 12.4.1 &amp; Guidance, 13.3, 18.2.1, &amp; Guidance, 20, 21, App B</b>	Bruce Power, CNA, OPG, NB Power	Use of the words “acceptable to the CNSC” <b>MAJOR</b> <b>Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	Replace “acceptable to the CNSC”  For example; change: “ <i>acceptable to the CNSC</i> ” to: “ <i>accepted as part of the licensing basis</i> ”	CNSC staff considered using the suggested text, but decided to maintain the original text. The proposed REGDOC provides licensees with operational flexibility, which the industry sought and needed to implement best training practice and improve candidate selection and retention rates. The regulatory statement made in the current REGDOC draft is "acceptable to the CNSC"; that is, the Commission, not CNSC staff.  The partial shift to a performance-based approach documented in this revised REGDOC was achieved by means of both quantitative and qualitative metrics. Much guidance has been added to the proposed REGDOC in order to minimize diverging regulatory interpretation.
14.	<b>Several sections</b>  <b>5.3.3, 5.4.3, 5.4.4, 5.5.3, 5.5.4, 10.1.2, 12, 12.1, 13.2.1, 13.2.2, 13.2.3, 14.5, 17.1, 18.5, 18.5.1, 18.5.2, 18.5.3, 18.6, App D</b>	Bruce Power, CNA, OPG, NB Power	Use of the word “suitable” <b>MAJOR</b> <b>Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	Remove the word “suitable”.	See comment 13
15.	<b>Page 11</b> <b>1.3 (c)</b>	Bruce Power, CNA, OPG, NB Power	List of <i>Class I Nuclear Facilities Regulations</i> sections being referenced does not include 13(2), which deals with certification decision notifications.	Add a reference to section 13(2).	CNSC staff added the missing reference.
16.	<b>Page 13</b> <b>Section 2</b>	Bruce Power,	CNSC cannot mandate that workers <b>MUST</b> apply for renewal of	Consequently, <b>applicants seeking certification renewal should apply</b>	Section 2 merely provides a brief summary of the relevant legislation as background information, and therefore sets no requirement. Interpretation must consider the

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		CNA, OPG, NB Power	<p>certification, if the person or licensee does not want to.</p> <p>Certified workers DO NOT apply for certification, a licensee does. <b>MAJOR Impact:</b> REGDOC must comply with Class I Facilities Regulations.</p> <p>Regulatory uncertainty due to the inconsistency with the Class I Facilities Regulations.</p>	for the renewal of certified worker's <b>their</b> certification(s) before the expiry date specified on their certificate(s).	context. The context is that of a worker applying for the renewal of their certification, after making the voluntary decision to request the renewal, in which case the said application must be submitted before the deadline. This section does not imply that certified workers are obligated to seek the renewal of their certification. CNSC staff nonetheless modified the statement for added clarity.
17.	Page 13 Section 3.1 Guidance	Bruce Power, CNA, OPG, NB Power	In this document, employee-employer relationship should be limited to certified staff.	The licensee is responsible for the competency of all <b>certified</b> workers employed at the reactor facility identified in the licence, regardless of the contractual agreement binding certified workers and the licensee as employer.	The referenced text is a statement of fact and a description included as guidance; it does not set any requirement. The statement of fact does not apply to certified workers specifically, and should therefore not be qualified as such, lest some readers incorrectly infer that the statement applies only to certified workers. The addition of the term “certified” to this particular sentence would therefore introduce, rather than minimize, ambiguity. CNSC staff did not amend the text as suggested, but did revise the sentence for added clarity.
18.	Page 13 Section 3.1 Guidance	Bruce Power, CNA, OPG, NB Power	“Multiple Certifications” wording is not aligned with Section 1 Introduction.	The CNSC may certify a worker <b>as qualified to carry out the duties of for employment in</b> more than one designated position, as long as...	The referenced text is a statement of fact and a description included as guidance; it does not set any requirement. The introduction ties the REGDOC to the language used in the Act on purpose. However, this legislative language is lengthy and need not be repeated throughout the document. The second formula suffices to convey the intended meaning and is used throughout the document for the sake of brevity. Furthermore, it should be noted that the full text of the Act includes the term <i>employment</i> : NSCA 21(1)(i) states that the CNSC may certify persons “as qualified to carry out their duties under this Act <b>or the duties of their employment</b> , as the case may be”, which statement primarily applies, respectively, to members of Commission and CNSC staff, and members of licensee staffs, including certified workers. The terms <i>employment</i> and <i>employed</i> are therefore used throughout the proposed REGDOC consistently with the Act. CNSC staff did not amend the text as suggested, but did revise the introduction to underline the term <i>employment</i> is borrowed from the Act, since Subsection 1.3, in agreement the latest REGDOC template, no longer cites the legislative basis in full.

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19.	Page 14 Section 3.2 b	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	... an inactive status is assigned to any certified worker who holds a valid certificate, but was formally removed from duty in accordance with subsection 18.3 or 18.4; either one of the processes specified in subsections 18.3 <u>or</u> and 18.4;	CNSC staff revised paragraph 3.2.b for clarity.
20.	Page 14 Section 3.2 Guidance	Bruce Power, CNA, OPG, NB Power	Typo in “End of Employment”.	...unless the worker is reinstated to duty as per subsection 18.518.5 before ....	A number of hyperlinks failed to update as expected and consequently read as typographic errors. CNSC staff will investigate and correct this technical issue before final publication. Notwithstanding, CNSC staff revised the guidance for added clarity.
21.	Page 14 Section 4	Bruce Power, CNA, OPG, NB Power	Current list of designated positions is reflective of the current licenced facilities and implies that these positions will be required at all future facilities. <b>MAJOR Impact:</b> Does not allow for different operating organization structures that may be proposed for future SMRs.	Add guidance to explain that these four positions reflect only those at the currently licensed facilities.	Since REGDOC-2.2.3 Volume III is referenced in operating licences, Section 4 inherently reflects the positions designated in existing licences at the time of writing. The proposed REGDOC, like previous versions, neither designates positions (designation occurs in licences) nor restricts the COO to the listed designated positions. Section 4 merely defines generic terms based on existing management systems and, by referencing Appendix A, establishes a convention regrouping positions that are similar, but given different names by the existing licensees. If and when alternate COOs entailing new designated positions are accepted by the CNSC during a licensing process, REGDOC-2.2.3 Volume III can be amended. Moreover, LCHs can be used to document amendments and exemptions, either temporarily between REGDOC revisions, or permanently to address site or class-specific circumstances. As previously stated, applicants may propose alternatives to existing requirements during the licensing process in accordance with REGDOC-1.1.2 and REGDOC-1.1.3. The requirements applicable to the management system and the minimum staff complement are specified in REGDOC-2.1.1, <i>Management System</i> , and REGDOC-2.2.5, <i>Minimum Staff Complement</i> respectively, as indicated in the additional information section included at the end of REGDOC-2.2.3 Volume III. Notwithstanding, CNSC staff revised and added guidance to Section 4.
22.	Page 14 Section 4 c	Bruce Power, CNA, OPG, NB Power	Missing an acronym.	c. shift supervisor ( <u>SS</u> ); and	The abbreviation is not missing. CNSC staff decided not to use the abbreviation in the body of the document in order to avoid the historical, negative connotation, which some reviewers objected to. The abbreviation is used, hence defined, in Appendix A only, for brevity, but this usage too may be revised before publication. Spelling out the position title in full causes no added burden and introduces no ambiguity.

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23.	Page 15 4.1	Bruce Power, CNA, OPG, NB Power	Typo	... and are associated with the generic classes of designated positions <u>listed</u> in Appendix A.	There is no error, typographic or grammatical, in the referenced statement. CNSC staff nonetheless revised the sentence for added clarity.
24.	Page 15 4.3	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	When in possession of a valid certificate, workers are deemed qualified to perform the duties of the pertinent site-specific positions listed in Appendix A in accordance with the licensee's established management system., <b>including the roles and responsibilities documentation found acceptable by the CNSC.</b>	CNSC staff amended the text as suggested.
25.	Page 15 5.1	Bruce Power, CNA, OPG, NB Power	Section 5.1 deals with applications for certification, renewal of certification, and requests for decertification. The section does not mention requests for opportunities to be heard or applications for examinations and tests, while sections 6.3 and 7 refer back to section 5.	Revise section 5 to include requests for opportunities to be heard and applications for SHP examination and tests.	The document structure was revised for added clarity: new sections were created to separate the general provisions from the core application processes, and requests were linked to a specific subsection of Section 5.
26.	Page 16 5.2.2 Guidance Page 19 5.3.2 Guidance	Bruce Power, CNA, OPG, NB Power	The definition of "Worker Competency" is repeated in several instances:	Move the definition of "Worker Competency" to the Glossary section on Page 69.	Current CNSC policy is to refer readers to REGDOC-3.6, <i>Glossary of CNSC Terminology</i> for all terms requiring a definition. However, <i>worker competency</i> does not yet appear in REGDOC-3.6, and it is such a fundamental concept in context that the writing team added guidance to the relevant subsections of the REGDOC. CNSC staff has removed the guidance and has added new definitions to the REGDOC glossary for later inclusion in REGDOC-3.6.
27.	Page 17 5.2.3	Bruce Power, CNA, OPG, NB Power	Requirement could be written more clearly, with less repetition in the document.	The application shall describe how the applicable prerequisites of the personnel selection program mandated in section 12 were met., <b>including, but not limited to:</b>	CNSC staff believes specifying the minimum information to be enclosed in the application process described under subsection 5.2.3 adds clarity. Part I is written to assist authorized applicants by regrouping all of the information relevant to each application process under a distinct subsection. This approach causes some repetition, but minimizes the occurrence of incomplete applications. Part III specifies the program-level requirements to be implemented in support of the CNSC processes specified in Part I, and therefore shares elements in common with Part I.

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				<p>a. the worker’s education or literacy level upon selection for initial training;</p> <p>b. any education or literacy level equivalency recognized by the licensee;</p> <p>c. any prior work experience required by the CNSC or the licensee;</p> <p>d. any personnel selection interview undergone by the worker;</p> <p>e. any personnel selection test administered to the worker, including any medical screening; and</p> <p>f. any exemption explicitly sanctioned in this REGDOC that was employed by the licensee.</p>	
28.	Page 17 5.2.4	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear and the requirement should be limited to the “certification” related training.	The application shall provide a chronological summary of the qualifications achieved by the worker covering the initial <u>certification</u> training components, the certification examinations, and all other personnel certification <u>requirements</u> <u>milestones</u> successfully completed by the worker.	By default, any and all training administered to workers to qualify and requalify them for employment in designated positions is considered “certification training”. However, neither this nor the prior version of REGDOC-2.2.3 Volume III, nor RD-204, nor REGDOC-2.2.2, mentions any training specifically titled <i>certification training</i> . The proposed REGDOC is meant to be generic and technologically-neutral. The CNSC is concerned with all training completed by the candidates in relation to their duties as certified workers. Conversely, any training delivered to certified workers that is not related to the said duties is irrelevant in context, and falls outside of the defined scope. CNSC staff did not add the term <i>certification</i> as suggested. The term <i>milestones</i> reflects the language used on current application letters. CNSC staff nonetheless replaced <i>milestone</i> with <i>requirement</i> as suggested.
29.	Page 17 5.2.4 & Page 19 5.3.3	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	The worker qualification summary should offer sufficient evidence that the worker meets all of the applicable qualifications specified	CNSC staff replaced the term <i>should</i> with <i>shall</i> , but did not remove “at a minimum”. CNSC staff will verify compliance with minimum requirements.

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				in Part II. At a minimum, <u>this</u> summary shall include, as applicable depending on the designated position:	
30.	Page 17 5.2.4 a.	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	a. the date of <b>each cumulative or final</b> formal evaluation marking the completion of each initial training component;	Paragraph 5.2.4.a was intended to refer generically to the final evaluation, which may or may not be a cumulative, depending on the training program implemented by the licensee. CNSC staff revised paragraph 5.4.4.a using the technical term “summative evaluation” as defined in REGDOC 2.2.2, <i>Personnel Training</i> and REGDOC 3.6, <i>Glossary of CNSC Terminology</i> .
31.	Page 17 5.2.4 e.	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	e. the date of completion of any period of work <u>ing</u> under supervision ( <b>WUS</b> ), including the total number of supervised work hours;	The correct term is “work under supervision” (WUS). CNSC staff consistently refers to a WUS period throughout the draft, the first version of the REGDOC, and the original RD-204 published in 2008.
32.	Page 17 5.2.4 Guidance & Page 19 5.3.3 Guidance	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Move the following text under guidance section: <u>The worker qualification summary should offer sufficient evidence that the worker meets all of the applicable qualifications specified in Part II.</u>	As in the previous case, CNSC staff replaced the term <i>should</i> with <i>shall</i> – see item #29.
33.	Page 17 5.2.5 & Page 19 5.3.4	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Delete “comprehensive”:  For example; The licensee is not required to append any supporting documentation to the application as proof of competency; however, <b>comprehensive</b> personnel records shall be maintained in accordance with subsection 19.2 and made available for verification by the CNSC upon request.	CNSC staff removed the qualifier in this case since it is already specified in subsection 19.2 as part of the guidance on the maintenance of “adequate” personnel records.
34.	Page 19 5.3.3	Bruce Power,	As written, the statement is unclear.	The application shall provide a chronological summary of the	This comment has already been addressed – see item #28.



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		CNA, OPG, NB Power		requalification requirements met by the worker during the current certification period covering the continuing training components, the requalification tests, and all other personnel certification <b>requirements milestones</b> successfully completed by the worker.	
35.	Page 19 5.3.3 a.	Bruce Power, CNA, OPG, NB Power	Could be written more clearly, with less repetition in the document.	a. confirmation that the worker attended continuing training and successfully underwent formal evaluations compliant with the requirements specified in section 13., <b>including suitable update, refresher, simulator-based, and nuclear emergency response training;</b>	CNSC staff will explicitly list minimum requirements and repeat essential information as added emphasis when deemed warranted, in order to reduce the risk, and avoid the consequences, of omissions. In this particular case, CNSC staff wants to receive an explicit mention upon application, rather than a blanket statement. The original text was preserved.
36.	Page 19 5.3.3 d.	Bruce Power, CNA, OPG, NB Power	This requirement should be aligned with section 18.2.1 and Appendix B.	d. the total number <b>of</b> complete shifts and hours of shiftwork in the designated position performed by the worker <b>during each quarter of over</b> the current certification period;	CNSC staff corrected the typographic error. However, although linked to shiftwork in all cases, the information required under paragraph 5.3.3.d differs, in kind and purpose, from the requirement specified in subsection 18.2.1 and the CANDU compliance scheme specified in Appendix B. The minimum employment requirement provides partial evidence of continued competency monitored on a quarterly basis in order to permit timely intervention by CNSC staff during the certification period. In contrast, paragraph 5.3.3.d sets a certification renewal requirement applicable upon application once every five years. The certification renewal requirement is not a duplication of the quarterly report requirement, as suggested by the commenter. Rather, the application must specify the total numbers of complete shifts and hours of shiftwork completed by the certified worker during the current certification period, up to the time of application for certification renewal. This requirement is primarily designed to satisfy 9.3(a) of the Class I Regulations, and therefore serves a distinct purpose. Aggregating and submitting this information causes minimal administrative burden if the licensee maintains adequate records as per subsection 19.2.

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37.	Page 20 5.3.5 Guidance	Bruce Power, CNA, OPG, NB Power	<p>Per section 18.4.4, when a certificate expires, the licensee must remove a person from the designated position.</p> <p>When a certificate is not issued before the current one expires, due to <u>CNSC</u> processing delays, the effective date of the new certificate should be the date of the CNSC decision, not the date of expiry of the previous certification.</p> <p><b>MAJOR Impact:</b> The CNSC suggested wording will prevent the individual from having the full benefit of the new 5-year certification period.</p>	<p>Certificate Expiry – When the certificate expires before the application can be processed by CNSC staff and a renewed certificate issued by the CNSC, the effective date of the certification renewal will be <u>that of the certification decision made by the Commission or a DO, made to coincide with the date of expiry of the existing certification.</u></p>	<p>Neither the Commission nor a DO may renew an expired certification. Therefore, the latest possible effective date of renewal is the date of expiry of the current certification. The situation addressed by the cited guidance is suboptimal, but it can be avoided if the applicant submits a complete application within the normal processing time specified in the REGDOC. Subsection 5.3.5 provides licensees with maximum operational flexibility by allowing the processing of renewal applications – including incomplete ones – that are submitted up to the very end of the certification period. Other, more restrictive approaches were analyzed by CNSC staff and found less effective, since alternatives are known to lead to more instances of non-compliance, causing added administrative burden for both CNSC and licensee staffs.</p>
38.	Page 20 5.3.6 Guidance	Bruce Power, CNA, OPG, NB Power	<p>In guidance, “Limitation” seems to contradict section 5.3.5, which does not specify when a renewal application should be submitted, in that a renewal application requesting an “early” effective date is subject to a 60-day validity window, while a normal renewal is not.</p> <p>CNSC’s suggested wording seems to be written as a requirement.</p>	<p>Limitation – In order to provide licensees with scheduling flexibility, the CNSC allows the renewal of the certification of reactor facility workers at any time before the end of the certificate validity period. This allowance is made because shortening the certification period effectively increases the requalification testing frequency. <u>However, the CNSC will not postpone the effective date of the certification renewal any more than 60 calendar days past the effective date of the application for certification renewal. This</u></p>	<p>CNSC staff agrees that the combination of subsections 5.3.5 and 5.3.6 as currently written results in ambiguity when the application is made within 60 calendar days of the certificate expiry. Consequently, CNSC staff revised both subsections and established an equivalent, but simpler compliance scheme.</p>

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				restriction is imposed to ensure that the proof of worker competency provided at the time of application is relatively recent, and is therefore valid.	
39.	Page 20 5.4, 5.4.1, Page 22 5.5, 5.5.1, 5.5.3 Page 30 & 31 9.4 , 9.4.1, 9.4.2, 9.4.3, 9.4.5 Guidance, 9.5, 9.5.2, 9.5.3, 9.5.4, & Page 36 10.3	Bruce Power, CNA, OPG, NB Power	The term “recertification” is not present in the NSCA or the Class 1 Facilities Regulations.	Replace “Recertification” with “Certification”  For example; Application for ReCertification within Five Years of a Certificate Expiry	In this particular case, the legislation provides no language or guidance directly relevant to the recertification context. The term <i>recertification</i> is universally understood and its usage is already established in the regulatory framework, namely via REGDOC-2.2.3, <i>Personnel Certification: Radiation Safety Officers</i> , and the Canadian Standards Association (CSA) standard PCP-09, regarding the certification of Exposure Device Operators (EDO). The change therefore reflects first a standardization decision. In addition, the proposed term allows for a clearer distinction between the existing CNSC processes and the proposed new processes dealing with the recertification of operations personnel. These new processes are designed to address longstanding regulatory gaps that have caused added burden for CNSC and licensee staffs. Early draft versions referred to “certification within five years...” as suggested by the commenter, but this convention caused confusion for most reviewers. Based on this feedback and the other considerations mentioned, <i>recertification</i> was retrained as an intuitive term improving regulatory clarity.
40.	Page 20 5.4	Bruce Power, CNA, OPG, NB Power	Typo; section 5.2 is for initial certification applications.	In addition to the general provisions specified in subsection 5.1 5.2, an application for certification submitted ...	CNSC staff fixed the failed hyperlink update.
41.	Page 20 5.4.1	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	A worker whose certificate expired more than five (5) years prior to the date of application shall must meet the additional requirements specified later in subsection 5.5.	To avoid duplicating <i>shall</i> statements, the term <i>must</i> was preferred here because the cited paragraph refers the reader to a relevant requirement specified later in Subsection 5.5. Notwithstanding, CNSC staff replaced the “must” statement with a statement of fact under a guidance header.
42.	Page 21 5.4.2 Guidance	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Important Note – To satisfy the condition set by subsection 9(2) of the Class I Regulations, the correct worker competency	The choice of term made by CNSC staff in this case is consistent with the choice made under item #39. The terms <i>certification</i> and <i>recertification</i> form a pair as part of a convention consistent with the legislative basis. The term “initial certification” does not appear in the Act and Regulations. In this revised version of REGDOC-2.2.3 Volume

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				declaration <b>for a recertification</b> is the same as the one required for an <b>initial</b> certification.	III, CNSC staff proposes interrelated changes: the removal of all references to <i>initial certification</i> , in strict adherence with the language of the Act and Regulations; and, the adoption of <i>recertification</i> , given the absence of any explicit legislative language in that case. The adjective <i>initial</i> is not needed when <i>recertification</i> is adopted. As previously mentioned, standardizing personnel certification terminology starting with this REGDOC was one of the key objectives of the revision.
43.	Page 21 5.4.2 b and 5.4.3 b & c.	Bruce Power, CNA, OPG, NB Power	5.4.3 b & c specify “test”, which contradicts section 5.4.2 b, which specifies “examination”. <b>MAJOR Impact:</b> Licensees cannot implement the REGDOC when two sections define contradicting requirements to be implemented at the same time.	<b>5.4.2 Worker Competency Declaration</b> In accordance with regulations, the application shall state that the worker: b. has successfully completed the applicable training program and <b>requalification tests examination</b> referred to in the licence; ...	Licensees can comply with paragraphs 5.4.3.a, b, and c by submitting the information required by the CNSC at the time of application, although CNSC staff understands the resulting conundrum because the regulations do not address recertification.  In accordance with the graded approach, CNSCs staff is of the opinion that requiring a full suite of certification examinations under subsection 5.4 would be excessive. CNSC staff instead proposes a generic interpretation of the word “examination” in context of a recertification, and the use the requalification tests as sufficient examination in context. This preferred option is consistent with the requalification requirement to be met every five years and is possible because modern licences do not, in fact, refer to any examination, pointing instead to this REGDOC-2.2.3. The alternative would be to require a suite of certification examinations in blind adherence with Class I Regs 9(2)(b). However, this second option would create undue added regulatory and administrative burden for both CNSC and licensee staffs. CNSC staff added guidance to the appropriate subsections to clarify the proposed approach, but the declaration to be made by applicants as specified under 5.4.2.b is the correct one.  Since this issue is complex, CNSC staff proposes to provide further details at the planned workshop.
44.	Page 21 5.4.4 c, d, e & f	Bruce Power, CNA, OPG, NB Power	Section 19.2 requires licensees to retain, and make available to the CNSC upon request, personnel training records, and should not be required to submit such records with certification applications. <b>MAJOR Impact:</b> Increased requirement and administrative burden beyond a	c. <b>the date of</b> the knowledge-based requalification test successfully completed by the worker, <b>including the worker’s answers and the grade, in percentage, obtained by the worker;</b> d. <b>the date of</b> the performance-based requalification test or	The CNSC sets requirements according to the graded approach. The information to be submitted upon application as sufficient proof of competency is at the discretion of the CNSC, as regulator and certifying body. CNSC staff acting on behalf of the Commission must be satisfied with the evidence presented to them before making informed recommendations and decisions regarding the qualification of workers seeking certification by the CNSC. The context of subsection 5.4.4 is a recertification following a certificate expiry, not a routine case. The worker may have been inactive for up to five (5) years by the time the application is made. This situation poses a risk commensurate with the duration of the period of inactivity. The current regulatory framework provides no applicable requirement or guidance, a known regulatory gap that has

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			normal renewal application with no obvious or corresponding improvement to nuclear safety.	series of tests successfully completed by the worker; <b>e. a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker; and</b> <b>f. a recording, transcript, or the minutes of the mandated management interview.</b> <b>e. the date of completion of any period of work under supervision, including the total number of supervised work hours; and</b> <b>f. the date of the management interview.</b>	caused added burden for both CNSC and licensee staffs in the past. The proposed process is elastic and vary in scope with the length of the period of inactivity, eliminating the need to define “prolonged inactivity”. This is the very approach that would be recommended by ECOs if an application for recertification was received today. Under the current regulatory framework, the DO would delay the recertification until satisfactory proof of competency was received by the applicant. The implementation of a standardized process will ultimately save time and effort for all parties involved. CNSC staff does not intend, in this non-routine case, to postpone the verification of the pertinent records until an inspection can be conducted. Baseline inspections target personnel record samples to ensure licensee compliance with general recordkeeping requirements. The information required at the time of application is immediately pertinent to the certification of the worker concerned. Supplementing the new recertification processes, the REGDOC establishes a new approach in dealing with certified workers who announce their retirement or otherwise cease to be employed in a designated position. Workers in such circumstances will neither be decertified nor deemed uncertified, but will be removed from duty until the certification expires, making their eventual reinstatement to duty possible. This approach reduces the probability that any worker will be seeking recertification and licensees will be able to avoid nearly all recertification cases.
45.	Page 22 5.5.2 Guidance	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Important Note – To satisfy the legal requirement set by subsection 9(2) of the Class I Regulations, the correct worker competency declaration <b>for a recertification</b> is the same as the one required for an <b>initial</b> certification.	This comment has been addressed already – see item #42.
46.	Page 23 5.5.3 b ii & iii	Bruce Power, CNA, OPG, NB Power	Section 19.2 requires licensees to retain, and make available to the CNSC upon request, personnel training records, and should not be required to submit such records with certification applications <b>MAJOR</b>	ii. <b>the date of</b> the knowledge-based certification examination successfully completed by the worker, <b>including the worker’s answers and the grade, in percentage, obtained by the worker;</b>	This comment has largely been addressed already – see item #44. However, the rationale already supplied is even more relevant to subsection 5.5. The context is one of two cases: either the worker was previously decertified by the CNSC, or the worker’s certification expired more than five (5) years ago. In the first case, the CNSC rarely decertify workers, and it does so only when the worker has demonstrated significant shortcomings. In the rare, and arguably unlikely, event that the licensee subsequently requests the recertification of the same worker, the CNSC is justified in requiring a more detailed proof of competency at the time of application than is the case for a

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			<b>Impact:</b> Increased requirement and administrative burden beyond a normal renewal application, with no obvious or corresponding improvement to nuclear safety.	iii. <b>the date of</b> the performance-based certification examinations successfully completed by the worker;	“normal renewal”, including the remediation of the decertification basis. This approach is consistent with the graded approach and the existing removal-from-duty and reinstatement processes. In the second case, the worker has been uncertified for more than five (5) years, and has therefore skipped an entire continued training and requalification testing cycle, posing an obvious added risk compared to certified workers who have been frequently employed, continually trained, and recently retested. CNSC staff does not intend, in those two exceptional cases, to rely on a potential later inspection before verifying the proof of competency necessary to make an informed recommendation to the DO or the Commission. The added burden is minimal compared to the status quo, and occurrences as rare as the circumstances relevant to subsection 5.5 cannot be said to cause added burden.
47.	Page 23 5.5.4 a, b, c & d			a. <b>the tailored training needs analysis (TNA) or a summary of the said TNA;</b> b. <b>the individual training plan (ITP) or a summary of the ITP;</b> c. <b>the knowledge-based certification examination successfully completed by the worker,</b> <b>including the worker’s answers and the grade, in percentage, obtained by the worker;</b> d. <b>the performance-based certification examination successfully completed by the worker;</b>	This comment has sufficiently been addressed already – see items #44 and #46.
48.	Page 23 5.5.4 e & f			e. <b>a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker; and</b> f. <b>a recording, transcript, or the minutes of the mandated management interview.</b>	This comment has sufficiently been addressed already – see items #44 and #46.

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				e. the date of completion of any period of work under supervision, including the total number of supervised work hours; and f. the date of the management interview.	
49.	Page 23 6.1	Bruce Power, CNA, OPG, NB Power	Suggest adding the following guidance.	Important Note – To satisfy the legal requirement set by subsection 11(1) of the Class I Regulations, the CNSC shall notify a licensee and the person of a proposed decision not to certify the person, as well as the basis for the proposed decision, at least 30 days before refusing to certify the person.	The comment was noted. The purpose of subsection 6.1 is not to duplicate the regulations, but to provide contextual information for licensee staffs and other readers.
50.	Page 24 6.3	Bruce Power, CNA, OPG, NB Power	Requirements should use the word “SHALL”.	All such requests <del>shall</del> should contain the information and be transmitted to the CNSC ...	The term <i>should</i> was used under subsection 6.3 because some of the information referenced does not apply to all relevant cases. The text was revised to avoid the wording altogether.
51.	Page 24 6.3 & Page 24 7.	Bruce Power, CNA, OPG, NB Power	Sections 6.3 & 7 should not refer to all of 5.1; just 5.1.2 to 5.1.4. Section 5 is titled "Personnel Certification Applications", while section 6 is related to refusal to certify and decertification.	Replace 5.1 with 5.1.2 to 5.1.4, for example;  ... with the general provisions specified in subsections <del>5.1</del> 5.1.2 to 5.1.4.	The document structure was revised to avoid the issue.
52.	Page 24 7 a.	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	... specifying the <del>effective</del> date of completion of the initial or continuing training referenced in section 10;	The term “effective date” is universally understood and used consistently throughout the document. The proposed REGDOC is requiring that the applicant specify an effective date of completion, in part to ensure that applications are duly completed individually, and not recycled applications. Another reason is that CNSC staff cannot proceed without receiving the relevant attestation, which of little legal value without an effective date.
53.	Page 26 9 c.	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	c. shift supervisor ( <del>SS</del> ).	This comment has already been addressed – see item # 22.



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54.	Page 26 9.1.1	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear, and should use wording similar to section 10.1.1.	The worker must have met, prior to the start of their initial training, the <b>basic</b> prerequisites specified in subsection 12.2 as part of the personnel selection program mandated in section 12. <b>OR</b> The worker must have met, prior to the start of their initial training, any applicable position specific prerequisites set by the licensee as part of the personnel selection program mandated in section 12.	Subsection 9.1.1 correctly refers to the basic prerequisites applicable to all operations personnel listed under 12.2.1. This subsection already encompasses criteria set by the licensee. In the case of operations personnel, it is necessary to distinguish between basic and supplementary prerequisites because the supplementary prerequisites defined under 12.2.2 apply to shift supervisors only. This approach avoids repeating detailed lists of requirements applicable to all positions. CNSC staff revised subsection 9.1.1 for added clarity, but the subsection continues to reference the basic prerequisites applicable to all operation personnel. Conversely, subsection 10.1.1 pertains to SHPs only. In that case, the basic prerequisites specified under 12.2.1 do not apply, which is why section 10 is more generic. CNSC staff revised section 10 for added clarity.
55.	Page 26 9.1.2	Bruce Power, CNA, OPG, NB Power	This revision of the requirement focusses on the worker, while current version focusses on the training.  The proposed wording is not aligned with the Science Fundamentals and Equipment Principles (SF&EP/Generals) training that has been established in accordance with a Systematic Approach to Training (SAT) and accepted by the CNSC. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or	The worker must have successfully completed general training based on a training system and must possess adequate knowledge of the applied science and engineering principles relevant to the design and operation of the reactor(s) and the systems, subsystems, and equipment installed in the reactor facility identified in the licence. covering the science fundamentals and equipment principles relevant to the operation of a reactor facility.	In order to allow the SAT implementation at future facilities, the proposed REGDOC essentially defines science fundamentals in a generic manner without contradicting the current CANDU terminology or imposing the CANDU SAT outcome on non-CANDU facilities. This performance-based description replaces the existing prescriptive list of training topics, and merely clarifies the regulatory intent that should guide the SAT. Furthermore, the generic language proposed in the revised REGDOC is consistent with the terminology used by the World Association of Nuclear Operators (WANO) in describing the operator fundamentals implemented by the industry. Notwithstanding, CNSC staff reviewed the subsection for potential improvement.



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			corresponding improvement to nuclear safety.		
56.	Page 26 9.1.2	Bruce Power, CNA, OPG, NB Power	<p>9.1.2 does not address how a licensee confirms a worker “possesses adequate knowledge”, while current version requires formal written evaluations. Section 13.4 does require formal evaluations, but the linkage to 9.1.2 is unclear.</p> <p><b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.</p>	<p>Add: <b>This training shall include formal learner evaluations, mandated in section 13.4, that confirms at the completion of the training, the person has adequate knowledge to perform the duties of the relevant designated position.</b></p>	<p>Part III already states that all training programs must include formal learner evaluations. This is a training program requirement that only needs to be stated once and will not be repeated throughout the document. Part II is not intended to specify how the licensee should measure trainee progress or confirm that workers possess adequate knowledge. Neither does Part II set licensee program compliance verification criteria (CVC), many of which are specified in complementary documents.</p> <p>Part II describes performance-based worker qualifications relevant to the individual certification basis of each worker, while Part III specifies the support program requirements to be implemented by the licensee as part of the broader licensing basis. In order to facilitate regulatory oversight and improve regulatory clarity, this revised REGDOC decouples qualifications strictly applicable to the worker upon application (which are verified by ECOs at the time of application) from the requirements continuously applicable to the licensee as part of the broader licensing basis (which are verified by various staff members and divisions during inspections).</p> <p>From the perspective of the regulator and certifying body, the worker competency evaluations which confirm that the worker has adequate knowledge to perform the duties of the relevant designated position are the certification examinations administered by examiners, not the formal learner evaluations administered by trainers. This is a fundamental distinction explained in Part III. The relevant series of certification examinations is correctly mandated in Part II, along with the other worker qualifications. The formal learner evaluations are not worker qualifications, but training program components correctly prescribed Part III.</p> <p>Because the document structure departs from previous versions, the scope defined in the introduction includes an overview of the new document structure, including a description of the parts, which description is partially repeated at the start of each part. Given that Parts II and III are published in the same REGDOC and that Part II consistently refers the reader to the associated program requirements specified in Part III, the linkage is sufficiently clear without duplicating content.</p>

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57.	9.1.3 Page 26	Bruce Power, CNA, OPG, NB Power	<p>This revision of the plant experience requirement focusses on a worker’s “knowledge”, while current version focusses on a set period of time.</p> <p>9.1.3 does not address how a licensee confirms a worker “possesses adequate knowledge”. Section 13.4 requires formal evaluations be a component of training, but the linkage to 9.1.3 is unclear.</p> <p>For new facilities, information on physical layout, time to operate, and organizational structure may not be available until commissioning is under way.</p> <p>“Time to operate” and “organizational structure” are not addressed before the start of the station-specific phase of training.</p> <p><b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensees’ training system (SAT) process is diminished.</p>	<p>The worker must have successfully completed, prior to the start of the station-specific training specified next in sub-subsection 9.1.4, plant familiarization training based on a training system.</p> <p><b>Guidance:</b> <b>Plant familiarization training should address:</b> <b>a. the physical layout of the reactor facility identified in the licence, including the location and size of the major systems, subsystems and equipment., and the time and effort required for field personnel to operate, upon direction by certified workers, the systems, subsystems, and equipment located outside of the main control room (MCR); and</b> <b>b. the organizational infrastructure necessary to operate the said reactor facility under normal, abnormal, and emergency conditions, including the mandate, roles and responsibilities of the key personnel and groups of personnel.</b></p>	<p>The inclusion of training program requirements in Part II has already been addressed – see item #56. Concerns over FOAK technology and new build commissioning have also been addressed – see item #3.</p> <p>The CNSC currently requires (for the relevant candidates) a minimum of two (2) years of prior work experience at the plant (or various equivalencies) prior to their entry in the relevant initial training programs. The proposed REGDOC replaces this prescriptive requirement with an optional consideration as an integral part of a mandatory personnel selection program, which is already implemented at current CANDU sites. This is a flexible approach compared to other regulatory bodies. However, the prior prescriptive approach did not guarantee meaningful employment of the candidates and served to delay, in some cases needlessly, their intake into the initial training programs. CNSC staff therefore recommends the adoption of a performance-based approach allowing for training to be tailored according to individual learner needs.</p> <p>As an integral part of this regulatory change, CNSC staff further proposes: firstly, a clearer purpose for any potential work experience required by the licensee; and secondly, the implementation of just-in-time familiarization training prior to candidate entry in a suitable NPP-specific training program. The greater diversity of candidates seen in recent years means that some candidates have had less exposure to field work than others. Whether plant familiarization is conducted immediately before or as an integral part of NPP-specific training should be of minimal consequence on the SAT, but empirical data suggests that candidates should invest some time familiarizing themselves with the reactor facility infrastructure, physical and organizational, before the start of the NPP-specific training. Candidates will be better prepared for the NPP-specific training and the latter can serve to reinforce the basic knowledge gained during the plant familiarization training.</p> <p>The proposed performance-based approach provides licensees with all the needed flexibility to meet the safety goal of the familiarization training using whatever methodology works best, including any combination of OJT, mentorship, and/or meaningful employment. Notwithstanding, CNSC staff has removed a subset of the original text, which was deemed potentially problematic.</p>

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58.	Page 27 9.1.4	Bruce Power, CNA, OPG, NB Power	<p>9.1.4 does not address how a licensee confirms a worker “possesses adequate knowledge”.</p> <p>Section 13.4 does require formal evaluations be a component of training, but the linkage to 9.1.4 is unclear.</p> <p><b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.</p>	<p>The worker must have successfully completed <b>baseline</b> station-specific training based on a training system <b>and must possess adequate knowledge</b> of the design and the <b>precise</b> operation, under normal, abnormal, and emergency conditions, of the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.</p> <p><b>This training shall include formal learner evaluations, mandated in section 13.4, that confirm, at the completion of the training, the person has adequate knowledge to perform the duties of the relevant designated position.</b></p>	<p>The inclusion of training program requirements in Part II has already been addressed – see item #56. Part II sets worker qualifications, not licensee program CVC.</p> <p>The term <i>baseline</i> was used to underline the difference between the baseline and supplementary training for shift supervisors. Notwithstanding, it may be omitted here without negative consequence.</p> <p>The term <i>precise</i> is borrowed from WANO’s operator fundamentals, which licensees have implemented at CANDU sites. Operations personnel are expected to precisely control, cool, and contain. This is fundamental part of the job description and the key difference between generally knowing something about nuclear reactor operations and being able to actually, that is precisely, operate a nuclear reactor.</p> <p>The worker must likewise possess <i>adequate</i> knowledge. The safety goal is not to implement SAT-based training programs – that is merely one of the means used to achieve the safety goal. The safety goal is to ensure workers are qualified to carry out the duties of their position, which in this particular case means they must possess adequate station-specific knowledge, depending on the designated position. This safety goal is verified by means of the certification examinations specified shortly after.</p> <p>CNSC staff does not intend to modify the text as suggested.</p>
59.	Page 27 9.1.4 Guidance	Bruce Power, CNA, OPG, NB Power	<p>1) As written, the statement is unclear.</p> <p>2) Typo.</p>	<p>Clarification – The <b>baseline</b> station-specific training covers the station-specific knowledge that, for ASO candidates, is required of a certified ASO or, for RO and shift supervisor candidates, is required of a certified RO. <b>In other words, Shift supervisors are expected to possess station specific knowledge equivalent to that of ROs, in addition to the supplementary station-specific knowledge specified later in subsection 9.29.2</b></p>	<p>This comment has already been addressed. CNSC staff revised the text.</p> <p>A number of hyperlinks failed and appear as typographic errors in the draft. This technical issue will be corrected before final publication.</p>

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60.	Page 27 9.1.5	Bruce Power, CNA, OPG, NB Power	Implementation of a system's approach to training should ensure nuclear emergency response training is addressed, if required by the analysis.  As written, the statement is unclear.  <b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensees' training system (SAT) process is diminished.	Delete 9.1.5 or; as a minimum, revise as follows: The worker must <b>have successfully completed possess adequate knowledge of</b> training on nuclear emergency response (NER) and the management of beyond-design-basis accidents (BDBA), <b>based on a training system. including the roles and responsibilities of certified workers regarding emergency operating procedures and severe accident management.</b>	It is not sufficient for workers to attend SAT-based training. They must possess adequate knowledge as a result of their training and/or their prior education and experience. That is the safety goal.  The emphasis represents a particular CNSC staff concern post-Fukushima, but it does not prevent the licensees from applying the SAT and cover all the relevant knowledge depending on the designated position.
61.	Page 27 9.1.6	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear. <b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensees' training system (SAT) process is diminished.	The worker must have successfully completed on-the-job training (OJT) based on a training system <b>covering the relevant knowledge and skills (K&amp;S) and safety-related attributes acquired or reinforced most effectively through OJT.</b>	The text specifies a performance-based objective and a natural purpose for OJT, and therefore clarifies the regulatory intent. This purpose does not conflict with the SAT process, since licensees must apply the SAT to determine what K&S and safety-related attributes should be covered by means of OJT. The specified purpose is primarily aimed at future operations and licensees, which may include organizations and personnel less cognisant of first principles than the current, CANDU reactor licensees.
62.	Page 27 9.1.7	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear. <b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensees' training system (SAT) process is diminished.	The worker must have successfully completed simulator-based training based on a training system <b>covering the relevant K&amp;S and safety-related attributes acquired or reinforced most effectively through simulated scenarios.</b>	This comment has already been partially addressed – see item #61. The revised REGDOC is forward-looking and not written exclusively in reference to CANDU licensees. Future licensees may not automatically recognize the concepts being described. CNSC staff removed the prior prescriptive lists of training topics in order to align the REGDOC with the SAT and REGDOC-2.2.2. These lists in effect defined each training program component without the need for further description. Without the topic lists, the revised REGDOC must describe the mandatory training program components and other requirements in some generic, performance-based manner in order for all potential readers to recognise the concepts and objects being referenced.  Accordingly, Part II specifies generic worker qualifications and provides a performance-based safety goal for each qualification. The SAT can be applied to determine the

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					specific topics for each training component and meet the associated safety goal. But the SAT should be guided by these ultimate, performance-based safety goals. Part II does not contain program-level CVC, but worker qualifications verified at the time of application as part of the certification processes described in Part I. Training programs are verified during inspections by a distinct CNSC division using REGDOC-2.2.2 <i>Personnel Training</i> as primary reference.
63.	Page 27 9.1.8	Bruce Power, CNA, OPG, NB Power	In October 2021, OPG/BP/NBP recommended the CNSC allow licensees to conduct science fundamentals, equipment principles and radiation protection training prior to commencing the initial certification training program, and the requirement to conduct a separate general examination be removed. <b>MAJOR Impact:</b> CNSC's initial response was that this proposal would not be addressed for this revision. Industry wants to ensure that this proposal is considered for next revision.	Delete section 9.1.8, such that a separate Knowledge-based General Certification Examination is not required.	Examinations provide an instantaneous, imperfect, and short-live measure of knowledge retention. No examination assesses 100% of the necessary knowledge and none of the certification examinations requires a 100% pass mark. Individual exam results are indicators, not absolute proof of worker competency. Therefore, the removal on any one examination could significantly reduce the validity of the proof of competency overall, which the CNSC relies on to infer sufficient worker competency at the completion of the initial training. The industry has made a compelling argument in favour of the multiple-choice questions (MCQ) methodology for general examinations by arguing that the said methodology allowed a more comprehensive sampling of science fundamentals. The CNSC has approved this methodology based on this argument as well as the current state of the art in support of MCQ as a valid methodology, but the validity of the MCQ methodology is predicated on sufficient sampling; that is, a relatively large number of questions, compared to the modified essay questions (MEQ) methodology. The CNSC has furthermore removed the validity period (aka expiry date) from the knowledge-based exam results in order to allow licensees to administer the general exam at any time, and thereby form pools of suitable candidates well ahead of their eventual or potential entry in the NPP-specific training. Now the industry is proposing to remove the general examination altogether or merge it with the NPP-specific examination, which in either case would reduce the sampling rate of science fundamentals and consequently hamper the effectiveness of the MCQ methodology. CNSC staff presently sees no rationale or necessity that would justify recommending that the CNSC accepts a lesser proof of worker competency at the time of application for certification.
64.	Page 27 9.1.8	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear and should be aligned with current wording in CNSC EG1. <b>MAJOR Impact:</b>	The worker must have successfully completed a general knowledge examination <b>that samples topics covered in the training specified in section 9.1.2. confirming that the worker</b>	This comment has already been partially addressed. Furthermore, CNSC-EG1 is currently undergoing a revision and will be made to align with the revised REGDOC-2.2.3 Volume III where necessary. That said, CNSC-EG1 is CANDU-centric and can only apply to CANDU reactors. The proposed REGDOC aims to be technologically-neutral and cannot be in all cases aligned with existing CANDU-specific documentation. Examination and testing methodologies are not specified in this REGDOC, but in CVC

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			Regulatory uncertainty due to the inconsistency with the current examination process as mandated by CNSC EG1	possesses the general knowledge necessary to perform the duties of the pertinent designated position safely and competently.	documents, including CNSC-EG1 and CNSC-EG2. Methodologies relevant to non-CANDU facilities will likewise be specified in other documents. Detailed requirements specified in complementary documents will no be repeated in this REGDOC. Capturing overly prescriptive requirements in this REGDOC would also reduce the flexibility required to deal effectively with future operations, including, but not limited to, SMRs. Notwithstanding, CNSC staff revised the text here and in other parts of the text to reduce the potential uncertainty surrounding the word “confirm”.
65.	Page 27 9.1.9	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear and should be aligned with current wording in CNSC EG1. <b>MAJOR Impact:</b> Regulatory uncertainty due to the inconsistency with the current examination process as mandated by CNSC EG1.	The worker must have successfully completed a station-specific knowledge examination that samples topics covered in the training specified in section 9.1.4 confirming that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently.	This comment has already been addressed – see item #64.
66.	Page 27 9.1.10	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear and should be aligned with current wording in CNSC EG2.  CNSC proposal is a significant change in the scope of the initial simulator-based examination mandated by CNSC EG2. <b>MAJOR Impact:</b> Regulatory uncertainty due to the inconsistency with the current examination process as mandated by CNSC EG2.	The worker must have successfully completed, within two (2) years of the application for certification, a performance-based certification examination conducted in a full-scope simulator or an approved alternative to the full scope simulator. This examination samples topics covered in the training specified in section 9.1.7 and is aimed at providing assurance that, at the time of their certification, workers have the level of knowledge and skills required to respond to abnormal operating conditions at their	This comment has already been addressed – see item #64.



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				facility. confirming that the worker can perform the duties of the pertinent designated position safely and competently.	
67.	Page 28 9.1.11	Bruce Power, CNA, OPG, NB Power	The concept of “Work Under Supervision (WUS)” cannot be applied to new facilities. <b>MAJOR Impact:</b> Document cannot be implemented as written for new facilities.	CNSC should develop criteria or an exemption that can be applied to a newly built or first of a kind facility.	The requirement set under subsection 9.1.11 is performance-based and will apply to all future reactor facilities.
68.	Page 28 9.1.12 Page 31 9.4.5 Page 32 9.5.6	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear and the Industry suggested revision focusses the requirement on the interview, not the manager.  “Authorized” manager is undefined. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	The worker must have successfully undergone a formal management interview  conducted by an authorized manager that who thereby confirmed the worker can perform the duties of the pertinent designated position safely and competently.	The CNSC insists that the management interview be carried out by a manager duly authorized, by the licensee, to represent the licensee. It is not the case that anyone who happens to be a manager, regardless of their role and position in the organization, should conduct this interview. CNSC staff has revised the text so as to be more explicit and reduce ambiguity surrounding the word <i>authorized</i> .
69.	Page 28 9.1.12 Page 31 9.4.5 Page 33 9.5.6	Bruce Power, CNA, OPG, NB Power	The following guidance regarding is repeated throughout the document:  1) when the management interview is conducted	Suggest move to Glossary section on Page 69.	The glossary may not be used in the suggested manner. Instead, CNSC staff revised the text to include guidance relevant to entire sections or subsections.

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	<b>Page 28</b> <b>9.1.10</b> <b>Page 29</b> <b>9.3.2/9.3.3</b> <b>Page 30</b> <b>9.4.2/9.4.3</b> <b>Page 32</b> <b>9.5.3/9.5.4</b>		2) examination and test expiry dates		
70.	<b>Page 28</b> <b>9.2.1</b>	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	The worker must have met the supplementary prerequisites for shift supervisors specified in subsection 12.2 <b>as part of the personnel selection program mandated in section 12.</b>	The text was revised as suggested.
71.	<b>Page 28</b> <b>9.2.2</b> <b>Page 29</b> <b>9.2.3</b>	Bruce Power, CNA, OPG, NB Power Bruce Power, CNA, OPG, NB Power	<p>The concept of supplementary training and a subsequent supplementary examination is linked to the operating structure at currently licensed facilities and does not allow for different operating organization structures that may be proposed for future SMRs.</p> <p>Current list of designated positions in section 4 implies these positions and the related training/examinations will be required at all future facilities.</p> <p><b>MAJOR Impact:</b> Does not allow for different operating organization structures that may be proposed for future SMRs.</p>	<p>Add guidance to explain that this training and examination is only required at licensed facilities that use an operating organization as reflected by Section 4.</p>	<p>As previously stated, the requirements set in REGDOC 2.2.3 Volume III apply to existing designated positions part of existing management systems, as explicitly stated in the scope and in other parts of the REGDOC. LCHs are the appropriate regulatory instrument to document exceptions, not REGDOCs. FOAK concerns have already been largely addressed – see items #3 and #8.</p> <p>REGDOC 2.2.3 Volume III does not prescribe any specific COO. Part II lists generic qualifications that are likely to apply regardless of the COO implemented, and the REGDOC can be amended at later date if required. That said, workers may be trained to the highest level and possess multiple qualifications or an ultimate qualification, but management systems and minimum shift complements (MSC) meeting the requirements of the CNSC will, in all probabilities, entail the presence, local or remote, of: (a) an ultimate decision-maker (i.e., some sort of shift supervisor) overseeing an operator or crew of operators; or (b) a sole or a series of operators having all decision-making powers for the safe and competent operation of their unit. A sound management system entails well-defined roles and responsibilities, including clear delegated authorities. Certified workers on watch as members of the MSC must therefore be qualified to carry the duties of the position they occupy at the time, regardless of whether or not they are qualified to stand duty in other designated positions. The baseline and supplementary qualifications are written so as not to overlap, by design. Therefore, certified workers needing to be qualified for</p>



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					employment in both RO and shift supervisor positions will need to meet all qualifications, regardless of the COO. Personnel certification schemes departing significantly from past practices can be specified in LCHs.
72.	Page 28 9.2.2	Bruce Power, CNA, OPG, NB Power	<p>9.2.2 does not address how a licensee confirms a worker “possesses supplementary knowledge”.</p> <p>Section 13.4 does require formal evaluations be a component of training, but the linkage to 9.2.2 is unclear.</p> <p><b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.</p>	<p>The worker must have successfully completed supplementary station-specific training, based on a training system, <b>and must possess</b> of the supplementary knowledge specifically required of shift supervisors concerning the design and the <b>precise</b> operation, under normal, abnormal, and emergency conditions, of the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.</p> <p><b>This training shall include formal learner evaluations, mandated in section 13.4, that confirm at the completion of the training, the person has adequate knowledge to perform the duties of the relevant designated position.</b></p>	<p>The inclusion of training program requirements in Part II has already been addressed – see (among others) item #56. Part II sets worker qualifications, not licensee program CVC.</p> <p>REGDOC-2.2.3 Volume III is a personnel certification REGDOC, not a training REGDOC. REGDOC-2.2.2 <i>Personnel Training</i> already details the components of a compliant training system, including learner evaluations. In the personnel certification context, the regulator and certifying body relies on the certification examinations and requalification tests (administered by independent examiners) to confirm adequate knowledge retention, which are therefore correctly specified in Part II. The purpose of learner evaluations (administered by trainers) is explained in part III.</p>
73.	Page 29 9.2.3	Bruce Power, CNA, OPG, NB Power	<p>As written, the statement is unclear and should be aligned with current wording in CNSC EG1.</p> <p><b>MAJOR Impact:</b> Regulatory uncertainty due to the inconsistency with the current examination process as mandated by CNSC EG1.</p>	<p>The worker must have successfully completed a supplementary station-specific knowledge examination <b>that samples topics covered in the training specified in section 9.2.2 confirming that the worker possesses the supplementary station-specific knowledge specifically required of shift</b></p>	<p>The inclusion of training program requirements in Part II has already been addressed – see (among others) item #56. Part II sets performance-based worker qualifications, not licensee program CVC.</p> <p>The safety goal for station-specific is not to “sample topics covered during training”. That is merely a means to achieve the safety goal, which is to confirm the candidate possess adequate station-specific knowledge. Part II contains generic descriptions and specify performance-based goals for the training components</p>

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				supervisors to perform their duties safely and competently.	
74.	Page 29 9.3.1	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	The certified worker must have successfully <b>completed</b> continuing training based on a training system <b>comprising knowledge and performance-based refresher and update components delivered by means of effective instructional methods, including simulator-based training.</b>	The inclusion of training program requirements in Part II has already been addressed – see (among others) item #56. Part II sets performance-based worker qualifications, not licensee program CVC. Furthermore, this requirement is not new and already implemented at all CANDU sites. The typographic error has been corrected.
75.	Page 29 9.3.3	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	... conducted in a full-scope simulator or approved alternative <b>simulator</b> confirming that the worker ...	The word <i>alternative</i> by definition implies the approved alternative is also a simulator.
76.	Page 30 9.3.4	Bruce Power, CNA, OPG, NB Power	For consistency, requirements should be written using “SHALL”.	The certified worker <b>shall must</b> have been sufficiently employed in the pertinent designated position to maintain an adequate competency level.	This concern has already been addressed – see item #41.
77.	Page 30 9.4.1	Bruce Power, CNA, OPG, NB Power	Use of the term “tailored” training is new terminology and expectations are unclear. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	<b>9.4.1 Individual Tailored Training Plan</b> The worker must have successfully completed <b>approved tailored</b> training, comprising <b>of</b> knowledge and performance-based refresher and update training, based on a <b>documented, tailored training needs analysis (TNA) and a</b> documented individual training plan (ITP).  At a minimum, this <b>tailored</b> training shall cover any scheduled refresher training and update	The term <i>tailored</i> is used in the proposed REGDOC instead of the term <i>remedial</i> when training must be tailored (synonyms include customized, tailor-made, specialized) to account for the individual training needs of a single worker, as opposed to the training programs designed to meet the needs of cohorts of trainees. The term <i>remedial</i> is avoided in this and other relevant cases because the root-cause may not always be an observed deficiency. The term <i>remedial</i> and <i>remediation</i> are used consistently throughout the proposed REGDOC when the root-cause unequivocally entails an observed knowledge or performance deficiency. Likewise, the meaning of an individual TNA is clear in context. Licensee staffs have no choice but to conduct an individual (as opposed to a program-level) TNA when producing an individual training plan. The scope of this TNA will be commensurate with the specific needs of the individual as situation dictates. The terms tailored training, individual TNA, and ITP have been retained in all cases when the context is individual, rather than group-based, but the usage was verified for consistency throughout the document. A new definition has also been added to the glossary to clarify the term.

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				training, including any simulator-based training, that the worker missed during the interim period between the certificate expiry and the application for recertification.	
78.	Page 30 9.4.1	Bruce Power, CNA, OPG, NB Power	<p>An individual training plan includes the completion of a needs assessment and does not need to be mandated.</p> <p><b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensees' training system (SAT) process is diminished.</p>	<p><b>9.4.1 Individual Tailored Training Plan</b> The worker must have successfully completed <b>approved tailored</b> training, comprising of knowledge and performance-based refresher and update training, based on a <b>documented, tailored training needs analysis (TNA) and a</b> documented individual training plan (ITP).</p> <p>At a minimum, this <b>tailored</b> training shall cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the certificate expiry and the application for recertification.</p>	This comment has already been addressed – see item #77.
79.	Page 30 9.4.2	Bruce Power, CNA, OPG, NB Power	<p>Not aligned with CNSC document “Requirements for the Requalification Testing of Certified Shift Personnel at Nuclear Power Plants”, Revision 2, May 1, 2009.</p> <p>Industry suggested change in wording reflects current testing process as mandated by CNSC document “Requirements for the Requalification</p>	<p>The certified worker must have successfully completed, within two (2) years of the application for recertification, a knowledge-based requalification test or series of tests <b>aimed at demonstrating confirming</b> that the worker has retained the knowledge necessary to perform the duties of the pertinent</p>	CNSC staff revised the draft REGDOC using an alternate wording. However, the proposed REGDOC will not be made to replicate past terminology without due consideration.

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			Testing of Certified Shift Personnel at Nuclear Power Plants”, Revision 2, May 1, 2009. <b>MAJOR Impact:</b> Regulatory uncertainty due to the inconsistency with the current process as mandated by CNSC document: Requirements for the Requalification Testing of Certified Shift Personnel at Nuclear Power Plants”, Revision 2	designated position safely and competently	
80.	Page 30 9.4.3	Bruce Power, CNA, OPG, NB Power	Not aligned with CNSC document” Requirements for the Requalification Testing of Certified Shift Personnel at Nuclear Power Plants”, Revision 2, May 1, 2009.  Industry suggested change in wording reflects current testing process as mandated by CNSC document ”Requirements for the Requalification Testing of Certified Shift Personnel at Nuclear Power Plants”, Revision 2, May 1, 2009. <b>MAJOR Impact:</b> Regulatory uncertainty due to the inconsistency with the current process as mandated by CNSC document: Requirements for the Requalification Testing of Certified Shift Personnel at Nuclear Power Plants”, Revision 2.	The certified worker must have successfully completed, within two (2) years of the application for recertification, and in a lead role, a comprehensive simulator-based requalification test aimed at demonstrating confirming that the worker can perform the duties of the pertinent designated position safely and competently.	This comment has already been addressed – see item #79.
81.	Page 34 10.1.2	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Irrespective of any applicable prerequisites set by the licensee	The text was revised as suggested.

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				as part of the personnel selection program, the The worker shall:	
82.	Page 34 10.1.3	Bruce Power, CNA, OPG, NB Power	<p>CNSC has eliminated Section 19, Transfer to another Nuclear Power Plant, for the SHP.</p> <p>Under the current model, a licensee could provide gap training on systems, etc. and then present a candidate for certification.</p> <p><b>MAJOR Impact:</b> For a new facility, it is unclear how a licensee could certify an SHP (Senior Health Physicist).</p>	<p>Reinstate the requirements given in current REGDOC in <b>Section 19: Transfer to another Nuclear Power Plant</b></p> <p>A person, who holds a certification as senior health physicist at a given Canadian NPP, seeking certification for the same position after transferring to another NPP shall, at the time of certification at this NPP, meet the requirements specified in subsections 19.1 to 19.3.</p> <p>19.1 Training requirements ... 19.2 Nuclear power plant management interview .. 19.3 CNSC examination ...</p>	<p>The current personnel transfer process, which applies to SHPs only, has been replaced by a universal transfer process applicable to all trainees and certified workers. The improved process states that transferred trainees and certified workers may be exempted from retaking general training, whatever that may be for SHPs, based on the SAT. The revised REGDOC no longer specifies training topics, relying instead on the SAT to determine training program content. The certification requirements for a transferred SHP are therefore the same as for any SHP, as per Section 10. These requirements include initial training, an interview, and an examination, which are the same components comprising the current “transfer process”, save the prescribed training topics. CNSC staff no longer aim to prescribe training topics. Since the training required under 10.1.4 must be SAT-based, the topics to be included is the initial training of transferred SHPs is entirely within the control of the licensee. The management interview and examination administered by CNSC staff remains unchanged in all cases. There may be a need to provide further SHP-specific guidance to fully explain the departure from the current prescriptive approach. This topic could be discussed further during the stakeholder workshop.</p>
83.	Page 34 10.1.3	Bruce Power, CNA, OPG, NB Power	<p>Increases current requirement from six months to two years and it could be written clearer.</p> <p><b>MAJOR Impact:</b> Increase in burden with no obvious or corresponding improvement to nuclear safety.</p>	<p>Irrespective of any applicable prerequisites set by the licensee as part of the personnel selection program, the worker shall possess at least four (4) years of relevant experience, including two (2) years as a health physicist or an equivalent position at a the reactor facility, with 6 months at the facility identified in the licence.</p>	<p>This topic could be discussed further during the stakeholder workshop.</p>
84.	Page 34 10.1.5	Bruce Power, CNA, OPG, NB Power	<p>Section 10.1.5 should be guidance, or the section removed completely; duplication of sections 10.1.2, 10.1.3 and 10.1.4.</p> <p><b>MAJOR</b></p>	<p>Delete section 10.1.5.</p>	<p>Subsection 10.1.5 specifies a regulatory expectation for certified health physicists, which replaces the current prescriptive list of training topics. It provides a performance-based safety goal for the combined activities specified under 10.1.2 (education), 10.1.3 (experience) and 10.1.4 (training). Given that the current licensees already meet this expectation, it cannot be said to add burden. Activities that are</p>

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			<b>Impact:</b> This section is redundant and adds burden with no obvious or corresponding improvement to nuclear safety.		without a clear end goal can easily diverge from the original intent over time. Therefore, CNSC staff prefers to be clear about the expectations of the regulator in relation to the special expertise required of SHPs, which is unique. SHPs play an important role during routine operations and, perhaps more crucially, during non-routine activities and emergency operations.
85.	<b>Page 35</b> <b>10.1.6</b> <b>Page 36</b> <b>10.3.3</b>	Bruce Power, CNA, OPG, NB Power Bruce Power, CNA, OPG, NB Power	Could be written more clearly; Industry suggested revision focusses the requirement on the interview, not the manager.  “Authorized” manager is undefined. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	The worker must have successfully undergone a formal management interview <b>conducted by an authorized manager who thereby that</b> confirmed that the worker can perform the duties of a SHP safely and competently.	This comment has already been addressed – see item # 68.
86.	<b>Page 35</b> <b>10.1.7</b>	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear, and should be aligned with current requirements of REGDOC 2.2.3 Volume III. <b>MAJOR Impact:</b> Regulatory uncertainty due to the inconsistency with the current examination process as mandated by the current version of REGDOC 2.2.3 Volume III.	The worker must have successfully completed <b>an oral</b> knowledge-based examination administered by CNSC staff <b>covering the radiation protection principles, methods, and practices related to the operation of the reactor facility identified in the licence. that samples topics covered in the training specified in section 10.1.4.</b>	The CNSC does not rely on the SAT implementation as sole evidence of competency in relation to the workers certified by the CNSC. Regardless of the SAT, the regulator determines what knowledge areas are to be covered during the certification examinations and requalification tests. CNSC staff has agreed to remove the prior prescriptive training requirements from REGDOC-2.2.3 Volume III, but did not agree to relinquish regulatory control over the certification examination and requalification testing envelopes. The generic knowledge areas listed under subsection 10.1.7 are in fact aligned with the education equivalency and initial training topics currently specified in REGDOC-2.2.3 Volume III, Version 1, as well as the topics covered by the CNSC examination, as per Appendix C – there is no “inconsistency” in the proposed REGDOC version.

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					Both licensees and candidates are duly informed of the current, oral methodology, and will likewise be informed if a different methodology is ever adopted.
87.	Page 35 10.1.7 Guidance	Bruce Power, CNA, OPG, NB Power	Appendix C is listed as <b>guidance</b> , but can be interpreted as a <b>mandatory</b> list of training topics, developed outside of a licensees training system; thus requiring it to be trained so it can be examined by CNSC.  <b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensees' training system (SAT) process is diminished.	Delete the guidance and Appendix C.	This comment has already been addressed – see item #86. The guidance is provided for added clarity and for the sake of completeness. The knowledge areas listed in Appendix C are in fact mandatory, but they also are sufficiently generic to apply now and in the foreseeable future. CNSC staff does not intend to deviate from the listed generic knowledge areas and topics. The SAT process, if properly conducted, should cover, and most likely exceed, these minimum requirements.
88.	Page 36 10.2.3 Guidance	Bruce Power, CNA, OPG, NB Power	Typo	Knowledge Areas – <b>Article A</b> .Appendix C provides a summary of the key knowledge areas ...	This technical issue has already been addressed.
89.	Page 37 11.1, 11.2, 12, Page 40 12.5, Page 47 14.4, Page 48 15 Page 49 16, 17.1 Page 50 18.1Page 57 19 & Page 63 21.5.4	Bruce Power, CNA, OPG, NB Power	Use of the word “effective”, as written, the statements are unclear.  <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	Delete “effective”:  For example; The licensee shall establish and document <b>effective</b> policies and procedures...  The licensee shall establish and document <b>an effective</b> process to ...	The rationale for the use of qualitative metrics has already been explained – see item #13. The usage and meaning made of the term “effective” in the proposed REGDOC is consistent with the terminology previously adopted in other REGDOCs of the Human Performance Management series, including REGDOC-2.1.1, <i>Management System</i> , REGDOC-2.1.2, <i>Safety Culture</i> , REGDOC-2.2.1 <i>Human Performance</i> , REGDOC-2.2.2 <i>Personnel Training</i> , and REGDOC-2.2.4 <i>Fitness for Duty</i> .



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90.	Page 37 12.1	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	As an integral part of the <b>mandated</b> personnel selection program, ...	CNSC staff revised the text as suggested.
91.	Page 37 12.1 d	Bruce Power, CNA, OPG, NB Power	<p>A selection process does not necessarily include formal testing. Candidates are selected by a facilities' operating organization, and the process used may not be developed in accordance with a training system.</p> <p><i>(Aligns with Section 19.2.c comment 119)</i></p> <p><b>MAJOR Impact:</b> Increased burden with no obvious or corresponding improvement to nuclear safety.</p>	<b>d. shall assess if candidates meet the applicable minimum standards of literacy or numeracy; d. shall use standardized tests and proven methods to assess if whether or not candidates selected on the basis of a literacy or numeracy level, or a recognized equivalency, do in fact meet the applicable minimum standards of literacy or numeracy;</b>	The requirement specified under paragraph 12.1.d applies only when the licensee has chosen to set minimum literacy and numeracy levels (i.e., basic reading, writing, and mathematical skills) or allow an equivalency instead of requiring recognized diplomas as proof of sufficient prior education. In that context, candidates must be assessed internally using proven methodologies and standardized tests, in order to ensure that all candidates do in fact meet the required minimums standards, and are treated fairly by means of a standardised personnel selection test that is given to all candidates in similar circumstances. Available methods are well-known and standardized tests are routinely used in many other sectors. The requirement was specified for future licensees who may choose to establish literacy and numeracy levels as part of their personnel selection program, rather than setting minimum education levels. The personnel selection program specified in this revised REGDOC offers a great deal more flexibility to licensee than the current prescriptive approach. However, CNSC staff expects licensees to implement quality alternatives to the prescribed minimum education levels.
92.	Page 37 12.1.c 12.1. f 12.1. h	Bruce Power, CNA, OPG, NB Power	<p>Not written as a requirement; uses “may” and “should”.</p> <p><b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.</p>	Move under Guidance heading.	All “should” regulatory statements made in the REGDOC were moved under guidance headers. However, “may” statements indicates sanctioned optional elements of the whole being described and were maintained in their original location for added regulatory clarity. The meaning of the term “may” is as per the preface and is independent of its location in the document.
93.	Page 38 12.1. g	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	g. shall identify attributes and aptitudes deemed essential to safely and competently perform	This sentence states a regulatory expectation. The added details are consistent with CNSC’s concerns post-Fukushima, and the pertinent safety-related attributes should be expected from any person in a position of leadership.



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				the duties of the designated position, <b>including integrity, leadership, and resilience, as may be pertinent</b> ; and	
94.	Page 38 12.1 Guidance	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	b. the management team with an opportunity to evaluate the prospective candidate against the pertinent personal selection criteria, <b>in particular any essential or desirable attribute, including integrity, leadership and resilience.</b>	This sentence states a regulatory expectation. The added details are consistent with CNSC's concerns post-Fukushima, and the pertinent safety-related attributes should be expected from any person in a position of leadership.
95.	Page 38 12.2.2	Bruce Power, CNA, OPG, NB Power	Uncertain how these requirements can be assessed and documented. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	Delete 12.2.2.	Leadership is a key safety-related attribute required of leaders working within a healthy safety culture. REGDOC 2.1.2 <i>Safety Culture</i> identifies some key characteristics of good leadership. The subsection does not specify CVC, but a performance-based safety goal.
96.	Page 39 12.3.1 b	Bruce Power, CNA, OPG, NB Power	Uncertain how this requirement can be assessed and documented. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased	Delete 12.3.1 b.	Safety-related attributes are an integral part of the training systems mandated by REGDOC-2.2.2 <i>Personnel Training</i> . The subsection does not specify CVC, but a performance-based safety goal.

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			burden with no obvious or corresponding improvement to nuclear safety.		
97.	Page 39 12.3.3 & Page 42 12.5.6	Bruce Power, CNA, OPG, NB Power	<p>This notification is duplication of information provided with the application for certification.</p> <p><b>MAJOR Impact:</b> Increased administrative burden, with no obvious or corresponding improvement to nuclear safety.</p>	Delete this section.	<p>Some of the information is the same, but the purpose and context differ.</p> <p>The context of subsection 12.3 is that of a certified RO selected for advancement to shift supervisor. The current process requires a minimum of one (1) year of prior work experience as RO. The revised process proposed under subsection 12.3 rescinds the prior, prescriptive requirement and replaces it with a performance-based objective, namely safe and competent performance as RO. This change is partly based on the GBA+ outcome. However, CNSC staff expects to be promptly notified, in lieu of the one-year experience, of the selection and to receive proper assurance prior to the candidate's entry into a shift supervisor training program. The reason is chiefly to ensure that the CNSC's personnel certification records are duly updated, but another reason is to allow CNSC staff with a timely opportunity to intervene if the existing performance record of the certified RO contradicts the licensee assessment.</p> <p>Likewise, subsection 12.5.6 specifies a similar notification requirement as part of an entirely new process designed to deal effectively with personnel transfer.</p>
98.	Page 39 12.4	Bruce Power, CNA, OPG, NB Power	<p>This section implies that a facility must utilize a Senior Shift Supervisor (SSS) if they decide to allow Shift Supervisors to operate the station without utilizing the RO position, and implies the creation of a separate SSS training program.</p> <p>Also implies the CRSS at current facilities must be SSS qualified and the CRSS at a currently licensed facility may not replace the SM during an emergency if the SM is incapacitated.</p> <p><b>MAJOR Impact:</b></p>	Delete this section.	<p>Subsection 12.4 implies no such CNSC staff position.</p> <p>Deleting subsection 12.4 would mean abandoning the single certification scheme and retaining the status quo; that is, retaining distinct certifications for Control Room Shift Supervisors (CRSS) and Shift Managers (SM), an option that is simpler from the regulator's perspective, but causes known operational issues, and which no longer aligns with the staffing model adopted at multi-unit CANDU sites. CNSC staff has many times indicated that the new single certification scheme would permit SMs (aka senior shift supervisors) to be employed in all designated shift supervisor positions, but conversely, would <b>not</b> allow CRSSs (aka shift supervisors) to be employed in SM positions. An internal qualification process must therefore be implemented by licensees (in lieu of the distinct CNSC certifications) that distinguishes between the two levels of supervision and qualify shift supervisors prior to their employment as senior shift supervisor. This process differs little from the current certification requirements: the management interview has been eliminated, the WUS is no longer specified, but is performance-based, and a notification was added to replace the application for</p>

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			Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.		<p>certification, altogether representing a reduction in burden for both CNSC and licensee staffs. The new single certification scheme makes no difference to the training and qualification of SMs, since part of the basis for the regulatory change is the prior knowledge that all shift supervisors are trained to the same degree of technical expertise, with the SM needing only minimum supplementary training, chiefly of an administrative nature.</p> <p>This REGDOC neither defines nor prescribes a COO, but specifies personnel certification requirements for positions designated in operating licences based on the management systems implemented by licensees at existing reactor facilities. Care was taken to define concepts as generically as possible so they would remain applicable in the future. That is the primary reason why the term “senior shift supervisor” is proposed. The new term is at once generic – hence possibly relevant to future multi-unit sites – and indicative of the single certification scheme for shift supervisors. In the event that future COOs depart significantly from the current norms, this REGDOC can be updated accordingly or alternate regulatory tools can be used or developed.</p> <p>Shift supervisors have supervisory responsibilities and some form of ultimate decision-making power. The designation of the positions comprising the MSC should not be confused with the qualification(s) held by the specific persons filling the said positions at any given time. Whether or not each person hold multiple qualifications or an all-encompassing qualification does not change the need for a MSC composed of members assigned clearly defined roles and responsibilities, including documented delegations of authority applicable while on duty. In the event that novel COOs rely on shift supervisors routinely operating instrumentation and controls, or reactor operators with decision-making powers normally delegated to shift supervisors, the licensee merely needs to implement training programs and a management system (including clearly defined roles, responsibilities, and delegations of authority) that permits the implementation of the planned COO in a safe and effective manner.</p> <p>In answer to the specific conclusions reached by the commenter:</p> <p>(1) By definition, there is no “senior shift supervisors” at reactor facilities where the management system does not include two levels of shift supervisors. This is the outcome of section 12.4, including the guidance. The subsection defines,</p>

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					<p>generically, what is considered a senior shift supervisor, where two levels do exist, based on the chief discriminating characteristic, which is the power to exercise authority over other shift supervisors. Nothing is said in the subsection about the necessity to have a second level of supervision, much less what specific authorities should be delegated in each case.</p> <p>(2) Subsection 12.4.2, which is named <i>Supplemental Training</i>, implies that the training for senior shift supervisor is not a distinct program, except for the supplemental portion. It should be noted that Part II refers to the training of shift supervisors, which include those who may later be selected as senior shift supervisor, implying a common training program. By default, one has to be certified as shift supervisor, and have completed the core initial training, before advancing to the senior position.</p> <p>(3) Subsection 12.4 indicates that CRSS are <b>not</b> allowed to act as SMs and therefore need <b>not</b> be qualified as SM. The whole of the document must also be considered; Appendix A removes all doubt about which positions are considered senior shift supervisor positions and which are not.</p> <p>(4) It is understood that CRSSs, during emergency situations or when the SM is unavailable, may have to make safety-critical and time-sensitive decisions normally delegated to the SM. REGDOC-2.2.3 Volume III does not specify roles and responsibilities, nor does it preclude any worker from taking appropriate action as may be necessary to protect the integrity of the plant and the safety of workers, the Canadian public, and the environment.</p>
99.	Page 40 12.4.3	Bruce Power, CNA, OPG, NB Power	The concept of having to “Work Under Supervision (WUS)” for a specified number of complete shifts may be better applied at new facilities by requiring completion of a specified set of tasks, either in the plant or in the full scope simulator.	CNSC should allow for development of criteria that can be applied to a newly built or first of a kind facility.	The task-based approach suggested here is appropriate when implementing on-the-job training (OJT), not work under supervision (WUS). Tasks may be exercised during OJT and other types of performance-based learning, including simulator-based training. The WUS period is not a training activity, but a probation period, and therefore a time-based requirement. The worker undergoing WUS should ideally be fully trained and able (but not permitted) to work without supervision; at the very least, the worker should be trained to a functional level and requires minimal (but continuous) supervision. OJT should be performed under the leadership of the training team, while WUS should be conducted under the leadership of the operations team. The purpose of the WUS period is explained in Part III of the proposed REGDOC. A suitable duration for the WUS period for non-CANDU reactor facilities will be determined during the applicable licensing process and appended to Annex B once known.

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100.	Page 40 12.4.3	Bruce Power, CNA, OPG, NB Power	Individuals will no longer be certified as senior shift supervisors. <b>MAJOR Impact:</b> REGDOC cannot be implemented as written.	The worker must have performed the duties of the senior shift supervisor under the supervision of a worker <b>qualified certified</b> as senior shift supervisor for a number of complete shifts ...	CNSC staff corrected the oversight.
101.	Page 40 12.4.4	Bruce Power, CNA, OPG, NB Power	Prior notification is not necessary. <b>MAJOR Impact:</b> Increased administrative burden, with no obvious or corresponding improvement to nuclear safety.	The licensee shall inform the CNSC, <b>prior to allowing the worker to act as senior shift supervisor</b> , of any senior shift supervisor qualification received by the worker.	CNSC staff agrees that the notification may follow employment without safety consequence and the draft requirement may unnecessarily prevent timely employment of qualified workers. The text has been revised as suggested.
102.	Page 40 12.5	Bruce Power, CNA, OPG, NB Power	As written, section 12.5 requires experienced candidates to retake ALL of the General training and subsequent examination, even if the ceding reactor facility General training is partially aligned with the gaining facility. <b>MAJOR Impact:</b> Inconsistent with current practices.  Increased candidate and administrative burden, with no obvious or corresponding improvement to nuclear safety.	CNSC should allow for the use of General SAT based GAP training.	Two subsections explicitly allow exemptions from the general training (12.5.3) and the general exam (12.5.4). Allowing these exemptions was the very purpose of specifying a personnel transfer process, which is otherwise unnecessary. Once the licensee elects to exempt a transferred worker from the general training program and/or the general examination, the licensee is free to conduct (or not) any additional SAT-based training before the worker is integrated in the plant familiarization training and subsequent NPP-specific training program. Licensees remain free at all times to exceed the minimum requirement set by the regulator; REGDOCs do not and cannot explicitly sanction all activities not explicitly prohibited.  The current default position for operations personnel is for transferred workers to retake the entire initial training program and all certification examinations. Past occurrences therefore had to be treated on a case-by-case basis by means of special DO decisions, which caused added burden for CNSC staff. The new personnel transfer process aims to establish a sensible standard process that recognizes the prior qualifications of the transferred worker and minimizes the added burden for both CNSC and licensee staffs.
103.	Page 41 12.5.1 b, c, d & e	Bruce Power, CNA, OPG, NB Power	These clauses are written as guidance. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance	Move 12.5.1 b, c, d & e under Guidance.	This comment has already been addressed. The “should” statement was reworded as a “shall” statement, but the “may” clauses were maintained as sanctioned options integral to the whole (the process) being described. The meaning of the term “may” is defined in the preface and is not predicated on its location in the document.

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			instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.		
104.	Page 41 12.5.1 a	Bruce Power, CNA, OPG, NB Power	This requirement as written cannot be controlled by the gaining licensee. <b>MAJOR Impact:</b> REGDOC cannot be implemented as written.	a. <b>should obtain, shall request</b> from the licensee of the ceding reactor facility:	CNSC staff revised the text as suggested and added some guidance under the subsequent guidance header.
105.	Page 43 12.5.7	Bruce Power, CNA, OPG, NB Power	This section is related to initial certifications and should be included in section 5.	Move 12.5.7 to section 5.	CNSC staff will consider the suggestion and may modify the text accordingly. The information is narrowly linked to the personnel transfer process, which is the reason for its current location, but it could be stated in Part I. Some explicit linkage between the subsections may also improve clarity.
106.	Page 43 13.1, 13.2	Bruce Power, CNA, OPG, NB Power	Use of the word “distinct” reduces flexibility. <b>MAJOR Impact:</b> Reduced flexibility and increased burden related to conduct of initial training programs with no obvious or corresponding improvement to nuclear safety.	The licensee shall implement and document <b>distinct</b> initial training programs specifically...	CNSC staff revised the text as suggested.
107.	Page 44 13.2.1	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear and should be aligned with current requirements. <b>MAJOR Impact:</b> Change from wording of current REGDOC provides increased burden with no obvious or corresponding improvement to nuclear safety.	<b>All</b> continuing training programs <b>designed to requalify certified workers</b> shall include <b>suitable</b> update training, including formal knowledge and performance-based evaluations, <b>covering any relevant technical or procedural changes implemented at the reactor facility identified in the licence, as well as the relevant</b>	This subsection maintains requirements in effect since 2008. The current CANDU licensees already meet the regulatory intent.  The subsection emphasizes the minimum regulatory expectations for clarity and provide a performance-based purpose for the continuing training programs going forward.  The terms <i>qualify(cation)</i> and <i>requalify(cation)</i> reflect the language of the Act and Regulation.

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				lessons-learned acquired by the industry over time, including, but not limited to:	Notwithstanding, CNSC staff partially revised the subsection for added clarity.
108.	Page 44 13.2.1	Bruce Power, CNA, OPG, NB Power	Potential for misinterpretation. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	Delete: The licensee shall deliver the knowledge update training referenced in this REGDOC promptly following the occurrence of the initiating change or event using effective instructional methods, including suitable simulator-based training whenever pertinent.	This subsection maintains requirements in effect since 2008. The current CANDU licensees already meet the regulatory intent.  CNSC staff added guidance for added clarity.
109.	Page 44 13.2.2	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	All continuing training programs designed to requalify certified workers shall include suitable refresher training, including formal knowledge and performance-based evaluations, and be based on a training system. covering the essential K&S and safety-related attributes that certified workers acquired during their initial training and which must be periodically reviewed and applied to ensure adequate retention.	The fact that training need to be based on a training system is already specified in REGDOC-2.2.2 and throughout this REGDOC where relevant.  Subsection 13.2.2 merely describes a regulatory expectation and a performance-based purpose to guide the SAT going forward.
110.	Page 44 13.2.2	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance	The licensee shall deliver the knowledge refresher training referenced in this REGDOC on a regular basis and according to a training cycle not exceeding five (5) years, using effective	REGDOC-2.2.2 requires that the training programs be effective. As already stated, the term <i>effective</i> appears in most human performance REGDOCs.  The simulator-based training is a current requirement for all certified operations personnel.

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			instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	instructional methods, including suitable simulator-based training whenever pertinent.	
111.	Page 44 13.2.3	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	All continuing training programs designed to requalify operations personnel shall include suitable simulator-based training based on a training system. designed to ensure that operations personnel maintain their qualification by applying their K&S and safety-related attributes through recurrent performance-based training covering varied simulated scenarios under normal, abnormal and, to the extent possible, emergency conditions.	This comment has already been addressed – see item #107.
112.	Page 45 13.3	Bruce Power, CNA, OPG, NB Power	Management of Contractors must be in accordance with REGDOC 2.1.1, Management System, and duplication of this topic should not be included in REGDOC 2.2.3.  Per the guidance given in REGDOC 2.2.3 section 3.1, a licensee is fully responsible for the competency of all workers employed at their reactor facility, even if the licensee decides to contract out any aspect of the training programs.	Delete the second paragraph from section 13.3, or revise:  In the event that the licensee intends to contract out, in whole or in part, the responsibility for any aspect of the training referenced in this REGDOC, the licensee shall obtain prior approval from the CNSC and, if such approval is granted, shall ensure that the requirements and guidance specified in this and any relevant complementary REGDOC	This comment has already been partially addressed – see item #1.  In this case, CNSC staff revised the text as suggested, except for the reference to complementary REGDOC, which was retained; many requirements relevant to personnel certification and applicable to certified workers are specified in other REGDOCs.



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			<p>Direct CNSC involvement in the conduct of a licensee’s management system is an over-reach of regulatory responsibilities and may result in significant delays in conduct of the licensee’s training programs.</p> <p><b>MAJOR Impact:</b> Duplication with other REGDOCs may lead to instances of regulatory uncertainty.</p> <p>Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.</p> <p>CNSC involvement may result in a reduction in safety due to delays in conduct of training programs.</p>	are complied with by the contracted party or parties.	
113.	Page 45 13.3 Guidance	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Instructional Strategies and Methods – In implementing and administering the initial and continuing training referenced in this REGDOC, the licensee is free to employ any <b>effectual</b> instructional strategies and any combination of <b>recognized</b> instructional methods., <b>including</b>	<p>The use of qualitative metrics has already been addressed. In addition, the statement is made under a guidance header, and therefore sets no requirement.</p> <p>The added details were included specifically to address past uncertainties expressed by licensee staff members wanting to optimize training, and who assumed the current regulatory framework disallowed the listed instructional methods. The guidance makes it clear these methods are optional.</p>

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				self paced learning, remote learning, and e-learning.	
114.	Page 46 13.3 - Guidance	Bruce Power, CNA, OPG, NB Power	Typo	Training Program Samples – Article A. Appendix D contains examples	This technical glitch has already been noted.
115.	Page 47 14.2, 14.3	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	... applicable CNSC requirements specified or referenced in the licence or accompanying licensing documentation.	The wording is a generic catch-all in order to remain applicable in all cases going forward. In past instances, overly-specific statements became obsolete, pointing to superseded references. “Accompanying licensing documentation” currently refers to the LCH and CVC documents without being specific, in the event that alternate regulatory instruments are produced to replace or supplement these documents. This will allow the REGDOC to remain applicable in time with minimum amendment. The detailed certification examination and requalification testing requirements applicable to CANDU workers are currently specified in CVC documents referenced in the LCH. However, this is not the case for all reactor facilities, and may not be the case for SMR operations. Likewise, the CANDU CVC are being revised and may ultimately take a different form. In any case, the proposed REGDOC is written in context of a wider regulatory framework. The suite of documents relevant to each licensee is unequivocally identified via the relevant licence, removing all ambiguity. Nonetheless, CNSC staff partially revised the text by deleting the word “licensing” since any document accompanying the licence is licensing documentation by default.
116.	Page 47 14.4, Page 48 15 & Page 49 16	Bruce Power, CNA, OPG, NB Power Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	Delete “effective & mandatory”:  For example; The licensee shall establish and document effective procedures for preparing and conducting the various management interviews referenced in this REGDOC. Each mandatory management interview shall serve an evaluation function and: ....	The text refers to mandatory activities and program components specified in the REGDOC by means of “shall” statements. The word “mandatory” was deleted in this case since it is redundant and has no impact of regulatory oversight.  The need for qualitative metrics has already been addressed. The word <i>effective</i> implies that the programs and procedures must meet the safety goal and produce the expected outcome. As previously stated, the term is used consistently with other key REGDOCs of the <i>Human Performance Management SCA</i> .

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117.	Page 49 16 d.	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	d. be <b>documented recorded</b> in writing or via any other retrievable medium, ...	Using the term <i>documented</i> would imply that the record must maintained in writing. Paragraph 16.d allows the licensee to keep a record in any preferred form, including in writing, but also using other means, including audiovisual recording. The term <i>recorded</i> is the correct technical term.
118.	Page 49 17 & 17.1	Bruce Power, CNA, OPG, NB Power	<p>Significant increase in requirements and regulatory burden.</p> <p>While main requirement may be acceptable, the details should be given as guidance.</p> <p><b>MAJOR Impact:</b> Reduced flexibility and increased burden related to conduct of initial training programs with no obvious or corresponding improvement to nuclear safety.</p>	<p><b>17. Administrative Policies and Procedures Applicable to Workers in Training</b> The policies and procedures specified in this section apply to any worker, whether certified or not, who is attending one of the initial training programs referenced in this REGDOC, in the context of, and in relation to, the said training.</p> <p><b>17.1 Reintegration of Worker in Initial Training Following a Prolonged Training Interruption</b> The licensee shall establish and document an <b>effective</b> process to manage the case of any worker reintegrating into an initial training program after a prolonged training interruption. <b>Any worker who is absent from an initial training program for a period of six (6) months or more shall undergo a formal reintegration process.</b></p> <p><b>Guidance:</b> As an integral part of this process, the licensee <b>should shall:</b> a. perform a formal evaluation, ...;</p>	<p>CNSC staff will consider revising Section 17, in particular paragraph 17.1.a. However, CNSC staff does not see the need for any other significant change.</p> <p>The introduction to Section 17 is meant to indicate that adequate reintegration is required for all workers reintegrating an applicable initial training program after a prolonged period of absence. The introduction may arguably be redundant, but added clarity does not cause ambiguity.</p> <p>There is no need to lengthen the subsection header since the text points to initial, rather than continuing, training. The case of certified workers returning to work is already covered by the existing removal and reinstatement processes, as implied by the different titles used for Sections 17 and 18. The training reintegration process is essentially a scaled-down reinstatement process.</p> <p>Section 17 is meant to be mandatory, and not guidance. The requirements are generic and represent an effort commensurate with the duration of the absence. This section was added to the proposed REGDOC in context of other regulatory changes providing licensees with added training flexibility; the added burden must therefore be assessed accordingly. Since the revised REGDOC no longer imposes validity periods on knowledge-based examinations, future candidates may be returning to training after several years of absence. In order to mitigate the resulting risk, CNSC staff is proposing the implementation of a formal and mandatory training reintegration process. The added burden is more than amply counter-balanced by the unprecedented flexibility afforded to licensees in managing initial training at both group and individual bases.</p>

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				b. determine the need for remedial training ...; c. formulate and implement a remedial ...; d. ensure that the worker, at a minimum, ...; and e. determine a suitable point of re-entry ... . <b>At a minimum, any worker who is absent from an initial training program for a period of six (6) months or more shall undergo a formal reintegration process meeting the requirements specified in this subsection.</b>	
119.	Page 50 18.1	Bruce Power, CNA, OPG, NB Power	Fitness for Duty must be in accordance with CNSC REGDOC-2.2.4, Fitness for Duty: Managing Worker Fatigue and REGDOC-2.2.4, Fitness for Duty, Volume II: Managing Alcohol and Drug Use, and duplication of this topic should not be included in REGDOC 2.2.3. <b>MAJOR Impact:</b> Duplication with other REGDOCs may lead to instances of regulatory uncertainty, leading to potential increased administrative burden, with no obvious or corresponding improvement to nuclear safety.	Delete section 18.1 or revise: <b>18.1 Fitness for Duty</b> The licensee shall implement and document <b>effective</b> fitness-for-duty policies and procedures <b>providing the CNSC with reasonable assurance that certified workers are free of any physical or mental impairment that could hinder their ability to perform the duties of the pertinent designated position(s) safely and competently.</b> <b>The fitness-for-duty policies and procedures applicable to certified workers shall be implemented</b>	The fitness-for-duty program for certified workers has always been more stringent than similar requirements applicable to the general worker population. Subsection 18.1 does not introduce any new requirement, but merely clarifies the existing regulatory framework. The text was also modernized to be consistent with REGDOC-2.2.4. CNSC staff was careful to ensure that the proposed REGDOC was aligned with REGDOC-2.2.4 and neither duplicated nor contradicted existing requirements. Personnel certification exists for the very purpose of exercising increased regulatory oversight regarding workers employed in designated positions.

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				<p>consistently with the requirements and guidance specified <b>in this and</b> complementary REGDOCs regarding fitness for duty , <b>including those related to the management of worker fatigue and the management of alcohol and drug use.</b></p> <p>Guidance</p> <p>Complementary Regulatory Documents – Further requirements and guidance pertaining to the management of worker fatigue and the management of alcohol and drug use, including testing, can be found in the applicable complementary REGDOCs listed as additional information at the end of this REGDOC.</p>	

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120.	Page 51 18.2.1	Bruce Power, CNA, OPG, NB Power	<p>A licensee's staffing complement must be in accordance with CNSC REGDOC 2.2.3, Minimum Staff Complement. Adherence to this REGDOC requires that the available number of certified operation's staff be greater than those who are in a lead role. As per current practice, these additional certified staff should be able to count all worked shifts towards satisfying any mandated minimum employment requirement.</p> <p>Suggested wording of 18.2.1 also implies that shifts worked during station outage (VBO) cannot be counted.</p>	<p><b>18.2.1 Minimum Shift Requirement for Operations Personnel</b></p> <p>Any worker certified for employment as ASO, RO or shift supervisor shall perform the duties of a <b>lead</b> ASO, RO or shift supervisor for a minimum number <b>acceptable to the CNSC</b> of complete shifts per calendar quarter amounting to a minimum number <b>acceptable to the CNSC</b> of hours of shiftwork per calendar quarter, as <b>accepted as part of the licensing basis</b>.  <b>Each worker shall perform the mandated minimum employment as the lead incumbent, as opposed to a back-up or supernumerary capacity, and, to the fullest extent possible, in relation to a fuelled and operating reactor or group of reactors.</b></p>	The CNSC staff position is that the minimum employment requirement must be met while acting in a lead position. All other comments have already been addressed.
121.	Page 51 18.2.1 Guidance	Bruce Power, CNA, OPG, NB Power	<p><b>MAJOR Impact:</b></p> <p>Increased requirement from current practice, leading to potential increased administrative and staffing burden, with no obvious or corresponding improvement to nuclear safety.</p>	<p><b>Guidance</b></p> <p>Complete Shift – A complete shift means a minimum of four (4) consecutive hours of work in a designated position <b>as a lead operator or shift supervisor</b> that is preceded by a formal turnover of the responsibilities for the shift with an outgoing counterpart, and is concluded by an equal turnover with an incoming counterpart.</p>	The CNSC staff position is that the minimum employment requirement must be met while acting in a lead position.

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122.	Page 51 18.2.1 Guidance	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Compliance Scheme – <b>Article A.</b> Appendix B specifies the minimum shift requirements acceptable to the CNSC for the <b>pertinent</b> reactor facilities in service at the time of publication of the current version of this REGDOC	The technical glitch has been noted.  The term <i>pertinent</i> is used here and throughout the document as warranted because REGDOC-2.2.3 Volume III does not apply to all Class I reactor facilities. The pertinent reactor facilities are identified in the applicable operating licences.
123.	Page 52 18.2.1 Guidance	Bruce Power, CNA, OPG, NB Power	Typo	... supervisor positions listed in <b>Article A.</b> Appendix A, and may therefore stand...	The technical glitch has been noted.
124.	Page 53 18.4.3	Bruce Power, CNA, OPG, NB Power	Fitness for Duty must be in accordance with CNSC REGDOC-2.2.4, Fitness for Duty: Managing Worker Fatigue and REGDOC-2.2.4, Fitness for Duty, Volume II: Managing Alcohol and Drug Use, and duplication of this topic should not be included in REGDOC 2.2.3. <b>MAJOR Impact:</b> Duplication with other REGDOCs may lead to instances of regulatory uncertainty, leading to potential increased administrative burden, with no obvious or corresponding improvement to nuclear safety.	<b>The worker is deemed unfit, by the licensee, to perform the duties of a designated position safely and competently, for any reason.</b>  <b>The worker was the subject of a verified positive alcohol or drug test administered in accordance with the fitness-for-duty program mandated by the CNSC, or is otherwise deemed unfit, by the licensee, to perform the duties of a designated position safely and competently, for any reason, including, but not limited to:</b> <b>a. a medical or physical condition, be it permanent or temporary;</b> <b>b. a mental health condition, be it permanent or temporary;</b> <b>c. inadequate performance while on duty, including any action or decision that puts at risk the</b>	The fitness-for-duty program for certified workers has always been more stringent than similar requirements applicable to the general worker population. Subsection 18.4.3 does not introduce any new requirement, but clarifies the existing regulatory framework. The text was also modernized to be consistent with REGDOC-2.2.4. The addition of the “verified positive alcohol and drug test” as new cause for removal from duty is consistent with the first version of REGDOC-2.2.3 Volume III and the latest version of REGDOC-2.2.4. CNSC staff was careful to ensure that the proposed REGDOC was aligned with REGDOC-2.2.4 and neither duplicated nor contradicted existing requirements. Certified workers removed from duty may be reinstated once adequate remedial action has been taken. The proposed REGDOC does not specify what form the remediation should take, which is to be determined by the licensee.

#	Section	Organisation	Comments Commentaires	Suggested changes Modifications proposées	CNSC staff responses Réponses du personnel de la CCSN
				health and safety of workers, the public, or the environment; d. a demonstrated unwillingness or failure to take the necessary precautions to protect the health and safety of workers, the public, or the environment; and e. a demonstrated lack of integrity or trustworthiness.	
125.	Page 53 18.4.5	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	<b>18.4.5 Proposed Decision to Not Renew a Certification Not to Certify or to Decertify</b> The worker was identified by the CNSC as the worker concerned in a proposed decision <b>not to renew a certification certify</b> or a proposed decertification, while a final certification decision by the Commission or a DO remains pending.	The suggested wording is not consistent with the Class I Regulations. This comment is addressed in more details under item #127. The CNSC may refuse to issue certifications, and not merely certification renewals.
126.	Page 18.6.2	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	This <b>supplementary</b> requalification test must be equivalent in all respects, ...	The term <i>supplementary</i> was added to indicate that the test in question is in addition to the scheduled test. CNSC staff revised the text for added clarity.
127.	Page 56 18.6.5	Bruce Power, CNA, OPG, NB Power	The licensee cannot reinstate a worker to the duties of the pertinent designated position who is not certified. <b>MAJOR Impact:</b> Cannot be implemented as written.	The licensee may reinstate a worker to the duties of the pertinent designated position who was the subject of a proposed decision not to <b>renew a certificate certify</b> or to decertify once officially informed of the Commission or DO's decision to certify, <b>or not to decertify</b> , the worker.	Subsection 18.6.5 is linked to the removal cause specified under 18.4.5, namely a <b>proposed</b> decision to decertify or not to certify the worker. The description of the cause for removal under subsection 18.4.5 indicates that the worker must be removed from duty while the decision "remains pending". In that context, the worker was not decertified when removed from duty and therefore may, as indicated in subsection 18.6.5, be reinstated by the licensee, but only <b>once informed</b> of the Commission or DO's final decision to certify (including a renewal) or not to decertify the worker, contrary to the proposal. This requirement has been in effect since 2008.  The Act and Regulations obligate the CNSC to offer an opportunity to be heard before making a final certification decision. The commission or a DO must therefore make a



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					<p>proposal first. However, the worker must be removed from duty as soon as a proposal is made, while the worker remains certified and the decision remains pending. The outcome of the opportunity to be heard is not yet known at the time of removal, and the final decision may differ from the proposed decision. Decertification is not a cause for removal from duty, which is why the case of a decertified worker is not covered in subsections 18.4 and 18.6. A worker decertified by the CNSC is not permitted to work in a designated position, as per Section 3.</p> <p>Finally, the language used by CNSC staff in subsection 18.6.5 reflects, as it must in this particular case, the legal language of the Class I Regulations. The legislation refers to a “proposed decision not to certify the person” and a “proposed decision to decertify the person”. There is no reference to any proposed decision “not to renew” a certification, which is implicitly covered by the proposal “not to certify”.</p>
128.	Page 57 19.1.2	Bruce Power, CNA, OPG, NB Power	<p>As written, the statement is unclear.</p> <p>Licensee should have the flexibility to manage their organization’s operating documentation.</p>	<p>The licensee shall retain, and make available to the CNSC upon request, a copy of the latest version of the licensee and station-specific policies, procedures, and technical diagrams referenced by certified workers to perform the duties of the designated positions. <b>safely and competently, including those related to:</b></p> <ul style="list-style-type: none"> <li><b>a. operating policies and principles;</b></li> <li><b>b. worker performance expectations;</b></li> <li><b>c. radiation protection;</b></li> <li><b>d. normal and abnormal operations;</b></li> <li><b>e. abnormal incidents;</b></li> <li><b>f. power reduction actions; and</b></li> <li><b>g. severe accident management.</b></li> </ul>	<p>The documentation is necessary for CNSC staff to discharge their duties under the Act. More precisely, CNSC staff cannot carry out effective inspections of the certification examinations and requalification tests without access to the operational and technical documentation which form the basis for operational actions and decisions. These documents have been made available to the regulator upon request for many years. The documents are referenced generically and the requirement does not prevent licensees from managing their operating documentation, as long as it is made available to CNSC staff tasked with verifying licensee compliance post-exam transfer. The list is also specified to provide sufficient guidance to future licensees.</p>

#	Section	Organisation	Comments Commentaires	Suggested changes Modifications proposées	CNSC staff responses Réponses du personnel de la CCSN
129.	Pages 58 and 59 19.2 b, c, d, e, f, g, h & n.	Bruce Power, CNA, OPG, NB Power	Use of the word “Comprehensive” in the requirement’s statements. <b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance instead of the well-defined requirement(s) of the approved licensing basis. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.	Delete “comprehensive” in 19.2 b, c, d, e, f, g, h & n.	This comment has already been addressed. The requirements for records to be comprehensive and retrievable are fundamental principles of sound information management (IM) practices. Adequate records must be maintained by licensees whether or not CNSC staff can successfully list all the relevant records.
130.	Pages 58 19.2 c	Bruce Power, CNA, OPG, NB Power	Per the comment on section 12.1 d, a selection process does not necessarily include formal testing. Candidates are selected by a facilities’ operating organization, and the process used may not be developed in accordance with a training system. Detailed record keeping of such activities is not required.  (Aligns with Section 12.1.d comment 80) <b>MAJOR Impact:</b> Increased burden with no obvious or corresponding improvement to nuclear safety.	Delete 19.2 c.	This comment has already been addressed – see item #91. Furthermore, as implied by the text, paragraph 19.2.c applies only <b>if</b> the licensee has conducted personnel selection interviews and tests. Future licensees may choose to administer personnel selection interviews and tests. The requirement is therefore always relevant and appropriate records must be maintained according to paragraph 19.2.c as applicable.
131.	Page 60 20	Bruce Power, CNA, OPG, NB Power	Per the guidance given in REGDOC 2.2.3 section 3.1, a licensee is fully responsible for the competency of all workers employed at their reactor facility, and therefore responsible for	Delete second paragraph of section 20.  All knowledge-based training, certification examinations, and	This comment is addressed in more details under item #132. References to training have been removed from the section, but the text has been revised to apply as a certification examination and requalification testing program requirement. CNSC staff has also revised the text as proposed in this particular case, because the remainder of the text, including the guidance, will suffice to meet the regulatory intent. Again, this

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			<p>all aspects of the training programs, including the training facilities.</p> <p>Actual CNSC involvement in the conduct of a licensee's training programs is an over-reach of regulatory responsibilities and may result in significant delays in conduct of the licensee's training programs.</p> <p><b>MAJOR Impact:</b> Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance of training facilities. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.</p> <p>CNSC involvement may result in a reduction in safety due to delays in conduct of training programs.</p>	<p>requalification tests referenced in this REGDOC shall be delivered in facilities acceptable to the CNSC.</p>	<p>requirement is forward-looking in preparation for future operations, which may not necessarily have access to facilities equal to that of CANDU sites. The revised REGDOC is not intended as a CANDU-centric document.</p>
132.	Page 60 21	Bruce Power, CNA, OPG, NB Power	<p>Per the guidance given in REGDOC 2.2.3 section 3.1, a licensee is fully responsible for the competency of all workers employed at their reactor facility, and therefore responsible for all aspects of the training programs, including the simulator facilities.</p> <p>Actual CNSC involvement in the conduct of a licensee's training programs is an over-reach of regulatory responsibilities and may</p>	<p>Delete second paragraph of section 21.</p> <p>All performance-based training, certification examinations, and requalification tests referenced in this REGDOC shall be delivered using simulator facilities or systems acceptable to the CNSC.</p>	<p>The Class I Regulations require that applicants submit a description of the full-scope training simulator for analysis during the licensing process. Because the proposed REGDOC allows alternatives to the full-scope simulator, any "partial-scope" simulator proposed by applicants will need to be analyzed by CNSC staff and approved by the Commission.</p> <p>CNSC staff concurs that the SAT requirements specified in REGDOC-2.2.2 are, in principle, sufficient to ensure adequate use of the full-scope simulator in the training context. All references to training have been removed from Section 21.</p> <p>That said, this REGDOC is interested in the full-scope simulator, not only as a training instrument, but primarily as a means to conduct performance-based certification examinations and requalification tests. In that context, and in order to ensure that all candidates are fairly treated and thus face equal chances of success or failure, the</p>

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			<p>result in significant delays in conduct of the licensee’s training programs.</p> <p><b>MAJOR Impact:</b></p> <p>Regulatory uncertainty results from the use of potential subjective criteria/expectations for acceptance of simulator facilities. This leads to increased burden with no obvious or corresponding improvement to nuclear safety.</p> <p>CNSC involvement may result in a reduction in safety due to delays in conduct of training programs.</p>		<p>CNSC staff position is that adequate facilities are to be available to examiners tasked with administering certification examinations and requalification tests on behalf of the Commission. Moreover, the requirement is forward-looking, in anticipation of future operations located at sites where access to adequate facilities may be an issue. The requirement is minimal, performance-based, and the current licensees are fully compliant. The regulatory statement will therefore have no impact on current licensees. Section 21 has been revised to apply strictly in the certification examination and requalification testing context.</p>
133.	Page 61 21.5	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	In order to facilitate the conduct and grading of the performance-based certification examinations and requalification tests referenced in this REGDOC, the simulator shall be equipped with adequate data-recording systems and equipment meeting the minimum requirements specified next in this subsection.	<p>The statement introduces the very purpose of the data-recording system in the present context, which is certification examination and requalification testing. This purpose is further explained under the guidance header. The added information may also be useful to future applicants and licensees in guiding the design and development of new full and partial-scope simulators. This stated purpose, from the perspective of the regulator, does not prevent licensees from using the data-recording for any other purpose neither specified nor prohibited explicitly in this or other REGDOCs. Finally, the purpose is further clarified in CVC documentation that specifies exactly how the performance-based examinations and requalification tests are to be designed, developed, conducted, and graded.</p>
134.	Page 62 21.5.3 d	Bruce Power, CNA, OPG, NB Power	<p>Significant increase from current requirements.</p> <p><b>MAJOR Impact:</b></p> <p>Significant increase in cost and regulatory burden for the current accepted practice as documented in CNSC-EG2 with no obvious or corresponding improvement to nuclear safety.</p>	d. the identification, live and during replay, with the aid of the corresponding control panel photographs, of the controls and instruments used by the candidate(s) being evaluated of the operating controls, instruments, and electronic or printed references used by the candidate(s) being evaluated;	<p>CNSC staff concurs that the added segment “live and during replay” may be misconstrued. That portion of the text was therefore deleted.</p> <p>However, the rest of the text duplicates the current requirement and since these capabilities are essential to the purpose of the videorecording system, CNSC staff sees no reason to modify the text further.</p> <p>The segment “with the aid of the corresponding control panel photographs” has been deleted from the proposed REGDOC since it prescribes a means to meet the regulatory expectation. Including this detail would make photographs mandatory, which is not the</p>

#	Section	Organisation	Comments Commentaires	Suggested changes Modifications proposées	CNSC staff responses Réponses du personnel de la CCSN
					intent of the requirement. The revised REGDOC and future revisions of related CVC documentation (namely CNSC-EG1, CNSC -EG2, and the requalification testing document) will avoid unnecessarily prescribing technical solutions, but set performance-based outcomes instead. This will provide licensees with maximum flexibility to adopt optimum technical solutions meeting the regulatory intent, and will help ensure that requirements remain relevant over time, regardless of technological developments.
135.	Page 65 Appendix B	Bruce Power, CNA, OPG, NB Power	Typo	Sub-Subsection 9.1.11 <b>9.1.11</b>	This technical glitch has been noted already.
136.	Page 65 Appendix B	Bruce Power, CNA, OPG, NB Power	By specifying 360 hours, the REGDOC does not allow for simplifications in technology at new facilities where the analysis demonstrates that such a number of hours is more than required. <b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensees' training system (SAT) process is diminished.	<b>Delete reference to 9.1.11</b> or, The worker must have successfully performed <b>360 hours of WUS, as specified by the licensee</b> , in the pertinent designated position, under the supervision of a qualified worker certified to work in the said designated position.	The title of the table enclosed in Appendix B reads <i>Mandatory Personnel Certification Schemes for CANDU Reactor Facilities</i> . Moreover, the introduction to Appendix B c states that the compliance schemes specified in Annex B apply to the relevant reactor facilities in operation at the time of publication, which are CANDU reactors. The associated requirement set under subsection 9.1.11 is technologically-neutral and performance-based for the very purpose of remaining applicable to all future operations. Appendix B will be updated as new compliance schemes are developed during licensing processes. Applicants will have to propose a substantiated case for a preferred WUS period.  In the CANDU context, the proposed 360 hours represents a significant reduction from the previous 480 hours. The change was made in parallel with an improved definition of WUS versus OJT. As previously communicated to the industry, the remaining 120 hours are to be covered by means of OJT, although the CNSC will not regulate OJT duration. CNSC staff sees no reason to further modify the CANDU compliance scheme.
137.	Page 65 Appendix B	Bruce Power, CNA, OPG, NB Power	As written, the statement is unclear.	Any worker certified for employment as ASO, RO or shift supervisor shall perform the duties of a <b>lead</b> ASO, RO or shift supervisor/ <b>senior shift supervisor</b> , respectively, for a minimum of four (4) complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.	Under the single certification scheme proposed by CNSC staff, there is no distinct certification for senior shift supervisors. The suggested change would imply that all shift supervisors may perform shifts in the senior shift supervisor position, contrary to the regulatory intent. Instead, CNSC staff revised Appendix B to include a distinct regulatory statement for each designated position and qualification level. Although this solution introduces repetition, it removes all potential ambiguity.  The CNSC staff position is for certified workers to meet the minimum quarterly requirement in a lead position. This requirement applies only to the mandatory 48

#	Section	Organisation	Comments Commentaires	Suggested changes Modifications proposées	CNSC staff responses Réponses du personnel de la CCSN
					hours of shiftwork per quarter, as explained under the guidance header. CNSC staff will raise this topic during the follow-up stakeholder workshop.
138.	Page 66 Appendix C	Bruce Power, CNA, OPG, NB Power	<p>Appendix C is listed as guidance, but can be interpreted as a mandatory list of training topics, developed outside of a licensee's training system; thus requiring it to be trained so it can be examined by CNSC.</p> <p>The appendix also includes new topics related to "international standards" that may be examined.</p> <p><b>MAJOR Impact:</b> By retaining too fine a level of detail in the requirements, the effectiveness of the licensee's training system (SAT) process is diminished.</p>	<p>Clarify intent of C.2 Radiation Protection and revise: The relevant topics include, but are not limited to: e. standards, including those of the International Commission on Radiological Protection (ICRP).the relevant international</p>	<p>The list of knowledge areas and topics reflect recent certification examinations. Paragraph C.2 (e) was revised to be more generic.</p>
139.	Page 70 Abbreviations	Bruce Power, CNA, OPG, NB Power	Missing abbreviations used in the document.	<p><b>BD</b>BA Beyond-Design-Basis Accidents NER Nuclear Emergency Response</p>	The abbreviation list was updated.

Table B – Workshop/Tableau B – Atelier

Comment #	Summary of issue	CNSC staff response
#60 Page 27, 9.1.5	<p>Related to <b><i>Qualifications for Operations Personnel</i></b>, CNSC has stated that it is not sufficient for workers to attend SAT-based training.</p> <p>Industry needs to understand the CNSC staff’s concept of safety goals vs use of a training system (SAT).</p> <p><b>Summary of discussion:</b></p> <ul style="list-style-type: none"><li>• Requested clarification about the expectations to provide more than SAT-based training.</li><li>• Requested clarification about the post-Fukushima concerns mentioned in the comments table.</li><li>• For the new requirements on nuclear emergency management, industry considers that if training is based on SAT, it should satisfy the requirement to meet the safety goal.</li><li>• Request confirmation if competency will be part of the inspection criteria? Industry believes the SAT should be the basis for examination and are concerned the examination might introduce topics that are not included in the SAT</li></ul>	<ul style="list-style-type: none"><li>• CNSC staff previously stated that the CNSC does not rely exclusively on the SAT in a broader context than the focus of the present industry comment and issue summary; that is, the proof of worker competency required by the CNSC encompasses the outcome of many activities, in addition to the implementation of SAT-based training.</li><li>• The SAT process is important, but merely one of the specific means (the how) used to meet the safety goal, but the safety goal (the what) is to ensure nuclear safety, and more specifically in this case, to achieve worker competency through the demonstration of adequate knowledge, skills, and safety-related attributes.</li><li>• The revised requirements are more performance-based than in Version 1; therefore, CNSC needs to provide more details on the regulatory expectations. Version 1 includes lists of mandatory training topics; in that context, there was no need to specify a purpose for each training component, since that latter was implied by the topic list. Since Version 2 does not specify any topics for the various training components, it must instead specify performance-based objectives, essentially generic, technologically-neutral, program descriptions. Version 2 is also less focused on NPPs and the new requirements will be more readily applicable to other facilities; the generic program descriptions and performance-based safety goals will help guide SAT implementation at new sites in agreement with the regulatory expectations, without interfering with SAT-based programs already implemented at CANDU sites.</li><li>• CNSC will allow the SAT to take its course, as long as it is found compliant with REGDOC-2.2.2 by the CNSC’s Training Program Evaluation Division (TPED) and the desired outcome remains satisfactory – that is, no evidence of inadequate worker competency is observed.</li><li>• The intent is not for CNSC to tell licensees how to train their personnel, nor is the intent to insert training items outside of SAT. CNSC will ensure EG1/EG2 revisions are aligned with the SAT programs; however, CNSC staff will retain control over the certification examination topics at the knowledge area level.</li><li>• Staff do not have any particular concerns with worker competency. The post-Fukushima comment was made to explain why the current, indirect emergency management training requirement was revised. The analysis of the REGDOC</li></ul>

Comment #	Summary of issue	CNSC staff response
		started not long after the Fukushima event and CNSC staff found the existing requirement was not strong enough
#14, several sections #56 Page 26 9.1.2 #57, Page 26 9.1.3	<p>Regulatory uncertainty results from the use of potential subjective criteria/expectations. For example:</p> <ul style="list-style-type: none"> <li>• Use of the word “suitable”.</li> <li>• Use of the words “confirm/confirming worker possesses adequate knowledge”</li> </ul> <p><b>Summary of discussion:</b></p> <p>The term “suitable” does not add clarity to the requirements and opens the door to subjectivity during CNSC inspections</p>	<ul style="list-style-type: none"> <li>• Given the departure from the past prescriptive regulatory approach in favour of increased reliance on performance-based personnel certification requirements, the revised REGDOC contains qualitative metrics where quantitative metric are inexistent or undesirable. The usage of “subjective” language is unavoidable and necessary when prescriptive language is removed. Prescriptiveness was reduced as part of the revision to maximize REGDOC shelf life and relevancy while providing licensees with flexibility to implement best practice regardless of technology. However, CNSC staff must retain the ability to disagree with licensee staffs in order to discharge their duties under the Act. Some measure of professional judgment is necessary to assess what is “safe”, “adequate”, “effective” or indeed, “suitable”, to cite a few examples. This usage is consistent with other REGDOCs.</li> <li>• The writing team has made significant efforts to minimize the chances of varying regulatory interpretation by adding extensive guidance, which is currently inexistent in Version 1, and by including new or improved definitions of terms in the glossary, where needed.</li> <li>• Furthermore, no REGDOC exists in a regulatory vacuum. This REGDOC sets high-level requirements and is meant to be read in conjunction with other documents, including the detailed compliance verification criteria (CVC) set in CNSC-EG1 and EG2 and the requalification testing document, applicable requirements specified in complementary REGDOCs, and site-specific regulatory interpretations and potential exemptions documented in licence condition handbooks (LCH).</li> <li>• Finally, this and other terms are mainly meant for future licensees and not necessarily for those that have currently mature training and examination programs in place.</li> <li>• Terminology was revised throughout the document and some instances revised or deleted.</li> </ul>
#93, #94, #95 Page 38 12.1	<p>Related to <b>Personnel Selection Criteria</b>, industry seeks clarification of the regulatory expectations related to the pertinent safety-related attributes expected of any person in a position of leadership, (i.e.: integrity, leadership, and resilience), including an explanation of the CNSC’s concerns post-Fukushima.</p>	<ul style="list-style-type: none"> <li>• CNSC staff will consider the comments and review the draft for potential revision.</li> <li>• Personnel certification encompasses all relevant qualifications and all aspects of worker competency, including leadership and personnel selection evaluations.</li> </ul>



Comment #	Summary of issue	CNSC staff response
	<p><b>Summary of discussion:</b></p> <ul style="list-style-type: none"> <li>Concerned with the requirement to evaluate attributes (e.g., integrity, resilience) and having standardized tests. Unsure how attributes can be tested and or demonstrated by licensees. Licensees have leadership programs in place to evaluate the attributes, but they are not tied to minimum staff complement positions.</li> <li>Perceived overlap between certification, evaluation and leadership.</li> </ul>	<ul style="list-style-type: none"> <li>The personnel selection criteria in question are easily met and express a regulatory expectation, not a detailed set of CVC. The revised REGDOC stresses the importance of ensuring that candidates put in leadership positions have the proper safety-related attributes and that licensees have programs or processes to identify essential skillsets. This emphasis is directly related to the Fukushima event and the associated recommendations.</li> <li>The REGDOC has been revised to remove prescriptive prior education and experience requirements potentially eliminating suitable candidates. However, the CNSC expects licensees to implement quality performance-based personnel selection programs (which are already implemented at CANDU sites) as alternative to the current prescriptive approach.</li> <li>Standardized tests are mandatory only when candidates are selected that do not meet the minimum education or experience requirements set by the licensee, and who are therefore exempted based on an equivalency. In that case, the candidates should be formally assessed using standardized tests to ensure the validity of the assumed equivalency. CNSC staff does not intend to intervene unless extreme circumstances dictate an intervention, including decertification as warranted.</li> </ul>
<p>#97, Page 39, 12.3.3 &amp; Page 42 12.5.6</p>	<p>Related to <b><i>Notification of Selection for Shift Supervisor Training</i></b> and <b><i>Notification of Personnel Transfer</i></b>, industry seeks clarification of the purpose of these requirements and of CNSC staff’s understanding of their role in management of a licensee’s training program</p> <p><b>Summary of discussion:</b></p> <ul style="list-style-type: none"> <li>Industry were not able to find a scenario where the notification of selection of a shift supervisor candidate would apply and request clarification on its purpose. If a candidate would not have performed their duties safely or competently or would not have the proper attributes, they would not be part of the selection process for leadership position. Candidates could successfully pass all the training and exams, but not have the correct attributes, in which case the licensee would not request certification. It is expected that CNSC staff would let them know if they have concerns on candidate or staff.</li> <li>Issue with the requirement to notify CNSC “prior to allowing the worker to enter an initial training program”. Industry expressed concern that licensees</li> </ul>	<ul style="list-style-type: none"> <li>The new notifications serve a regulatory purpose (and are therefore not merely administrative in nature) as part of a series of new and amended processes designed to address known regulatory gaps or to simplify past compliance schemes, all of which have caused extreme regulatory and administrative burden for both licensee and CNSC staffs in the past. The “added” burden introduced by the notifications and other new requirements must be assessed in the broader revision context, which has overall eliminated far more burden than it has introduced; the net regulatory and administrative burden is much less than that arising from the current requirements and known regulatory gaps. Reduction of burden was one of the key objectives of the revision.</li> <li>The rationale for the new notifications includes: <ul style="list-style-type: none"> <li>adequate record-keeping – the CNSC must maintain accurate candidate records as part of its mandate (e.g., SSIT candidates already certified as RO often cause file duplication because CNSC staff is not informed of their selection for training);</li> </ul> </li> </ul>

Comment #	Summary of issue	CNSC staff response
	<p>would be non-compliant if they notifies the CNSC after candidates had started the training program. Industry usually contacts the CNSC in case of concerns.</p> <ul style="list-style-type: none"> <li>• Request to clarify that the CNSC only needs to be notified and will not be accepting or rejecting candidatures.</li> <li>• Agree that there might be benefits to notifying CNSC, since licensees only report when staff resume work in a certified position, but do not report when staff are undergoing training for another position.</li> </ul>	<ul style="list-style-type: none"> <li>○ licensee confirmation of minimum safe performance on shift in lieu of the prior mandatory one-year of experience as certified RO – this represents a non-trivial reduction in net burden and a significant increase in operational flexibility;</li> <li>○ timely verification by CNSC staff of newly possible exemptions (i.e., general training completion and general examination pass);</li> <li>○ early engagement with the regulator (e.g., CNSC staff may disagree with assumed technological equivalencies and granted exemptions) allowing for timely CNSC staff intervention, which is not possible unless duly informed – candidates should not complete demanding training programs only to find out, months to years later, that they do not qualify for CNSC certification.</li> </ul> <ul style="list-style-type: none"> <li>• CNSC wants to be notified of personnel transfers, in order to confirm that, where used as basis for granting training and examination exemption(s), the two reactor facilities have similar designs.</li> <li>• All non-routine personnel selections are a concern, particularly for future operations, where a potentially more fluid workforce may require added regulatory oversight. CNSC staff does not intend to intervene in personnel selection unless obvious shortcomings are observed.</li> <li>• Version 2 is less focused on CANDU reactors and the new requirements will make it easier to apply the REGDOC to other facilities. Licensee staffs also change with time and apply different standards; present industry practices and norms cannot reliably serve as primary basis for long-term, fundamental requirements. Non-CANDU facilities might not have the same processes in place.</li> </ul>
#134, Page 62, 21.5.3 d	<p>Related to <b><i>simulator video-recording equipment</i></b>, industry seeks clarification of the purpose of this system and how the CNSC staff believes the revised requirement will be implemented, in particular the need to identify “... <i>the operating controls, instruments, and electronic or printed references used by the candidate(s)</i>...”.</p> <p><b>Summary of discussion:</b></p> <p>Industry would like to know if the CNSC believes we currently meet this new requirement or not?</p>	<ul style="list-style-type: none"> <li>• The simulator requirements remain unchanged and are nearly verbatim reproduction of the current text. The only meaningful change was the addition of the “electronic or printed references” used by candidates, to the existing video capture capability, which Version 1 fails to specify. Based on past observations, CNSC staff believes the current setups already have this capacity.</li> <li>• Audiovisual recording requirements exist merely to <b>allow</b> for the candidate action capture for later reference during grading – CNSC staff understands this is not always possible based on candidate movement and posture.</li> </ul>

Comment #	Summary of issue	CNSC staff response
	Clarification is requested for the audio-video requirement and if CNSC has issues with the current practices.	<ul style="list-style-type: none"><li>• The current full-scope simulators are, to the knowledge of the writing team, adequate and no further simulator systems upgrades should be required, if all the current licensees are compliant with the existing requirements.</li></ul>

## **2. CNSC Commission Document, Minutes of June 28, 2023 Commission Meeting, September 2023**



Minutes of the Canadian Nuclear Safety  
Commission (CNSC) Meeting held on  
June 28, 2023

Minutes of the Canadian Nuclear Safety Commission (CNSC) meeting held Wednesday, June 28, 2023, starting at 9:00 a.m. EST. The public portion of the meeting was held virtually and [webcast live](#) via the CNSC website, and [video archives](#) are available on the CNSC website.

Present:

R. Velshi, President  
T. Berube  
R. Kahgee  
M. Lacroix  
V. Remenda

D. Saumure, Registrar  
C. Howlett, General Counsel  
M. Young, Recording Secretary

CNSC staff advisors were: B. Torrie, J. Churchill, L. Desaulniers, F. Martel,  
C. Françoise, R. Richardson, J. Stevenson, K. Campbell,  
K. Murthy, P. Burton, H. Tadros, R. Stenson, C. Cattrysse,  
A. Zenobi, A. Jean, A. Levine, T. Panichevska, M. Young  
and S. Faille

Other contributors were:

- Ontario Power Generation (OPG): C. Naidin, A. Owen and S. Irvine
- Bruce Power: M. Burton, C. Mudrick, A. London, M. Rinker, J. Ross and  
L. Van Wieringen
- NB Power: N. Reicker and J. Nouwens
- Canadian Nuclear Laboratories (CNL): J. McBrearty
- Cameco: L. Mooney
- Saskatchewan Ministry of Environment: T. Moulding
- Health Canada: D. Quayle
- Atomic Energy of Canada Limited (AECL): M.-E. Pagé

Constitution

1. With the notice of meeting [Commission member document \(CMD\) 23-M17](#) having been properly given and all Commission members being present, the meeting was declared to be properly constituted.
2. For the meeting, documents [CMD 23-M19 to CMD 23-M26](#), were distributed to members. These documents are further detailed in APPENDIX A of these minutes.

Minutes of the CNSC Meeting Held March 2, 2023

3. The minutes of the [March 2, 2023](#) meeting were approved secretarially in advance of the meeting.

Adoption of the Agenda

4. The agenda, [CMD 23-M18](#), was adopted as presented.

Chair and Registrar

5. The President chaired the meeting of the Commission, assisted by D. Saumure, Commission Registrar.

**DECISION ITEM – REGULATORY DOCUMENT**Regulatory Document REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, version 2*

6. With reference to [CMD 23-M22](#) and [CMD 23-M22-A](#), CNSC staff presented regulatory document (REGDOC<sup>1</sup>) REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers*, version 2 for Commission's consideration and approval. Version 2 would replace [version 1](#), which was approved by the Commission in September 2019 and [RD-204, Certification of Persons Working at Nuclear Power Plants](#), which was approved by the Commission in February 2008.

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<sup>1</sup> [REGDOCs](#) play a key role in the CNSC's regulatory framework. They explain to licensees and applicants what they must achieve in order to meet the requirements set out in the [Nuclear Safety and Control Act](#) (NSCA) and the regulations made under the NSCA. When included in the licensing basis, REGDOC requirements are mandatory and must be met to obtain or renew a licence or to operate a nuclear facility.

7. CNSC staff explained that REGDOC-2.2.3, version 2, sets out the requirements and guidance for the certification of reactor facility workers by the CNSC. CNSC staff noted that the revised REGDOC:
  - provides increased flexibility to licensees in managing staff and in developing and implementing training
  - sets performance-based, technology-neutral requirements, processes and objectives
  - standardizes existing personnel certification processes while reducing administrative and regulatory burden
  - clarifies regulatory interpretation and terminology
  - removes validity periods for all knowledge-based certification examination results, except the two-year validity period for all simulator-based certification examinations
  - improves candidate recruitment and retention
8. CNSC staff also provided information regarding the public consultation for REGDOC-2.2.3, version 2. CNSC staff noted that the consultation focused on the proposed changes to the REGDOC. CNSC staff reported that, during the 106-day consultation period, from July 4, 2022 to October 18, 2022, it received 139 distinct comments from the following 6 respondents:
  - Bruce Power
  - Canadian Nuclear Association
  - GE - Hitachi Nuclear Energy
  - Froats and Froats Associates
  - New Brunswick Power Corporation (NB Power)
  - Ontario Power Generation (OPG)
9. CNSC staff noted that the key issues raised during public consultation were:
  - use of subjective and prescriptive wording
  - increased site experience for Senior Health Physicists (SHP)
  - minimum employment of operations personnel
  - misalignment with CNSC examination guides
  - applicability and implementation at new facilities
  - perceived conflict with Systematic Approach to Training (SAT)
10. CNSC staff held a workshop on February 16, 2023, with the focus on comments received during the public consultation and implementation challenges. The workshop was opened to individuals and organizations who provided comments during the public consultation period. All issues brought up during the workshop were satisfactorily addressed.



11. The Commission asked CNSC staff to discuss the qualitative and quantitative methods that will be in place to measure the REGDOC's ability to deliver and address the key issues identified. CNSC staff noted that the validation process would include:
  - ongoing dialogue and stakeholder engagement activities
  - CNSC inspections and compliance verification activities
  - exchanging information during semi-annual Certification and Training Advisory Group (CTAG)<sup>2</sup> meetings
12. The Commission also asked NB Power, OPG and Bruce Power representatives to comment on this topic. Representatives from the 3 licensees noted that each organization tracks certified worker demographics, and that they would continue to provide feedback to CNSC staff during CTAG meetings. The OPG representative also noted that the revised REGDOC would accommodate OPG's future needs with respect to Small Modular Reactor (SMR) technologies.
13. The Commission asked for more information concerning how the REGDOC deals with job titles of certified positions, particularly as new reactor technologies are emerging. CNSC staff responded that the REGDOC establishes generic terminology that can be used to reference designated positions; however, licensees can use site-specific terminology for job titles, provided the job titles are associated with CNSC-designated positions. CNSC staff added that this practice would continue to apply to new facilities such as SMRs. Representatives from Bruce Power, OPG and NB Power noted that the current job titles are historical, well established within the operational framework, and emphasized that there are no plans to change them to align with new technologies. The OPG representative added that the appendix in REGDOC-2.2.3, Volume III, version 2 adequately addresses the various positions used at the nuclear power plants.
14. The Commission asked about the removal of prescriptive training topics and sequences, and the responsibility for defining training programs. CNSC staff clarified that the minimum requirements for training are established in [REGDOC-2.2.2, \*Personnel Training\*](#) and that the revised REGDOC-2.2.3, Volume III adds oversight by specifying training program components. CNSC staff added that licensees are responsible for implementing a systematic-approach-to-training-based approach to complement the requirements established in the REGDOCs.

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<sup>2</sup> The Certification and Training Advisory Group (CTAG) is a standing committee comprised of management representatives from the industry and CNSC staff, which facilitates the exchange of information and feedback on the CNSC worker certification and training.

15. The Commission asked for clarification on the proposed performance-based approach and on the certified personnel's flexibility to switch between reactor types and technologies. CNSC staff responded that workers are trained and certified for a specific reactor technology, and that cross-technology operation is not permitted without requalification.
16. The Commission requested insights into the timelines and expectations for licensees to implement the REGDOC. CNSC staff noted that REGDOC-2.2.3, Volume III is referenced in the operating licences instead of the Licence Condition Handbooks and would require a licence amendment to be implemented. CNSC staff explained that, once the REGDOC is approved, CNSC staff would contact impacted licensees to discuss timelines for a licence amendment application. CNSC staff noted that a similar approach was successfully followed for REGDOC-2.2.3, Volume III, version 1, in 2020. An OPG representative added that OPG expected the implementation of the revised REGDOC to take several months, rather than several years.
17. The Commission asked the licensee representatives to comment on any concerns they may have with respect to the revised REGDOC. The representatives from Bruce Power, OPG and NB Power unanimously expressed no significant concerns on the revised REGDOC. They noted that the revised REGDOC provides flexibility, improves inclusiveness of the training program, and would not impact their current operations.
18. The Commission also asked CNSC staff for information on the revision timeframe for examination guides.<sup>3</sup> CNSC staff responded that it was drafting a workplan, and that the workplan was expected to be completed by fall 2023.
19. The Commission highlighted its satisfaction with the modernization of the REGDOC and the use of Gender Based Analysis Plus (GBA+) as part of this revision. The Commission notes that one of the anticipated outcomes of the new revision is the removal of systemic barriers for recruitment and retention.

#### Decision on REGDOC-2.2.3, version 2

20. After considering the recommendations submitted by CNSC staff, the Commission approves REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers*, version 2 for publication and use.

#### **DECISION**

<sup>3</sup> Examination Guides ([EG1](#), [EG2](#)) summarize the requirements and guidelines for certification and requalification of shift personnel at Nuclear Power Plants. These two examination guides were last revised in 2005 and 2004, respectively.

## **STATUS REPORT ON POWER REACTORS**

21. With reference to [CMD 23-M19](#), CNSC staff presented the following additional updates:
  - Bruce Power Nuclear Generating Station (NGS) Unit 2 returned to full power following a brief forced outage to repair a leaking instrument line<sup>4</sup>
  - Bruce Power completed a primary heat transport system hydrostatic pressure test at Bruce NGS Unit 6, which is shut down for [the major component replacement project](#)<sup>5</sup>
  - OPG's Darlington NGS Unit 1 refurbishment is ongoing – the calandria tube installation is the current critical path
  - Testing at 30% full power and turbine testing are ongoing for the refurbishment of Darlington NGS Unit 3
  - OPG continues to prepare for the shutdown and refurbishment of Darlington NGS Unit 4
  - OPG has increased Pickering NGS Units 1 and 5 to full power, and Unit 4 was returned to full power on June 27, 2023 following a planned maintenance outage
  - On June 16, OPG submitted a licence application requesting authorization to operate Pickering NGS Units 5 to 8 until December 2026
  - OPG paid the [administrative monetary penalty](#) (AMP) noted in CMD 23-M19 for both Pickering NGS and Darlington NGS
  - CNSC staff issued letters to power reactor licensees requesting implementation of the remaining unimplemented sections of [REGDOC-2.2.4, Fitness for Duty Volume II: Managing Alcohol and Drug Use, version 3](#). CNSC staff noted that the letter requested implementation of the pre-placement and random testing provisions of REGDOC-2.2.4, Volume II by December 1, 2023
22. The Commission sought additional information on the Bruce Power NGS Unit 2 leak and the impact it had on nuclear energy workers. CNSC staff noted that the instrument line was located inside the primary heat transport system, and thus there was no impact to workers. Additionally, CNSC staff noted that Bruce Power shut down the unit to fix the leak prior to reaching the regulatory leak rate limit (100 kg/hour) that requires reactor shutdown. A Bruce Power representative added that, to prevent similar events, Bruce Power inspected an additional 23 sites

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<sup>4</sup> Details of the instrument line leak at Bruce NGS Unit 2 are found in the minutes from the [March 2, 2023](#) Commission meeting.

<sup>5</sup> The Bruce Power major component replacement project began in January 2020 and focuses on the replacement of key reactor components in Units 3-8, including steam generators, pressure tubes, calandria tubes and feeder tubes.

where similar problems could arise, and made repairs in 5 of those sites.

23. The Commission noted that several instrument lines leaks had occurred in 2022 and 2023<sup>6</sup>, and sought additional insights on the activities performed by CNSC staff to ensure that such systems are adequately maintained and managed. CNSC staff responded that due diligence activities include verification of the industry's Operating Experience (OPEX) processes and programs. CNSC staff added that lessons learned and sharing information across the industry<sup>7</sup> are key components of an OPEX program. A representative from Bruce Power added that, in addition to lessons learned and industry-wide OPEX sharing, Bruce Power has an internal program that looks at instrument lines during outages to ensure proper instrument line clearance is maintained to prevent degradation due to fretting. The OPG and NB Power representatives confirmed that similar programs are in place at OPG and NB Power.
24. The Commission asked Bruce Power for information on the planned restart timeline for Unit 6. A Bruce Power representative reported that the current scheduled timeframe for the restart is October 2023.

### **EVENT INITIAL REPORTS (EIRs)**

#### **Bruce Power – Improper disposal of tritium-contaminated waste by Bruce Power**

25. With reference to [CMD 23-M24](#), CNSC staff provided information regarding an improper disposal of tritium-contaminated waste by Bruce Power. CNSC staff's submission indicates that on February 2, 2023, Bruce Power released tritium-contaminated filter waste in excess of the unconditional clearance levels (UCL)<sup>8</sup> set out in the [Nuclear Substances and Radiation Devices Regulations](#) (NSRDR).
26. CNSC staff submitted that:
  - the event was not expected to have adverse impacts on the health and safety of persons or the environment due to the low

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<sup>6</sup> A leak due to worsening of an existing crack caused by high cycle fatigue at Point Lepreau NGS, which was discussed at the [December 2022](#) and [January 2023](#) Commission meetings. A leak due to cable fretting (rubbing) against equipment at Bruce Power NGS Unit 4, which was discussed at the [March 2, 2023](#) Commission meeting.

<sup>7</sup> In Canada, sharing of information across the industry is carried out through the CANDU Owners' Group (COG) weekly OPEX screening committee meeting.

<sup>8</sup> The unconditional clearance level (UCL) for tritium is set at 100 becquerel/gram (Bq/g). The tritium concentration in the charcoal released ranged between 185 Bq/g to 511 Bq/g.

level of contamination and capture of the tritium in the charcoal filters

- individual effective doses to a critical group in the public (i.e., a child) were estimated at 7.39 microsieverts per year ( $\mu\text{Sv/yr}$ )<sup>9</sup> for a low probability event and at 0.61  $\mu\text{Sv/yr}$  for a realistic exposure
- no adverse effects on the natural environment are expected as a result of disposal since the disposal site is designed to accept naturally-occurring radioactive materials (NORMs)

CNSC staff noted that the detailed event report submitted by Bruce Power is currently under review. CNSC staff noted that, as per [REGDOC-3.1.1 Reporting Requirements for Nuclear Power Plants](#), CNSC staff will review any additional information as it becomes available.

27. A representative from Bruce Power noted that Bruce Power performed a review of all different material release paths from the Bruce Power site and implemented additional verification measures as a result of this event. The Bruce Power representative noted that an independent review was carried out to assess the robustness of the implemented measures.
28. The Commission enquired about the timeline of the event, particularly as it relates to the chemical analysis performed on the material that was incorrectly shipped offsite for disposal. A Bruce Power representative clarified that the chemical analysis was performed prior to shipment; however, the main causes of the event included:
  - human error due to incorrectly assuming that the shipment was clean based on air sampling only
  - lack of independent verification
29. The Commission enquired further into the lessons learned and independent review performed by Bruce Power. A Bruce Power representative responded that Bruce Power made improvements to its review and approval process for waste materials. With respect to the independent review process, the Bruce Power representative reported that an external contractor, with expertise in both radiological protection and shipping, was hired to independently review and identify any potential gaps before the end of December 2023.
30. The Commission asked Bruce Power to elaborate on the topic of conditional and unconditional clearance levels and how they apply to the waste discussed in the Initial Event Report. The Bruce Power representative responded that, as per the NSRDR, the unconditional clearance limit for tritium is 100 Bq/g, and the

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<sup>9</sup> The regulatory dose limit for members of the public is 1 mSv (1000  $\mu\text{Sv}$ ) in one calendar year.

waste in question had a peak tritium value of 511 Bq/g. As such, the waste needed to be disposed of under a conditional release permit, which requires a different approval process. The Bruce Power representative further noted that, in this case, the same disposal company and process used for conditional releases was used for the erroneous unconditional release of the waste, so there was no significant impact on people or the environment.

31. The Commission sought further information on the CNSC inspection performed as a result of this event. CNSC staff responded that it performed a reactive inspection looking at hazardous waste handling processes immediately after the event. CNSC staff noted that no issues were identified during the inspection. CNSC staff stated that it was planning additional inspections when future similar shipments occur.
32. The Commission requested further details regarding the tests performed to assess the toxicity of the waste that was placed in the landfill. A representative from Bruce Power noted that Bruce Power performed tests to reproduce the effects of aggressive acidic-type leachate on the waste materials. The Bruce Power representative noted that these tests provided an upper bound for various anticipated scenarios of how the waste material would behave in the landfill. The Bruce Power representative also reported that the waste implicated in this event contains tritium, which dissolves easily in water and does not change the pH.
33. The Commission is satisfied with the preliminary information provided on this item and the response by Bruce Power to make process improvements and address lessons learned.

#### Bruce Power – Bruce A Unit 4 Heat Transport Purification System Heavy Water Leak

34. With reference to [CMD 23-M20](#), CNSC staff provided information regarding a heavy water leak in the heat transport purification system of the Bruce Nuclear Generating Station A Unit 4. In its submission, CNSC staff informed the Commission that the source of the leak was identified as a failed flexible hose located on the inlet of a Unit 4 purification system, resulting in a total heavy water leak of 135 megagrams ( $135 \times 10^6$  g). Bruce Power informed the Commission that it responded to the heavy water leak event in an effective and timely manner, resulting in no adverse impact on employees, the environment or the public.
35. During its presentation ([CMD 23-M20.1](#)), Bruce Power explained that the leak was located in the purification portion of the auxiliaries of the primary heat transport system, specifically a hose leading to the mechanical filter used to remove impurities.

Bruce Power noted that no regulatory limits were reached or exceeded during the event; the highest individual dose by a worker received during the event, initial response, mitigation and cleanup activities was 2.36 millisieverts (mSv).<sup>10</sup>

36. Bruce Power reported that Unit 4 was returned to power following the cleanup and repair of the leak. Bruce Power noted that it made other improvements throughout the Unit 4 purification filter system. In addition, Bruce Power stated that it implemented improvements at both Bruce NGS A and B, such as a camera in the filter hose room, and shared lessons learned with the industry.
37. The Commission asked Bruce Power if its maintenance and inspection program covered the issue in question. A representative from Bruce Power responded that the effectiveness of the preventive maintenance program with respect to the filter hoses was one of the identified root causes of the event. The Bruce Power representative noted that the frequency of preventive maintenance activities associated with leak detection beetles<sup>11</sup> was 2.5 years. However, as a result of this event, Bruce Power stated that it looked at improving the effectiveness of the preventive maintenance program for leak detection beetles and performed a review of 59 leak detection beetles, identifying 7 that required remediation or repair.
38. The Commission asked Bruce Power for additional information on the amount of heavy water leaked during the event. A Bruce Power representative reported that the total amount of heavy water leaked represents approximately one third of the total inventory of heavy water outside the primary heat transport circuit<sup>12</sup> (i.e., part of the auxiliary heavy water inventory). The Bruce Power representative clarified that no heavy water inventory was lost from the primary heat transport circuit, and there was no impact on reactor shutdown and cooling during the event. Bruce Power also reported that the leaked heavy water was recovered and was being processed in order to be reused.
39. The Commission asked Bruce Power about possible upgrades to the design and materials used for the purification hoses. A representative from Bruce Power responded that Bruce Power was investigating different configurations and/or materials for

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<sup>10</sup> The annual dose limit for a nuclear energy worker as per the [Radiation Protection Regulations](#) is 50 mSv per year and 100 mSv over five years.

<sup>11</sup> Leak detector beetles are the primary leak detection elements within a plant. Currently, these elements are designed as open circuits, which would close and alarm if a leak occurred.

<sup>12</sup> The primary heat transport system (HTS) circulates pressurized heavy water coolant through the reactor fuel channels to remove heat produced by fission of the natural uranium in the fuel. One auxiliary system to the primary HTS is the heat transport purification system, which controls the chemistry of the reactor coolant. The auxiliary heavy water inventory which is part of the purification system is external to the heavy water inventory inside the primary HTS.



the hoses to improve the robustness of the system. The Bruce Power representative noted that Bruce Power would track corrective actions and follow its engineering change control process to implement any design changes.

40. The Commission asked for further information on Bruce Power's safety culture survey results during the incident. A Bruce Power representative responded that the results of the survey had just been received, and that Bruce Power was analyzing them using the organization's standard process. The Bruce Power representative noted that one prevalent theme was better communication with staff.
41. The Commission is satisfied with the preliminary information provided on this item and Bruce Power's response to the event.
42. The Commission directs CNSC staff and Bruce Power to provide an update on this event, including information on the safety culture survey, at a future public meeting.

**Action**  
By  
December  
2023

Canadian Nuclear Laboratories – Safety Stand-down at Canadian Nuclear Laboratories' Whiteshell Site following the discovery of non-compliances in the fire protection program

43. With reference to [CMD 23-M25](#), CNSC staff provided information on the safety stand-down<sup>13</sup> that took place at Canadian Nuclear Laboratories' (CNL) [Whiteshell Laboratories](#) facility, which is currently being decommissioned. The stand-down followed CNL's discovery of a non-compliance in its fire protection program, which had a direct impact on CNL's ability to maintain the minimum complement of fire response personnel to ensure adequate fire safety and response.
44. A CNL representative discussed the immediate and company-wide actions CNL had taken to address the organizational and compliance issues identified during the fire protection program self-assessment. The immediate actions included:
  - a safety stand-down of all activities with the exception of those required to maintain safety and security
  - CNSC staff notification, disclosure and updates regarding the event
  - public notification and updates
  - deployment of fire protection staff and spare equipment from Chalk River Laboratories site to Whiteshell

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<sup>13</sup> During the stand-down period, the Whiteshell Laboratories site was placed in a safe shutdown state and only essential compliance and maintenance work were conducted.



- Laboratories site to ensure necessary fire response capabilities
- the deployment of CNL executives and fire program subject matter experts to Whiteshell Laboratories site to oversee ongoing assessments
  - a full review to determine gaps in fire personnel training and identify remediation measures
  - full review of emergency response equipment and fire systems, and procurement of new equipment to address deficiencies
  - improvements to fire program oversight and shift staffing
45. The CNL representative also discussed site-wide actions including a root cause analysis of emergency services, a review of all safety and control areas at Whiteshell Laboratories, and corrective actions to ensure compliance with regulatory requirements and improve safety culture.
46. The Commission enquired about CNSC staff's inspection and compliance verification process at Whiteshell Laboratories. CNSC staff responded that compliance verification walkdowns and inspections targeting all 14 safety and control areas are performed at Whiteshell Laboratories on a yearly basis. CNSC staff noted that, for fire prevention, it looks at fire equipment in the field to ensure it is maintained, available and not obstructed, and observes drills performed by CNL. CNSC staff added that it had not noted any findings pointing to systemic program failure. CNSC staff further stated that, in light of this event, future compliance activities will include training, management system and fire response, as applicable.
47. The Commission asked for more information on CNL's self-assessment. A CNL representative noted that the self-assessment was initiated by the questioning attitude of a new employee and was conducted in accordance with CNL's approved procedures. The CNL representative noted that a review of previous years' audits and assessments identified gaps in terms of findings and recommendations and their categorization, which led to the safety stand-down. Additionally, the CNL representative noted that CNL failed to adequately assess the consequences of organizational changes at Whiteshell Laboratories, such as setting up a tiered combined security and fire response force, resulting in gaps in training and qualification requirements.
48. The Commission asked CNSC staff to comment on the nature of changes in non-compliances observed throughout the lifecycle of a nuclear facility, from construction to decommissioning. CNSC staff stated that, regardless of the lifecycle stage a facility is in,

compliance with all 14 safety and control areas is part of the licensing basis. CNSC staff noted that, as a facility progresses through its lifecycle, the focus of the work and the associated risks changes, but that does not necessarily correlate to changes in non-compliances.

49. The Commission expressed strong concerns regarding the number of fundamental failures at Whiteshell Laboratories which resulted in this event. The Commission noted that the event puts in question the competence of the licensee and the adequacy of the CNSC's level of oversight and compliance program for the facility. The Commission further noted that the event raises questions about whether similar gaps could exist in other safety and control areas.
50. A CNL representative responded that the boards of governors of CNL, the Canadian National Energy Alliance (CNEA)<sup>14</sup>, and Atomic Energy of Canada Ltd. (AECL) have shared the Commission's concerns and disappointment on the situation at Whiteshell Laboratories. The CNL representative noted that, organizationally, CNL is focusing on ensuring that Whiteshell Laboratories is appropriately staffed in terms of the number of employees and appropriate expertise and skillsets.
51. In addition, the CNL representative reported that CNL had conducted a review of all safety and control areas at Whiteshell Laboratories, which identified some deficiencies and common trends. The CNL representative noted that the identified gaps were lower in significance and impact than those noted within the fire program.
52. CNSC staff responded that it was looking into making changes and improvements to its oversight at Whiteshell Laboratories and similar sites. CNSC staff noted that it would also undertake a lesson learned activity.
53. The Commission appreciated the availability of CNSC staff and CNL to answer Commission members' questions. The Commission expressed that, while the licensee has responded to the event and the findings, the event is significant and speaks to a failing safety culture and many processes over a long period of time. The Commission encourages CNL to share operational experience on this topic with the industry and others, as some of the causes and lessons learned can have a broad application.

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<sup>14</sup> Canadian National Energy Alliance (CNEA) is the contractor who manages and operates Canadian Nuclear Laboratories sites in Ontario, Quebec and Manitoba.

54. The Commission directs CNSC staff to provide an update to the Commission on this event, including lessons learned, at a future public meeting.

**Action**  
By  
November  
2023

### **UPDATES ON ITEMS FROM PREVIOUS COMMISSION PROCEEDINGS**

Update on the Inspector's Order issued to Cameco Corporation in October 2022 regarding the exceedance of the approved volume of a waste rock stockpile at the Cigar Lake mine (Action from [December 15, 2022](#) Commission meeting)

55. Regarding [CMD 23-M26](#), CNSC staff submitted that Cameco had provided an acceptable drawdown plan identifying activities to reduce the volume of stockpile C to a level below the regulatory requirements. CNSC staff considered the drawdown plan and supporting submissions to be sufficient to meet the requirements of the CNSC Inspector's Order, and therefore considered the order closed. CNSC staff noted that it would provide a further update on this item in the 2022 Uranium Mines and Mills Regulatory Oversight Report (ROR) in December 2023.
56. A representative from Cameco reported that the current state of stockpile C had been reviewed by a third-party geotechnical subject matter expert, who confirmed that no mitigatory actions were required to ensure the geotechnical stability of the pile at its current volume. The Cameco representative added that there were no effects on the environment, the health and safety of persons or security as a result of the non-compliance.
57. The Commission asked for clarification on the drawdown plan and the changes in the volume of the pile. CNSC staff clarified that, as part of the drawdown plan, Cameco will be allowed to remove and add material from stockpile C, provided that the total volume not exceed the volume identified when the exceedance was noted.
58. The Commission asked for information on the impact of the leachate system. A representative from Cameco responded that the environmental risk assessment completed on a pile volume of 450,000 m<sup>3</sup> concluded that there were no issues with respect to the leachate.<sup>15</sup>
59. The Commission asked for an update on engagement with Indigenous communities since the [December 2022 update](#).

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<sup>15</sup> The volume of material in stockpile C upon discovery of the event was 413,172 m<sup>3</sup>, while the regulatory limit for stockpile C is 400,000 m<sup>3</sup>.

CNSC staff responded that the order was made available on the CNSC website, and that CNSC staff had proactively informed nations with an interest in the Cigar Lake site of the order. CNSC staff added that it offered to respond to any questions Indigenous communities may have.

60. The Commission asked if the Saskatchewan Ministry of Environment had any concerns regarding Cameco's proposal for stockpile C. A representative from the Saskatchewan Ministry of Environment noted that the Ministry had issued an order to Cameco for the stockpile C overage on November 8, 2022, and that Cameco had complied with the order. The representative also noted that the Ministry was working closely with CNSC staff to ensure that the non-compliance is resolved.
61. The Commission is satisfied with the update provided on this topic.

## **INFORMATION ITEM**

### **Information on the waste rock found around the homes in Elliot Lake**

62. CNSC staff presented a verbal update to the Commission on the issue of radiation levels from waste rock in the town of Elliot Lake, Ontario, which had been the subject of recent media coverage and inquiries from the public. CNSC staff noted that some Elliot Lake residents have raised concerns about radiation levels in their homes, attributed to waste rock from former uranium mines at Elliot Lake being used as construction material or landfill.
63. Based on a review of historical documentation, CNSC staff reported to the Commission that:
  - the waste rock used in Elliot Lake homes was clean waste rock, which was never chemically processed; the waste rock was naturally radioactive at levels consistent with the region and not considered part of the nuclear fuel cycle, under the [\*General Nuclear Safety and Control Regulations\*](#)<sup>16</sup>.
  - no tailings<sup>17</sup> from Elliot Lake mine were used as construction material in Elliot Lake – all tailings are stored and managed safely in CNSC-licensed tailing management facilities.
  - a Federal-Provincial Taskforce on Radioactivity was formed in 1970 to investigate and remediate many

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<sup>16</sup> SOR/2000-202.

<sup>17</sup> Tailings are defined as the waste material and water mixture that is leftover after the mill removes valuable rock.

locations across Canada, including Elliot Lake. The report issued by the taskforce concluded that radon in Elliot Lake homes could have been from natural causes or from the use of mine waste rock for construction. All homes were remediated by installing fans to exhaust radon outside the homes; the long-term maintenance of mitigative systems was transferred to the homeowners' responsibility.

64. CNSC staff emphasized that, based on the reported radon levels and conservative assumptions about exposure, the current situation in Elliot Lake did not pose any health risks to homeowners. CNSC staff noted that it encourages homeowners, members of the public, and media to consult the guidance provided by Health Canada's [National Radon Program](#). CNSC staff added that it would continue to monitor the developments on this topic and disseminate objective scientific information.
65. The Commission asked CNSC staff to clarify if BHP Canada Inc.'s (BHP)<sup>18</sup> remediation plans, if any, would be presented to the Commission. CNSC staff clarified that, although BHP is licensed to operate its tailings management facilities, the licence does not include the remediation of homes. CNSC staff stated that BHP's plans were not subject to CNSC regulatory requirements and would not come before the Commission.
66. The Commission asked Health Canada and AECL representatives to comment on their public communications on this matter. A Health Canada representative noted that Health Canada had not issued any communication. The Health Canada representative also noted that since the reported radon levels were above the Canadian national radon [action level](#) i.e. above 200 becquerels per cubic meter (Bq/m<sup>3</sup>), Health Canada would recommend intervention to reduce the levels. With respect to the gamma dose rates associated with the radon levels, the Health Canada representative stated that Health Canada would need more information to make an assessment.
67. The AECL representative stated that AECL had been involved in the 1980s remediation activities as the subject matter expert; however, it had no other role in the matter. The AECL representative also clarified that AECL was not responsible for the legacy waste rock material since it is naturally-occurring and the original owner still exists.

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<sup>18</sup> BHP is the company that acquired the mines at Elliot Lake from the operator, Rio Algom. In response to a letter sent by the Canadian Environmental Law Association (CELA) on behalf of the properties in Elliot Lake involved in this event, BHP began a detailed review of the information and made a public commitment "to understand the history of these properties, what has happened, and remediate, as appropriate."

68. The Commission requested further information on the process and responsibilities of various organizations for a situation in which a homeowner discovers elevated radiation levels in their home. CNSC staff responded that, if the radiation doses were at levels that could pose a health concern, the CNSC and Health Canada would assess the issue and determine a path forward to mitigate it.
69. CNSC staff also commented that a lot of information is readily available to homeowners on the topics of radon and naturally occurring radioactive materials (NORM) and how to remediate and/or mitigate such problems. CNSC staff noted the information available on Health Canada's *National Radon Program* website and the Elliot Lake local [Health Unit website](#). CNSC staff also noted that information on NORM and links to other resources can also be found on the [CNSC website](#).
70. The Commission requested CNSC staff to provide an update on BHP's conclusions and progress on the topic, as information becomes available.
71. The Commission appreciated the availability of AECL and Health Canada during the meeting to answer Commission members' questions.

**Action**  
by  
December  
2023

#### Information on CNSC funding programs

72. With reference to [CMD 23-M23](#), CNSC staff presented on 2 CNSC funding programs: the [Participant Funding Program](#) (PFP)<sup>19</sup>, which has been in place since 2011, and the [Indigenous Stakeholder and Capacity Fund](#) (ISCF)<sup>20</sup>, which was officially launched on May 1, 2023.
73. In its presentation CNSC staff summarized the eligibility criteria for the PFP and what the funding covers. The participant funding is provided for public Commission proceedings with interventions and for activities related to specific projects that come before the Commission. CNSC staff also described the application review process and how the funds are awarded.<sup>21</sup> CNSC staff noted that the CNSC is the only nuclear regulator

<sup>19</sup> The CNSC Participant Funding Program is an ongoing permanent program established in 2011 to enhance indigenous, public and stakeholder participation in environmental assessments and Commission proceedings and to support indigenous nations and communities and stakeholders to bring value-added information to the Commission.

<sup>20</sup> The Indigenous Stakeholder and Capacity Fund was established in December 2022 to help address capacity needs of Indigenous Nations and Communities and stakeholders.

<sup>21</sup> PFP applications are reviewed by an external Funding Review Committee (FRC), comprised of former public servants with experience in environmental assessment, licensing, indigenous consultation and engagement process, and PFPs from other federal agencies.

internationally to have a PFP, which has been recognized as an international best practice.

74. Regarding the ISCF, CNSC staff noted that the fund was established to address capacity needs of Indigenous nations and communities, as well as stakeholders, to support building relationships. CNSC staff noted that the ISCF builds on best practices and lessons learned from the CNSC's and other federal departments' funding programs.
75. CNSC staff explained that funding opportunities under the ISCF are distributed between 3 funding streams: Indigenous capacity support, regulatory policy dialogue, and engagement and collaboration support. Unlike the PFP, which is project-specific, the ISCF is not tied to a licensing decision, environmental assessment process or Commission proceeding. CNSC staff also noted that the funding provided under the ISCF does not require an agreement to be in place between the CNSC and an Indigenous nation or community.
76. The Commission requested further information on CNSC staff's communication plans related to the ISCF. CNSC staff noted that its current focus was on the Indigenous nations and communities with which the CNSC already has a relationship and regular meetings. CNSC staff noted that discussions and information sessions on the three funding streams are ongoing, and that CNSC staff is available to support the application process.
77. The Commission asked about the funding for the ISCF. CNSC staff responded that the funding – \$3.8 million per year for 6 years – is entirely directed towards external recipients. CNSC staff noted that, although the funds are divided between the 3 streams, there is flexibility in terms of moving funds between the streams, if justified.
78. The Commission enquired further on the Government of Canada's oversight of the ISCF program. CNSC staff responded that, since the funding for the ISCF program is managed by the federal government, it needs to follow the Treasury Board Secretariat of Canada's rules and guidelines. As such, funding awards are subject to scrutiny to ensure applicants do not get funding from various federal government sources for the same program. CNSC staff also noted that mechanisms are in place to monitor and evaluate the performance of the program.
79. Regarding PFP, the Commission asked about how CNSC staff ensures that information submitted by PFP recipients is value-added to Commission proceedings. CNSC staff explained that applicants are required to describe their submissions as part of their applications; however, recipients are not prevented from

adding new information to their final submissions. CNSC staff also noted that feedback from Commission proceedings is provided to the Funding Review Committee to consider for future applications.

80. The Commission commended CNSC staff for its efforts in implementing the new funding program initiative. The Commission found CNSC staff's submission and presentation to be informative and appreciated the information provided by CNSC staff in response to the Commission's questions.

#### Status of the Designated Officer Program for 2022

81. With reference to [CMD 23-M21](#), CNSC staff presented the status of the designated officer (DO) program for 2022. CNSC staff provided information on the number of CNSC DOs and their authorities under the [Nuclear Safety and Control Act](#) (NSCA), and reported on the DO authorities carried out in 2022. CNSC staff also presented information on the DO duties carried out by the CNSC's Nuclear Substances and Radiation Devices Licensing Division.
82. The Commission asked for additional information on the recruitment process for new DOs. CNSC staff responded that the Commission has designated specific positions as DOs, and that the CNSC ensures that individuals hired into those positions are qualified.
83. The Commission also asked for insights on CNSC staff's annual DO forum. CNSC staff responded that the topics discussed during the DO forum are determined based on input from DO forum participants, as well as CNSC staff who want to share information that could impact DO decision-making.
84. The Commission expressed its appreciation for CNSC staff's presentation on the DO program.



Closure of the Public Meeting

85. The Commission meeting closed at 14:52 pm. These minutes reflect both the public meeting itself and the Commission's considerations following the meeting.

Young,  
Michael

Digitally signed by Young, Michael  
DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Young, Michael"  
Reason: I am the author of this document  
Location: Ottawa, ON  
Date: 2023.09.11 21:23:53-04'00'  
Foxit PDF Editor Version: 12.1.2

\_\_\_\_\_  
Recording Secretary

\_\_\_\_\_  
Date

Saumure,  
Denis

Digitally signed by Saumure, Denis  
DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Saumure, Denis"  
Reason: I am the author of this document  
Location:  
Date: 2023.09.11 17:16:54-04'00'  
Foxit PDF Editor Version: 12.1.2

\_\_\_\_\_  
Commission Registrar

\_\_\_\_\_  
Date

## APPENDIX A

CMD	Date	e-Docs No.
23-M17	2023-06-06	7054487
Notice of Virtual Commission Meeting of June 28, 2023		
23-M18	2023-06-21	7054514
Agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held remotely on June 28, 2023		
CMD 23-M19	2023-06-21	7069617
Information Item  Status Report on Power Reactors  Written submission from CNSC staff		
CMD 23-M20	2023-06-19	7066144
Event Initial Report  Event Initial Report – Bruce A Unit 4 Heat Transport Purification System Heavy Water Leak  Written submission from CNSC staff		
CMD 23-M20.A	2023-06-21	7069664
Event Initial Report  Event Initial Report – Bruce A Unit 4 Heat Transport Purification System Heavy Water Leak  Presentation from Bruce Power		
CMD 23-M21	2023-06-16	7033027
Information Item  Designated Officer Program Update: 2022  Presentation from CNSC staff		

CMD	Date	e-Docs No.
CMD 23-M22	2023-06-09	6933212
Decision Item  REGDOC-2.2.3, <i>Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2</i>  Written submission from CNSC staff		
CMD 23-M22.A	2023-06-21	6939539
Decision Item  REGDOC-2.2.3, <i>Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2</i>  Presentation from CNSC staff		
CMD 23-M23	2023-06-13	7028191
Information Item  Funding Programs Update  Presentation from CNSC staff		
CMD 23-M24	2023-04-13	7022874
Event Initial Report  Event Initial Report – Improper disposal of tritium-contaminated waste by Bruce Power  Written submission from CNSC staff		
CMD 23-M25	2023-06-22	7066158
Event Initial Report  Event Initial Report – Safety stand-down at Canadian Nuclear Laboratories’ Whiteshell Site following the discovery of non-compliance in the fire protection program  Written submission from CNSC staff		
CMD 23-M26	2023-06-13	7065347
Information Item  Update from CNSC staff on the Inspector’s Order issued to Cameco Corporation in October 2022 regarding the exceedance of the approved volume of a waste rock stockpile at the Cigar Lake mine  Written submission from CNSC staff		

**3. NBP Letter, S. Bagshaw to D. Saumure,  
“Application to Amend the Point  
Lepreau Nuclear Generating Station  
Power Operating Licence - PROL  
17.00/2032”, February 9, 2024**



Point Lepreau Nuclear Generating Station  
PO Box 600, Lepreau, NB  
E5J 2S6

**TU 06374**  
**PICA 24-0728**

February 09, 2024

Mr. Denis Saumure, Commission Registry  
Registrar  
Canadian Nuclear Safety Commission  
P.O. Box 1046, Station B  
Ottawa, Ontario  
K1P 5S9

Dear Mr. Saumure:

**Subject:       Application to Amend the Point Lepreau Nuclear Generating Station  
Power Operating Licence - PROL 17.00/2032**

The purpose of this letter is to request that the Canadian Nuclear Safety Commission (the Commission) amend the Point Lepreau Nuclear Generating Station Power Reactor Operating Licence (PROL) PROL 17.00/2032. This application is pursuant to Section 24(2) of the *Nuclear Safety and Control Act* and Section 6 of the *General Nuclear Safety and Control Regulations*.

In October 2023, the Commission superseded regulatory document REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Persons Working at Nuclear Power Plants* with REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2.

NB Power requests an amendment to the PLNGS PROL 17.00/2032 to replace the reference to regulatory document REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Persons Working at Nuclear Power Plants* with REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2.

NB Power requests the amendment to the PLNGS PROL 17.00/2032, specifically to cite Version 2 of REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, and subsequent updates of Licence Conditions Handbooks LCH-PR-17.00/2032-R000, at your earliest convenience.

NB Power has initiated a gap analysis and is developing the associated action plan for the implementation and compliance to REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2 requirements. NB Power will complete and submit an implementation plan by the end of March 2024.

If you require further information or clarification, please contact Nick Reicker, Regulatory Affairs Manager at (506) 659-7324 or e-mail at [nreicker@nbpower.com](mailto:nreicker@nbpower.com).

Sincerely,



Steven Bagshaw  
Site Vice President

SB/RS/sd

**cc:** Louise Levert, Anu Bulkan, Solly Karivelil, Cheramy Thirumeny,  
Interventions (CNSC)  
CNSC Site Office  
[cnscc.licensee-titulaires.ccsn@canada.ca](mailto:cnscc.licensee-titulaires.ccsn@canada.ca)  
[forms-formulaires@cnscc-ccsn.gc.ca](mailto:forms-formulaires@cnscc-ccsn.gc.ca)  
Steven Bagshaw, Jason Nouwens, Joel Armstrong, Rob Stears, Nick Reicker,  
Scott Demmons, Amanda Gardner, Alex Bardsley, Kathleen Duguay (NBP)

**4. BP Letter, M. Burton to D. Saumure,  
“Application for the Amendment of the  
Nuclear Power Reactor Operating  
Licence, Bruce Nuclear Generating  
Stations A and B”, February 14, 2024**

**From:** [Susan Noe \[Site Services Division\]](#)

**Sent:** February 14, 2024 12:19 PM

**To:** [Forms / Formulaires \(CNSC/CCSN\)](#); Saumure, Denis; [Lun, Kenneth](#); Torrie, Brian; [Désaulniers, Lucie](#); [Viktorov, Alexandre](#); [Registry / Greffe \(CNSC/CCSN\)](#); [Poirier, Julie](#); [Gallant, Alexis](#)

**Subject:** CNSC Correspondence: BP-CORR-00531-05112 Application for the Amendment of the Nuclear Power Reactor Operating Licence, Bruce Nuclear Generating Stations A and B

**Attachments:** BP-CORR-00531-05112.pdf.DRF

---

**Categories:** Celia

EXTERNAL EMAIL – USE CAUTION / COURRIEL EXTERNE – FAITES PREUVE DE PRUDENCE
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Good afternoon,

The attached correspondence has been issued by Bruce Power and is being provided electronically to you.

Please accept this electronic communication as your official copy as *no paper correspondence will be sent*.

If you have any questions regarding the attached correspondence, please reply directly to the Bruce Power contact whose name and information is provided in the attached correspondence. Otherwise, for general inquiries regarding CNSC correspondence, please contact Mr. Jeroen Thompson, Section Manager, Licensing, at [jeroen.thompson@brucepower.com](mailto:jeroen.thompson@brucepower.com).

Thank you,  
Susan

Susan Noe | Business Support Representative | Licensing | B10-02E | **Bruce Power**

**CONFIDENTIALITY NOTICE:** This e-mail and its attachments are confidential, may be privileged and are intended only for the authorized recipients of the sender. Recipient is not permitted to publish, copy, disclose or transmit the contents of this email and its attachment unless expressly authorized in writing by the sender or document author. If you have received this e-mail in error, please delete it immediately and advise the sender by return e-mail.



February 14, 2024

BP-CORR-00531-05112

Mr. Denis Saumure  
Commission Registrar  
Canadian Nuclear Safety Commission  
P.O. Box 1046  
280 Slater Street  
Ottawa, Ontario  
K1P 5S9

Dear Mr. Saumure:

Application for the Amendment of the  
Nuclear Power Reactor Operating Licence, Bruce Nuclear Generating Stations A and B

The purpose of this letter is to request an amendment of Bruce Power's Power Reactor Operating Licence, PROL 18.03/2028, pursuant to Sub-section 24(2) of the *Nuclear Safety and Control Act*, and Section 6 of the *General Nuclear Safety and Control Regulations* (GNSCR).

In October 2023, REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*, superseded REGDOC-2.2.3, *Personnel Certification, Volume III, Certification of Persons Working at Nuclear Power Plants*.

Bruce Power requests the Commission amend Licence Condition 2.4 of PROL 18.03/2028 to replace the reference to REGDOC-2.2.3 *Volume III: Certification of Persons Working at Nuclear Power Plants*, with REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*.

Attachment A includes the information required for a Licence Amendment Application pursuant to the General Nuclear Safety and Control Regulations, Section 6, Application for Amendment, Revocation or Replacement of Licence”.

As discussed with CNSC staff, Bruce Power will provide an implementation plan for compliance with REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*, by end of March 2024.

If you require further information or have any questions regarding this submission, please contact Ms. Jennifer Smith, Department Manager Operations Training, at 226-930-4297.

Yours truly,



Digitally signed by  
Maury Burton  
Date: 2024.02.14  
10:21:45 -05'00'

Maury Burton  
Senior Director, Regulatory Affairs  
Bruce Power

cc: CNSC Bruce Site Office  
Attach.

Maury Burton, Senior Director, Regulatory Affairs  
P.O. Box 1540 B10 2nd Floor E, Tiverton ON N0G 2T0  
Telephone 519-361-5291  
maury.burton@brucepower.com

**Attachment A**

**Application to Amend the Nuclear Power Reacting Operating Licence  
Bruce Nuclear Generating Station A and B**

**Attachment A:**  
**Application to Amend the Nuclear Power Reacting Operating Licence**  
**Bruce Nuclear Generating Station A and B**

LEGAL SIGNING AUTHORITY

Mr. ☒ Dr. ☐ Mrs. ☐ Ms. ☐

Name: Chris Mudrick

Title: Executive Vice President and Chief Nuclear Officer

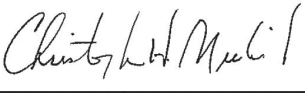
Telephone: 519-361-2673

Email: [christopher.mudrick@brucepower.com](mailto:christopher.mudrick@brucepower.com)

Applicant: Bruce Power Inc.

Address: PO Box 1540  
Building 610, 177 Tie Road  
Municipality of Kincardine,  
Tiverton, ON  
N0G 2T0

I, Chris Mudrick, have been designated by Bruce Power (A1) as having signing authority for this application, pursuant to the General Nuclear Safety and Control Regulations Section 15(a), and certify that all information submitted herein is true and correct to the best of my knowledge. I understand that all statements and representations made in this application and on supplementary documentation are binding on the applicant.

Signature: 

Date: 2024/02/13  
YYYY/MMM/DD

**Attachment A:  
Application to Amend the Nuclear Power Reacting Operating Licence  
Bruce Nuclear Generating Station A and B**

## **Introduction**

This Attachment provides information to address the regulatory requirements for an application to amend the Power Reactor Operating Licence, PROL 18.03/2028, pursuant to the *General Nuclear Safety and Control Regulations* (GNSCR).

## **Information Required by the General Nuclear Safety and Control Regulations**

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*GNSCR 6(a): [An application for the amendment... of a licence shall contain the following information:] a description of the amendment, revocation or replacement and of the measures that will be taken and the methods and procedures that will be used to implement it.*

---

REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*, was published in October 2023.

Bruce Power requests the Commission amend Licence Condition 2.4 of PROL 18.03/2028 to replace the reference to REGDOC-2.2.3 *Volume III: Certification of Persons Working at Nuclear Power Plants*, with superseding Regulatory Document, REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*.

### ***Current Wording of PROL 18.03/2028, Licence Condition 2.4:***

2.4 The licensee shall implement and maintain certification programs in accordance with CNSC regulatory document REGDOC-2.2.3, PERSONNEL CERTIFICATION, VOLUME III: CERTIFICATION OF PERSONS WORKING AT NUCLEAR POWER PLANTS.

Persons appointed to the following positions require certification:

- (i) authorized health physicist;
- (ii) authorized nuclear operator;
- (iii) control room shift supervisor;
- (iv) Unit 0 control room operator; and
- (v) shift manager.

### ***Bruce Power proposes the following change:***

The licensee shall implement and maintain certification programs in accordance with CNSC Regulatory document REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*.

Persons appointed to the following positions require certification:

- (i) authorized health physicist;
- (ii) authorized nuclear operator;
- (iii) control room shift supervisor;
- (iv) Unit 0 control room operator; and
- (v) shift manager.

---

*GNSCR 6(b): [An application for the amendment... of a licence shall contain the following information:] a statement identifying the changes in the information contained in the most recent application for the licence.*

---

There is no change to any of the information contained in the most recent application for the PROL 18.03/2028.

---

*GNSCR 6(c): [An application for the amendment... of a licence shall contain the following information:] a description of the nuclear substances, land, areas, buildings, structures, components, equipment and systems that will be affected by the amendment, revocation or replacement and of the manner in which they will be affected.*

---

The proposed modification does not impact or affect any nuclear substances, land, areas, buildings, structures, components, equipment or systems, as previously discussed in Reference A2.

This request is only applicable to the authorization training programs.

---

*GNSCR 6(d): [An application for the amendment... of a licence shall contain the following information:] the proposed starting date and the expected completion date of any modification encompassed by the application.*

---

Bruce Power is currently developing an implementation plan to ensure compliance with REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*. The implementation plan will be provided to CNSC staff by end of March 2024

#### References:

- A1. Letter, M. Burton to M. Hornof, "Bruce Power Authorized Delegates, Responsible Persons and Leadership Positions Responsible for Safety", October 24, 2023, BP-CORR-00531-04706.
- A2. Letter, F. Saunders to M. Leblanc, "Application for the Renewal of the Power Reactor Operating Licence for Bruce Nuclear Generating Stations A and B", June 30, 2017, e-Doc 5291208, NK21-CORR-00531-13493/NK29-CORR-00531-14085/NK37-CORR-00531-02768.

**5. OPG Letter, S. Gregoris to D. Saumure, “Application to Amend the Darlington and Pickering Nuclear Generating Station Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively”, February 15, 2024**

**OPG Proprietary**

February 15, 2024

CD# N-CORR-00531-23826

**Mr. D. Saumure**Commission Registrar  
Canadian Nuclear Safety Commission  
280 Slater Street  
Ottawa, Ontario  
K1P 5S9

Dear Mr. Saumure:

**Application to Amend the Darlington and Pickering Nuclear Generating Station  
Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively**

The purpose of this letter is to request that the Canadian Nuclear Safety Commission (the Commission) amend the Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) 13.03/2025 and the Pickering NGS PROL 48.01/2028. This application is pursuant to Section 24(2) of the *Nuclear Safety and Control Act* and Section 6 of the *General Nuclear Safety and Control Regulations*.

In October 2023, the Commission superseded regulatory document REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Persons Working at Nuclear Power Plants* with REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2.

OPG requests amendments to Darlington NGS PROL 13.03/2025 and Pickering NGS PROL 48.01/2028 to replace the reference to regulatory document REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Persons Working at Nuclear Power Plants* with REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2, as described in Attachments 1 and 2. Attachment 3 provides information pertaining to Section 6 of the *General Nuclear Safety and Control Regulations*.

OPG requests the amendments to Darlington NGS PROL 13.03/2025 and Pickering NGS PROL 48.01/2028, as described in Attachments 1 and 2, and subsequent updates of Licence Conditions Handbooks LCH-PR-13.03/2025-R005 and LCH-PR-48.00/2028-R005, at your earliest convenience.

OPG undertakes a Regulatory Management Action to complete a gap analysis and prepare the implementation plans for compliance with REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2 requirements, by March 15, 2024, as detailed in Table 1.

If you have any questions, please contact Ms. Cristina Naidin, Director, Operations Training, at (905) 706-0198, or by email at [cristina.naidin@opg.com](mailto:cristina.naidin@opg.com).

Sincerely,

A handwritten signature in black ink, appearing to be 'S. Gregoris', with a stylized flourish at the end.

Steve Gregoris  
Chief Nuclear Officer  
Enterprise Operations  
Ontario Power Generation Inc.

Attach.

cc: A. Viktorov - CNSC (Ottawa)  
A. Mathai - CNSC (Ottawa)  
R. Richardson - CNSC (Ottawa)  
L. Désaulniers - CNSC (Ottawa)  
C. Françoise - CNSC (Ottawa)  
CNSC Site Office - Pickering  
CNSC Site Office - Darlington



**TABLE 1****Summary of Regulatory Management Actions Undertaken in this Submission**

**Submission Title:** “Application to Amend the Darlington and Pickering Nuclear Generating Station Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively”

**Regulatory Management Actions (REGM):**

No.	Commitment Description	Date to be Completed
1.	Complete a gap analysis and prepare the implementation plans for compliance with REGDOC-2.2.3, Personnel Certification, Volume III: <i>Certification of Reactor Facility Workers</i> , Version 2.	March 15, 2024

**ATTACHMENT 1**

**Proposed Amendment to Darlington NGS PROL 13.03/2025**

**Prepared by: J. Cameron**

**Verified by: M. Priest**

**Attachment 1**

**Proposed Amendment to Darlington NGS PROL 13.03/2025**

<b>Current PROL 13.03/2025</b>	<b>Requested Amendment to PROL 13.03/2025</b>
<p>2.3 The licensee shall implement and maintain training programs for workers. The certification process and supporting examinations and tests shall be conducted in accordance with CNSC regulatory document REGDOC-2.2.3, PERSONNEL CERTIFICATION, VOLUME III: CERTIFICATION OF PERSONS WORKING AT NUCLEAR POWER PLANTS.</p> <p>Persons appointed to the following positions require certification:</p> <ul style="list-style-type: none"><li>(i) Responsible Health Physicist;</li><li>(ii) Shift Manager;</li><li>(iii) Control Room Shift Supervisor;</li><li>(iv) Authorized Nuclear Operator; and</li><li>(v) Unit 0 Control Room Operator.</li></ul>	<p>2.3 The licensee shall implement and maintain training programs for workers.</p> <p><b>2.4 The licensee shall implement and maintain certification programs in accordance with CNSC regulatory document <i>REGDOC-2.2.3, PERSONNEL CERTIFICATION, VOLUME III: CERTIFICATION OF REACTOR FACILITY WORKERS, VERSION 2.</i></b></p> <p>Persons appointed to the following positions require certification:</p> <ul style="list-style-type: none"><li>(i) Responsible Health Physicist;</li><li>(ii) Shift Manager;</li><li>(iii) Control Room Shift Supervisor;</li><li>(iv) Authorized Nuclear Operator; and</li><li>(v) Unit 0 Control Room Operator.</li></ul>

## **ATTACHMENT 2**

### **Proposed Amendment to Pickering NGS PROL 48.01/2028**

**Prepared by: J. Cameron**

**Verified by: E. Devlin**

## Attachment 2

### Proposed Amendment to Pickering NGS PROL 48.01/2028

Current PROL 48.01/2028	Requested Amendment to PROL 48.01/2028
<p>2.3 The licensee shall implement and maintain training programs.</p> <p>2.4 The licensee shall implement and maintain certification programs in accordance with CNSC regulatory document REGDOC-2.2.3, <i>Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants</i>.</p> <p>Persons appointed to the following positions require certification:</p> <ul style="list-style-type: none"> <li>(i) Responsible Health Physicist;</li> <li>(ii) Shift Manager;</li> <li>(iii) Control Room Shift Supervisor; and</li> <li>(iv) Authorized Nuclear Operator.</li> </ul>	<p>2.3 The licensee shall implement and maintain training programs.</p> <p>2.4 The licensee shall implement and maintain certification programs in accordance with CNSC regulatory document <i>REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2</i>.</p> <p>Persons appointed to the following positions require certification:</p> <ul style="list-style-type: none"> <li>(i) Responsible Health Physicist;</li> <li>(ii) Shift Manager;</li> <li>(iii) Control Room Shift Supervisor; and</li> <li>(iv) Authorized Nuclear Operator.</li> </ul>

Attachment 3 to OPG Letter, S. Gregoris to D. Saumure, "Application to Amend the Darlington and Pickering Nuclear Generating Station Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively", CD# N-CORR-00531-23826

### **ATTACHMENT 3**

#### **Information Required for Amendment, Revocation or Replacement of a Licence Pursuant to Section 6 of the General Nuclear Safety and Control Regulations**

**Prepared by: J. Cameron**

**Verified by: E. Devlin**

**M. Priest**

### Attachment 3

#### Information Required for Amendment, Revocation or Replacement of a Licence Pursuant to Section 6 of the General Nuclear Safety and Control Regulations

**Reference:** Section 6 of the *General Nuclear Safety and Control Regulations*:

6. An application for the amendment, revocation or replacement of a licence shall contain the following information:
- (a) *a description of the amendment, revocation or replacement and of the measures that will be taken and the methods and procedures that will be used to implement it;*

This is a request for licence amendment to Darlington's PROL 13.03/2025 and to Pickering's PROL 48.01/2028 to revise a currently licensed activity:

**Darlington:**

- 2.3 The licensee shall implement and maintain training programs for workers. The certification process and supporting examinations and tests shall be conducted in accordance with CNSC regulatory document REGDOC-2.2.3, PERSONNEL CERTIFICATION, VOLUME III: CERTIFICATION OF PERSONS WORKING AT NUCLEAR POWER PLANTS.

Persons appointed to the following positions require certification:

- (i) Responsible Health Physicist;
- (ii) Shift Manager;
- (iii) Control Room Shift Supervisor;
- (iv) Authorized Nuclear Operator; and
- (v) Unit 0 Control Room Operator.

**Pickering:**

- 2.3 The licensee shall implement and maintain training programs.
- 2.4 The licensee shall implement and maintain certification programs in accordance with CNSC regulatory document REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants*.

Persons appointed to the following positions require certification:

- (i) Responsible Health Physicist;
- (ii) Shift Manager;
- (iii) Control Room Shift Supervisor; and
- (iv) Authorized Nuclear Operator.

This request will revise Section 2.3 or Section 2.4 of the respective license to refer to REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*.

OPG will complete a gap analysis and prepare the implementation plans for compliance with REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2* by March 15, 2024.

During implementation, OPG will revise the applicable governance to reflect the REGDOC-2.2.3 Version 2 requirements for certification of nuclear power plant personnel. Documents to be revised will include:

- N-TQD-101-00001, "Authorized Nuclear Operator Initial Training and Qualification Description"
- N-TQD-102-00001, "Nuclear Shift Manager/Control Room Shift Supervisor Initiation Training and Qualification Description",
- N-TQD-103-00001, "Nuclear Certified Personnel Continuing Training and Qualification Description",
- N-TQD-105-00001, "Darlington Unit 0 Control Room Operator (CRO) Initial Training and Qualification Description", and
- N-TQD-443-00001, "Radiation Protection Training and Qualification".

- (b) *a statement identifying the changes in the information contained in the most recent application for the licence;*

This revised activity does not change any of the information contained in the most recent applications for the Darlington or Pickering licences (Ref. 1 to 13).

- (c) *a description of the nuclear substances, land, areas, buildings, structures, components, equipment and systems that will be affected by the amendment, revocation or replacement and of the manner in which they will be affected; and*

Not Applicable.

- (d) *the proposed starting date and the expected completion date of any modification encompassed by the application.*

OPG will complete a gap analysis and prepare the implementation plans for compliance with REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2, by March 15, 2024.

#### References:

1. OPG Letter, B. Duncan to M. Leblanc, "Darlington NGS - Application for Renewal of the Darlington Nuclear Generating Station Power Reactor Operating Licence 13.00/2014", December 13, 2013, CD# NK38-CORR-00531-16490.
2. OPG Letter, B. Duncan to M. Leblanc, "Darlington NGS - Additional Information in Support of Application for Renewal of Darlington's Power Reactor Operating Licence (PROL) 13.01/2015", January 30, 2015, CD# NK38-CORR-00531-17206.
3. OPG Letter, B. Duncan to M. Leblanc, "Darlington NGS - Application for Darlington Nuclear Generating Station Power Reactor Operating Licence PROL 13.00/2025 Amendment", March 17, 2017, CD# NK38-CORR-00531-18350.
4. OPG Letter, S. Gregoris to M. Leblanc, "Darlington NGS - Application for Darlington Nuclear Generating Station Power Reactor Operating Licence 13.01/2025 Amendment", December 5, 2018, CD# NK38-CORR-00531-20359.



Attachment 3 to OPG Letter, S. Gregoris to D. Saumure, "Application to Amend the Darlington and Pickering Nuclear Generating Station Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively", CD# N-CORR-00531-23826

5. OPG Letter, S. Gregoris to M. Leblanc, "Darlington NGS - Application for Amendment of the Darlington Nuclear Generating Station Power Reactor Operating Licence 13.01/2025", October 1, 2019, CD# NK38-CORR-00531-21080.
6. OPG Letter, S. Gregoris to M. Leblanc and G. Frappier, "Darlington NGS – Molybdenum-99: Updated Request for Amendment to the Darlington Nuclear Generating Station Power Reactor Operating Licence 13.02/2025", June 23, 2020, CD# NK38-CORR-00531-21744.
7. OPG Letter, S. Gregoris to M. Leblanc, "Darlington NGS – Molybdenum-99: Addendum to the Request for Amendment to the Darlington Nuclear Generating Station Power Reactor Operating Licence 13.02/2025", February 11, 2021, CD# NK38-CORR-00531-22275.
8. OPG letter, R. Geofroy to D. Saumure, "Darlington NGS – Notice of Intent to Renew Power Reactor Operating Licence PROL 13.03/2025", March 30, 2023, NK38-CORR-00531-24175.
9. OPG Letter, R. Lockwood to M. Leblanc, "Application for Renewal of Pickering Nuclear Generating Station Power Reactor Operating Licence," August 28, 2017, CD# P-CORR-00531-05055.
10. OPG Letter, R. Lockwood to M. Leblanc, "Supplementary Information to the Application for Renewal of the Pickering Nuclear Generating Station Power Reactor Operating Licence," December 11, 2017, CD# P-CORR-00531-05223.
11. OPG Letter, J. Franke to M. Leblanc, "Pickering NGS - Application for Amendment of the Pickering Nuclear Generating Station Power Reactor Operating Licence PROL 48.00/2028", November 13, 2019, CD# P-CORR-00531-05831.
12. OPG Letter, J. Franke to R. Richardson, "Intent to Seek CNSC Authorization to Operate Pickering NGS Units 5-8 Beyond December 31, 2024 to September 30, 2026", December 12, 2022, CD# P-CORR-00531-23091.
13. OPG Letter, J. Franke to D. Saumure, "Pickering Nuclear Generating Station – Power Reactor Operating Licence Amendment Application," June 16, 2023, CD# P-CORR-00531-23266.

**6. BP Letter, M. Burton to K. Lun, “Bruce A and Bruce B: Implementation of REGDOC-2.2.3, Volume III, Version 2”, March 27, 2024**

March 27, 2024

BP-CORR-00531-05180

Mr. Kenneth Lun  
Regulatory Program Director (acting)  
Bruce Regulatory Program Division  
Canadian Nuclear Safety Commission  
P.O. Box 1046  
280 Slater Street  
Ottawa, Ontario  
K1P 5S9

Dear Mr. Lun:

Bruce A and Bruce B: Implementation of REGDOC-2.2.3, Volume III, Version 2


The purpose of this letter is to provide CNSC staff with the implementation plan to support Bruce Power's licence amendment application in Reference 1.

Attachment A provides the implementation plan for updating Bruce Power's governance to include requirements of REGDOC-2.2.3 Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2. This implementation plan is in alignment with the Bruce Power Management of Change processes defined in BP-PROC-00166, Management of Program, General Procedures and Internal Standards Documents.

Bruce Power commits to having the plan fully implemented within one year of receiving the amended Power Reactor Operating Licence.

If you require further information or have any questions regarding this submission, please contact Ms. Jennifer Smith, Department Manager, Operations Training, at 226-930-4297 or [jennifer.smith@brucepower.com](mailto:jennifer.smith@brucepower.com).

Yours truly,

**Lisa  
Clarke**  Digitally signed by  
Lisa Clarke  
Date: 2024.03.27  
13:25:22 -04'00'

Maury Burton  
Senior Director, Regulatory Affairs  
Bruce Power

cc: CNSC Bruce Site Office  
Lucie Désaulniers, Director, PCD, CNSC, Ottawa

Attach.

Maury Burton, Senior Director, Regulatory Affairs  
P.O. Box 1540 B10 2nd Floor E, Tiverton ON N0G 2T0  
Telephone 519-361-5291  
[maury.burton@brucepower.com](mailto:maury.burton@brucepower.com)

Mr. K. Lun

March 27, 2024

Reference:

1. Letter, M. Burton to D. Saumure, "Application for the Amendment of the Nuclear Power Reactor Operating Licence, Bruce Nuclear Generating Stations A and B", February 14, 2024, BP-CORR-00531-05112

## **Attachment A**

### **REGDOC-2.2.3 Volume III Version 2: Implementation Plan**

PROPERTY OF BRUCE POWER L.P.

The information provided is SENSITIVE and/or CONFIDENTIAL and may contain prescribed or controlled information. Pursuant to the Nuclear Safety and Control Act, Section 48(b), the Access to Information Act, Section 20(1), and/or the Freedom of Information and Protection of Privacy Act, Sections 17 and 21, this information shall not be disclosed except in accordance with such legislation.

**Attachment A:**  
**REGDOC-2.2.3 Volume III Version 2: Implementation Plan**

The following table is the implementation plan for incorporating REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2, into Bruce Power governance. This plan reflects the approved Management of Change process and the dates provided are tentative based on the receipt of the amended Bruce A and B Power Operating Licence. The targeted completion dates are planned for full implementation within 1 year of receipt of the amended licence.

<b>Subject</b>	<b>Description</b>	<b>Due Date</b>	<b>Controlled Documents</b>
Minimum Shift Requirement (Certification Maintenance) And Employment Status	Implement new requirement for Certified Operations staff to perform a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter. Employment status to be recorded	October 2024	BP-STND-00146, <i>Site Operations</i>
Full Scope Simulator Physical Infrastructure and Simulation Capabilities	Verify compliance with REGDOC-2.2.3 Volume III, Version 2, Section 2.	June 2024	BP-STND-00041, <i>Simulator Validation, Capability, And Fidelity</i>
Removal and Reinstatement of Certified Workers	Revise and reissue STND-00083, <i>Certification Training - Removal And Reinstatement Of A Person From Main Control Room Duties</i> to comply with applicable sections of REGDOC-2.2.3 Volume III, Version 2.	December 2024	BP-STND-00083, <i>Certification Training - Removal And Reinstatement Of A Person From Main Control Room Duties</i>
Health Physics Training Documentation	Revise and reissue governance; update document to align with REGDOC-2.2.3 Volume III, Version 2.	October 2024	BP-STND-00095, <i>Conduct Of Projects And Safety Training</i>  TQD-00075, <i>Training and Qualifications Description, Health Physicist - Authorized Health Physicist</i>
Applications for Certification and Recertification	Verify application letter templates for compliance to new requirements and develop new templates where required	October 2024	Application letter templates
Regulatory Affairs Quarterly Reporting to the CNSC	Review requirements for quarterly report of Certified Personnel. Ensure any misalignment between REGDOC-2.2.3 Volume III, Version 2, and new revision of REGDOC-3.1.1 is identified and resolved.	August 2024	BP-PROC-00165, <i>Reporting To CNSC - Power Reactor Operating Licences</i>  BP-PROC-00509, <i>Reporting To The CNSC - Scheduled Reporting</i>

Subject	Description	Due Date	Controlled Documents
			BP-PROC-00833, <i>Reporting To The CNSC</i>
Operations Training Reporting to the CNSC	Ensure operations training compliance to quarterly reporting requirements per REGDOC-2.2.3 Volume III, Version 2.	August 2024	N/A
Advancement Notifications to the CNSC	<p>Ensure required notifications are identified in governance:</p> <ul style="list-style-type: none"> <li>• Notifications for advancement of Authorized Nuclear Operator (ANO) to Control Room Shift Supervisor (CRSS), and CRSS to Shift Manager (SM)</li> <li>• Notification of change in employment status</li> </ul>	December 2024	<p>BP-STND-00036, <i>Certification Training - Conduct Of Initial Training</i></p> <p>BP-SNTD-00146, <i>Site Operations</i></p>
Submit Document Change Requests for affected documents	<p>Submit Document Change Requests for documents which require intent revisions.</p> <p>Note: procedures are planned to be revised as part of their scheduled review time period.</p>	May 2024	<p>BP-PROC-00165, <i>Reporting to CNSC – Power Reactor Operating Licenses</i></p> <p>BP-PROC-00833, <i>Reporting to CNSC</i></p> <p>BP-STND-00036, <i>Certification Training - Conduct Of Initial Training</i></p> <p>BP-STND-00043, <i>Certification Training - Filing And Retention Of Certification Training Records</i></p> <p>BP-STND-00146, <i>Site Operations</i></p> <p>BP-STND-00083, <i>Certification Training – Removal and Reinstatement of a Person from Main Control Room Duties</i></p>
Revise and reissue TQD-00013, Bruce A And Bruce B Control Room Shift Supervisor/Shift Manager Training And Qualifications Description	Revise and reissue TQD-00013, Bruce A And Bruce B Control Room Shift Supervisor/Shift Manager Training And Qualifications Description Update document to align with REGDOC-2.2.3 Volume III, Version 2.	December 2024	TQD-00013, <i>Bruce A And Bruce B Control Room Shift Supervisor/Shift Manager Training And Qualifications Description</i>

Subject	Description	Due Date	Controlled Documents
Revise and reissue TQD-00015, Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description	Revise and reissue TQD-00015 Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description; ensure regulatory requirement for program sequence is removed. Update document to align with REGDOC-2.2.3 Volume III, Version 2.	December 2024	TQD-00015, <i>Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description</i>
Revise and reissue BP-STND-00036, Certification Training – Conduct of Initial Training	Revise and reissue BP-STND-00036 Certification Training – Conduct of Initial Training. Update document to align with REGDOC-2.2.3 Volume III, Version 2.	December 2024	BP-STND-00036, <i>Certification Training – Conduct of Initial Training</i>
Revise and reissue BP-STND-00043, Certification Training - Filing And Retention Of Certification Training Records	Revise and reissue STND-00043, Certification Training - Filing And Retention Of Certification Training. Update document to align with REGDOC-2.2.3 Volume III, Version 2.	December 2024	BP-STND-00043, <i>Certification Training - Filing And Retention Of Certification Training Records</i>
Determine Nuclear Emergency Response training requirement	Perform a Training Needs Analysis for Certified Staff to determine the training needs for Emergency Mitigating Equipment per REGDOC-2.2.3 Volume III, Version 2.	December 2024	N/A
Ensure alignment with BP-PROG-02.02. and Certification Standard changes	Submit Document Change Request against BP-PROG-02.02 for any Certification standards that have intent changes to ensure the changes are updated in the program document. Communicate to Learning Governance Oversight and Support Document Change Request has been submitted.  NOTE: procedure is planned to be revised during the next scheduled document revision date.	January 2025	BP-PROG-02.02, <i>Worker Learning And Qualification</i>
Prepare Document Change Requests for other documents with non-intent changes.	Prepare Document Change Requests for documents which require non-intent revisions (Example – REGDOC-2.2.3 Volume III, Version 2, title changes and Section number corrections).  NOTE: procedures are planned to be revised during the next scheduled document revision date.	June 2024	BP-PROG-02.02, <i>Worker Learning And Qualification</i>  BP-PROG-12.01, <i>Conduct Of Plant Operations</i>  BP-PROG-12.05, <i>Radiation Protection Program</i>



Subject	Description	Due Date	Controlled Documents
			<p>BP-STND-00032, <i>Learning Governance Oversight</i></p> <p>BP-STND-00040, <i>Simulator Change Control</i></p> <p>BP-STND-00064, <i>Certification Training - Development And Administration Of Written Re-Certification Examinations And Examination Material For Certified Staff</i></p> <p>BP-STND-00065, <i>Certification Training - Development And Administration Of Diagnostic Simulator-Based Re-Certification Examinations For Certified Staff</i></p> <p>BP-STND-00066, <i>Certification Testing &amp; Examinations - Development And Administration Of Comprehensive Simulator Based Re Certification Tests (CST) For Certified Staff</i></p> <p>BP-STND-00067, <i>Certification Training - Conduct Of Continuing Training And Re-Certification Testing</i></p> <p>BP-STND-00082, <i>Certification Training - Independence And Confidentiality Requirements For Development And Implementation Of Initial Certification And Re-Certification Examinations</i></p> <p>BP-STND-00092, <i>Certification Training - Development And Administration Of Comprehensive Written And Oral Examinations For Certification Training</i></p>

Subject	Description	Due Date	Controlled Documents
			<p><i>Programs</i></p> <p>BP-STND-00093, <i>Certification Testing &amp; Examinations - Development And Administration Of Comprehensive Simulator-Based Examinations For Initial Certification Training Programs</i></p> <p>BP-STND-00094, <i>Conduct Of Oral Boards</i></p> <p>BP-STND-00153, <i>Bruce Power Shift Operations Role Descriptions For Licence Related Positions</i></p> <p>BP-STND-00215, <i>Fitness For Duty: Policy On Managing Alcohol And Drug Use</i></p> <p>BP-STND-01071, <i>Systematic Approach To Training</i></p> <p>TQD-00012, <i>Bruce A and Bruce B Authorized Nuclear Operator Initial Training - Training &amp; Qualifications Description</i></p> <p>TQD-00014, <i>Certified Staff Continuing Training and Re-Certification Testing - Training and Qualifications Description</i></p> <p>TQD-00039, <i>Trainers, Certification Instructors And Certification Examiners - Training And Qualification Description</i></p>

**7. NBP Letter, S. Bagshaw to A. Bulkan,  
“NB Power REGDOC 2.2.3, Personnel  
Certification, Volume III, Certification  
of Reactor Facility Workers, Version 2:  
Implementation Plan in Support of  
Licence Amendment Request”, March  
28, 2024**



Point Lepreau Nuclear Generating Station  
PO Box 600, Lepreau, NB  
E5J 2S6

**TU 06374**  
**PICA 24-0728**

March 28, 2024

Ms. Anupama Bulkan, Director  
Point Lepreau Regulatory Program Division  
Canadian Nuclear Safety Commission  
P.O. Box 1046, Station B  
Ottawa, Ontario  
K1P 5S9

Dear Ms. Bulkan:

**Subject: NB Power REGDOC 2.2.3, Personnel Certification, Volume III,  
Certification of Reactor Facility Workers, Version 2: Implementation Plan  
in Support of Licence Amendment Request**

The purpose of this letter is for NB Power to provide CNSC staff with the plan for implementation of REGDOC 2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers, Version 2* (Attachment 1), as previously committed under letter dated February 9, 2024 (Reference 1), in support of NB Power's licence amendment request.

NB Power commits to having the plan fully implemented within one-year of receiving the amended Power Reactor Operating Licence (PROL 17.00/2032).

If you require additional information, please contact Nick Reicker at 506-659-7324 or by email at [nreicker@nbpower.com](mailto:nreicker@nbpower.com).

Sincerely,

**Steve Bagshaw** Digitally signed by Steve Bagshaw  
Date: 2024.03.27 14:41:50 -03'00'

Steven Bagshaw  
Site Vice President

SB/NR

**cc.** Solly Karivelil, Chloe Bridi, Isabelle Gingras, Tiffany Dunbar, William Zhang, Alexander Mawhinney, Cheramy Thirumeny, Lucie Desaulniers (CNSC - Ottawa) Interventions (CNSC)  
CNSC Site Office  
[cnsclicensee-titulaires.ccsn@canada.ca](mailto:cnsclicensee-titulaires.ccsn@canada.ca)  
[forms-formulaires@cnscccsn.gc.ca](mailto:forms-formulaires@cnscccsn.gc.ca)  
Steven Bagshaw, Nick Reicker, Amanda Gardner, Alex Bardsley, Jason Nouwens, Kathleen Duguay, Rob Stears, Patricia Manuel (NBP)

Reference:

1. Letter: Mr. Denis Samure, from Mr. Steven Bagshaw “Application to Amend the Point Lepreau Nuclear Generating Station Power Reactor Operating Licence – PROL 17.00/2032, February 9, 2024.

Attachment:

1. REGDOC 2.2.3 Version 2 – Implementation Plan.

## Attachment 1

### Implementation Plan - REGDOC 2.2.3 vol III Version 2

The following table is the implementation plan for incorporating REGDOC 2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2, in NB Power governance. The dates provided are tentative based on the receipt of the amended NB Power Operating Licence. The targeted completion dates are planned for full compliance implementation within 1 year of receipt of the amended licence.

REGDOC 2.2.3 impacted section(s)	Action(s)	Due Date
3.2, 3.3, 20.2.1, 20.3, 20.4, 20.6.1, 20.7, 20.7.2, 21.1	Update station governance under SDP-01368-P036 <i>Meeting Minimal Operational Staffing</i> .	September 2024
5.3, 7.2, 10, 11.2, 14.3.3, 20.7.1, 20.7.2	Revise all CNSC letter templates to align with new requirements	September 2024
14, 14.1, 14.2.1, 14.2.2, 14.3, 14.3.1, 14.3.2, 21.1, 24.2.1, 25.1, 25.1.1, 25.1.2, 25.1.3	Update Staffing Certified Positions document to align with requirements	September 2024
14.3.3	Update TRWI-97170-0001 to align with requirements	September 2024
19.1	Revise TRWI-97170-001 and TPD 97170-0001 to align with requirements to have a process to reintegrate personnel following an absence from training (greater than 6 months)	September 2024
20.2.2	Develop / include in a process the requirement to regularly perform the duties as a SHP during certification	September 2024
20.4.2	Update SDP-01368-TR15 to reflect updating LMS upon requal test failure	September 2024
20.5.1, 20.5.3, 20.5.4, 20.5.5	Update TPD-97179-01 to align with the revised requirements	September 2024

20.6.2	Update SDP-01368-TR15 and TPD-97179-01 to align with the revised requirements	September 2024
21	Develop a process to effectively address retention of Certification records	September 2024
21.1	Develop a process to document the roles and responsibilities for Shift Supervisors and Control Room Operators	September 2024
21.1.1	Develop a process to retain Comprehensive records of certified staff as required	September 2024
21.1.1	Revise SDP-01386-TR15 and associated examination forms to include full legal name of evaluators	September 2024
21.1.1	Revise Control Room Operator / Shift Supervisor Co-Piloting logs to include revised requirements	September 2024

**8. OPG Letter, S. Gregoris to A. Mathai and R. Richardson, “OPG – Implementation of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2”, April 25, 2024**



**OPG Proprietary**

April 25, 2024

CD# N-CORR-00531-24018

**Mr. A. Mathai**Director  
Darlington Regulatory Program Division**Mr. R. Richardson**Director  
Pickering Regulatory Program DivisionCanadian Nuclear Safety Commission  
280 Slater Street  
Ottawa, Ontario  
K1P 5S9

Dear Mr. Mathai and Mr. Richardson:

**OPG - Implementation of REGDOC-2.2.3, Personnel Certification, Volume III:  
Certification of Reactor Facility Workers, Version 2**

The purpose of this letter is to provide CNSC staff with the implementation plan for compliance with the requirements in REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*.

In Reference 1, OPG requested amendments to the Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) 13.03/2025 and the Pickering NGS PROL 48.01/2028 to replace the reference to regulatory document REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants* with REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*.

In that application (Reference 1), OPG committed to prepare an implementation plan for compliance with REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2* requirements.

Enclosure 1 identifies the governance that will be revised to become compliant with REGDOC-2.2.3, Volume III, Version 2 and the expected timeline for completion of these revisions.

The timeline given in this plan is tentative, as the actual target date for completion of each specific activity is subject to the scheduling of the Commission Hearing that will be held to consider OPG's request to amend the Darlington and Pickering PROLs.

OPG undertakes a Regulatory Management Action to submit a revised plan that shows target completion dates within 60 business days after OPG receives the amended PROLs, as detailed in Table 1. It is expected that, if the Commission decides to amend the PROLs, that the plan will be fully implemented within one year of receiving the amended licences.

If you have any questions, please contact Ms. Cristina Naidin, Director, Operations Training, at (905) 706-0198 or by email at [cristina.naidin@opg.com](mailto:cristina.naidin@opg.com).

Sincerely,



Steve Gregoris  
Chief Nuclear Officer  
Enterprise Operations  
Ontario Power Generation Inc.

Enc.

cc:	A. Viktorov	- CNSC (Ottawa)
	L. Désaulniers	- CNSC (Ottawa)
	C. Françoise	- CNSC (Ottawa)
	C. Krasnaj	- CNSC (Pickering Site)
	C. Chan	- CNSC (Darlington Site)

References: 1. OPG letter, S. Gregoris to D. Saumure, "Application to Amend the Darlington and Pickering Nuclear Generating Station Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively", February 15, 2024, CD# N-CORR-00531-23826.

**TABLE 1**

**Summary of Regulatory Management Actions Undertaken in this Submission**

**Submission Title:** “OPG - Implementation of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2”

**Regulatory Management Action (REGO):**

No.	Description	Target Date

**Regulatory Management Actions (REGM):**

No.	Commitment Description	Date to be Completed
1.	OPG to submit a revised implementation plan that shows target completion dates.	Within 60 business days after receipt of the amended PROs.

**Regulatory Management Action (REGC):**

No.	Description	Target Date

**CNSC Concurrence:** None

**ENCLOSURE 1**

**CD# N-PLAN-08920-10401, Rev000**

**Implementation Plan For CNSC REGDOC 2.2.3, Volume III, Version 2**

**(10 Pages)**

Prepared by: Joe Cameron  
Reviewed by: Cristina Naidin

OPG Proprietary	
Document Number: <b>N-PLAN-08920-10401</b>	Usage Classification: <b>N/A</b>
Sheet Number: <b>N/A</b>	Revision: <b>R000</b>

Title:

**IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2**

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## IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2

**N-PLAN-08920-10401-R000**

2024-03-15

Order Number: N/A  
Other Reference Number: N/A

**OPG Proprietary**

Prepared by: J. Cameron  
Executive Advisor  
Operations Training

Reviewed by: D. Osborne  
Executive Advisor  
Operations Training

Approved by: C. Naidin  
Director  
Operations Training

Plan

OPG Proprietary		
Document Number: <b>N-PLAN-08920-10401</b>		Usage Classification: <b>N/A</b>
Sheet Number: <b>N/A</b>	Revision Number: <b>R000</b>	Page: <b>2 of 10</b>
Title: <b>IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2</b>		

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OPG Proprietary		
Document Number:	Usage Classification:	
N-PLAN-08920-10401	N/A	
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Revision Summary

Revision Number	Date	Comments
R000	2024-03-15	Initial issue.

OPG Proprietary		
Document Number: <b>N-PLAN-08920-10401</b>		Usage Classification: <b>N/A</b>
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Title: <b>IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2</b>		

## 1.0 SUMMARY AND SCOPE

Regulatory document REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2 (2023)* sets out requirements and guidance for the certification of reactor facility workers by the Canadian Nuclear Safety Commission (CNSC).

The CNSC personnel certification regulatory document, RD-204, *Certification of Persons Working at Nuclear Power Plants*, was published in 2008. As part of a CNSC rebranding initiative, RD-204 was republished in 2019 as REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants*.

In October 2023, CNSC published REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*. The fundamentals from Version 1 have been preserved in Version 2; however, the layout of the REGDOC has been completely redesigned, many of the previous requirements have been reworded, and several sections added or deleted.

The CNSC usually implements new or revised regulatory documents by amending the License Conditions Handbooks (LCHs) and by requesting OPG submit implementation plans, which are then also captured in the LCH. However, the implementation of Version 2 differs because Version 1 is referenced within a Licence Condition (LC) in the current Power Reactor Operating Licences (PROLs). To implement the revised REGDOC, Pickering and Darlington PROLs will require an amendment to replace the reference to REGDOC-2.2.3, *Volume III*, Version 1 with REGDOC-2.2.3, *Volume III*, Version 2.

This plan identifies the governance that must be revised to become compliant with REGDOC-2.2.3, *Volume III*, Version 2. It is expected that such revisions must be completed or at least scheduled before the CNSC will revise the PROLs to refer to Version 2.



## 2.0 SUMMARY OF DOCUMENTS TO BE REVIEWED AND/OR REVISED

The following Table 1 provides a sequential list of documents impacted by the requirements given in REGDOC 2.2.3 *Volume III* Version 2.

The target completion date for each document revision will be finalized once the CNSC has advised as to the status of the PROL amendments. These dates will range from as soon as practicable (ASAP), to up to 12 months following the issuance of the PROLs, as shown below.

Action Request (AR) # 28266572 will be used to identify each task to be completed and the responsible workgroup.

**Table 1**  
**REGDOC 2.2.3 Volume III Version 2 Implementation**  
**AR# 28266572**

	Document	Completion timeline once PROL amended	Status
1.	Create a Document Change Request (DCR) to ensure that references to RD-204 and REGDOC 2.2.3 Volume III Version 1 are updated to reflect the new title of Version 2. This DCR to include the documents listed in DCR #0000153357. DCR #0000153357 to be cancelled.	ASAP	Planned
2.	D-INS-09260-10001, Duty Crew Minimum Complement Assurance	12 months	Planned
3.	D-PROC-OP-0009, Station Shift Complement;	12 months	Planned
4.	N-CHAR-AS-0002, Nuclear Management System, 1.5.2 Fitness-for-Duty	12 months	Planned
5.	N-CMT-62808-00001, Continuous Behaviour Observation Program (CBOP) Participants Materials - Workbook Components	12 months	Planned
6.	N-FORM-10824, CNSC Personnel Notification and Event Report	12 months	Planned
7.	N-GUID-00531-10001, Preparation of Correspondence to the Canadian Nuclear Safety Commission	12 months	Planned

**Plan**

OPG Proprietary		
Document Number: <b>N-PLAN-08920-10401</b>		Usage Classification: <b>N/A</b>
Sheet Number: <b>N/A</b>	Revision Number: <b>R000</b>	Page: <b>6 of 10</b>

Title:

**IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2**

**Table 1**  
**REGDOC 2.2.3 Volume III Version 2 Implementation**  
**AR# 28266572**

	<b>Document</b>	<b>Completion timeline once PROL amended</b>	<b>Status</b>
8.	N-GUID-09100-10002, Entry Level Requirements and Selection Guide for ANOITs/UO CROITs and CRSSITs	12 months	Planned
9.	N-GUID-09100-10004, Co-pilot Requirements for Certified Staff Candidates	12 months	Planned
10.	N-GUID-09110-10000, Certification Requirements for Certified Staff on Rotation	12 months	Planned
11.	N-HO-60630-00001. SM/CRSS Personnel Module 3 Fitness For Duty	12 months	Planned
12.	N-INS-03490-10003, Minimum Shift Complement Resources, Qualifications and Procedures Required for Responding to Resource Limiting Events	12 months	Planned
13.	N-INS-08920-10001, Requalification Testing of Certified Shift Personnel	12 months	Planned
14.	N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel	12 months	Planned
15.	N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel	12 months	Planned
16.	N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel	12 months	Planned
17.	N-INS-08920-10005, Standards and Methodology for Certification Training Formal Evaluations	12 months	Planned
18.	N-INS-08920-10022, Formal Evaluation Of Responsible Health Physicists	12 months	Planned
19.	N-MAN-08131-10000_CNSC-003; Director, Operations And Maintenance	12 months	Planned

**Plan**

OPG Proprietary		
Document Number: <b>N-PLAN-08920-10401</b>		Usage Classification: <b>N/A</b>
Sheet Number: <b>N/A</b>	Revision Number: <b>R000</b>	Page: <b>7 of 10</b>

Title:

**IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2**

**Table 1**  
**REGDOC 2.2.3 Volume III Version 2 Implementation**  
**AR# 28266572**

	<b>Document</b>	<b>Completion timeline once PROL amended</b>	<b>Status</b>
20.	N-MAN-08131-10000_CNSC-006; Shift Manager, Darlington Nuclear	12 months	Planned
21.	N-MAN-08131-10000_CNSC-007; Shift Manager, Pickering Nuclear	12 months	Planned
22.	N-MAN-08131-10000_CNSC-008; Control Room Shift Supervisor, Darlington Nuclear	12 months	Planned
23.	N-MAN-08131-10000_CNSC-010; Authorized Nuclear Operator	12 months	Planned
24.	N-MAN-08131-10000_CNSC-025; Unit 0 Control Room Operator	12 months	Planned
25.	N-MAN-08131-10000_CNSC-028; Control Room Shift Supervisor, Pickering Nuclear	12 months	Planned
26.	N-MAN-08131-10000 S0-0001, Standard Accountabilities for a Manager	12 months	Planned
27.	N-OBJ-60630-00001, SM/CRSS Personnel Module 3 Fitness For Duty	12 months	Planned
28.	N-PROC-OP-0047, Hours Of Work Limits And Managing Worker Fatigue	12 months	Planned
29.	N-PROC-RA-0005 Written Reporting to Regulatory Agencies.	12 months	Planned
30.	N-PROC-RA-0020, Preliminary Event Notifications	12 months	Planned
31.	N-PROC-RA-0047, Communications with the Canadian Nuclear Safety Commission	12 months	Planned
32.	N-PROC-TR-0008, Systematic Approach to Training	12 months	Planned
33.	N-PROC-TR-0012, Records and Documentation	12 months	Planned
34.	N-PROC-TR-0023, Simulator Quality Assurance	12 months	Planned

**Plan**

OPG Proprietary		
Document Number: <b>N-PLAN-08920-10401</b>		Usage Classification: <b>N/A</b>
Sheet Number: <b>N/A</b>	Revision Number: <b>R000</b>	Page: <b>8 of 10</b>

Title:

**IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2**

**Table 1**  
**REGDOC 2.2.3 Volume III Version 2 Implementation**  
**AR# 28266572**

	<b>Document</b>	<b>Completion timeline once PROL amended</b>	<b>Status</b>
35.	N-PROG-AS-0002, Human Performance.	12 months	Planned
36.	N-QG-602-00001, Operator Training Instructor Qualification Guide	12 months	Planned
37.	N-STD-OP-0003, Operations Narrative Logging	12 months	Planned
38.	N-TQD-101-00001, ANO Initial Training and Qualification Description	12 months	Planned
39.	N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description	12 months	Planned
40.	N-TQD-103-00001, Nuclear Certified Personnel Continuing Training and Qualification Description	12 months	Planned
41.	N-TQD-105-00001, U0CRO Initial Training and Qualification Description	12 months	Planned
42.	N-TQD-443-00001 Radiation Protection Training and Qualification	12 months	Planned
43.	N-TQD-602-00001, Nuclear Trainer Training and Qualification Description	12 months	Planned
44.	OPG-STD-0144, Corporate Safety Rules	12 months	Planned
45.	PEL 6971, Human Resources Overview – CBT; Module 2 - Fitness for Duty & CNSC Requirements	12 months	Planned
46.	P-INS-09100-00003, Pickering Minimum Shift Complement	12 months	Planned
47.	P-INS-09260-00008, Duty Crew Minimum Complement Assurance	12 months	Planned

OPG Proprietary		
Document Number: <b>N-PLAN-08920-10401</b>		Usage Classification: <b>N/A</b>
Sheet Number: <b>N/A</b>	Revision Number: <b>R000</b>	Page: <b>9 of 10</b>
Title: <b>IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2</b>		

### 3.0 MINIMUM EMPLOYMENT OF CERTIFIED SHIFT WORKERS

Version 2 now requires that all certified shift workers perform the duties of their designated position(s) for a minimum number of complete shifts per calendar quarter amounting to a minimum number of hours acceptable to the CNSC. It is also required that each certified shift worker perform this employment as a member of the minimum staff complement, as opposed to in any back-up or supernumerary capacity, and, to the fullest extent possible, on a fuelled and operating reactor or group of reactors.

The REGDOC specifies that shift workers holding the following certifications complete a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter:

- Authorized Nuclear Operator;
- Control Room Shift Supervisor;
- Shift Manager; and
- Unit 0 Control Room Operator

Per REGDOC 3.1.1, *Reporting Requirements for Nuclear Power Plants*, the number of shifts worked has been tracked and is currently being reported to the CNSC on a quarterly basis. The current process will continue to provide the required information to the CNSC.

### 4.0 INFORMATION ROLLOUTS

Station management, certified staff, trainees, trainers and examiners should be informed of the following key changes. These rollouts will also be tracked using ARs initiated under AR #28266572.

- (a) Once certified, shift workers in designated positions must work 4 complete shifts per calendar quarter AND a minimum of 48 hours of shiftwork per calendar quarter. Assuming the PROLS have been amended, this change will become effective:

- At Darlington beginning in Q#1 of 2025; January 1, 2025.\*
- At Pickering beginning in Q#1 of 2025; January 1, 2025.\*

NOTE: CNSC has defined “shift” as any 4-hour period preceded by a formal turnover and ending with a formal turnover to another certified worker.

\* Date to be confirmed.

- (b) The tracking of the number of shifts worked while on temporary assignment is no longer required. The 3 shifts per quarter and 5 shift per quarter requirements have been removed, as has the tracking of operational and non-operational assignments.
- (c) CNSC staff have advised that they plan to issue new certifications and reissue current certifications using the generic titles used in REGDOC 2.2.3 Volume III.

## Plan

OPG Proprietary		
Document Number: <b>N-PLAN-08920-10401</b>		Usage Classification: <b>N/A</b>
Sheet Number: <b>N/A</b>	Revision Number: <b>R000</b>	Page: <b>10 of 10</b>

Title: <b>IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2</b>
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- Authorized Nuclear Operators certifications will be identified as “Reactor Operators (RO)”
  - Control Room Shift Supervisors and Shift Managers as “Shift Supervisors (SS)”.
  - Unit 0 Control Room Operators may be retained; CNSC has yet to decide if they will be issued as “Auxiliary Systems Operator (ASO)”.
- (d) The words “*or upon termination of employment in the position by the licensee.*” will not be included on new certifications. This means all certificates remain valid for a 5-year period, regardless of the individual’s employment status; be it full time, term, contractor, etc.
- (e) Shift Managers will no longer be required to obtain a new/second CNSC certification. Workers who are to become qualified as Shift Manager shall be required to hold a valid CRSS (SS) certification.
- (f) Knowledge examinations will no longer have a validity period.
- (g) Simulator-based examinations will now have a two-year validity period, with no extensions.
- (h) Working Under Supervision (co-piloting) minimum hours has been set to 360 hours for ANOs, CRSSs and UOCROs.
- (i) The REGDOC now requires the implementation of a plant familiarization process.
- (j) The REGDOC allows for training program optimization of items such as:
- Revising experience and education requirements.
  - Revising current training phase sequences.
  - Completion of OJT after the simulator exam.
  - Completion of WUS before the simulator exam.
  - Conducting all examinations at the end of the training program.
- (k) Processes have been defined for:
- Reinstatement of an expired certification, before and after 5-years.
  - Licensee request for decertification of certified worker.
  - Request for Opportunity to be Heard.
  - Certificate replacement.
  - Legal name change.
  - Personnel transfer between licensees.

**9. CNSC Email, B. Torrie to B. Barron,  
“Implementation of REGDOC-2.2.3,  
Personnel Certification, Vol. III:  
Certification of Reactor Facility  
Workers, Version 2 – CTAG AI 2024-1-  
2”, July 18, 2024**

**From:** Charron, Jacynthe on behalf of Torrie, Brian

**Sent:** July 18, 2024 10:25 AM

**To:** [bill.barron@opg.com](mailto:bill.barron@opg.com)

**Cc:** [joe.cameron@opg.com](mailto:joe.cameron@opg.com); [Désaulniers, Lucie](#); [Hazelton, Kimberly](#); [Gracie, Brian](#); [Martel, Francis](#); [Alex, Alice](#); [TSB-VPO Administrative Support](#) / [DGST-VP Soutiens Administratif](#); Torrie, Brian

**Subject:** Implementation of REGDOC-2.2.3, Personnel Certification, Vol. III: Certification of Reactor Facility Workers, Version 2 – CTAG AI 2024-1-2

---

In regard to: CTAG Action 2024-1-2 – Seek internal alignment around REGDOC 2.2.3 implementation and what options are available.

Dear Bill,

CNSC staff has identified a way-forward for the implementation of REGDOC-2.2.3, Personnel Certification, Vol. III: *Certification of Reactor Facility Workers*, Version 2 that is satisfactory to internal stakeholders, taking into consideration the applicable legal aspects.

In consultation with industry, CNSC staff proposes to amend all CANDU PROLs effective January 31, 2025. CANDU PROLs and LCHs would thereafter reference REGDOC-2.2.3 Vol. III. V.2. Gentilly-2's licence will be amended separately as part of its scheduled revision cycle.

CNSC staff expects that the applicable licensees will be compliant with most, if not all, requirements of REGDOC-2.2.3 Vol.III V.2 and be ready to manage the pertinent licensee programs and processes starting February 1, 2025.

In order to finalize the Commission Member Document (CMD) in preparation for the licence amendments requested by industry [1][2][3], CNSC staff requests additional information as follows:

- a. revised versions of the detailed plans previously submitted by licensees [4][5][6], to include:
  - i. references to REGDOC-2.2.3 Vol. III V.2 requirements necessitating the implementation of new or modified licensee programs and processes;
  - ii. a brief description of the licensee programs and processes to be implemented or modified and a summary of the required changes;
  - iii. the planned implementation dates for the said changes; and
  - iv. any changes expected to be outstanding by January 31, 2025, and a rationale for the delayed implementation in each case.
- b. a copy or synopsis of any gap analysis produced to determine what changes must be implemented by the licensee to be fully compliant with REGDOC-2.2.3 Vol.III V.2; and
- c. licensee or site-specific schedules for the implementation of any expected outstanding changes as of January 31, 2025, to be grouped in two tiers as follows:
  - i. changes to be implemented within 3 months (by April 30, 2025); and
  - ii. changes to be implemented within 6 months (by July 31, 2025).



This additional information should be submitted by 19 September 2024 via email to myself; in addition, please send complimentary copies to the present cc addressees and [pcd-dap@cnscccsn.gc.ca](mailto:pcd-dap@cnscccsn.gc.ca). Inquiries associated with this email should be directed to Francis Martel at [francis.martel@cnscccsn.gc.ca](mailto:francis.martel@cnscccsn.gc.ca).

Regards,

Brian Torrie

**Brian Torrie**

Acting Vice-President Technical Support Branch and Chief Science Officer

Vice-président par intérim, Direction générale du soutien technique et conseiller scientifique principal

Canadian Nuclear Safety Commission | Commission Canadienne de Sûreté Nucléaire

Government of Canada | Gouvernement du Canada

Email : [brian.torrie@cnscccsn.gc.ca](mailto:brian.torrie@cnscccsn.gc.ca)

Phone: (613) 297-4338

References:

1. NBP Letter, S. Bagshaw to D. Saumure, "Application to Amend the Point Lepreau Nuclear Generating Station Power Operating Licence - PROL 17.00/2032", February 9, 2024 ([eDoc #7218940](#))
2. BP Letter, M. Burton to D. Saumure, "Application for the Amendment of the Nuclear Power Reactor Operating Licence, Bruce Nuclear Generating Stations A and B", February 14, 2024 ([eDoc #7222244](#))
3. OPG Letter, S. Gregoris to D. Saumure, "Application to Amend the Darlington and Pickering Nuclear Generating Station Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively", February 15, 2024 ([eDoc #7223643](#))
4. BP Letter, M. Burton to K. Lun, "Bruce A and Bruce B: Implementation of REGDOC-2.2.3, Volume III, Version 2", March 27, 2024 ([eDoc #7251411](#))
5. NBP Letter, S. Bagshaw to A. Bulkan, "NB Power REGDOC 2.2.3, Personnel Certification, Volume III, Certification of Reactor Facility Workers, Version 2: Implementation Plan in Support of Licence Amendment Request", March 28, 2024 ([eDoc #7252290](#))
6. OPG Letter, S. Gregoris to A. Mathai and R. Richardson, "OPG – Implementation of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2", April 25, 2024 ([eDoc #7270107](#))

- 10. OPG Email, B. Barron to B. Torrie,  
“OPG - Implementation of REGDOC-  
2.2.3, Personnel Certification, Volume  
III: Certification of Reactor Facility  
Workers, Version 2”, September 17,  
2024**

**From:** [BARRON Bill -INTFLTMGMT](#)

**Sent:** September 18, 2024 8:58 AM

**To:** Torrie, Brian

**Cc:** [Désaulniers, Lucie](#); [Hazelton, Kimberly](#); [Gracie, Brian](#); [Martel, Francis](#); [Alex, Alice](#); [Françoise, Corinne](#); [TSB-VPO Administrative Support / DGST-VP Soutiens Administratif](#); [BARRON Bill -INTFLTMGMT](#); [CAMERON Joe -NUCLEAR](#); [BEN-SHLOMO Ronen -INTFLTMGMT](#); [PCD / DAP \(CNSC/CCSN\)](#); [HATFIELD Sherie -CNO](#); [BAGHBANAN Mohammadreza -CNO](#); [DI LEVA Leanne -DIGITALCORP](#)

**Subject:** CD# N-CORR-00531-24192 - OPG - Implementation of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2

**Attachments:** Attachment 2 - N-REP-08920-10042 R000.pdf; Attachment 1 - N-PLAN-08920-10401 R001.pdf

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**Importance:** High

EXTERNAL EMAIL – USE CAUTION / COURRIEL EXTERNE – FAITES PREUVE DE PRUDENCE
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**OPG Proprietary**

**CD# N-CORR-00531-24192**

**Subject: OPG - Implementation of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2**

Dear Mr. Torrie:

The purpose of this email is to submit to the CNSC the requested OPG information in Reference 1.

The following table provides the additional information requested and OPG's responses:

Requested Information	OPG Response
a. revised versions of the detailed plans previously submitted by OPG to include: i. references to REGDOC-2.2.3 Vol. III V.2 requirements necessitating the implementation of new or modified licensee programs and processes;	N-PLAN-08920-10401 Revision 000, <i>Implementation Plan For CNSC REGDOC 2.2.3 Volume III Version 2</i> , was submitted to CNSC on April 25, 2024 (Reference 2).  N-PLAN-08920-10401 Revision 001 is included in this email (Attachment 1).
ii. a brief description of the licensee	This information is contained in N-REP-08920-

programs and processes to be implemented or modified and a summary of the required changes;	10042 R000, <i>Review Of Version 2 Of REGDOC 2.2.3 Volume III: Certification Of Reactor Facility Workers, To Facilitate Development Of An Implementation Plan</i> , included in this email (Attachment 2).
iii. the planned implementation dates for the said changes; and	Included in Attachment 1.
iv. any changes expected to be outstanding by January 31, 2025, and a rationale for the delayed implementation in each case.	Per the current implementation plan (Attachment 1), all changes are expected to be completed by January 31, 2025.
b. a copy or synopsis of any gap analysis produced to determine what changes must be implemented by the licensee to be fully compliant with REGDOC-2.2.3 Vol. III V.2; and	Included in Attachment 2.
c. licensee or site-specific schedules for the implementation of any expected outstanding changes as of January 31, 2025, to be grouped in two tiers as follows: <ul style="list-style-type: none"> <li>i. changes to be implemented within 3 months (by April 30, 2025); and</li> <li>ii. changes to be implemented within 6 months (by July 31, 2025).</li> </ul>	Per the current implementation plan (Attachment 1), all changes are expected to be completed by January 31, 2025.

Industry and Certification and Training Advisory Group (CTAG) members met on August 13, 2024, to discuss the path forward for the implementation of REGDOC 2.2.3 Volume III Version 2, CTAG Action 2024-1-3 (Reference 3), “*CNSC and industry to reconvene to discuss feedback on REGDOC 2.2.3 Implementation*”. No major issues were identified by Industry during the meeting. Industry and CTAG members will meet again on September 17, 2024, to ensure alignment on the implementation plan.

CNSC CTAG staff explained that information contained in the industry submissions will form the basis for the details included in the Commission Member Document (CMD) submission to the Commission expected to take place in October 2024, allowing for a November 2024 Commission decision. Updates are required to the Darlington Nuclear Generating Station (NGS) and Pickering NGS Licence Conditions Handbooks (LCH) before the Darlington (NGS) Power Reactor Operating Licence (PROL) 13.03/2025 and the Pickering NGS PROL 48.01/2028 are amended on January 31, 2025, if the Commission agrees to amend the PROLs.

Following the August 13 meeting, it was agreed that the next CTAG meeting will be held on November 28, 2024.

Action Request 28268837 has been created to submit to CNSC an update on OPGs implementation plan for REGDOC 2.2.3 Volume III Version 2 by March 31, 2025.

If you have any questions, please contact Mr. Ronen Ben-Shlomo at [ronen.ben-shlomo@opg.com](mailto:ronen.ben-shlomo@opg.com).

Sincerely,



**Bill Barron** (He/Him)



VP Enterprise Training

Enterprise Learning

905-718-2627

► *My workday may not be the same as yours. Please respond to this email during your normal working hours.*

Attach.

---

References:

1. CNSC Email, B. Torrie to B. Barron, "Implementation of REGDOC-2.2.3, Personnel Certification, Vol. III: Certification of Reactor Facility Workers, Version 2 – CTAG AI 2024-1-2", July 18, 2024, CD# N-CORR-00531-24145.
2. OPG Letter, S. Gregoris to A. Mathai and R. Richardson, "OPG – Implementation of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2", April 25, 2024, CD# N-CORR-00531-24018.
3. CNSC Email, E. Paris to J. Cameron and Bill Barron, "CNSC Email For Review: Draft CTAG-32 Meeting Minutes and Actions List (May 28, 2024)", June 19, 2024, eDocs #7295943, CD# N-CORR-00531-24215.

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**CD# N-CORR-00531-24145**

**From:** Charron, Jacynthe <[jacynthe.charron@cnscccsn.gc.ca](mailto:jacynthe.charron@cnscccsn.gc.ca)> **On Behalf Of** Torrie, Brian

**Sent:** Thursday, July 18, 2024 10:25 AM

**To:** BARRON Bill -INTFLTMGMT <[bill.barron@opg.com](mailto:bill.barron@opg.com)>

**Cc:** CAMERON Joe -NUCLEAR <[joe.cameron@opg.com](mailto:joe.cameron@opg.com)>; Désaulniers, Lucie <[Lucie.Desaulniers@cnscccsn.gc.ca](mailto:Lucie.Desaulniers@cnscccsn.gc.ca)>; Hazelton, Kimberly <[Kimberly.Hazelton@cnscccsn.gc.ca](mailto:Kimberly.Hazelton@cnscccsn.gc.ca)>; Gracie, Brian <[Brian.Gracie@cnscccsn.gc.ca](mailto:Brian.Gracie@cnscccsn.gc.ca)>; Martel, Francis <[Francis.Martel@cnscccsn.gc.ca](mailto:Francis.Martel@cnscccsn.gc.ca)>; Alex, Alice <[alice.alex@cnscccsn.gc.ca](mailto:alice.alex@cnscccsn.gc.ca)>; TSB-VPO Administrative Support / DGST-VP Soutiens Administratif <[tsb-vpo@cnscccsn.gc.ca](mailto:tsb-vpo@cnscccsn.gc.ca)>; Torrie, Brian <[Brian.Torrie@cnscccsn.gc.ca](mailto:Brian.Torrie@cnscccsn.gc.ca)>

**Subject:** Implementation of REGDOC-2.2.3, Personnel Certification, Vol. III: Certification of Reactor Facility Workers, Version 2 – CTAG AI 2024-1-2

In regard to: CTAG Action 2024-1-2 – Seek internal alignment around REGDOC 2.2.3 implementation and what options are available.

Dear Bill,

CNSC staff has identified a way-forward for the implementation of REGDOC-2.2.3, Personnel Certification, Vol. III: *Certification of Reactor Facility Workers*, Version 2 that is satisfactory to internal stakeholders, taking into consideration the applicable legal aspects.

In consultation with industry, CNSC staff proposes to amend all CANDU PROLs effective January 31, 2025. CANDU PROLs and LCHs would thereafter reference REGDOC-2.2.3 Vol. III. V.2. Gentilly-2's licence will be amended separately as part of its scheduled revision cycle.

CNSC staff expects that the applicable licensees will be compliant with most, if not all, requirements of REGDOC-2.2.3 Vol.III V.2 and be ready to manage the pertinent licensee programs and processes starting February 1, 2025.

In order to finalize the Commission Member Document (CMD) in preparation for the licence amendments requested by industry [1][2][3], CNSC staff requests additional information as follows:

- a. revised versions of the detailed plans previously submitted by licensees [4][5][6], to include:
  - i. references to REGDOC-2.2.3 Vol. III V.2 requirements necessitating the implementation of new or modified licensee programs and processes;
  - ii. a brief description of the licensee programs and processes to be implemented or modified and a summary of the required changes;
  - iii. the planned implementation dates for the said changes; and
  - iv. any changes expected to be outstanding by January 31, 2025, and a rationale for the delayed implementation in each case.
- b. a copy or synopsis of any gap analysis produced to determine what changes must be implemented by the licensee to be fully compliant with REGDOC-2.2.3 Vol.III V.2; and
- c. licensee or site-specific schedules for the implementation of any expected outstanding changes as of January 31, 2025, to be grouped in two tiers as follows:
  - i. changes to be implemented within 3 months (by April 30, 2025); and
  - ii. changes to be implemented within 6 months (by July 31, 2025).

This additional information should be submitted by 19 September 2024 via email to myself; in addition, please send complimentary copies to the present cc addressees and [pcd-dap@cnscccsn.gc.ca](mailto:pcd-dap@cnscccsn.gc.ca). Inquiries associated with this email should be directed to Francis Martel at [francis.martel@cnscccsn.gc.ca](mailto:francis.martel@cnscccsn.gc.ca).

Regards,

Brian Torrie

**Brian Torrie**

Acting Vice-President Technical Support Branch and Chief Science Officer

Vice-président par intérim, Direction générale du soutien technique et conseiller scientifique principal

Canadian Nuclear Safety Commission | Commission Canadienne de Sécurité Nucléaire  
Government of Canada | Gouvernement du Canada

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**References:**

1. NBP Letter, S. Bagshaw to D. Saumure, "Application to Amend the Point Lepreau Nuclear Generating Station Power Operating Licence - PROL 17.00/2032", February 9, 2024 ([eDoc #7218940](#))
2. BP Letter, M. Burton to D. Saumure, "Application for the Amendment of the Nuclear Power Reactor Operating Licence, Bruce Nuclear Generating Stations A and B", February 14, 2024 ([eDoc #7222244](#))
3. OPG Letter, S. Gregoris to D. Saumure, "Application to Amend the Darlington and Pickering Nuclear Generating Station Power Reactor Operating Licences, 13.03/2025 and 48.01/2028 Respectively", February 15, 2024 ([eDoc #7223643](#))
4. BP Letter, M. Burton to K. Lun, "Bruce A and Bruce B: Implementation of REGDOC-2.2.3, Volume III, Version 2", March 27, 2024 ([eDoc #7251411](#))
5. NBP Letter, S. Bagshaw to A. Bulkan, "NB Power REGDOC 2.2.3, Personnel Certification, Volume III, Certification of Reactor Facility Workers, Version 2: Implementation Plan in Support of Licence Amendment Request", March 28, 2024 ([eDoc #7252290](#))
6. OPG Letter, S. Gregoris to A. Mathai and R. Richardson, "OPG – Implementation of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2", April 25, 2024 ([eDoc #7270107](#))

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**IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2**

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## IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2

**N-PLAN-08920-10401-001**

2024-08-21

Order Number: N/A  
Other Reference Number: N/A

**OPG Proprietary**

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Director  
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Revision Summary

Revision Number	Date	Comments
R001	2024-08-21	Revised to update or add implementation dates and additional items to be completed.
R000	2024-03-15	Initial issue.

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## 1.0 SUMMARY AND SCOPE

Regulatory document REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2 (2023) sets out requirements and guidance for the certification of reactor facility workers by the Canadian Nuclear Safety Commission (CNSC).

The CNSC personnel certification regulatory document, RD-204, *Certification of Persons Working at Nuclear Power Plants*, was published in 2008. As part of a CNSC rebranding initiative, RD-204 was republished in 2019 as REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Persons Working at Nuclear Power Plants*.

In October 2023, CNSC published REGDOC-2.2.3, Personnel Certification, Volume III: *Certification of Reactor Facility Workers*, Version 2. The fundamentals from Version 1 have been preserved in Version 2; however, the layout of the REGDOC has been significantly reorganized, many of the previous requirements have been reworded, and several sections added or deleted.

New or revised regulatory documents are usually implemented by amending the License Conditions Handbooks (LCHs) and by requesting OPG submit implementation plans, which are then also captured in the LCH. However, the implementation of Version 2 differs because Version 1 is referenced within a Licence Condition (LC) in the current Power Reactor Operating Licences (PROLs). To implement the revised REGDOC, Pickering and Darlington PROLs will require an amendment to replace the reference to REGDOC-2.2.3, Volume III, Version 1 with REGDOC-2.2.3, Volume III, Version 2.

On February 15, 2024, OPG applied to the CNSC to amend the Darlington and Pickering PROLs to refer to Version 2; see N-CORR-00531-23826. Revision R000 of this plan was submitted to the CNSC under N-CORR-00531-24018 on April 26, 2024.

This plan identifies the governance that must be revised to become compliant with REGDOC-2.2.3, Volume III, Version 2. It is expected that such revisions must be completed or at least scheduled before the CNSC will revise the PROLs to refer to Version 2. The plan also identifies other actions to be completed as part of the implementation.

Revision 1 of this document provides a status update of the required actions as of the date of issuance.

## Plan

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## 2.0 ACTION TRACKING

Action Request (AR) # 28266572 is being used to track each document revision or task to be completed to implement REGDOC 2.2.3 Volume III Version 2. The overall due date of this AR has been set to December 16, 2025, to allow for the addition of assignments that may arise during the implementation phase.

Table 1 Action Request (AR) # 28266572			
Assign #	Document	Due Date	Status
1.	File AR sub-assignments to identify documents to be revised and actions to be completed to implement REGDOC-2.2.3 Volume III Version 2.	December 16, 2025	In Progress
2.	Create a Document Change Request (DCR) to ensure that references to RD-204 and REGDOC 2.2.3 Volume III Version 1 are updated to reflect the new title of Version 2. This DCR to include the documents listed in DCR #0000153357. DCR #0000153357 may be cancelled.	July 30, 2024	DCR #0000167720 input on April 22, 2024. <b>Action Complete</b>

## 3.0 ITEMS REQUIRING MANAGEMENT DIRECTION

The shift in Version 2 towards more performance-based, technology-neutral requirements, and the removal of the prescriptive requirements given in Version 1, presents an opportunity to optimize the current authorization training programs. Table 2 below provides a list of the current requirements that may be impacted by this change.

Each of these items was reviewed at an Operations Training Program Review Committee (OPS-TPRC) meeting. The conduct of this meeting was tracked by AR# 28266572 assignment #04.

To provide input to any future decision-making process for these items, a benchmarking exercise was initiated prior to the OPS-TPRC. The results of this exercise will be documented in the self assessment database, per AR# 28266572 assignment #03.

The decisions made at the TPRC meeting are documented per assignments 5 to 18.

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**Table 2**  
**Action Request (AR) # 28266572**

Assign #	Description	Due Date	Status
3.	<p>Conduct benchmarking on industry certification training programs to:</p> <ul style="list-style-type: none"> <li>Assess how other nuclear industry certification training programs address issues like those revised and/or introduced via REGDOC 2.2.3 Volume III Version 2.</li> <li>Determine industry best practices.</li> </ul> <p>Document recommendations and actions via the Self-Assessment database.</p>	November 30, 2024	In Progress
4.	<p>Conduct Operations Training Program Review Committee (TPRC) meeting to review certain aspects of the REGDOC-2.2.3 Volume III Version 2 Implementation Plan.</p>	July 30, 2024	<p>Ad-hoc Operations TPRC held on June 24, 2024.</p> <p>Refer to N-CORR-08125.TC-1377630 for minutes and record of decisions made (items 5 to 18)..</p> <p><b>Action Complete</b></p>
5.	<p>Training and Operations management to determine if N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001 should continue to require that candidates meet the education requirements stated in REGDOC 2.2.3 Volume III Version 1, or if the requirements should be updated.</p>	July 30, 2024	<p>Decisions made at the TPRC held on June 24, 2024.</p> <p><b>Action Complete</b></p>
6.	<p>Training and Operations management to determine if N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001 should include a process to recognize equivalencies to the minimum education, literacy, or numeracy level required of authorization training program candidates.</p>	July 30, 2024	<p>Decisions made at the TPRC held on June 24, 2024.</p> <p><b>Action Complete</b></p>
7.	<p>Training and Operations management to determine if N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001 should continue to require that candidates meet the experience requirements stated in REGDOC 2.2.3 Volume III Version 1, or if the requirements should be updated.</p>	July 30, 2024	<p>Decisions made at the TPRC held on June 24, 2024.</p> <p><b>Action Complete</b></p>

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Table 2 Action Request (AR) # 28266572			
Assign #	Description	Due Date	Status
8.	Provide options and facilitate decision-making around the Plant Familiarization Program requirement introduced in REGDOC 2.2.3 Volume III Version 2.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
9.	Training and Operations management to determine if the requirement to use standardized tests or other methods or require a medical assessment to assess if candidates have any permanent, physical or mental limitation that would prevent them from performing duties of the certified position should be added to N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
10.	Training and Operations management to determine if N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001 should include a personnel transfer process.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
11.	Training and Operations management to determine if a process for "Recertification Within 5 Years of a Certificate Expiry" should be added to N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
12.	Training and Operations management to determine if a process for "Recertification Following Decertification or Certificate Expiry After 5 years" should be added to N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
13.	Training and Operations management to determine if a process for "Licensee's Request For Decertification" should be added to N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
14.	Training and Operations management to determine if a process for "Request For An Opportunity To Be Heard" should be added to N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
15.	Training and Operations management to determine if a process for "Replacement Of Certificates" should be	July 30, 2024	Decisions made at the TPRC held on June 24, 2024.

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**Table 2**  
**Action Request (AR) # 28266572**

<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
	added to N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.		<b>Action Complete</b>
16.	Training and Operations management to determine if N-TQD-102-00001 should include a management interview, consistent with current practice of interviewing Shift Manager candidates prior to submitting a certification application letter to the CNSC.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
17.	Training and Operations management to determine the required number of copiloting shifts for the "Senior Shift Supervisor/Shift Manager" position to be documented in N-TQD-102-00001.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>
18.	Training and Operations management to determine how to document the ideal certification training program sequence in N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.	July 30, 2024	Decisions made at the TPRC held on June 24, 2024. <b>Action Complete</b>

**4.0 TASKS TO BE COMPLETED**

Table 3 provides a list of tasks to be completed during the implementation of REGDOC 2.2.3 Volume III Version 2.

**Table 3**  
**Action Request (AR) # 28266572**

<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
19.	Prepare letters for CNSC submissions for changes in certification training programs that are covered under REGDOC 2.2.3 Volume III Version 2 requirements identified as "prescribed by licensee and acceptable to CNSC". Refer to REGDOC 2.2.3 Volume III Version 2 sections 14.4.1, 15.3, 20.2.1, 23 and 24.1.11 for additional details.	October 31, 2024	OPG's planned implementation of each requirement was confirmed to be compliant with Version 2. Following discussion with CNSC staff, it was determined that such letters were not required. <b>Action cancelled and considered complete.</b>

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**Table 3**  
**Action Request (AR) # 28266572**

<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
20.	Create Senior Shift Supervisor qualifications for Darlington, Pickering 14 and Pickering 58.	December 31, 2024	Planned
21.	Conduct REGDOC 2.2.3 Volume III Version 2 information rollout sessions to Darlington certified staff and trainees.	November 30, 2024	Planned
22.	Conduct REGDOC 2.2.3 Volume III Version 2 information rollout sessions to Pickering certified staff and trainees.	November 30, 2024	Planned
23.	Conduct REGDOC 2.2.3 Volume III Version 2 information rollout sessions to Operations Training trainers and examiners.	November 30, 2024	Planned
24.	Conduct REGDOC 2.2.3 Volume III Version 2 information rollout sessions to Darlington and Pickering Operations Leadership.	November 30, 2024	Planned
25.	Develop and implement the Darlington SAT-based plant familiarization training as required to be compliant with REGDOC 2.2.3 Volume III Version 2 section 24.1.3.	January 15, 2025	Planned
26.	Develop and implement the Pickering SAT-based plant familiarization training as required to be compliant with REGDOC 2.2.3 Volume III Version 2 section 24.1.3.	January 15, 2025	Planned

## **5.0 DOCUMENTS TO BE REVIEWED AND/OR REVISED**

Table 4 provides a list of documents potentially impacted by the requirements given in REGDOC 2.2.3 Volume III Version 2. Each document will be reviewed against the relevant sections of the REGDOC and revised if required to ensure compliance. The table gives the date by which each document is to be revised and issued.



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**Table 4**  
**Action Request (AR) # 28266572**

<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
27.	Review N-HO-60630-00001, SM/CRSS Personnel Module 3 Fitness for Duty, against REGDOC 2.2.3 Volume III Version 2 section 20.1, and revise if required.	January 17, 2025	Planned
28.	Review N-INS-08920-10001, Requalification Testing of Certified Shift Personnel, against REGDOC 2.2.3 Volume III Version 2 sections 21.1.1 (b) and 23.5.4, and revise if required.	January 17, 2025	Planned
29.	Review N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel, against REGDOC 2.2.3 Volume III Version 2 sections 21.1.1 (b), 23.5.4 and 24.1.10, and revise if required.	January 17, 2025	Planned
30.	Review N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel, against REGDOC 2.2.3 Volume III Version 2 sections 21.1.1 (b) and 23.5.4, and revise if required.	January 17, 2025	Planned
31.	Review N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel, against REGDOC 2.2.3 Volume III Version 2 sections 21.1.1 (b), 24.1.9 and 24.2.3, and revise if required.	January 17, 2025	Planned
32.	Review N-INS-08920-10005, Standards and Methodology for Certification Training Formal Evaluations, against REGDOC 2.2.3 Volume III Version 2 sections 15.4, 15.5, 21.1.1 (b) and 23.5.4, and revise if required.	January 17, 2025	Planned
33.	Review N-OBJ-60630-00001, SM/CRSS Personnel Module 3 Fitness For Duty, against REGDOC 2.2.3 Volume III Version 2 section 20.1, and revise if required.	January 17, 2025	Planned
34.	Review N-QG-602-00001, Operator Training Instructor Qualification Guide, against REGDOC 2.2.3 Volume III Version 2 section 21.1.4 and revise if required.	January 17, 2025	Planned
35.	Review N-TQD-101-00001, ANO Initial Training and Qualification Description, against REGDOC 2.2.3 Volume III Version 2 sections 12.1, 14.1, 14.2, 14.5, 15.4, 17, 18, 19.1, 21.1.3, 21.2 and 24, and revise as required.	January 17, 2025	In Progress
36.	Review N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, against REGDOC 2.2.3 Volume III	January 17, 2025	Planned

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**Table 4  
Action Request (AR) # 28266572**

<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
	Version 2 sections 12.1, 14.1, 14.2, 14.3, 14.4, 14.5, 15.4, 17, 18, 19.1, 21.1.3, 21.2 and 24, and revise as required.		
37.	Review N-TQD-103-00001, Nuclear Certified Personnel Continuing Training and Qualification Description, against REGDOC 2.2.3 Volume III Version 2 sections 7.5, 7.6, 8, 9, 11.2, 11.3, 12.1, 12.2, 15, 20, 21.1 and 24, and revise as required.	January 17, 2025	Planned
38.	Review N-TQD-105-00001, U0CRO Initial Training and Qualification Description, against REGDOC 2.2.3 Volume III Version 2 sections 12.1, 14.1, 14.2, 14.5, 15.4, 17, 18, 19.1, 21.1.3, 21.2 and 24, and revise as required.	January 17, 2025	Planned
39.	Review D-INS-09260-10001, Duty Crew Minimum Complement Assurance, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required	January 15, 2025	Planned
40.	Review D-PROC-OP-0009, Station Shift Complement, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
41.	Review N-GUID-09100-10002, Entry Level Requirements and Selection Guide for ANOITs/U0 CROITs and CRSSITs, against REGDOC 2.2.3 Volume III Version 2 sections 14 and 24.1.3 and revise as required.	January 15, 2025	Planned
42.	Review N-GUID-09100-10004, Co-pilot Requirements for Certified Staff Candidates, against REGDOC 2.2.3 Volume III Version 2 section 17, and revise if required.	January 15, 2025	Planned
43.	Review N-GUID-09110-10000, Certification Requirements for Certified Staff on Rotation, against REGDOC 2.2.3 Volume III Version 2 section 20.2 and 20.4.1, and revise as required.	January 15, 2025	Planned
44.	N-INS-03490-10003, Minimum Shift Complement Resources, Qualifications and Procedures Required for Responding to Resource Limiting Events, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
45.	Review N-PROC-OP-0047, Hours Of Work Limits And Managing Worker Fatigue, against REGDOC 2.2.3 Volume III Version 2 section 20.1, and revise if required.	January 15, 2025	Planned

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**Table 4**  
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<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
46.	Review N-STD-OP-0003, Operations Narrative Logging, against REGDOC 2.2.3 Volume III Version 2 sections 3.2 and 3.3, and revise if required.	January 15, 2025	Planned
47.	Review P-INS-09100-00003, Pickering Minimum Shift Complement, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
48.	Review P-INS-09260-00008, Duty Crew Minimum Complement Assurance, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
49.	Review N-PROC-TR-0023, Simulator Quality Assurance, against REGDOC 2.2.3 Volume III Version 2 section 23, and revise if required.	January 15, 2025	Planned
50.	Review N-TQD-443-00001 Radiation Protection Training and Qualification, against REGDOC 2.2.3 Volume III Version 2 sections 5.1, 6.5, 7.4, 8, 9, 11, 12, 14, 15, 17, 18, 19, 20, 21, 24, 25.1, 25.2 and 25.3, and revise as required.	December 6, 2024	Planned
51.	Review N-INS-08920-10022, Formal Evaluation Of Responsible Health Physicists, against REGDOC 2.2.3 Volume III Version 2 sections 15.4, 15.5 and 21.1.1 (b), and revise if required.	December 6, 2024	Planned
52.	Review N-TQD-602-00001, Nuclear Trainer Training and Qualification Description, 00001 against REGDOC 2.2.3 Volume III Version 2 section 21.1.4 and revise as required.	December 31, 2024	Planned
53.	Review N-PROC-TR-0012, Records and Documentation, against REGDOC 2.2.3 Volume III Version 2 section 21, and revise if required.	January 31, 2025	Planned
54.	Review N-MAN-08131-10000_CNSC-003; Director, Operations And Maintenance, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
55.	Review N-MAN-08131-10000_CNSC-006; Shift Manager, Darlington Nuclear, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned

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**Table 4**  
**Action Request (AR) # 28266572**

<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
56.	Review N-MAN-08131-10000_CNSC-007; Shift Manager, Pickering Nuclear, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
57.	Review N-MAN-08131-10000_CNSC-008; Control Room Shift Supervisor, Darlington Nuclear, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
58.	Review N-MAN-08131-10000_CNSC-010; Authorized Nuclear Operator, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
59.	Review N-MAN-08131-10000_CNSC-025; Unit 0 Control Room Operator, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
60.	Review N-MAN-08131-10000_CNSC-028; Control Room Shift Supervisor, Pickering Nuclear, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
61.	Review N-MAN-08131-10000 S0-0001, Standard Accountabilities for a Manager, against REGDOC 2.2.3 Volume III Version 2 sections 4.2 and 14.4, and revise if required.	January 15, 2025	Planned
62.	Review N-FORM-10824, CNSC Personnel Notification and Event Report, against REGDOC 2.2.3 Volume III Version 2 section 20.7, and if required, revise per assignment 63.	October 18, 2024	Planned
63.	If required, revise N-FORM-10824, CNSC Personnel Notification and Event Report to be complaint with REGDOC 2.2.3 Volume III Version 2 section 20.7.	January 31, 2025	Planned
64.	Review N-GUID-00531-10001, Preparation of Correspondence to the Canadian Nuclear Safety Commission, against REGDOC 2.2.3 Volume III Version 2 sections 5, 6, 7 and 10, and if required, revise per assignment 65.	October 18, 2024	Planned
65.	If required, revise N-GUID-00531-10001, Preparation of Correspondence to the Canadian Nuclear Safety Commission, to be complaint with REGDOC 2.2.3 Volume III Version 2 sections 5, 6, 7 and 10.	January 31, 2025	Planned

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**Table 4**  
**Action Request (AR) # 28266572**

<b>Assign #</b>	<b>Description</b>	<b>Due Date</b>	<b>Status</b>
66.	Review N-PROC-RA-0005 Written Reporting to Regulatory Agencies, against REGDOC 2.2.3 Volume III Version 2 sections 5, 6, 7, 10 and 20.7, and if required, revise per assignment 67.	October 18, 2024	Planned
67.	If required, revise N-PROC-RA-0005 Written Reporting to Regulatory Agencies, to be compliant with REGDOC 2.2.3 Volume III Version 2 sections 5, 6, 7, 10 and 20.7	January 31, 2025	Planned
68.	Review N-PROC-RA-0020, Preliminary Event Notifications, against REGDOC 2.2.3 Volume III Version 2 section 20.7, and if required, revise per assignment 69.	October 18, 2024	Planned
69.	If required, revise N-PROC-RA-0020, Preliminary Event Notifications, to be compliant with REGDOC 2.2.3 Volume III Version 2 section 20.7.	January 31, 2025	Planned
70.	Review N-PROC-RA-0047, Communications with the Canadian Nuclear Safety Commission, against REGDOC 2.2.3 Volume III Version 2 section 5 and if required, revise per assignment 71.	October 18, 2024	Planned
71.	If required, revise N-PROC-RA-0047, Communications with the Canadian Nuclear Safety Commission, to be compliant with REGDOC 2.2.3 Volume III Version 2 section 5.	January 31, 2025	Planned

## 6.0 ADDITIONAL DOCUMENTS REVIEWED.

During the review of the governance potentially affected by REGDOC 2.2.3 Volume III Version 2, five other documents were identified. The documents reviewed and the result of the assessment is given in Table 5.

**Table 5**  
**Additional documents reviewed**

<b>Document</b>	<b>Version 2 Requirements</b>	<b>Assessment Conclusion</b>
N-CHAR-AS-0002, Nuclear Management System, 1.5.2 Fitness-for-Duty.	N-CHAR-AS-0002, section 1.5.2, was reviewed against REGDOC 2.2.3 Volume III Version 2 section 20.1.	It was verified that N-CHAR-AS-0002 does not need to be revised to be in compliance with REGDOC 2.2.3 Volume III Version 2, section 20.1.
N-CMT-62808-00001, Continuous Behaviour Observation Program (CBOP)	N-CMT-62808-00001 was reviewed against REGDOC	PEL 62808 is now conducted as Computer Based Training (CBT). N-CMT-62808-00001 is

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**Table 5**  
**Additional documents reviewed**

<b>Document</b>	<b>Version 2 Requirements</b>	<b>Assessment Conclusion</b>
Participants Materials - Workbook Components.	2.2.3 Volume III Version 2 section 20.1.	no longer being updated. No revision required.
Review PEL 6971, Human Resources Overview – CBT; Module on Fitness for Duty & CNSC Requirements.	PEL 6971 was reviewed against REGDOC 2.2.3 Volume III Version 2 section 20.1.	It was verified that the CBT does not need to be revised to be in compliance with REGDOC 2.2.3 Volume III Version 2, section 20.1.
N-PROG-AS-0002, Human Performance.	N-PROG-AS-0002 was reviewed against REGDOC 2.2.3 Volume III Version 2 section 20.1.	It was verified that N-PROG-AS-0002 does not need to be revised to be in compliance with REGDOC 2.2.3 Volume III Version 2, section 20.1.
OPG-STD-0144, Corporate Safety Rules.	OPG-STD-0144 was reviewed against REGDOC 2.2.3 Volume III Version 2 section 20.1.	It was verified that OPG-STD-0144 does not need to be revised to be in compliance with REGDOC 2.2.3 Volume III Version 2, section 20.1

## 7.0 MINIMUM EMPLOYMENT OF CERTIFIED SHIFT WORKERS

Version 2 now requires that all certified shift workers perform the duties of their designated position(s) for a minimum number of complete shifts per calendar quarter amounting to a minimum number of hours acceptable to the CNSC. It is also required that each certified shift worker perform this employment as a member of the minimum staff complement, as opposed to in any back-up or supernumerary capacity, and, to the fullest extent possible, on a fuelled and operating reactor or group of reactors.

The REGDOC specifies that shift workers holding the following certifications complete a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter:

- Authorized Nuclear Operator;
- Control Room Shift Supervisor;
- Shift Manager; and
- Unit 0 Control Room Operator.

Assuming the PROLS are to be amended January 31, 2025, this change will become effective:

- At Darlington beginning in Q#1 of 2025; January 1, 2025.
- At Pickering beginning in Q#1 of 2025; January 1, 2025.

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Per REGDOC 3.1.1, *Reporting Requirements for Nuclear Power Plants*, the number of shifts worked has been tracked and is currently being reported to the CNSC on a quarterly basis. The current process will continue to provide the required information to the CNSC.

## 8.0 INFORMATION ROLLOUTS

Station management, certified staff, trainees, trainers and examiners should be informed of the following key changes. As stated above, these rollouts are being tracked using AR #28266572 assignments # 21 to 24.

- (a) Shift workers in designated positions must work 4 complete shifts per calendar quarter AND a minimum of 48 hours of shiftwork per calendar quarter. Assuming the PROLS are to be amended, this change will become effective at Darlington and Pickering beginning in Q#1 of 2025.
- (b) CNSC has defined “shift” as any 4-hour period preceded by a formal turnover and ending with a formal turnover to another certified worker.
- (c) The tracking of the number of shifts worked while on temporary assignment is no longer required. The 3 shifts per quarter and 5 shift per quarter requirements have been removed, as has the tracking of operational and non-operational assignments.
- (d) CNSC staff have advised that they plan to issue new certifications and reissue current certifications using the generic titles used in REGDOC 2.2.3 Volume III.
  - Authorized Nuclear Operators certifications will be identified as “Reactor Operators (RO)”
  - Control Room Shift Supervisors and Shift Managers as “Shift Supervisors (SS)”.
  - Unit 0 Control Room Operators may be retained; CNSC has yet to decide if they will be issued as “Auxiliary Systems Operator (ASO)”.
- (e) The words “*or upon termination of employment in the position by the licensee.*” will not be included on new certifications. This means all certificates remain valid for a 5-year period, regardless of the individual’s employment status; be it full time, term, contractor, etc.
- (f) Shift Managers will no longer be required to obtain a new/second CNSC certification. Workers who are to become qualified as Shift Manager (SM) shall be required to hold a valid CRSS (SS) certification. Creation of the new SM qualifications will be tracked via AR #28266572 assignment #20; TCD: Dec 31, 2024.
- (g) Knowledge examinations will no longer have a validity period.
- (h) Simulator-based examinations will now have a two-year validity period, with no extensions allowed.

## Plan

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- (i) Working Under Supervision (co-piloting) minimum hours has been set to 360 hours for ANOs, CRSSs and UOCROs.
- (j) The REGDOC now requires the implementation of a plant familiarization process.
- (k) The REGDOC allows for training program optimization of items such as:
  - Revising experience and education requirements.
  - Revising current training phase sequences.
  - Completion of OJT after the simulator exam.
  - Completion of WUS before the simulator exam.
  - Conducting all examinations at the end of the training program.
- (l) The only requirements that must now be done in sequence are:
  - Personnel selection before start of the initial training.
  - Plant familiarization before start of station-specific training.
  - Simulator-based exam within 2 years of the application for certification.
  - Management interview after all other requirements have been met.
- (m) Processes have been defined for:
  - Reinstatement of an expired certification, before and after 5-years.
  - Licensee request for decertification of certified worker.
  - Request for Opportunity to be Heard.
  - Certificate replacement.
  - Legal name change.
  - Personnel transfer between licensees.

## 9.0 TRANSITION CLAUSES

The following transition clauses have been recommended to the CNSC staff for inclusion in each License Condition Handbook (or PROL; CNSC to determine). CNSC is to advise if a formal submission of this information is required.

TRANSITIONAL PROVISIONS FOR THE IMPLEMENTATION OF REGDOC 2.2.3 VOLUME III VERSION 2	
Requirement	Proposed Clause
Personnel Selection, Minimum Education and Experience (Sections 6.2 and 14.2.1)	When a worker seeking certification in a designated position at the reactor facility has already met the education and minimum experience requirements for the applicable position that were specified in REGDOC 2.2.3 Volume III, <i>Certification of Persons Working at Nuclear Power Plants</i> , prior to the effective date of the licence amendment referencing REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , the worker will be deemed to meet the corresponding minimum education and



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**IMPLEMENTATION PLAN FOR CNSC REGDOC 2.2.3 VOLUME III VERSION 2**

<b>TRANSITIONAL PROVISIONS FOR THE IMPLEMENTATION OF REGDOC 2.2.3 VOLUME III VERSION 2</b>	
<b>Requirement</b>	<b>Proposed Clause</b>
	experience requirements specified in REGDOC 2.2.3 Volume III Version 2.
Minimum shift requirement for operations personnel (Section 20.2.1)	During the calendar quarter when REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , is first referenced in the Power Reactor Operating License (PROL), each certified shift worker shall perform the duties of the pertinent designated position for a minimum of three (3) complete shifts amounting to a minimum of thirty-six (36) hours of shiftwork.
Initial Training (Section 24)	When a worker seeking certification in a designated position at the reactor facility has already met a number of the initial training requirements for the applicable position that were specified in REGDOC 2.2.3 Volume III, <i>Certification of Persons Working at Nuclear Power Plants</i> , prior to the effective date of the licence amendment referencing REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , the worker will be deemed to meet the corresponding initial training requirements specified in REGDOC 2.2.3 Volume III Version 2.
Plant Familiarization (Section 24.1.3)	When a worker seeking certification in a designated position at the reactor facility has already begun the nuclear power plant-specific training for the applicable position that was specified in REGDOC 2.2.3 Volume III, <i>Certification of Persons Working at Nuclear Power Plants</i> , prior to the effective date of the licence amendment referencing REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , the worker will be deemed to have completed the Plant Familiarization training required by Section 24.1.3 of REGDOC 2.2.3 Volume III Version 2.
Certification Examinations (Sections 24.1.8, 24.1.9 & 24.1.10)	When a worker seeking certification in a designated position at the reactor facility has already completed a number of the certification examinations for the applicable position that were specified in REGDOC 2.2.3 Volume III, <i>Certification of Persons Working at Nuclear Power Plants</i> , prior to the effective date of the licence amendment referencing REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , the worker will be deemed to have completed the corresponding certification examination(s) specified in REGDOC 2.2.3 Volume III Version 2.
Advancement to Senior Shift	When a worker seeking to advance to the position of Shift Manager at the reactor facility has already completed a number of the initial certification requirements for " <i>Plant Shift Supervisors at a</i>

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<b>TRANSITIONAL PROVISIONS FOR THE IMPLEMENTATION OF REGDOC 2.2.3 VOLUME III VERSION 2</b>	
<b>Requirement</b>	<b>Proposed Clause</b>
Supervisor (Section 24.2)	<i>Multi-Unit Nuclear Power Plant</i> <sup>8</sup> that were specified in REGDOC 2.2.3 Volume III, <i>Certification of Persons Working at Nuclear Power Plants</i> , prior to the effective date of the licence amendment referencing REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , the worker will be deemed to have completed the corresponding qualification requirements specified in REGDOC 2.2.3 Volume III Version 2.
Continuing Training (Section 24.3.1)	When a worker seeking renewal of certification in a designated position at the reactor facility has already met a number of the continuing training requirements for the applicable position that were specified in REGDOC 2.2.3 Volume III, <i>Certification of Persons Working at Nuclear Power Plants</i> , prior to the effective date of the licence amendment referencing REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , the worker will be deemed to meet the corresponding continuing training requirements specified in REGDOC 2.2.3 Volume III Version 2.
Requalification Tests (Section 24.3.2 & 24.3.3)	When a worker seeking renewal of certification in a designated position at the reactor facility has already completed a number of the requalification tests for the applicable position that were specified in REGDOC 2.2.3 Volume III, <i>Certification of Persons Working at Nuclear Power Plants</i> , prior to the effective date of the licence amendment referencing REGDOC 2.2.3 Volume III Version 2, <i>Certification of Reactor Facility Workers</i> , the worker will be deemed to have completed the corresponding requalification test(s) specified in REGDOC 2.2.3 Volume III Version 2.

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**REVIEW OF VERSION 2 OF REGDOC 2.2.3 VOLUME III: CERTIFICATION OF REACTOR FACILITY WORKERS, TO FACILITATE DEVELOPMENT OF AN IMPLEMENTATION PLAN**

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### REVIEW OF VERSION 2 OF REGDOC 2.2.3 VOLUME III: CERTIFICATION OF REACTOR FACILITY WORKERS, TO FACILITATE DEVELOPMENT OF AN IMPLEMENTATION PLAN

**N-REP-08920-10042-**

2024-03-15

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## Report

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Revision Summary

Revision Number	Date	Comments
R000	2024-03-15	Initial issue.

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### Executive Summary

Regulatory document REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2 (2023)* sets out requirements and guidance for the certification of reactor facility workers by the Canadian Nuclear Safety Commission (CNSC).

The original CNSC personnel certification regulatory document, RD-204, *Certification of Persons Working at Nuclear Power Plants*, was published in 2008.

As part of a CNSC rebranding initiative, RD-204 was republished in 2019 as REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants*. This document contained one single amendment that changed the maximum length of the extension of validity periods for knowledge-based certification examinations from one year to three years. This revision has been successfully implemented within OPG governance.

On April 9, 2020, the CNSC amended DNGS Power Reactor Operating Licence (PROL) 13.01/2025, Licence Condition 2.3 and Pickering NGS PROL 48.00/2028, Licence Condition 2.4, to replace the reference to RD-204 with the superseding document, REGDOC-2.2.3 Volume III.

In October 2023, CNSC published REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*. The fundamentals from Version 1 have been preserved in Version 2; however, the layout of the REGDOC has been completely redesigned, many of the previous requirements have been reworded, and several sections added or deleted.

The CNSC usually implements new or revised regulatory documents by amending the License Conditions Handbooks (LCHs) and by requesting OPG submit implementation plans, which are then also captured in the LCH. However, the implementation of Version 2 differs because Version 1 is referenced within a Licence Condition (LC) in the current PROLs. To implement the revised REGDOC, Pickering and Darlington PROLs will require an amendment to replace REGDOC-2.2.3, Volume III, Version 1 with REGDOC-2.2.3, Volume III, Version 2.

Before implementing such amendments, OPG governance was reviewed to determine compliance with Version 2. Based on identified gaps, governance will be revised and a timeline for implementation developed that can be referred to in the LCHs.

This report compares the requirements specified in Version 1 and Version 2 and identifies OPG documents that need to be updated. The report also identifies changed or new requirements that OPG may decide to not implement at this time.

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## 1.0 OVERVIEW OF REGDOC-2.2.3 VOLUME III VERSION 2

REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2* comprises of three parts:

- **Part I** describes the regulatory and procedural provisions of the CNSC personnel certification scheme relevant to reactor facility workers;
- **Part II** describes the organizational and physical infrastructures that must be implemented by the licensee to support the personnel certification scheme described in Part I and achieve the worker qualifications specified in Part III; and
- **Part III** specifies the prerequisites that reactor facility workers must meet to be eligible for the personnel certification processes described in Part I.

### 1.1 KEY CHANGES

Some of the key changes documented in Version 2 include:

- A shift towards more performance-based, technology-neutral requirements, while retaining sufficient prescriptiveness to maintain a standardized personnel certification scheme for all candidates and certified workers;
- The removal of prescriptive education and experience prerequisites in favor of performance-based requirements as the basis for the implementation of personnel selection programs;
- The removal of prescriptive training topics and sequence consistent with the systematic approach to training (SAT);
- The removal of a distinct certification process for Shift Managers (SM) and the issue of a single certification for all shift supervisors;
- The removal of the validity periods from all knowledge-based certification examinations;
- The replacement of the two-tier minimum shift requirement scheme with a universal four (4) shifts/quarter requirement;
- The addition of new and existing (but previously undocumented) standardized processes to address known regulatory gaps; and
- The use of guidance and explicit expectations to clarify regulatory intent and address interpretation issues.

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## 2.0 REVIEW PROCESS

To capture the extent of the changes being made, and to facilitate the understanding of why governance should be revised, the table in section 6 lists the requirements of Version 2, and identifies the related sections of Version 1, where applicable.

Following each section, the OPG documentation that requires review and possibly revision is identified. In some instances, specific document sections are identified, while in other cases only the overall document number is given.

**Note:** This report does not include a review of the “Guidance” sections of the regulatory document.

## 3.0 SUMMARY OF DOCUMENTS TO BE REVIEWED AND/OR REVISED

The following is a sequential list of documents impacted by the requirements given in REGDOC 2.2.3 Volume III Version 2:

- (a) Pickering and Darlington PROLs and LCHs;
- (b) DCR #0000153357 should be replaced to ensure references to RD-204 are updated to reflect the new title of Version 2. The documents listed in Appendix B should be included in this DCR to ensure references to REGDOC 2.2.3 Volume III **Version 1** are updated to reflect the new title of **Version 2**;
- (c) D-INS-09260-10001, Duty Crew Minimum Complement Assurance;
- (d) D-PROC-OP-0009, Station Shift Complement;
- (e) N-CHAR-AS-0002, Nuclear Management System, 1.5.2 Fitness-for-Duty;
- (f) N-CMT-62808-00001, Continuous Behaviour Observation Program (CBOP) Participants Materials - Workbook Components;
- (g) N-FORM-10824, CNSC Personnel Notification and Event Report;
- (h) N-GUID-00531-10001, Preparation of Correspondence to the Canadian Nuclear Safety Commission;
- (i) N-GUID-09100-10002, Entry Level Requirements and Selection Guide for ANOITs/UO CROITs and CRSSITs;
- (j) N-GUID-09100-10004, Co-pilot Requirements for Certified Staff Candidates;
- (k) N-GUID-09110-10000, Certification Requirements for Certified Staff on Rotation;



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- (l) N-HO-60630-00001. SM/CRSS Personnel Module 3 Fitness For Duty;
- (m) N-INS-03490-10003, Minimum Shift Complement Resources, Qualifications and Procedures Required for Responding to Resource Limiting Events;
- (n) N-INS-08920-10001, Requalification Testing of Certified Shift Personnel;
- (o) N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel;
- (p) N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel;
- (q) N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel;
- (r) N-INS-08920-10005, Standards and Methodology for Certification Training Formal Evaluations;
- (s) N-INS-08920-10022, Formal Evaluation Of Responsible Health Physicists;
- (t) N-MAN-08131-10000\_CN-003; Director, Operations And Maintenance;
- (u) N-MAN-08131-10000\_CN-006; Shift Manager, Darlington Nuclear;
- (v) N-MAN-08131-10000\_CN-007; Shift Manager, Pickering Nuclear;
- (w) N-MAN-08131-10000\_CN-008; Control Room Shift Supervisor, Darlington Nuclear;
- (x) N-MAN-08131-10000\_CN-010; Authorized Nuclear Operator;
- (y) N-MAN-08131-10000\_CN-025; Unit 0 Control Room Operator;
- (z) N-MAN-08131-10000\_CN-028; Control Room Shift Supervisor, Pickering Nuclear;
- (aa) N-MAN-08131-10000 SO-0001, Standard Accountabilities for a Manager;
- (bb) N-OBJ-60630-00001, SM/CRSS Personnel Module 3 Fitness For Duty;
- (cc) N-PROC-OP-0047, Hours Of Work Limits And Managing Worker Fatigue;
- (dd) N-PROC-RA-0005 Written Reporting to Regulatory Agencies.
- (ee) N-PROC-RA-0020, Preliminary Event Notifications.
- (ff) N-PROC-RA-0047, Communications with the Canadian Nuclear Safety Commission

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- (gg) N-PROC-TR-0012, Records and Documentation;
- (hh) N-PROC-TR-0023, Simulator Quality Assurance;
- (ii) N-PROG-AS-0002, Human Performance.
- (jj) N-QG-602-00001, Operator Training Instructor Qualification Guide;
- (kk) N-STD-OP-0003, Operations Narrative Logging;
- (ll) N-TQD-101-00001, ANO Initial Training and Qualification Description;
- (mm) N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description;
- (nn) N-TQD-105-00001, UOCRO Initial Training and Qualification Description;
- (oo) N-TQD-103-00001, Nuclear Certified Personnel Continuing Training and Qualification Description;
- (pp) N-TQD-443-00001 Radiation Protection Training and Qualification Description;
- (qq) N-TQD-602-00001, Nuclear Trainer Training and Qualification Description;
- (rr) OPG-STD-0144, Corporate Safety Rules; and
- (ss) PEL 6971, Human Resources Overview – CBT; Module 2 - Fitness for Duty & CNSC Requirements.
- (tt) P-INS-09100-00003, Pickering Minimum Shift Complement; and
- (uu) P-INS-09260-00008, Duty Crew Minimum Complement Assurance;

#### 4.0 VERSION 2 REQUIRMENTS REQUIRING MANAGEMENT DIRECTION

- (a) Governance does not include instruction for “Recertification Within 5 Years of a Certificate Expiry” (**8, 24.4**) and “Recertification Following Decertification or Certificate Expiry After 5 Years” (**9, 24.5**), but including it can be considered optional, as it may never be used.

Management to decide path forward.

- (b) Governance does not include instruction for a licensee’s request for decertification of a certified worker (**11.2**), on a request for an opportunity to be heard (**11.3**), or the replacement of certificates (**12.2**), but including it can be considered optional.

Management to decide path forward.

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(c) Related to:

- N-TQD-101-00001, ANO Initial Training and Qualification Description,
- N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description,
- N-TQD-105-00001, UOCRO Initial Training and Qualification Description, and
- N-TQD-443-00001 Radiation Protection Training and Qualification.

- (1) Section 1.1.2, Entry Level Requirements, Selection, and Development Phase need to be revised to comply with Version 2 and to remove references to Version 1. The TQDs should either include the previous education requirements stated in Version 1, or updated education requirements. **(14.1, 14.2, 24.1, 24.1.1)**

Education requirements to be determined by management.

- (2) Version 2 allows for equivalencies to minimum education, literacy, or numeracy levels and requires the use of tests and methods to assess if candidates meet the applicable minimum standards. The TQDs do not include instruction for this situation, and including it can be considered optional. **(14.1 c & d, 14.2).**

Management to decide if equivalency processes are to be implemented.

- (3) TQDs should either include the previous experience requirements stated in Version 1, or updated requirements. **(14.1 e, 14.2).**

Experience requirements to be determined by management.

- (4) TQDs may include a requirement to use standardized tests or other methods, or require a medical assessment, to assess if candidates have any permanent, physical or mental limitation that would prevent them from the performing duties of the position. **(14.1 g).**

Requirements to be determined by management.

- (5) Version 2 no longer requires conduct of a management interview for Senior Shift Supervisor (Shift Manager) candidates.

Management to decide to continue interviews or not.

- (6) Version 2 requires documentation of a "Personnel Transfer" process, if such a process is to be used. **(14.5)**

Management to decide if transfer process is to be used and therefore documented.

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### 5.0 DETAILS OF DOCUMENT SECTIONS TO BE REVIEWED OR REVISED

**Note:** **BOLD** numbers in brackets are the relevant REGDOC 2.2.3 Volume III Version 2 section numbers.

- (a) Pickering and Darlington PROLs and LCHs need to be amended to:
- Reflect new document title.
  - Either remove Shift Manager (SM) from the list of certified positions, or identify that the SM and Control Room Shift Supervisor (CRSS) shall both hold a CRSS (SS) certification. Actual wording to be discussed with CNSC. **(4.1)**.
- (b) DCR #0000153357 should be replaced to ensure references to RD-204 are updated to reflect the new title of Version 2. The documents listed in Appendix B of this report should be included in this DCR to ensure references to REGDOC 2.2.3 Volume III **Version 1** are updated to reflect the new title of **Version 2**.
- (c) Once the outcome of discussion with CNSC per (a) (ii) above, the following documents should be reviewed and revised if impacted by the change in the Shift Manager certification requirement **(4.2)** and by the creation of the Senior Shift Supervisor qualification **(14.4)**:
- D-INS-09260-10001, Duty Crew Minimum Complement Assurance;
  - D-PROC-OP-0009, Station Shift Complement;
  - N-INS-03490-10003, Minimum Shift Complement Resources, Qualifications and Procedures Required for Responding to Resource Limiting Events;
  - N-MAN-08131-10000\_CNSC-003; Director, Operations And Maintenance;
  - N-MAN-08131-10000\_CNSC-006; Shift Manager, Darlington Nuclear;
  - N-MAN-08131-10000\_CNSC-007; Shift Manager, Pickering Nuclear;
  - N-MAN-08131-10000\_CNSC-008; Control Room Shift Supervisor, Darlington Nuclear;
  - N-MAN-08131-10000\_CNSC-010; Authorized Nuclear Operator;
  - N-MAN-08131-10000\_CNSC-025; Unit 0 Control Room Operator;
  - N-MAN-08131-10000\_CNSC-028; Control Room Shift Supervisor, Pickering Nuclear;
  - N-MAN-08131-10000 S0-0001, Standard Accountabilities for a Manager;
  - P-INS-09100-00003, Pickering Minimum Shift Complement; and
  - P-INS-09260-00008, Duty Crew Minimum Complement Assurance.

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- (d) The role and responsibilities of all personnel involved in the training and qualification of workers seeking or holding a certification, including trainers, examiners, and managers must be documented. **(21.1.1)**

No gap, however, additional documents may be identified.

- (e) Certified staff employment records need to show the assigned employment status (active, inactive, removed from duty, returned to duty, uncertified or decertified) and the number of complete shifts and hours of work performed in a designated position, specifying the position and the date of each complete shift and hour of work performed. **(3.2, 3.3)**

- (1) Staff Shift Logs contain some of the above information and per N-STD-OP-0003, Operations Narrative Logging, the official station log is a QA record maintained for 10 years. This will need to be reviewed as Version 2 requires employment records be kept for “5 years after the worker ceases to be employed in any capacity.”

- (2) Additional documents may be identified, for example the Quarterly NPP Personnel Reports to the CNSC.

- (f) For Responsible Health Physicists (RHPs), specific governance or templates do not exist for the preparation of applications for examinations, certifications (initial and renewal), or for requests for decertification. The following should be reviewed, and governance revised or created as required:

- (1) Section 1.5.3 of N-PROC-RA-0047, Communications with the Canadian Nuclear Safety Commission, and N-GUID-00531-10001, Preparation of Correspondence to the Canadian Nuclear Safety Commission, do provide some general guidance. N-TQD-443-00001 should be reviewed to ensure compliance with the following sections of Version 2:
- **5.** General Provisions Pertinent to All Applications
  - **6.** Application for Certification
  - **7.** Application for Certification Renewal
  - **10.** Application for Senior Health Physicist Examination or Requalification Testing
- (2) Version 2 allows for “Recertification Within 5 Years of a Certificate Expiry” **(8, 24.4)** and “Recertification Following Decertification or Certificate Expiry After 5 Years” **(9, 24.4)**. Governance does not include instruction for these situations, but including it can be considered optional, as it may never be used.

Management to decide path forward.

- (3) Version 2 provides guidance on a licensee’s request for decertification of a certified worker **(11.2, 24.5)**, on a request for an opportunity to be heard **(11.3,**

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**24.5)**, and the replacement of certificates **(12.2, 24.5)**. Governance does not include instruction for these situations but including it can be considered optional.

Management to decide path forward.

- (4) Version 2 requires the CNSC to be notified of legal name change. Governance should include instructions for these situations **(12.1)**.
- (g) There is no specific governance or template for notifying CNSC of a certified worker removed from or reinstated to the duties of a designated position. **(20.7, 20.7.1, 20.7.2)**.

The following documents should be reviewed to ensure compliance with version 2:

- N-PROC-RA-0005 Written Reporting to Regulatory Agencies;
  - N-FORM-10824, CNSC Personnel Notification and Event Report; and
  - N-PROC-RA-0020, Preliminary Event Notifications.
- (h) Fitness for Duty **(20.1)** is addressed in several documents. The following should be reviewed and revised as required:
- N-CHAR-AS-0002, Nuclear Management System, 1.5.2 Fitness-for-Duty;
  - N-CMT-62808-00001, Continuous Behaviour Observation Program (CBOP) Participants Materials - Workbook Components;
  - N-HO-60630-00001, SM/CRSS Personnel Module 3 Fitness For Duty;
  - N-OBJ-60630-00001, SM/CRSS Personnel Module 3 Fitness For Duty;
  - N-PROC-OP-0047, Hours Of Work Limits And Managing Worker Fatigue;
  - N-PROG-AS-0002, Human Performance.
  - OPG-STD-0144, Corporate Safety Rules; and
  - PEL 6971, Human Resources Overview – CBT; Module 2 - Fitness for Duty & CNSC Requirements.
- (i) N-GUID-09100-10002, Entry Level Requirements and Selection Guide for ANOITs/UO CROITs and CRSSITs:
- (1) Needs to be revised to comply with revision 2 and to remove references to requirements given in Version 1. **(14)**
  - (2) Consideration should be given to allowing equivalencies to minimum education, literacy, or numeracy level requirements. Implementing this will require the use of tests and methods to assess if candidates meet the applicable minimum standards. **(14.1 c & d, 14.2)** . Any changes implemented need to be aligned with changes made to N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001.
  - (3) Must identify the attributes and aptitudes deemed essential for designated positions. The guide must also include integrity, leadership, and resilience, and must ensure that candidates selected possess the required attributes and aptitudes. **(14.1 f, 14.2.2)**

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- (4) Must identify that shift supervisor candidates possess leadership skills and have consistently demonstrated a high level of integrity. **(14.2.2)**
- (5) Should include progression of certified ANOs to the CRSS position **(14.3)**.
- (6) Needs to be revised to comply with “Plant Familiarization” requirements. **(24.1.3)**
- (j) N-GUID-09100-10004, Co-pilot Requirements for Certified Staff Candidates, needs to be reviewed to ensure compliance with revision 2 “Work Under Supervision” requirements. **(17)**
- (k) N-GUID-09110-10000, Certification Requirements for Certified Staff on Rotation, needs to be revised to:
  - (1) Ensure compliance with version 2 “Minimum Employment” requirements. **(20.2, 20.2.1)**
  - (2) Include direction on minimum shift deferment requirement. **(20.2.2)**
    - (i) Documents for staff working normally on shift may be identified.
  - (3) Include direction on removal from duty for failing to meet minimum employment requirement. **(20.4.1)**
- (l) N-INS-08920-10001, Requalification Testing of Certified Shift Personnel, should be reviewed to ensure compliance with:
  - (1) “Roles and responsibilities” **(21.1.1 (b))**.
    - Need to ensure roles and responsibilities are fully documented for all personnel involved in the training and qualification of workers holding a certification.
  - (2) “Control of audiovisual data”. **(23.5.4)**.
- (m) N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel should be reviewed to ensure compliance with:
  - (1) “Roles and responsibilities” **(21.1.1 (b))**.
    - Need to ensure roles and responsibilities are fully documented for all personnel involved in the training and qualification of workers seeking a certification.
  - (2) “Control of audiovisual data”. **(23.5.4)**
  - (3) Version 2 requirement that examinations are “*providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and*

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*competently*” compared to current examination methodologies given in CNSC-EG2. **(24.1.10)**.

- (n) N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel, should be reviewed to ensure compliance with:
- (1) “Separation of the training and examination function” requirements. **(16.1)**
  - (2) “Roles and responsibilities” **(21.1.1 (b))**.
    - Need to ensure roles and responsibilities are fully documented for all personnel involved in the training and qualification of workers seeking a certification.
  - (3) “Control of audiovisual data”. **(23.5.4)**
- (o) N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel, should be reviewed to ensure compliance with:
- (1) “Roles and responsibilities” **(21.1.1 (b))**.
    - Need to ensure roles and responsibilities are fully documented for all personnel involved in the training and qualification of workers seeking a certification.
  - (2) Requirement that examinations are “*providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently*” compared to the current examination methodologies given in CNSC-EG1. **(24.1.9, 24.2.3)**.
- (p) N-INS-08920-10005, Standards and Methodology for Certification Training Formal Evaluations, should be reviewed to ensure compliance with:
- (1) “Formal Learner Evaluation” requirements. **(15.4)**
  - (2) “Trainer qualification” requirements. **(15.5)**
  - (3) “Roles and responsibilities” **(21.1.1 (b))**.
    - Need to ensure roles and responsibilities are fully documented for all personnel involved in the training and qualification of workers seeking a certification.
  - (4) “Control of audiovisual data”. **(23.5.4)**
- (q) N-INS-08920-10022, Formal Evaluation Of Responsible Health Physicists, should be reviewed to ensure compliance with:
- (1) “Formal Learner Evaluation” requirements. **(15.4)**



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- (2) “Trainer qualification” requirements. **(15.5)**
- (3) “Roles and responsibilities” **(21.1.1 (b))**.
  - Need to ensure roles and responsibilities are fully documented for all personnel involved in the training and qualification of workers seeking or holding a certification.
- (r) N-PROC-TR-0012, Records and Documentation, should be reviewed to ensure compliance with version 2 “Information Management” requirements. **(21)**
- (s) N-TQD-101-00001, ANO Initial Training and Qualification Description:
  - (1) TQD must reviewed to ensure compliance with “Legal Name Change” requirements **(12.1)**
  - (2) Section 1.1.2, Entry Level Requirements, Selection, and Development Phase need to be revised to comply with Version 2 and to remove references Version 1. The TQD should either include the previous education requirements stated in Version 1, or updated education requirements. **(14.1, 14.2, 24.1, 24.1.1)**

#### Education requirements to be determined by management.

- (3) Version 2 allows for equivalencies to minimum education, literacy, or numeracy levels and requires the use of tests and methods to assess if candidates meet the applicable minimum standards. TQDs do not include instruction for this situation, but including it can be considered optional. **(14.1 c & d, 14.2)**. Any changes implemented need to be aligned with changes made to N-GUID-09100-10002.

#### Management to decide if such processes are to be implemented.

- (4) TQD should either include the previous experience requirements stated in Version 1, or updated requirements. **(14.1 e, 14.2)**.

#### Experience requirements to be determined by management.

- (5) Version 2 requires documentation of a “Personnel Transfer” process, if such a process is to be used. **(14.5)**

#### Management to decide if transfer process is to be used and therefore documented.

- (6) TQD should be reviewed to ensure compliance with “Formal Learner Evaluation” requirements. **(15.4)**
- (7) TQD needs to be reviewed to ensure compliance with revision 2 “Work Under Supervision” requirements. **(17, 24.1.11)**, including **number of hours acceptable to the CNSC**.

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- (8) TQD needs to be reviewed to ensure compliance with revision 2 “Management Interviews” requirements. **(18)**
- (9) TQD needs to include instructions for candidates who need to be reintegrated into training following an absence. **(19.1)**
- (10) TQD needs to be reviewed to ensure compliance with revision 2 “Training and qualifying governance” requirements. **(21.1.3)**
- (11) Section 3.0, Records And References, needs to direct that:
  - (i) Candidates provide a copy of any diploma, degree or certificate required by the personnel selection program and that such documents are filed in the candidate’s training record (ITR). **(21.2 a)**
  - (ii) Comprehensive records are maintained of a candidate’s:
    - Prior work experience. **(21.2.b)**
    - Selection interview or test. **(21.2.c)**
    - Transfer. **(21.2.d)**
    - Initial training and continuing training. **(21.2.f)**
    - Formal learner evaluations. **(21.2.g)**
    - Work under supervision. **(21.2.h)**
    - Management interviews. **(21.2.i)**
    - Certification examinations. **(21.2.j)**
    - Requalification tests. **(21.2.k)**
    - Employment. **(21.2.l)**
    - Fitness for duty. **(21.2.m)**
    - Removals and reinstatements. **(21.2.n)**
- (12) TQD needs to be reviewed to ensure compliance with following sections of version 2:
  - **24.1.2** General knowledge
  - **24.1.3** Plant familiarization
  - **24.1.4** Station-specific knowledge
  - **24.1.5** Nuclear emergency management
  - **24.1.6** On-the-job training
  - **24.1.7** Simulator-based training
  - **24.1.8** Knowledge-based general certification examination
  - **24.1.9** Knowledge-based station-specific certification examination
  - **24.1.10** Performance-based certification examination
  - **24.1.11** Work under supervision
  - **24.1.12** Management interview

Management to decide if training program phase sequence needs to be revised.

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- (13) TQD needs to identify 2-year validity period for simulator-based examinations, with no extension possible. **(24.1.10)**
- (t) N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description
- (1) TQD must reviewed to ensure compliance with “Legal Name Change” requirements **(12.1)**
- (2) Section 1.1.2, Entry Level Requirements, Selection, and Development Phase need to be revised to comply with revision 2 and to remove references Version 1. TQD should either include the previous education requirements stated in Version 1, or updated education requirements. **(14.1, 14.2, 24.1, 24.1.1)**

Education requirements to be determined by management.

- (3) Version 2 allows for equivalencies to minimum education, literacy, or numeracy levels and requires the use of tests and methods to assess if candidates meet the applicable minimum standards. TQDs do not include instruction for this situation, but including it can be considered optional. **(14.1 c & d, 14.2)**. Any changes implemented need to be aligned with changes made to N-GUID-09100-10002.

Management to decide if such processes are to be implemented.

- (4) TQD should either include the previous experience requirements stated in Version 1, or updated requirements. **(14.1 e, 14.2)**.

Experience requirements to be determined by management.

- (5) TQD should include progression of certified ANOs to the CRSS position, including exemption and CNSC notification processes. **(14.3, 14.3.1, 14.3.2, 14.3.3)**
- (6) Section 1.1.10, *Application to Canadian Nuclear Safety Commission for SM Certification*, needs to be revised to reflect version 2 requirements. **(14.4, 14.4.1)**.
- (i) Qualification structure should be revised to create a separate SM qualification, with the Shift Supervisor (CRSS) qualification as a prerequisite and to remove the SM certification PEL from the CRSS qualification.
- (ii) Define how many WUS hours/shifts are required. 168 hours is currently acceptable to the CNSC. **(14.4.3)**.
- (iii) Version 2 no longer requires conduct of a management interview for SM candidates.

Management to decide to continue or not.

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- (7) Version 2 requires documentation of a “Personnel Transfer” process, if such a process is to be used. **(14.5)**
- Management to decide if transfer process is to be used and therefore documented.
- (8) TQD should be reviewed to ensure it is in compliance with “Formal Learner Evaluation” requirements. **(15.4)**
- (9) TQD needs to be reviewed to ensure compliance with revision 2 “Work Under Supervision” requirements. **(17, 24.1.11)**, including **number of hours acceptable to the CNSC**.
- (10) TQD needs to be reviewed to ensure compliance with revision 2 “Management Interviews” requirements. **(18)**
- (11) TQD needs to include direction for candidates who need to be reintegrated into training following an absence. **(19.1)**
- (12) TQD needs to be reviewed to ensure compliance with revision 2 “Training and qualifying governance” requirements. **(21.1.3)**
- (13) Section 3.0, Records And References, needs to direct that:
- (i) Candidates provide a copy of any diploma, degree or certificate required by the personnel selection program and that such documents are filed in the candidate’s training record (ITR). **(21.2 a)**
  - (ii) Comprehensive records are maintained of a candidate’s:
    - Prior work experience. **(21.2.b)**
    - Selection interview or test. **(21.2.c)**
    - Transfer. **(21.2.d)**
    - Advancement to a shift supervisor or senior shift supervisor position. **(21.2.e)**
    - Initial training and continuing training **(21.2.f)**
    - Formal learner evaluations **(21.2.g)**
    - Work under supervision **(21.2.h)**
    - Management interviews **(21.2.i)**
    - Certification examinations **(21.2.j)**
    - Qualification tests **(21.2.k)**
    - Employment **(21.2.l)**
    - Fitness for duty **(21.2.m)**
    - Removals and reinstatements **(21.2.n)**
- (14) TQD needs to be reviewed to ensure compliance with following sections of version 2:

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- **24.1.2** General knowledge
- **24.1.3** Plant familiarization
- **24.1.4** Station-specific knowledge
- **24.1.5** Nuclear emergency management
- **24.1.6** On-the-job training
- **24.1.7** Simulator-based training
- **24.1.8** Knowledge-based general certification examination
- **24.1.9** Knowledge-based station-specific certification examination
- **24.1.10** Performance-based certification examination
- **24.1.11** Work under supervision
- **24.1.12** Management interview

(15) TQD needs to identify 2-year validity period for simulator-based examinations, with no extension possible. **(24.1.10)**

(u) N-TQD-105-00001, UOCRO Initial Training and Qualification Description

- (1) TQD must reviewed to ensure compliance with “Legal Name Change” requirements **(12.1)**
- (2) Section 1.1.2, Entry Level Requirements, Selection, and Development Phase need to be revised to comply with Version 2 and to remove references Version 1. TQD should either include the previous education requirements stated in Version 1, or updated education requirements. **(14.1, 14.2, 24.1, 24.1.1)**

Education requirements to be determined by management.

- (3) Version 2 allows for equivalencies to minimum education, literacy, or numeracy levels and requires the use of tests and methods to assess if candidates meet the applicable minimum standards. TQDs do not include instruction for this situation, but including it can be considered optional. **(14.1 c & d, 14.2)**. Any changes implemented need to be aligned with changes made to N-GUID-09100-10002.

Management to decide if such processes are to be implemented.

- (4) TQD should either include the previous experience requirements stated in Version 1, or updated requirements. **(14.1 e, 14.2)**.

Experience requirements to be determined by management.

- (5) Version 2 requires documentation of a “Personnel Transfer” process, if such a process is to be used. **(14.5)**

Management to decide if transfer process is to be used and therefore documented.

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- (6) TQD should be reviewed to ensure it is in compliance with “Formal Learner Evaluation” requirements. **(15.4)**
- (7) TQD needs to be reviewed to ensure compliance with revision 2 “Work Under Supervision” requirements. **(17, 24.1.11)**, including **number of hours acceptable to the CNSC (Appendix B)**.
- (8) TQD needs to be reviewed to ensure compliance with revision 2 “Management Interviews” requirements. **(18)**
- (9) TQD needs to include instructions for candidates who need to be reintegrated into training following an absence. **(19.1)**
- (10) TQD needs to be reviewed to ensure compliance with Version 2 “Training and qualifying governance” requirements. **(21.1.3)**
- (11) Section 3.0, Records And References, needs to direct that:
  - (i) Candidates provide a copy of any diploma, degree or certificate required by the personnel selection program and that such documents are filed in the candidate’s training record (ITR). **(21.2 a)**
  - (ii) Comprehensive records are maintained of a candidate’s:
    - Prior work experience. **(21.2.b)**
    - Selection interview or test. **(21.2.c)**
    - Transfer. **(21.2.d)**
    - Initial training and continuing training **(21.2.f)**
    - Formal learner evaluations **(21.2.g)**
    - Work under supervision **(21.2.h)**
    - Management interviews **(21.2.i)**
    - Certification examinations **(21.2.j)**
    - Requalification tests **(21.2.k)**
    - Employment **(21.2.l)**
    - Fitness for duty **(21.2.m)**
    - Removals and reinstatements **(21.2.n)**
- (12) TQD needs to be reviewed to ensure compliance with following sections of version 2:
  - **24.1.2** General knowledge
  - **24.1.3** Plant familiarization
  - **24.1.4** Station-specific knowledge
  - **24.1.5** Nuclear emergency management
  - **24.1.6** On-the-job training
  - **24.1.7** Simulator-based training
  - **24.1.8** Knowledge-based general certification examination

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- **24.1.9** Knowledge-based station-specific certification examination
  - **24.1.10** Performance-based certification examination
  - **24.1.11** Work under supervision (**required hours may now 360**)
  - **24.1.12** Management interview
- (13) TQD needs to identify 2-year validity period for simulator-based examinations, with no extension possible. **(24.1.10)**
- (v) N-TQD-103-00001, *Nuclear Certified Personnel Continuing Training and Qualification Description*:
- (1) Section 1.5, *Application to Canadian Nuclear Safety Commission (CNSC) for Certification Renewal*, needs to be revised to reflect new “Application for Certification Renewal” requirements. **(7.5, 7.6)**
  - (2) Dependent upon management decisions, TQD may have sections added to ensure compliance with:
    - (i) “Recertification Within 5 Years of a Certificate Expiry” **(8, 24.4)**
    - (ii) “Recertification Following Decertification or Certificate Expiry After 5 Years” **(9, 24.4)**.
    - (iii) “Licensee’s request for decertification of a certified worker **(11.2, 24.5)**,
    - (iv) “Request for an opportunity to be heard” **(11.3, 24.5)**
    - (v) “Replacement of certificates” **(12.2, 24.5)**.
  - (3) TQD must reviewed to ensure compliance with “Legal Name Change” requirements **(12.1)**
  - (4) TQD must be reviewed to ensure compliance with following sections of revision 2:
    - **15** Training Programs
    - **15.2** Continuing training programs
    - **15.2.1** Update training
    - **15.2.2** Refresher training
    - **15.2.3** Simulator-based continuing training for operations personnel
    - **15.2.4** Nuclear emergency response training
    - **15.3** Training system for reactor facilities
    - **20.5.1** Update training
  - (5) TQD should be reviewed to ensure compliance with “Formal Learner Evaluation” requirements. **(15.4)**

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- (6) TQD must provide direction on management of prolonged unemployment. **(20.3)** and removal from duty for cause **(20.4)**
- (7) TQD needs to include direction on removal from duty for failing to work safely and competently **(20.4.3)**, for certificate expiry **(20.4.4)** or following a proposed CNSC decision not to renew a certificate or to decertify, **(20.4.5)**
- (8) Section 1.3.4 (e) must be reviewed to ensure compliance with the following requirements associated with a reinstatement process:
  - Update training. **(20.5.1)**
  - Refresher training. **(20.5.2)**
  - Simulator-based training. **(20.5.3)**
  - Work under supervision. **(20.5.4)**
  - Management interview. **(20.5.5)**
- (9) TQD should provide direction on remediation following removal from duty for cause **(20.6)**, for each of the following situations:
  - Failure to meet a minimum employment requirement. **(20.6.1)**
  - Requalification test failure. **(20.6.2)**
  - Inability to work safely and competently. **(20.6.3)**
  - Certificate expiry. **(20.6.4)**
  - Proposed decision not to certify or to decertify. **(20.6.5)**
- (10) TQD needs to be reviewed to ensure compliance with revision 2 “Training and qualifying governance” requirements. **(21.1.3)**
- (11) TQD needs to be reviewed to ensure compliance with “Minimum employment” requirements. **(24.3.4)**
- (w) N-TQD-443-00001 Radiation Protection Training and Qualification, section 4.5:
  - (1) N-TQD-443-00001 needs to be revised to comply with revision 2 and to remove references to requirements given in version 1.

The following sections need to be addressed:

- **14** Personnel Selection Program
- **14.1** Personnel selection program requirements
- **15** Training Programs
- **15.2** Continuing training programs
- **15.2.1** Update training
- **15.2.2** Refresher training
- **15.2.4** Nuclear emergency response training
- **15.3** Training system for reactor facilities
- **25.1** Qualifications for senior health physicists
- **25.1.1** Personnel selection



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- **25.1.2** Prior education
  - **25.1.3** Prior work experience
  - **25.1.4** Initial training
  - **25.1.5** Radiation protection expertise
  - **25.1.6** Management interview
  - **25.1.7** Certification examination
  - **25.2** Requalification of senior health physicists
  - **25.2.1** Continuing training
  - **25.2.2** Management interview
  - **25.2.3** Requalification testing
  - **25.3** Qualifying for recertification following decertification or certificate expiry
  - **25.3.1** Decertification basis remediation
  - **25.3.2** Tailored training
  - **25.3.3** Management interview
  - **25.3.4** Certification examination
- (2) TQD does not specify who should submit the applications for certification, be it initial or renewal, nor does it address the application for the initial examination or requalification test. **(5.1)**
- (3) TQD does not specify when to submit the applications for certification, be it initial or renewal, nor does it address timing of the application for the initial certification examination or requalification test. **(6.5, 7.4)**
- (4) Dependent upon management decisions, TQD may have sections added to ensure compliance with:
- (i) “Recertification Within 5 Years of a Certificate Expiry” **(8, 24.4)**
  - (ii) “Recertification Following Decertification or Certificate Expiry After 5 Years” **(9, 24.4).**
  - (iii) “Licensee’s request for decertification of a certified worker **(11.2, 24.5),**
  - (iv) “Request for an opportunity to be heard” **(11.3, 24.5)**
  - (v) “Replacement of certificates” **(12.2, 24.5).**
- (5) TQD must reviewed to ensure compliance with “Legal Name Change” requirements **(12.1)**
- (6) TQD needs to include education requirements stated in version 2, section 25.1.2, or more stringent education requirements. **(14.1, 25.1.2)**

Education requirements as determined by management.

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- (7) TQD should require candidates provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider. **(14.1, 25.1.2)**
- (8) Version 2 allows for equivalencies to minimum education, literacy, or numeracy levels and requires the use of tests and methods to assess if candidates meet the applicable minimum standards. TQDs do not include instruction for this situation, but including it can be considered optional. **(14.1 c & d, 14.2).**

Management to decide if such processes are to be implemented.

- (9) TQD must include experience requirements stated in Version 2, section 25.1.3, or more stringent education requirements as determined by management. Since 25.1.3 can be deemed essential, plans and procedures need to be put in place to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program **(14.1 e, 25.1.3).**
- (10) TQD (or another document) needs to identify the attributes and aptitudes deemed essential for the RHP position. The TQD must include integrity, leadership, and resilience, and must ensure that candidates selected possess the required attributes and aptitudes. **(14.1 f, 14.2.2)**
- (11) TQD (or another document) must identify that RHP candidates possess leadership skills and have consistently demonstrated a high level of integrity. **(14.2.2)**
- (12) Version 2 requires documentation of a “Personnel Transfer” process, if such a process is to be used. **(14.5)**

Management to decide if a transfer process is to be used and therefore documented.

- (13) TQD should be reviewed to ensure it is in compliance with “Formal Learner Evaluation” requirements. **(15.4)**
- (14) TQD needs to be reviewed to ensure compliance with revision 2 “Work Under Supervision” requirements. **(17)**
- (15) TQD needs to be reviewed to ensure compliance with revision 2 “Management Interviews” requirements. **(18)**
- (16) TQD needs to include instructions for candidates who need to be reintegrated into training following an absence. **(19.1)**
- (17) TQD (or another document) must identify RHP minimum employment requirement **(20.2.3)** and provide direction on management of prolonged unemployment **(20.3)** and removal from duty for cause **(20.4)**

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- (18) TQD needs to include direction on removal from duty for failing to work safely and competently **(20.4.3)**, for certificate expiry **(20.4.4)** or following a proposed CNSC decision not to renew a certificate or to decertify **(20.4.5)**
- (19) TQD needs to be reviewed to ensure compliance with revision 2 “Training and qualifying governance” requirements. **(21.1.3)**
- (20) Section 3.0, Records And References, needs to direct that:
- (i) Candidates provide a copy of any diploma, degree or certificate required by the personnel selection program and that such documents are filed in the candidate’s training record (ITR). **(21.2 a)**
  - (ii) Comprehensive records are maintained of a candidate’s:
    - Prior work experience. **(21.2.b)**
    - Selection interview or test. **(21.2.c)**
    - Transfer. **(21.2.d)**
    - Initial training and continuing training **(21.2.f)**
    - Formal learner evaluations **(21.2.g)**
    - Work under supervision **(21.2.h)**
    - Management interviews **(21.2.i)**
    - Certification examinations **(21.2.j)**
    - Requalification tests **(21.2.k)**
    - Employment **(21.2.l)**
    - Fitness for duty **(21.2.m)**
    - Removals and reinstatements **(21.2.n)**
- (x) Need to ensure the following documents comply with the trainer and examiner qualification requirements specified in version 2 **(21.1.4)**:
- N-TQD-602-00001, Nuclear Trainer Training and Qualification Description; and
  - N-QG-602-00001, Operator Training Instructor Qualification Guide.
- (y) Need to determine if governance exists that addresses the “Examination and Testing Facilities” requirements **(22, 23)**, including:
- **23.1** Simulation capabilities
  - **23.2** Physical layout
  - **23.3** Simulator operating room
  - **23.4** Communication systems and equipment
  - **23.5** Data-recording systems and equipment
    - **23.5.1** Recording of operator actions
    - **23.5.2** Recording of system parameters
    - **23.5.3** Audiovisual recording system
    - **23.5.4** Control of audiovisual data

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*Documents to be identified.* Possibly N-PROC-TR-0023, Simulator Quality Assurance.

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6.0 TABLE 1 – DETAILED GOVERNANCE REVIEW

REGDOC 2.2.3 VOL III 2023 Version 2	REGDOC 2.2.3 VOL III 2019 Version 1
TITLE  Human Performance Management Personnel Certification, Volume III: Certification of Reactor Facility Workers	TITLE  Human Performance Management Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants
Pickering and Darlington PROLs and LCHs need to be amended to reflect new document title.	
<b>1. Introduction</b>  The Canadian Nuclear Safety Commission (CNSC) requires that the reactor facility workers employed in certain positions of immediate relevance to nuclear safety must be certified by the CNSC as qualified to carry out the duties of their employment. For the purpose of this regulatory document, said positions are referred to as designated positions.  <b>1.1 Purpose</b>  The purpose of this regulatory document is to specify the detailed requirements and provide guidance pertinent to the certification of the reactor facility workers employed or seeking employment in designated positions.	<b>1. Purpose</b>  This regulatory document defines requirements aiming to ensure that persons seeking a certification or renewal of a certification by the Canadian Nuclear Safety Commission (CNSC) for a position referred to in the licence of a nuclear power plant (NPP or plant) are qualified to carry out the duties of that position in accordance with the Nuclear Safety and Control Act (NSCA) and the regulations made under the NSCA.
No impact / no governance revision required.	
<b>1.2 Scope</b>  When referenced in a licence, this regulatory document applies to:  a. all workers seeking certification by the CNSC, or seeking to maintain or renew such certification, for employment in one of the designated positions identified in the licence  b. the licensee operating the reactor facility identified in the licence  c. the personnel identified in this regulatory document and involved in the training and evaluation, or the certification examination and requalification testing, of workers employed or seeking employment in designated positions at the reactor facility identified in the licence  This regulatory document comprises 3 parts, as follows:  a. Part I describes the regulatory and procedural devices that make up the CNSC personnel certification scheme relevant to reactor facility workers.  b. Part II describes the organizational and physical infrastructures that the licensee must implement to support the personnel certification scheme described in Part I and achieve the worker qualifications specified in Part III.  c. Part III specifies the prerequisites that reactor facility workers must meet to be eligible for the personnel certification processes described in Part I.	<b>2. Scope</b>  This document, when incorporated in an NPP licence, sets out the obligations of the licensee with respect to the certification of its workers, including:  1. the programs and processes that the licensee must implement to train and examine persons seeking a certification or a renewal of certification;  2. the respective qualifications required of persons seeking a certification for those positions referred to in the licence; and  3. the respective training and requalification tests that certified persons seeking a renewal of certification must have completed.
No impact / no governance revision required.	
<b>1.3 Relevant legislation</b>	<b>3.0 Relevant Legislation</b>  The provisions of the NSCA and its regulations relevant to this document are as follows:

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<p>The following provisions of the Nuclear Safety and Control Act (NSCA) and the regulations made under it are relevant to this document:</p> <p>a. NSCA, paragraphs 21(1)(i), 37(2)(b), 44(1)(k) and 44(1)(l)</p> <p>b. General Nuclear Safety and Control Regulations, paragraphs 12(1)(a) and 12(1)(b)</p> <p>c. Class I Nuclear Facilities Regulations, section 10, subsections 9(2), 9(3), 9(4), 11(1), 11(2), 12(1), 12(2), 13(1), 13(2) and 14(5), and paragraph 14(2)(e)</p>	<p>1. Paragraph 21(1)(i) of the NSCA empowers the Commission to certify and decertify persons referred to in paragraph 44(1)(k) of the NSCA as qualified to carry out their duties.</p> <p>2. Paragraph 44(1)(k) of the NSCA empowers the Commission to make regulations respecting the qualifications for, and the training and examination of, nuclear energy workers and other persons employed in a nuclear facility.</p> <p>3. Subsection 24(5) of the NSCA empowers the Commission to impose any licence condition that the Commission considers necessary for the purposes of this Act</p> <p>4. Paragraph 37(2)(b) of the NSCA states that the Commission may authorize a designated officer to certify and decertify persons referred to in paragraph 44(1)(k) of the NSCA as qualified to carry out their duties.</p> <p>5. Subsection 24(4) of the NSCA prohibits the Commission from issuing, renewing, amending, replacing or authorizing the transfer of a licence, “unless, in the opinion of the Commission, the applicant</p> <p>(a) is qualified to carry on the activity that the licence will authorize the licensee to carry on; and</p> <p>(b) will, in carrying on that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.”</p> <p>6. Subsection 9(2) of the Class I Nuclear Facilities Regulations 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</p> <p>(a) meets the applicable qualification requirements referred to in the licence;</p> <p>(b) has successfully completed the applicable training program and examination referred to in the licence; and</p> <p>(c) is capable, in the opinion of the licensee, of performing the duties of the position.”</p> <p>7. Subsection 9(3) of the Class I Nuclear Facilities Regulations states that “The Commission or a designated officer authorized under paragraph 37(2)(b) of the Act may renew a certification after receiving from a licensee an application stating that the certified person</p> <p>(a) has safely and competently performed the duties of the position for which the person was certified;</p> <p>(b) continues to receive the applicable training referred to in the licence;</p> <p>(c) has successfully completed the applicable requalification tests referred to in the licence for renewing the certification; and</p> <p>(d) is capable, in the opinion of the licensee, of performing the duties of the position.”</p> <p>8. Subsection 9(4) of the Class I Nuclear Facilities Regulations states that “A certification expires five years after the date of its issuance or renewal.”</p> <p>9. Subsection 10(1) of the Class I Nuclear Facilities Regulations states that: “If a licence requires a person to successfully complete an examination administered by the Commission in order to be certified, the person may take the examination after the Commission receives from the licensee an application that includes</p>

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	(a) the name of the person;  (b) the name of the applicable examination; and  (c) a statement that the person has successfully completed the applicable training program referred to in the licence.”  10. Paragraph 12(1)(a) of the General Nuclear Safety and Control Regulations obliges every licensee to “ensure the presence of a sufficient number of qualified workers to carry on the licensed activity safely and in accordance with the Act, the regulations made under the Act and the licence.”  11. Paragraph 12(1)(b) of the General Nuclear Safety and Control Regulations obliges every licensee to “train the workers to carry on the licensed activity in accordance with the Act, the regulations made under the Act and the licence.”
No impact / no governance revision required.	
<b>1.4 National and international standards</b> The key principles and elements used in developing this document are consistent with national and international standards. The following standards are relevant to this regulatory document: a. IAEA Nuclear Energy Series NG-T-2.8, Systematic Approach to Training for Nuclear Facility Personnel: Processes, Methodology and Practices b. IAEA Safety Standard Series NS-G-2.8, Recruitment, Qualification and Training of Personnel for Nuclear Power Plants c. IAEA TECDOC 525, Guidebook on Training to Establish and Maintain the Qualification and Competence of Nuclear Power Plant Operations Personnel d. IAEA TECDOC 1502, Authorization of Nuclear Power Plant Control Room Personnel: Methods and Practices with Emphasis on the Use of Simulators e. ISO/IEC 17000, Conformity Assessment – Vocabulary and General Principles f. ISO/IEC 17024, Conformity Assessment – General Requirements for Bodies Operating Certification of Persons.	N/A
No impact / no governance revision required.	
<b>Part I – Personnel Certification Scheme</b> Part I describes the regulatory and procedural devices that make up the CNSC personnel certification scheme relevant to reactor facility workers.  <b>2. Background Information</b> The relevant legislation authorizes the Commission and designated officers (DO) to certify workers as qualified to carry out their duties, to renew the certification of certified workers, and to decertify certified workers following due process. The reactor facility workers certified by the CNSC are issued certificates as proof of certification specifying, among other information, a date of expiry. In accordance with regulations, certifications issued by the CNSC expire 5 years after their date of issuance or renewal. Consequently, authorized applicants must submit applications on behalf of the certified workers seeking the renewal of their certification(s) before the expiry date specified on each certificate.	N/A
No impact / no governance revision required.	
<b>3. Employment Stipulations</b> <b>3.1 Permitted employment</b>	N/A

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REGDOC 2.2.3 VOL III 2023 Version 2	REGDOC 2.2.3 VOL III 2019 Version 1
The certificates issued by the CNSC to reactor facility workers permit the employment of the worker identified on the certificate: <ul style="list-style-type: none"><li>a. on a full-time, part-time, or temporary basis</li><li>b. as an employee or a contractor</li><li>c. by the specified licensee</li><li>d. at the specified reactor facility or facilities</li><li>e. in the specified designated position</li></ul>	
No impact / no governance revision required. NOTE: REGDOC now allows for the use of certified CONTRACTORS in any designated position.	
<b>3.2 Employment status</b> The licensee <b>shall</b> assign an employment status to each certified worker in accordance with the following categories: <ul style="list-style-type: none"><li>a. an “active: status is assigned to a worker who:<ul style="list-style-type: none"><li>i. holds a valid certificate</li><li>ii. attends the scheduled continuing training</li><li>iii. meets the applicable minimum employment requirements</li><li>iv. continues to be able to perform the duties of the pertinent designated position safely and competently</li></ul></li><li>b. an “inactive” status is assigned to any certified worker who holds a valid certificate, but was formally removed from duty in accordance with subsection 20.3 or subsection 20.4</li><li>c. an “uncertified” status is assigned to a worker whose certificate has expired</li><li>d. a “decertified” status is assigned to a worker decertified by the CNSC.</li></ul>	N/A
See comments for Section 3.3.	
<b>3.3 Employment record</b> The licensee <b>shall</b> maintain, in accordance with subsection 21.2, a continuous and auditable employment record for each worker certified by the CNSC, including, at a minimum: <ul style="list-style-type: none"><li>a. the employment status assigned to the worker</li><li>b. the number of complete shifts and hours of work performed in a designated position by the worker, specifying:<ul style="list-style-type: none"><li>i. the pertinent designated position</li><li>ii. the date on which each complete shift and hour of work were performed</li></ul></li></ul>	N/A
<b>Possible GAP. Need a continuous and auditable employment record for each certified worker showing the:</b> <ul style="list-style-type: none"><li>• assigned employment status (active, inactive, removed from duty, returned to duty, uncertified or decertified) and;</li><li>• number of complete shifts and hours of work performed in a designated position, specifying the position and the date of each complete shift and hour of work performed.</li></ul> <b>Current processes to be reviewed to ensure compliance with Version 2.</b>	
<b>4. Designated Positions</b> This regulatory document applies to the certification of the reactor facility workers employed or seeking employment in the following generic classes of designated positions: <ul style="list-style-type: none"><li>a. auxiliary systems operator (ASO)</li><li>b. reactor operator (RO)</li><li>c. shift supervisor</li><li>d. senior health physicist (SHP)</li></ul>	<b>4.1.1 Training and qualifying for initial certification</b> The licensee <b>shall</b> establish and document policies and procedures for training and qualifying persons seeking certification for the positions listed below that are applicable to its nuclear power plants (NPPs): <ol style="list-style-type: none"><li>1. senior health physicist;</li><li>2. reactor operator;</li><li>3. unit 0 operator;</li><li>4. control room shift supervisor; and</li></ol>



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	5. plant shift supervisor.
See comments for Section 4.1.	
<b>4.1 Station-specific designated positions</b> The station-specific positions corresponding to the generic classes of designated positions are designated in the applicable licences.  Appendix A specifies which station-specific position(s) correspond to each generic class of designated position and which CNSC certification is required in each case.	N/A
<b>Pickering and Darlington PROLs and LCHs to be amended to remove Shift Manager from the list of certified positions, or to identify that the SM and CRSS shall both hold a CRSS (SS) certification. Actual wording to be discussed with CNSC.</b>	
<b>Darlington PROL Section 2.3</b> The licensee shall implement and maintain training programs for workers. The certification process and supporting examinations and tests shall be conducted in accordance with CNSC regulatory document REGDOC-2.2.3, PERSONNEL CERTIFICATION, VOLUME III: CERTIFICATION OF <del>PERSONS WORKING AT NUCLEAR POWER PLANTS</del> <b>REACTOR FACILITY WORKERS</b> . Persons appointed to the following positions require certification: (i) Responsible Health Physicist; (ii) Shift Manager; (iii) Control Room Shift Supervisor; (iv) Authorized Nuclear Operator; and (v) Unit 0 Control Room Operator.	
<b>Pickering PROL Section 2.4</b> The licensee shall implement and maintain certification programs in accordance with CNSC regulatory document REGDOC-2.2.3, Personnel Certification, Volume III: Certification of <del>Persons Working at Nuclear Power Plants</del> <b>Reactor Facility Workers</b> . Persons appointed to the following positions require certification: (i) Responsible Health Physicist; (ii) Shift Manager; (iii) Control Room Shift Supervisor; and (iv) Authorized Nuclear Operator.	
<b>4.2 Designated position staffing</b> The site-specific positions designated in reactor facility licences shall be staffed with workers certified by the CNSC as qualified to perform the duties of said designated positions.	N/A
<b>Documents to be reviewed and revised if impacted by the change in Shift Manager certification requirements:</b> <ul style="list-style-type: none"><li>D-INS-09260-10001, Duty Crew Minimum Complement Assurance;</li><li>D-PROC-OP-0009, Station Shift Complement;</li><li>N-INS-03490-10003, Minimum Shift Complement Resources, Qualifications and Procedures Required for Responding to Resource Limiting Events;</li><li>N-MAN-08131-10000_CNSC-006; SHIFT MANAGER, DARLINGTON NUCLEAR;</li><li>N-MAN-08131-10000_CNSC-007; SHIFT MANAGER, PICKERING NUCLEAR;</li><li>N-MAN-08131-10000_CNSC-008; CONTROL ROOM SHIFT SUPERVISOR, DARLINGTON NUCLEAR;</li><li>N-MAN-08131-10000_CNSC-010; Authorized Nuclear Operator;</li><li>N-MAN-08131-10000_CNSC-025; Unit 0 Control Room Operator;</li><li>N-MAN-08131-10000_CNSC-028; CONTROL ROOM SHIFT SUPERVISOR, PICKERING NUCLEAR;</li><li>P-INS-09100-00003, Pickering Minimum Shift Complement; and</li><li>P-INS-09260-00008, Duty Crew Minimum Complement Assurance;</li></ul> <b>Perhaps also:</b>	

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<ul style="list-style-type: none"><li>N-MAN-08131-10000_CN-SC-003; DIRECTOR, OPERATIONS AND MAINTENANCE.</li></ul>	
<b>4.3 Roles and responsibilities of certified workers</b> When in possession of a valid certificate, workers are deemed qualified to perform the duties of the pertinent site-specific positions listed in Appendix A in accordance with the licensee's management system.	N/A
No impact / no governance revision required.	
<b>5. General Provisions Pertinent to All Applications</b> <b>5.1 Authorized applicant</b> Applications made under the provisions of this regulatory document <b>shall</b> be signed by a signatory officially authorized by the pertinent licensee to represent said licensee.	<b>3. Relevant Legislation</b> The provisions of the NSCA and its regulations relevant to this document are as follows: <b>6.</b> Subsection 9(2) of the Class I Nuclear Facilities Regulations 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 <b>after receiving from the licensee an application stating</b> that the person... <b>7.</b> Subsection 9(3) of the Class I Nuclear Facilities Regulations states that “The Commission or a designated officer authorized under paragraph 37(2)(b) of the Act may renew a certification after <b>receiving from a licensee an application</b> stating that the certified person... <b>9.</b> Subsection 10(1) of the Class I Nuclear Facilities Regulations states that: “If a licence requires a person to successfully complete an examination administered by the Commission in order to be certified, the person may take the examination after the Commission <b>receives from the licensee an application</b> that includes...”
Section 1.5, <i>Outgoing Correspondence</i> , of N-PROC-RA-0047, Communications With The Canadian Nuclear Safety Commission, requires that: 1.5.2 All correspondence from OPG to the CNSC shall be signed by an Authorized Representative, or on behalf of the Authorized Representative, by a person who has received a specific delegation from an Authorized Representative. A list of persons authorized to represent OPG in its dealings with the CNSC is documented in formal submissions to the CNSC (by the (by the Vice President, Nuclear Regulatory Affairs and Stakeholder Relations)).  A recent example of such a submission is shown in OPG letter “OPG - Persons Authorized to Act on Behalf of OPG in Dealings with the CNSC”, N-CORR-00531-23404. Such letters designate the Pickering and Darlington Senior Vice Presidents (SVP) for all communications specific to Pickering and Darlington NGSs.	
Governance for operating positions requires initial certification applications be submitted by the Station Vice President (SVP).  Addressed in: <ul style="list-style-type: none"><li>N-TQD-101-00001, Authorized Nuclear Operator Initial Training and Qualification Description, section 1.1.10;</li><li>N-TQD-102-00001, Nuclear Shift Manager/Control Room Shift Supervisor Initial Training and Qualification Description, section 1.1.9, and;</li><li>N-TQD-105-00001, Darlington Unit 0 Control Room Operator (CRO) Initial Training and Qualification Description, section 1.1.10:</li></ul> <b>1.1.* Application to Canadian Nuclear Safety Commission for Certification</b> (a) Upon successful completion of Line Management interview, <b>SVP</b> shall submit letter of application for certification to CNSC requesting that candidate be certified to perform ANO/CRSS/U0 CRO duties in accordance with Power Reactor Operating License (PROL).	
Governance for operating positions requires certification renewal applications also be submitted by the Station Vice President (SVP).  Addressed in N-TQD-103-00001, Nuclear Certified Personnel Continuing Training And Qualification Description : <ul style="list-style-type: none"><li><b>1.5 Application to Canadian Nuclear Safety Commission (CNSC) for Certification Renewal</b></li><li>1.5.1 ANO Certification Renewal,</li><li>1.5.2 U0CRO Certification Renewal,</li></ul>	

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<ul style="list-style-type: none"><li>1.5.3 CRSS Certification Renewal and</li><li>1.5.4 Shift Manager Certification Renewal:<ul style="list-style-type: none"><li>(a) Site Vice President (<b>SVP</b>) shall submit letter of application for certification renewal to CNSC requesting that certified personnel be recertified to perform ANO/U0CRO/CRSS/SM duties as prescribed in PROL.</li></ul></li></ul> <p>Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i>. <b>GAP: N-TQD-443-00001 does not specify who should submit the applications for certification, be it initial or renewal, nor does it address the application for the initial certification examination or requalification test.</b></p>	
<b>5.2 Complete application</b> Authorized applicants <b>shall</b> ensure that the applications submitted to the CNSC are complete. Incomplete applications may be rejected by the CNSC without further analysis.	N/A
<p><b>Possible GAP: There is no specific governance or template for certification application letters.</b></p> <p><b>Section 1.5.3 of N-PROC-RA-0047 does state that “Author shall ensure that all comments received from technical and stakeholder reviews have been adequately dispositioned before providing draft correspondence package to the DLA for final review before submission to the CNSC. <u>Line manager is accountable for the technical accuracy and acceptability of the submission.</u>”</b></p> <p><b>N-GUID-00531-10001, Preparation of Correspondence to the Canadian Nuclear Safety Commission provides some additional general guidance.</b></p>	
<b>5.3 Basic information</b> Applications made under the provisions of this regulatory document <b>shall</b> contain the following information: <ul style="list-style-type: none"><li>a. the purpose of the application</li><li>b. the legal name of the worker, including a first name, a surname, and a middle name or initial when possible</li><li>c. the designated position in which the worker is or <b>will</b> be employed</li><li>d. the reactor facility where the worker is or <b>will</b> be employed, including, where applicable, a specific reactor or group of reactors</li><li>e. the corporate name of the licensee operating said reactor facility</li><li>f. the effective date of the application</li><li>g. the legal name, position, contact information, and signature of the authorized applicant</li><li>h. a valid return mailing or email address</li></ul>	N/A
<b>Possible GAP: See comments for section 5.2.</b>	
<b>5.4 Transmission</b> An authorized applicant <b>may</b> submit any application made under the provisions of this regulatory document either in printed or electronic form.  Canadian Nuclear Safety Commission 280 Slater Street P.O. Box 1046, Station B Ottawa, ON K1P 5S9	N/A

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Electronic submissions <b>must</b> be emailed to <a href="mailto:forms-formulaires@cnscccsn.gc.ca">forms-formulaires@cnscccsn.gc.ca</a> and include a complimentary copy (cc) to <a href="mailto:pcc-dap@cnscccsn.gc.ca">pcc-dap@cnscccsn.gc.ca</a> .	
Possible GAP: See comments for section 5.2.	
<b>6. Application for Certification</b> In addition to the general provisions specified in section 5, an application for certification meet the requirements specified in this section.	<b>23.3 Certification examinations</b> A person seeking certification as reactor operator at a given NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 23.3.1 to 23.3.3.
	<b>24.3 Certification examinations</b> A person seeking certification as unit 0 operator at a given multi-unit NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 24.3.1 to 24.3.3.
	<b>25.3 Certification examinations</b> A person seeking certification as control room shift supervisor at a given multi-unit NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 25.3.1 to 25.3.4.
	<b>27.3 Certification examinations</b> A person seeking certification as plant shift supervisor at a given single-unit NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 27.3.1 to 27.3.4.
Possible GAP: See comments for section 5.2.	
<b>6.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: a. meets the applicable qualification requirements referred to in the licence b. has successfully completed the applicable training program and examination referred to in the licence c. is capable, in the opinion of the licensee, of performing the duties of the position	N/A
Possible GAP: See comments for section 5.2.	
<b>6.2 Personnel selection</b> The application <b>shall</b> describe how the applicable prerequisites of the personnel selection program described in section 14 were met, including, at a minimum: a. the worker’s education or literacy level upon selection for initial training b. any education or literacy level equivalency recognized by the licensee c. any prior work experience required by the CNSC or the licensee d. any personnel selection interview undergone by the worker e. any personnel selection test administered to the worker, including any medical screening f. any exemption explicitly sanctioned in this regulatory document that was employed by the licensee	N/A
Possible GAP: See comments for section 5.2.	
<b>6.3 Worker qualification summary</b> The application <b>shall</b> provide a chronological summary of the qualifications achieved by the worker, covering the initial training components, the certification examinations, and all other personnel certification requirements met by the worker.	N/A

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The worker qualification summary <b>shall</b> offer sufficient evidence that the worker meets all of the applicable qualifications specified in Part III. At a minimum, this summary <b>shall</b> include, as applicable depending on the designated position: a. the date of each summative learner evaluation marking the completion of each initial training component b. the date of each knowledge-based certification examination c. the date of the performance-based certification examination d. any remedial action required by CNSC staff as a result of a certification examination administered by CNSC staff e. the date of completion of any period of work under supervision (WUS) and the total number of hours of supervised work performed by the worker f. the date of the management interview	
Possible GAP: See comments for section 5.2.	
<b>6.4 Supporting documentation</b> The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records <b>shall</b> be maintained in accordance with subsection 21.2 and made available for verification by the CNSC upon request.	N/A
Refer to comments for section 21.2	
<b>6.5 Application schedule</b> The licensee <b>may</b> apply for the certification of a qualified worker at any time.	N/A
Governance for initial certification of operating positions is addressed in: <ul style="list-style-type: none"><li>N-TQD-101-00001, Authorized Nuclear Operator Initial Training and Qualification Description, section 1.1.10;</li><li>N-TQD-102-00001, Nuclear Shift Manager/Control Room Shift Supervisor Initial Training and Qualification Description, section 1.1.9, and;</li><li>N-TQD-105-00001, Darlington Unit 0 Control Room Operator (CRO) Initial Training and Qualification Description, section 1.1.10:</li></ul> <b>1.1.* Application to Canadian Nuclear Safety Commission for Certification</b> Upon successful completion of Line Management interview, <b>SVP</b> shall submit letter of application for certification to CNSC requesting that candidate be certified to perform ANO/CRSS/U0 CRO duties in accordance with Power Reactor Operating License (PROL).	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> .  Possible GAP: N-TQD-443-00001 does not specify when to submit the applications for certification, be it initial or renewal, nor does it address the application for the initial certification examination or requalification test.	
<b>6.6 Effective date of certification</b> Unless the licensee requests a deferment, the effective date of the certification <b>will</b> be that of the certification decision made by the Commission or a DO.	N/A
No impact / no governance revision required.	
<b>6.7 Certification deferment</b> The licensee <b>may</b> request that the effective date of certification be delayed up to 60 calendar days from the effective date of application for certification.	N/A



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No impact / no governance revision required.	
<b>7. Application for Certification Renewal</b> In addition to the general provisions specified in section 5, an application for the renewal of a certification <b>shall</b> meet the requirements specified in this section.	N/A
No real impact / no governance revision required.	
<b>7.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: <ul style="list-style-type: none"><li>a. has safely and competently performed the duties of the position for which the worker was certified</li><li>b. continues to receive the applicable training referred to in the licence</li><li>c. has successfully completed the applicable requalification tests referred to in the licence for renewing the certification</li><li>d. is capable, in the opinion of the licensee, of performing the duties of the position</li></ul>	<b>10. Requalification Tests</b> The licensee <b>shall</b> prepare, conduct and grade the requalification tests required in section 33 <b>in accordance with the conditions referred to in the NPP licence.</b>
Possible GAP: See comments for section 5.2.	
<b>7.2 Worker requalification summary</b> The application <b>shall</b> provide a chronological summary of the requalification requirements met by the worker during the current certification period, covering the continuing training components, the requalification tests, and all other personnel certification requirements met by the worker.  The worker requalification summary <b>shall</b> offer sufficient evidence that the worker meets all of the applicable requalification requirements specified in Part III. At a minimum, this summary <b>shall</b> include, as applicable depending on the designated position: <ul style="list-style-type: none"><li>a. a confirmation that the worker attended continuing training and successfully underwent formal learner evaluations compliant with the requirements specified in section 15, including suitable update, refresher, simulator-based and nuclear emergency response training</li><li>b. the dates of all knowledge-based requalification tests successfully completed</li><li>c. the dates of all performance-based requalification tests successfully completed</li><li>d. the number of complete shifts and the number of hours of shiftwork performed in the designated position over the current certification period</li><li>e. any remedial action required by CNSC staff as a result of a requalification test administered by CNSC staff</li></ul>	N/A
Possible GAP: See comments for section 5.2.	
<b>7.3 Supporting documentation</b> The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records <b>shall</b> be maintained in accordance with subsection 21.2, and made available for verification by the CNSC upon request.	N/A
Refer to comments for section 21.2	

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<b>7.4 Application schedule</b> The licensee <b>shall</b> apply for the renewal of the certification of a requalified worker no later than the date of expiry specified on the certificate.	N/A
Governance for renewal of certification of operating positions is addressed in N-TQD-103-00001, Nuclear Certified Personnel Continuing Training And Qualification Description: <b>1.5 Application to Canadian Nuclear Safety Commission (CNSC) for Certification Renewal</b> Application for certification renewal should be submitted to the CNSC at least 60 days before expiry of current certification, but should not be submitted sooner than 6 months before expiry of current certification.	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> .  <b>Possible GAP: N-TQD-443-00001 does not specify when to submit the applications for certification, be it initial or renewal, nor does it address the application for the initial certification examination or requalification test.</b>	
<b>7.5 Effective date of renewal</b> When the application is signed and dated by an authorized applicant no earlier than 90 calendar days before the certification expiry, the effective date of the certification renewal <b>will</b> be made to coincide with the date of expiry of the existing certification.	N/A
<b>Revision to N-TQD-103-00001:</b> <b>1.5 Application to Canadian Nuclear Safety Commission (CNSC) for Certification Renewal</b> Application for <i>certification</i> renewal should be submitted to the CNSC at least 60 days before expiry of current <i>certification</i> , but should not <b>normally</b> be submitted sooner than <b>90 days 6-months</b> before expiry of current <i>certification</i> .	
<b>7.6 Early certification renewal</b> When the application is signed and dated by an authorized applicant earlier than 90 calendar days before the certification expiry, the effective date of the certification renewal <b>will</b> be that of the certification decision made by the Commission or a DO.	N/A
<b>See comment for 7.5.</b>	
<b>8. Application for Recertification Within 5 Years of a Certificate Expiry</b> In addition to the general provisions specified in section 5, an application for recertification submitted no later than 5 years following the expiry of a certificate <b>shall</b> meet the requirements specified in this section.	N/A
<b>Possible GAP</b> <b>Governance does not include instruction for this situation, but including it can be considered optional, as it may never be used. Management to decide path forward.</b>	
<b>8.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: <ul style="list-style-type: none"><li>a. meets the applicable qualification requirements referred to in the licence</li><li>b. has successfully completed the applicable training program and examination referred to in the licence</li></ul>	N/A

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c. is capable, in the opinion of the licensee, of performing the duties of the position	
Possible GAP: See comments for section 5.2.	
<b>8.2 Worker requalification summary</b> The application <b>shall</b> provide a chronological summary of a suitable reinstatement process, specifying the effective date of completion of each step, including, at a minimum: <ul style="list-style-type: none"><li>a. the tailored training, including any knowledge and performance-based refresher and update training, completed by the worker</li><li>b. the knowledge-based requalification test successfully completed by the worker</li><li>c. the performance-based requalification test or series of tests successfully completed by the worker</li><li>d. the number of hours of WUS completed by the worker</li><li>e. the management interview</li></ul> The applicable worker requalification requirements are specified in Part III.	N/A
Possible GAP: See comments for section 8.	
<b>8.3 Supporting documentation</b> The following supporting documentation <b>shall</b> be appended to the application: <ul style="list-style-type: none"><li>a. the individual training needs analysis (ITNA) or a summary of the ITNA</li><li>b. the individual training plan (ITP) or a summary of the ITP</li><li>c. the knowledge-based requalification test successfully completed by the worker, including the worker’s answers and the grade obtained, in percentage</li><li>d. the performance-based requalification test or series of tests successfully completed by the worker, including the graded candidate actions</li><li>e. a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker</li><li>f. a recording, a transcript, or the minutes of the mandated management interview</li></ul>	N/A
Possible GAP: See comments for section 8.	
<b>8.4 Application schedule</b> The licensee <b>may</b> apply for the recertification of a worker in accordance with section 8 no later than 5 years after the date of expiry specified on the certificate.	N/A
Possible GAP: See comments for section 8.	
<b>8.5 Effective date of certification</b> The effective date of the certification <b>will</b> be that of the certification decision made by the Commission or a DO.	N/A
No real impact / no governance revision required.	
<b>9 Application for Recertification Following Decertification or Certificate Expiry After 5 Years</b> In addition to the general provisions specified in section 5, an application for the recertification of a worker following decertification by the CNSC, or following a certificate expiry that occurred more than 5 years prior to the effective date of the application for recertification, <b>shall</b> meet the requirements specified in this section.	<b>Subpart H – Certification Following Decertification</b> <b>34. Requirements Within Three Years</b> Within the three-year period following a decertification as reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor, a person <b>may</b> be certified again in the same position at the same NPP if:



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	1. the basis for the decertification of the person is no longer applicable; and 2. the person meets the requirements specified in subsections 34.1 to 34.8.
<b>Possible GAP</b> Governance does not include instruction for this situation, but including it can be considered optional, as it may never be used. Management to decide path forward.	
<b>9.1 Worker competency declaration</b> The application <b>shall</b> state that the worker: <ul style="list-style-type: none"><li>a. meets the applicable qualification requirements referred to in the licence</li><li>b. has successfully completed the applicable training program and examination referred to in the licence</li><li>c. is capable, in the opinion of the licensee, of performing the duties of the position</li></ul>	N/A
<b>Possible GAP: See comments for section 9.</b>	
<b>9.2 Recertification substantiation</b> The application <b>shall</b> present a substantiated argument in support of the recertification of the worker, explaining why the CNSC <b>should</b> recertify a worker previously decertified by the CNSC, or whose certificate expired more than 5 years ago, including: <ul style="list-style-type: none"><li>a. a description of the remedial actions taken by the licensee, including any remedial training, to ensure that any deficiency identified as part of the basis for the prior decertification has been adequately remedied or mitigated, as applicable</li></ul>	N/A
<b>Possible GAP: See comments for section 9.</b>	
<ul style="list-style-type: none"><li>b. a summary of a suitable reinstatement process and the effective date of completion of each step, including:<ul style="list-style-type: none"><li>i) the tailored training, including any knowledge and performance-based refresher and update training, completed by the worker</li><li>ii) the knowledge-based certification examination successfully completed by the worker</li><li>iii) the performance-based certification examination successfully completed by the worker</li><li>iv) the number of hours of WUS completed by the worker</li><li>v) the management interview</li><li>vi) the management interview</li></ul></li></ul>	<b>34.1 Update training</b> The person must have completed update training, appropriate to the knowledge and skill requirements of the position, covering changes or events that have occurred during the absence of the person from the position, including: <ul style="list-style-type: none"><li>1. changes to NPP systems;</li><li>2. changes to licensee’s and NPP policies, standards and procedures;</li><li>3. changes to regulatory requirements;</li><li>4. changes to the NPP licence or to documents referenced in the licence; and</li><li>5. NPP and industry experience and operating events.</li></ul> This training <b>shall</b> include formal knowledge and performance evaluations that confirm and document that, at the completion of the training, the person has the required knowledge and skills to perform the duties of the position. <b>34.2 Refresher training</b> The person must have completed refresher training covering the topics from the initial training that must be reviewed and practiced to ensure that the person has the knowledge and the skills required to work competently in the position. The selection of the topics <b>shall</b> be based on a documented assessment, performed by the licensee, of the impact of the absence from the position on the person’s competence.

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	This training <b>shall</b> include formal written and performance evaluations that confirm and document that, at the completion of the training, the person has the required knowledge and skills to perform the duties of the position.
	<b>34.3 Simulator-based training</b> The person must have completed simulator-based exercises that cover a sufficient number of varied situations that challenge the diagnostic and decision-making abilities of the person to ensure that the person has the knowledge and the skills required to work competently in the position. The selection of exercises <b>shall</b> be based on a documented assessment, performed by the licensee, of the impact of the absence from the position on the person’s competence.  This training <b>shall</b> include formal simulator-based evaluations that confirm and document that, at the completion of the training, the person has the required diagnostic and decision-making abilities to perform the duties of the position.
	<b>34.6 Written requalification test</b> The person must have successfully completed, within the two-year period prior to obtaining the new certification, one written requalification test that meets the conditions referred to in the NPP licence.
	<b>34.5 Simulator-based requalification tests</b> The person must have successfully completed simulator-based requalification tests equivalent in types and number to those referred to in the NPP licence that the person would have had to take during the period of decertification, if the person had remained certified.
	<b>34.7 Performing duties under supervision</b> The person must have performed the duties of the position under the supervision of a certified incumbent of the position for the number of shifts that the licensee considers necessary to confirm and document that the person can perform those duties competently and safely.
	<b>34.8 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the position. The person must complete this interview after having met the requirements specified in subsections 34.1 to 34.7.
<b>Possible GAP: See comments for section 9.</b>	
c. a description of any relevant mitigating circumstances  The applicable worker requalification requirements are specified in Part III.	N/A
<b>Possible GAP: See comments for section 9.</b>	
<b>9.3 Supporting documentation</b>  The following supporting documentation <b>shall</b> be appended to the application:  a. the individual training needs analysis (ITNA) or a summary of the ITNA b. the individual training plan (ITP) or a summary of the ITP c. the knowledge-based certification examination successfully completed by the worker, including the worker’s answers and the grade obtained, in percentage	N/A

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<div>d. the performance-based certification examination successfully completed by the worker, including the graded candidate actions</div> <div>e. a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker</div> <div>f. a recording, a transcript, or the minutes of the mandated management interview</div> <div>g. any other documentation deemed essential in support of the application</div>	
Possible GAP: See comments for section 9.	
<div>9.4 Application schedule</div> <div>The licensee <b>may</b> apply for the recertification of a worker following decertification at any time after being informed of the Commission’s or DO’s decision to decertify the worker.</div> <div>The licensee <b>may</b> apply for the recertification of a worker following certificate expiry in accordance with section 9 no earlier than 5 years after the effective date of expiry specified on the certificate of the worker.</div>	N/A
Possible GAP: See comments for section 9.	
<div>9.5 Effective date of certification</div> <div>The effective date of the certification <b>will</b> be that of the certification decision made by the Commission or a DO.</div>	N/A
No real impact / no governance revision required.	
<div>10. Application for Senior Health Physicist Examination or Requalification Testing</div> <div>An authorized applicant <b>may</b> submit an application for the administration of a certification examination or requalification test to a worker seeking certification or the renewal of a certification for employment as senior health physicist (SHP) once the worker has met the pertinent prerequisites specified in Part III.</div> <div>The application <b>shall</b> be submitted in writing in accordance with the general provisions of the personnel certification application processes specified in section 5, and <b>shall</b> state that the worker:</div> <div>a. has successfully completed the applicable training referenced in the licence, specifying the effective date of completion of the initial or continuing training referenced in section 25</div> <div>b. has successfully undergone the applicable management interview referenced in section 25, specifying the date of the interview</div>	<div>9. Subsection 10(1) of the Class I Nuclear Facilities Regulations states that: “If a licence requires a person to successfully complete an examination administered by the Commission in order to be certified, the person <b>may</b> take the examination after the Commission receives from the licensee an application that includes (a) the name of the person; (b) the name of the applicable examination; and (c) a statement that the person has successfully completed the applicable training program referred to in the licence.”</div>
	<div>19.3 CNSC examination</div> <div>The person must have successfully completed an oral examination administered by CNSC staff that samples the topics specified in subsection 19.1, and current radiation protection principles, methods and practices related to the operation of the NPP where certification is sought.</div>
GAP: There is no specific governance or template for examination or requalification test application letters. See comments for Section 5.	
<div>11. Refusal to Certify and Decertification</div> <div>11.1 Background information</div> <div>In accordance with the relevant legislation, the Commission or a DO <b>may</b> refuse to issue or renew a certification upon receiving an application for certification or the renewal of a certification, and <b>may</b> initiate the decertification of a certified worker on its own motion or upon request. Prior to making a final decision, the Commission or a DO <b>will</b> give prior notice of the proposed decision to the licensee and the worker concerned, offering each party an opportunity to be heard, either in support of or against the proposed decision.</div>	N/A
No real impact / no governance revision required.	

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<b>11.2 Licensee requests for decertification</b> The licensee <b>may</b> request the decertification of a certified worker employed at the reactor facility identified in the licence. All such requests <b>shall</b> be submitted in writing in accordance with subsection 5.4 and contain the following information: <ul style="list-style-type: none"><li>a. the purpose of the request</li><li>b. the legal name of the worker, as shown on the most recent certificate issued to the worker</li><li>c. the designated position for which the worker is to be decertified</li><li>d. the reactor facility where the worker is employed, including, where applicable, a specific reactor or group of reactors</li><li>e. the corporate name of the licensee operating said reactor facility</li><li>f. a description of the basis for the request</li><li>g. supporting documentation, as <b>may</b> exist, establishing a sufficient basis for decertification</li><li>h. the effective date of the request</li><li>i. the legal name, position, contact information and signature of an authorized licensee representative</li><li>j. a valid return mailing or email address</li></ul>	N/A
<b>Possible GAP</b> <b>Governance does not include instruction for this situation, but including it can be considered optional. Management to decide path forward.</b>	
<b>11.3 Requesting an opportunity to be heard</b> A licensee or a worker who has received notice of a proposed decision <b>may</b> request an opportunity to be heard within 30 calendar days of the receipt of the notice. All such requests <b>shall</b> be submitted in writing in accordance with subsection 5.4.	N/A
<b>Possible GAP</b> <b>Governance does not include instruction for this situation, but including it can be considered optional. Management to decide path forward.</b>	
<b>11.4 Commission or designated officer decision</b> On completion of an opportunity to be heard, the licensee and the worker concerned <b>will</b> be notified in writing of the Commission or DO decision and the rationale for the decision.	N/A
<b>No real impact / no governance revision required.</b>	
<b>12. Administrative Processes</b> <b>12.1 Legal name change</b> The licensee <b>shall</b> promptly: <ul style="list-style-type: none"><li>a. inform the CNSC of any change in the legal name of any worker employed or training for employment in a designated position</li><li>b. request that the CNSC issue a replacement certificate for any certified worker who has officially changed their legal name.</li></ul>	N/A
<b>GAP</b> <b>Governance does not include instruction for this situation:</b> <ul style="list-style-type: none"><li>• N-TQD-103-00001</li><li>• N-TQD-443-00001</li></ul>	

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<b>12.2 Replacement certificates</b> The licensee <b>may</b> request that the CNSC reissue a certificate on behalf of a certified worker if: <ul style="list-style-type: none"><li>a. the certificate has been lost</li><li>b. some of the information shown on the certificate is no longer legible</li><li>c. the legal name of the worker was officially changed, as mandated in subsection 12.1.</li></ul> All requests for a replacement certificate <b>shall</b> be submitted in writing in accordance with subsection 5.4 and contain the following information: <ul style="list-style-type: none"><li>a. the purpose and the rationale for the request</li><li>b. the legal name of the worker, as shown on the most recent certificate issued to the worker</li><li>c. the new legal name that is to appear on the replacement certificate, as applicable</li><li>d. the title of the designated position shown on the certificate</li><li>e. the corporate name of the licensee employing the worker</li><li>f. the legal name, position, contact information and signature of an authorized licensee representative</li><li>g. the effective date of the request</li></ul>	N/A
<b>Possible GAP</b> Governance does not include instruction for this situation, but including it can be considered optional. Management to decide path forward.	
<b>Part II – Licensee Organizational and Physical Infrastructures</b> <b>Subpart A – Organizational Infrastructure</b>	N/A
<b>13. Policies and Procedures</b> <b>13.1 Training and qualifying workers for initial certification</b> The licensee <b>shall</b> establish and document effective policies and procedures to train and qualify the workers seeking certification for employment in designated positions.	<b>4.1.1 Training and qualifying for initial certification</b> The licensee <b>shall</b> establish and document policies and procedures for training and qualifying persons seeking certification for the positions listed below that are applicable to its nuclear power plants (NPPs): <ul style="list-style-type: none"><li>1. senior health physicist;</li><li>2. reactor operator;</li><li>3. unit 0 operator;</li><li>4. control room shift supervisor; and</li><li>5. plant shift supervisor.</li></ul>
<b>Current document set is comprehensive and includes:</b> <ul style="list-style-type: none"><li>• N-INS-08920-10001, Requalification Testing of Certified Shift Personnel,</li><li>• N-INS-08920-10002, Simulator-Based Initial Certification Examinations for Shift Personnel,</li><li>• N-INS-08920-10003, Independence and Security for Initial Certification Examinations and Requalification Testing of Certified Shift Personnel,</li><li>• N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel,</li><li>• N-INS-08920-10005, Standards &amp; Methodology for Formal Evaluations,</li><li>• N-INS-08920-10022, Formal Evaluation of Responsible Health Physicists,</li><li>• N-LIST-08920-10001, Trained Performance Areas lists positions identified in the Operating Licences,</li><li>• N-MAN-08131-10000-CN-SC-006, Shift Manager, Darlington Nuclear,</li><li>• N-MAN-08131-10000-CN-SC-007, Shift Manager, Pickering Nuclear,</li><li>• N-MAN-08131-10000-CN-SC-008, Control Room Shift Supervisor,</li><li>• N-MAN-08131-10000-CN-SC-010, Authorized Nuclear Operators,</li></ul>	



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<ul style="list-style-type: none"><li>N-MAN-08131-10000-CNSC-025, Unit 0 Control Room Operator,</li><li>N-MAN-08131-10000-CNSC-028, Control Room Shift Supervisor, Pickering Nuclear,</li><li>N-MAN-08131-10000-CNSC-031, Responsible Health Physicist,</li><li>N-PROC-TR-0008, Systematic Approach to Training,</li><li>N-PROC-TR-0012, Records and Documentation,</li><li>N-PROC-TR- 0021, TQD Development and Approval Process,</li><li>N-TQD-101-00001, ANO Initial Training and Qualification Description,</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description,</li><li>N-TQD-103-00001, Continuing Training and Qualification Description,</li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description, and</li><li>N-TQD-443-00001 Radiation Protection Training and Qualification.</li></ul>	
<b>13.2 Maintaining the qualification of certified workers</b> The licensee <b>shall</b> establish and document effective policies and procedures to train and maintain the qualification of the certified workers employed in designated positions.	<b>4.1.2 Maintaining the qualification of certified persons</b> The licensee <b>shall</b> establish and document policies and procedures for training and maintaining the qualification of persons holding a certification for the applicable positions listed in paragraph 4.1.1.
See comments for 13.1	
<b>14. Personnel Selection Program</b> The licensee <b>shall</b> implement and document a personnel selection program that ensures the selection of suitable candidates for entry in the initial training programs referenced in this regulatory document.	<b>4.2 Training programs</b> <b>4.2.1 Initial training programs</b> The licensee <b>shall</b> establish and document initial training programs, specific to each applicable position listed in paragraph 4.1.1, to address the training requirements specified in Part II and in Part III of this regulatory document.
Each of the following TQDs contains direction regarding a selection process: <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description</li><li></li></ul> <b>In each TQD, Section 1.1.2, Entry Level Requirements, Selection, and Development Phase, states:</b> <ul style="list-style-type: none"><li>(a) Entry Level Requirements, Selection, and Development phase shall be implemented in accordance with:<ul style="list-style-type: none"><li>N-GUID-09100-10002, Entry Level Requirements And Selection Guide For ANOITs/U0 CROITs and CRSSITs.</li></ul></li></ul> <b>GAP: N-GUID-09100-10002 needs to be revised to comply with revision 2 and to remove references to requirements given in Version 1.</b>	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 needs to be revised to comply with revision 2 and to remove references to requirements given in Version 1.</b>	
<b>14.1 Personnel selection program requirements</b> As an integral part of the personnel selection program, at a minimum and for each designated position identified in the licence, the licensee: <ul style="list-style-type: none"><li>a. <b>shall</b> set a minimum prior education level or minimum literacy and numeracy levels commensurate with the duties of the designated position and consistent with the entry level of a suitable initial training program</li></ul>	<b>18.1 Education (RHP)</b> The person must have a degree in health physics from a recognized university. An acceptable alternative to this degree is a Baccalaureate in engineering or science from a recognized university and the successful completion of specialized courses, taken at a recognized educational institution or university, covering current radiation protection principles, methods and practices related to the operation of an NPP.
	<b>23.1.1 Education (ANO)</b> The person must have a high school diploma obtained from a recognized educational institution that includes course credits in both science and mathematics.
	<b>24.1.1 Education (UOCRO)</b>

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b. <b>shall</b> require that candidates selected on the basis of their prior education level provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider	<p>The person must have a high school diploma obtained from a recognized educational institution that includes course credits in both science and mathematics.</p> <p><b>25.1.1 Education (CRSS)</b> The person must have a Baccalaureate in engineering or science from a recognized university, or an acceptable alternative to this university degree. Acceptable alternatives are:</p> <ol style="list-style-type: none"><li>1. a current or expired certification as reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor at a Canadian NPP; or</li><li>2. a current or expired certificate of qualification as stationary engineer second class or operating engineer second class obtained in Canada; or</li><li>3. a two-year technician or technologist diploma from a recognized educational institution in a discipline relevant to power engineering, with three years of experience in that discipline; or</li><li>4. a three-year technologist diploma from a recognized educational institution in a discipline relevant to power engineering, with two years of experience in that discipline; or</li><li>5. academic qualifications that meet the requirements for registration as a professional engineer in Canada.</li></ol>
<p>Each of the following TQDs contains direction regarding a minimum education requirement:</p> <ul style="list-style-type: none"><li>• N-TQD-101-00001, ANO Initial Training and Qualification Description</li><li>• N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li><li>• N-TQD-105-00001, UOCRO Initial Training and Qualification Description</li></ul> <p><b>In each TQD, Section 1.1.2, Entry Level Requirements, Selection, and Development Phase, states:</b></p> <p>(b) Candidates selected to the <b>ANO</b> initial certification training program shall meet the following minimum requirements:</p> <ul style="list-style-type: none"><li>• Educational qualification or work experience in accordance with current station documentation and REGDOC-2.2.3 Vol. III, Subpart A, Section 23.1.</li></ul> <p>(b) Candidates selected to the <b>SM/CRSS</b> initial certification training program shall meet the following minimum requirements:</p> <ul style="list-style-type: none"><li>• Educational qualification and work experience in accordance with current station documentation and REGDOC-2.2.3 Vol. III, Subpart C, Section 25.1 and 26.1.</li></ul> <p>(b) Candidates selected to the <b>UO CRO</b> initial certification training program shall meet the following minimum requirements:</p> <ul style="list-style-type: none"><li>• Educational qualification or work experience in accordance with current station documentation and REGDOC-2.2.3 Vol. III, Subpart B, Section 24.1.</li></ul> <p><b>GAP: N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001 need to be revised to comply with revision 2 and to remove references Version 1. Each TQD should either include the previous education requirements stated in Version 1, or updated education requirements as determined by management. TQDs should also require candidates provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider.</b></p>	
<p>Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i>.</p> <p><b>GAP: N-TQD-443-00001 needs to be revised to comply with revision 2 and to remove references to Version 1. TQD to include education requirements stated in Version 2, section 25.1.2, or more stringent education requirements as determined by management. TQD should also require candidates provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider.</b></p> <p><b>Also refer to comments for 25.1.2.</b></p>	
c. <b>may</b> recognize equivalencies to any minimum education, literacy, or numeracy level set by the licensee d. <b>shall</b> use standardized tests and proven methods to assess whether or not candidates selected on the basis of a literacy or numeracy level, or a recognized equivalency, do in fact meet the applicable minimum standards	N/A
<p><b>See comments for 14.1 a) and b).</b></p> <p><b>Possible GAP: TQDs do not include instruction for this situation, but including it can be considered optional. Management to decide if education, literacy, or numeracy equivalency levels should be defined. If defined, such processes shall include the need to conduct use standardized tests and proven methods to assess equivalency. Also refer to comments for 25.1.2.</b></p>	

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<p>e. <b>shall</b> determine whether or not prior work experience <b>may</b> be desirable or essential and, when deemed essential, develop plans and procedures to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program</p>	<p><b>18.2 Minimum experience</b> The person must have a minimum of four years related experience at a nuclear facility. At least two years of this experience must be at an NPP with at least six months at the NPP where certification is sought.</p>
	<p><b>23.1.2 Minimum experience</b> 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: 1. two years of plant experience at a similar NPP on the same site and at least six months of additional plant experience at the NPP where certification is sought; or 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; or 3. two years of plant experience at an NPP of a different type, and at least one and a half years of additional plant experience at the NPP where certification is sought.</p>
	<p><b>24.1.2 Minimum experience</b> 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: 1. two years of plant experience at a similar NPP on the same site and at least six months of additional plant experience at the NPP where certification is sought; or 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; or 3. two years of plant experience at an NPP of a different type and at least one and a half years of additional plant experience at the NPP where certification is sought.</p>
	<p><b>25.1.2 Minimum experience</b> 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: 1. two years of plant experience at a similar NPP on the same site and at least six months of additional plant experience at the NPP where certification is sought; or 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; or 3. two years of plant experience at an NPP of a different type and at least one and a half years of additional plant experience at the NPP where certification is sought; or 4. three years of experience in a technical support position related to the operation of an NPP of the same type and at least one year of additional plant experience at the NPP where certification is sought.</p>
<p>Each of the following TQDs contains direction regarding an experience requirement:</p> <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li><li>N-TQD-105-00001, U0CRO Initial Training and Qualification Description</li><li></li></ul> <p><b>In each TQD, Section 1.1.2, Entry Level Requirements, Selection, and Development Phase, states:</b></p> <p>(b) Candidates selected to the <b>ANO</b> initial certification training program shall meet the following minimum requirements:</p> <ul style="list-style-type: none"><li>Educational qualification or work experience in accordance with current station documentation and REGDOC-2.2.3 Vol. III, Subpart A, Section 23.1.</li></ul> <p>(b) Candidates selected to the <b>SM/CRSS</b> initial certification training program shall meet the following minimum requirements:</p> <ul style="list-style-type: none"><li>Educational qualification and work experience in accordance with current station documentation and REGDOC-2.2.3 Vol. III, Subpart C, Section 25.1 and 26.1.</li></ul> <p>(b) Candidates selected to the <b>U0 CRO</b> initial certification training program shall meet the following minimum requirements:</p> <ul style="list-style-type: none"><li>Educational qualification or work experience in accordance with current station documentation and REGDOC-2.2.3 Vol. III, Subpart B, Section 24.1.</li></ul>	



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<b>GAP: N-TQD-101-00001, N-TQD-102-00001 and N-TQD-105-00001 need to be revised to comply with revision 2 and to remove references Version 1.</b> <b>Each TQD should either include the previous experience requirements stated in Version 1, or updated requirements as determined by management.</b> <b>If work experience is deemed essential, plans and procedures need to be put in place to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program</b>	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 needs to be revised to comply with revision 2 and to remove references to Version 1.</b> <b>TQD to include experience requirements stated in Version 2, section 25.1.3, or more stringent education requirements as determined by management.</b> <b>Since 25.1.3 can be deemed essential, plans and procedures need to be put in place to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program</b>  <b>Also refer to comments for 25.1.3.</b>	
<b>f. shall</b> identify attributes and aptitudes deemed essential to safely and competently perform the duties of the designated position, including integrity, leadership, and resilience, as <b>may</b> be pertinent, and select candidates accordingly	N/A
The attributes for certified operations staff are given in the following sections of N-GUID-09100-10002, Entry Level Requirements and Selection Guide For ANOITs/UO CROITs and CRSSITs: <ul style="list-style-type: none"><li>2.0 ATTRIBUTES OF AN ANO/UO CRO</li><li>3.0 ATTRIBUTES OF A CRSS AND SM</li></ul> <b>Possible GAP: N-GUID-09100-10002 needs to be reviewed to ensure it correctly identifies the attributes <u>and aptitudes</u> deemed essential for designated position .The GUID must include integrity, leadership, and resilience, and must ensure that candidates selected possess the required attributes and aptitudes.</b> <b>Also refer to comments for 14.2.2.</b>	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 Radiation Protection Training and Qualification. <b>GAP: N-TQD-443-00001 (or another document) needs to be revised to ensure it correctly identifies the attributes <u>and aptitudes</u> deemed essential for the RHP position.</b> <b>The TQD must include integrity, leadership, and resilience, and must ensure that candidates selected possess the required attributes and aptitudes.</b> <b>Also refer to comments for 14.2.2.</b>	
<b>g. may</b> use standardized tests and proven methods, or require a medical assessment performed by a licensed physician, to assess whether or not candidates have any permanent, physical or mental limitation that would prevent them from performing the duties of the pertinent designated position safely and competently	N/A
<b>Possible GAP: TQDs do not include instruction for this situation, but including it can be considered optional. Management to decide if testing or medical assessments are required.</b>	
<b>14.2 Personnel selection criteria</b> <b>14.2.1 Basic prerequisites</b> Candidates selected for entry in any initial training program referenced in this regulatory document <b>shall</b> : <ul style="list-style-type: none"><li>a. have demonstrated literacy and numeracy levels commensurate with the duties of the pertinent designated position</li></ul>	N/A
<b>Refer to comments for 14.1. a.</b>	
<b>b.</b> have provided sufficient proof of any prior education level required by the CNSC or the licensee	N/A
<b>Refer to comments for 14.1. b.</b>	

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c. have gained any prior work experience required by the CNSC or the licensee	N/A
Refer to comments for 14.1. e.	
d. possess all the safety-related attributes and aptitudes deemed essential by the licensee	N/A
Refer to comments for 14.1. f.	
e. meet all other applicable position-specific selection criteria set by the licensee	N/A
Management to decide if other applicable position-specific selection criteria are required.	
<b>14.2.2 Supplementary prerequisites for shift supervisors and senior health physicists</b> In addition to meeting the applicable basic prerequisites, shift supervisor and senior health physicist (SHP) candidates <b>shall</b> , to the licensee’s knowledge: a. possess known leadership skills or potential b. have consistently demonstrated a high level of integrity	<b>25.2.2 Supplementary nuclear power plant-specific training</b> The person must have completed training, appropriate to the knowledge requirements of the control room shift supervisor and of the plant shift supervisor that are in addition to those of a reactor operator, covering: ----- Items 1 to 24. This training <b>shall</b> include formal written evaluations and, if required, formal oral evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of the control room shift supervisor. The person must complete this training before taking the certification examination specified in paragraph 25.3.3.  <b>26.2 Supplementary nuclear power plant-specific training</b> The person must have completed the training for control room shift supervisors specified in paragraph 25.2.2.
The attributes for shift supervisors are given in the following sections of N-GUID-09100-10002, Entry Level Requirements and Selection Guide For ANOITs/U0 CROITs and CRSSITs: • 3.0 ATTRIBUTES OF A CRSS AND SM • 3.1.1 (a) Leadership and Management Capabilities • 3.1.1 (e) Values and Integrity  <b>Possible GAP: N-GUID-09100-10002 needs to be reviewed to ensure it correctly identifies that candidates possess leadership skills and have consistently demonstrated a high level of integrity.</b>	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 Radiation Protection Training and Qualification. <b>GAP: N-TQD-443-00001 (or another document) needs to be revised to ensure it correctly identifies that candidates possess leadership skills and have consistently demonstrated a high level of integrity.</b>	
<b>14.3 Selection of reactor operators for shift supervisor training</b> A worker certified or previously certified for employment as reactor operator (RO) at the reactor facility identified in the licence <b>may</b> be selected for entry in an initial training program for shift supervisor candidates in accordance with the requirements specified in this subsection.	<b>26. Advancement from Reactor Operator to Control Room Shift Supervisor</b> A person, who holds a certification as reactor operator at a given multi-unit NPP, seeking certification as control room shift supervisor at the same NPP <b>shall</b> , at the time of certification as control room shift supervisor, meet the requirements specified in subsections 26.1 to 26.8.
<b>GAP: The following documents should be revised to include progression of certified ANOs to the CRSS position:</b> • N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description • N-GUID-09100-10002, Entry Level Requirements And Selection Guide For ANOITs/U0 CROITs and CRSSITs.	
<b>14.3.1 Performance as reactor operator</b> Prior to being selected for shift supervisor training, the worker <b>must</b> : a. have performed the duties of an RO safely and competently b. be known to possess the safety-related attributes and aptitudes required of a shift supervisor	<b>26.1 Minimum experience prior to training</b> The person must have safely and competently performed the duties of a reactor operator at the NPP for a minimum of one year, immediately prior to beginning training as control room shift supervisor.
	<b>28.1 Minimum experience prior to training</b> The person must have safely and competently performed the duties of a reactor operator at the NPP for a minimum of one year, immediately prior to beginning training as plant shift supervisor.

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Refer to comments for 14.3.	
<b>14.3.2 Personnel selection exemption</b> The licensee <b>may</b> , if the worker has been regularly employed as a certified RO for at least 4 calendar quarters, exempt the worker from any education level or work experience normally required of shift supervisor candidates.	N/A
Refer to comments for 14.3.	
<b>14.3.3 Notification of selection for shift supervisor training</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program for shift supervisor candidates. This communication <b>shall</b> include: a. the full legal name of the worker b. a confirmation that the worker performed the duties of an RO safely and competently c. a confirmation that the worker possesses the safety-related attributes and aptitudes required of a shift supervisor d. a summary of any exemption explicitly sanctioned in sub-subsection 14.3.2 and employed as part of the selection of the worker, including the start and end dates of the observation period(s) adding to 4 calendar quarters in total	N/A
Refer to comments for 14.3.	
<b>14.4 Advancement to senior shift supervisor</b> Any certified shift supervisor who, as a member of the minimum staff complement (MSC), exercises authority over any number of certified shift supervisors <b>shall</b> , prior to being employed in such a senior shift supervisor position, have been selected and trained by the licensee for the express purpose by means of a documented process meeting the requirements specified in this subsection.  The licensee <b>shall</b> not allow any worker to act as senior shift supervisor who is not duly qualified to exercise authority over other certified shift supervisors in accordance with the aforementioned process.	<b>29. Requirements for Initial Certification</b> Only a person who holds a certification as control room shift supervisor at a given multi-unit NPP <b>may</b> seek certification as plant shift supervisor at the same NPP. At the time of certification as plant shift supervisor, the person <b>shall</b> meet the requirements specified in subsections 29.1 to 29.4.
Once in effect, Shift Managers will be required to maintain only a CRSS certification. <b>GAP - need to revise the following documents to reflect this change:</b> <ul style="list-style-type: none"><li>N-MAN-08131-10000_CNSC-006; Shift Manager, Darlington Nuclear.</li><li>N-MAN-08131-10000_CNSC-007; Shift Manager, Pickering Nuclear.</li><li>N-MAN-08131-10000_CNSC-008; Control Room Shift Supervisor, Darlington Nuclear</li><li>N-MAN-08131-10000_CNSC-028; Control Room Shift Supervisor, Pickering Nuclear.</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, specifically:<ul style="list-style-type: none"><li>1.1.10 Application to Canadian Nuclear Safety Commission for SM Certification</li></ul></li></ul> Review also: <ul style="list-style-type: none"><li>N-MAN-08131-10000_CNSC-003; DIRECTOR, OPERATIONS AND MAINTENANCE.</li></ul>	
<b>14.4.1 Minimum experience as shift supervisor prior to advancement</b> The worker <b>must</b> have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a <b>minimum number of complete shifts acceptable to the CNSC, adding to a minimum number of hours of shiftwork acceptable to the CNSC.</b>	<b>29.1 Minimum experience prior to advancement</b> The person must have safely and competently performed the duties of the control room shift supervisor at the NPP where certification is sought for a minimum of 80 complete shifts immediately prior to being selected for advancement from control room shift supervisor to plant shift supervisor.
Currently addressed by N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description	

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<ul style="list-style-type: none"><li>1.1.10 Application to Canadian Nuclear Safety Commission for SM Certification</li></ul> <p><b>GAP: A minimum of 80 shifts amounting to 960 hours is currently acceptable and documented in REGDOC Appendix B.</b></p> <p><b>Need to revise N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, specifically 1.1.10 and Appendix A.</b></p> <p><b>Qualification structure should be revised to create a separate SM qualification, with the Shift Supervisor (CRSS) qualification as a prerequisite and to remove the SM certification PEL from the CRSS qualification.</b></p>	
<b>14.4.2 Supplemental training</b> The worker <b>must</b> have successfully completed training based on a training system, including some on-the-job training (OJT), covering the K&S and safety-related attributes required to safely and competently perform the duties of the senior shift supervisor, as defined by the licensee’s management system.	<b>29.2 On-the-job training</b> The person must have completed on-the-job training, appropriate to the knowledge and skill requirements of the plant shift supervisor, covering: 1. where applicable, operation and monitoring of the systems of the tritium removal facility by the operators of the facility under normal, abnormal and emergency conditions; 2. supervision and direction of NPP operations in the field under normal, abnormal and emergency conditions; 3. where applicable, supervision and direction of operations at the tritium removal facility under normal, abnormal and emergency conditions; and 4. authorization of maintenance and repair of NPP systems.  This training <b>shall</b> include formal performance evaluations that confirm and document that, at the completion of the training, the person has the required knowledge and skills to perform the duties of the plant shift supervisor.
<p><b>GAP: Need to revise N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, specifically:</b></p> <ul style="list-style-type: none"><li><b>1.1.10 Application to Canadian Nuclear Safety Commission for SM Certification</b></li></ul>	
<b>14.4.3 Work under supervision</b> The worker <b>must</b> have performed the duties of the senior shift supervisor under the supervision of a qualified senior shift supervisor for a number of complete shifts that the licensee considers necessary to confirm that the worker can perform said duties competently and safely.	<b>29.3 Performing duties under supervision</b> The person must have performed the duties of the plant shift supervisor under the supervision of a certified incumbent of the position for a minimum of 168 hours on shift to confirm and document that the person can perform those duties competently and safely. Those hours must have been worked after the person has met the requirements specified in subsection 29.2.
<p><b>GAP: 168 hours is currently acceptable.</b></p> <p><b>Need to determine the minimum number of hours and to revise N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, specifically:</b></p> <ul style="list-style-type: none"><li><b>1.1.10 Application to Canadian Nuclear Safety Commission for SM Certification</b></li></ul>	
<b>N/A</b>	<b>29.4 Nuclear power plant management interview</b>  The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the plant shift supervisor. The person must complete this interview after having met the requirements specified in subsection 29.3.
<p><b>Interview no longer required, but management could decide to continue doing it.</b></p> <p><b>Possible GAP: Depending on MGT decision, revise N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, specifically:</b></p> <ul style="list-style-type: none"><li><b>1.1.10 Application to Canadian Nuclear Safety Commission for SM Certification</b></li></ul>	
<b>14.5 Personnel transfer</b>	<b>19. Transfer to another Nuclear Power Plant</b>

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The licensee <b>shall</b> implement and document an effective personnel transfer process compliant with the requirements and guidance specified in this subsection.	A person, who holds a certification as senior health physicist at a given Canadian NPP, seeking certification for the same position after transferring to another NPP <b>shall</b> , at the time of certification at this NPP, meet the requirements specified in subsections 19.1 to 19.3.
The wording of 14.5 makes it mandatory; however, the guidance for this section describes that it is applicable only when such a transfer occurs.  <b>Possible GAP: Management to decide if 14.5 will be documented, and the following revised IF required:</b> <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description</li><li>N-TQD-443-00001, Radiation Protection Training and Qualification.</li></ul>	
<b>14.5.1 Personnel transfer process</b> As an integral part of the personnel transfer process, the licensee of the gaining reactor facility: <ul style="list-style-type: none"><li>a. <b>shall</b> request, from the licensee of the ceding reactor facility:<ul style="list-style-type: none"><li>(i) the training and qualification records and, if applicable, the certification examination history of the worker, including sufficient proof of any certification examination successfully completed by the worker</li><li>(ii) confirmation that the worker performed their duties in a safe and competent manner, be it in a designated position or not</li><li>(iii) confirmation that the worker is trustworthy</li></ul></li><li>b. <b>shall</b> ensure that the worker meets all of the applicable personnel selection criteria in effect at the gaining reactor facility prior to the worker’s entering one of the initial training programs referenced in this regulatory document</li><li>c. <b>may</b> administer a single or a series of standardized general knowledge test(s) based on proven methods to identify any gaps in the general knowledge of the worker</li><li>d. <b>may</b> use the results of the aforementioned general knowledge test(s) as part of the basis for the development of an individual training needs analysis (ITNA) and an individual training plan (ITP), on a case-by-case basis</li><li>e. <b>may</b> administer a general knowledge certification examination to the worker in order to ascertain that the worker possesses adequate general knowledge</li><li>f. <b>may</b> employ one or both potential exemptions explicitly sanctioned in this subsection</li></ul>	N/A
<b>Refer to comments for 14.5.</b>	
<b>14.5.2 Initial training</b> Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.3, the worker <b>shall</b> successfully complete the same initial training that is administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.	<b>19.1 Training requirements</b> The person must have completed training, appropriate to the knowledge requirements of the position at the NPP where certification is sought, covering: <ul style="list-style-type: none"><li>1. the responsibilities and authority of the senior health physicist;</li><li>2. the responsibilities and authority of persons who interact with the senior health physicist;</li><li>3. the NPP licence and documents referenced in the licence;</li><li>4. the licensee’s and NPP policies, standards and procedures; and</li><li>5. NPP design, operation and maintenance.</li></ul> This training <b>shall</b> include a formal evaluation that confirms and documents that, at the completion of the training, the person has the required knowledge to perform the duties of the senior health physicist at the NPP where certification is sought.



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Refer to comments for 14.5.	
<b>14.5.3 General knowledge training exemption</b> The licensee is not obligated to administer additional general knowledge training to the worker if the worker has previously successfully completed general knowledge training that: <ul style="list-style-type: none"><li>a. is equivalent to the general knowledge training administered to all workers seeking employment in the same designated position at the gaining reactor facility</li><li>b. was administered in accordance with the applicable requirements specified in this and complementary regulatory documents</li><li>c. is, in all other respects, acceptable to the gaining reactor facility licensee</li></ul>	N/A
Refer to comments for 14.5.	
<b>14.5.4 Certification examinations</b> Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.5, the worker <b>shall</b> successfully complete the same certification examinations as those administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.	N/A
Refer to comments for 14.5.	
<b>14.5.5 General knowledge examination exemption</b> The licensee is not obligated to administer an additional general knowledge certification examination to the transferred worker if the worker previously received a passing grade on a general knowledge examination that: <ul style="list-style-type: none"><li>a. is equivalent to the general knowledge examination administered to all workers seeking employment in the same designated position at the gaining reactor facility</li><li>b. was administered by qualified examiners in accordance with the conditions set in the gaining reactor facility licence or accompanying document, including any detailed requirements specified in documents referenced in the licence or accompanying document</li><li>c. is, in all other respects, acceptable to the gaining reactor facility licensee</li></ul>	N/A
Refer to comments for 14.5.	
<b>14.5.6 Notification of personnel transfer</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program referenced in this regulatory document. This communication <b>shall</b> include: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. a summary of any exemption(s) explicitly sanctioned in subsection 14.5 and employed as part of the selection of the worker, including, as applicable:<ul style="list-style-type: none"><li>(i) the start and end dates of the general training referenced as basis for the exemption and the licensee and reactor facility responsible for the associated general training program</li><li>(ii) the date on which the general certification examination referenced as basis for the exemption was administered and the licensee and reactor facility responsible for its administration</li></ul></li></ul>	N/A
Refer to comments for 14.5.	
<b>14.5.7 Added information upon application for certification</b> At the time of application for certification, the worker <b>shall</b> meet all of the personnel certification requirements applicable to any worker seeking certification for employment in the pertinent designated position at the reactor facility identified in the licence.	<b>19.2 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the senior health physicist at the NPP. The person must complete this interview after having met the requirements specified in subsection 19.1 and before taking the CNSC examination specified in subsection 19.3.

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In addition to the requirements specified in subsection 6.2 and the notification specified in this subsection, the application for certification <b>shall</b> include a summary of any ITNA, ITP and certification examination employed as part of the transfer of the worker.	
<b>Refer to comments for 14.5.</b>	
<b>15 Training Programs</b> <b>15.1 Initial training programs</b> The licensee <b>shall</b> implement and document initial training programs specifically designed to prepare workers for employment in each designated position identified in the licence, and to qualify the said workers for certification by the CNSC in accordance with the applicable worker qualifications specified in Part III.	<b>4.2.1 Initial training programs</b> The licensee <b>shall</b> establish and document initial training programs, specific to each applicable position listed in paragraph 4.1.1, to address the training requirements specified in Part II and in Part III of this regulatory document
<b>See comments for 13.1.</b>	
<b>15.2 Continuing training programs</b> The licensee <b>shall</b> implement and document continuing training programs specifically designed to maintain the competency of workers employed in each designated position identified in the licence, and to requalify the said workers prior to the renewal of their certification by the CNSC in accordance with the applicable worker requalification requirements specified in Part III.	<b>4.2.2 Continuing training programs</b> The licensee <b>shall</b> establish and document continuing training programs, specific to each applicable position listed in paragraph 4.1.1, to address the training requirements specified in sections 20 and 32.
	<b>32. Continuing Training Requirements</b> During the period of certification, each reactor operator, unit 0 operator, control room shift supervisor and plant shift supervisor <b>shall</b> meet the requirements specified in subsections 32.1 to 32.3.
<b>See comments for 13.1.</b> <b>Suggest review of the following to ensure compliance:</b> <ul style="list-style-type: none"><li><b>N-TQD-103-00001 – Continuing Training and Qualification Description</b></li><li><b>N-TQD-443-00001 RADIATION PROTECTION TRAINING AND QUALIFICATION</b></li></ul>	
<b>15.2.1 Update training</b> The pertinent continuing training programs <b>shall</b> include suitable update training, including formal knowledge and performance-based evaluations, covering any relevant technical or procedural changes implemented at the reactor facility identified in the licence, as well as the relevant lessons learned by the industry over time, including, but not limited to: <ul style="list-style-type: none"><li>a. changes to reactor facility systems and subsystems</li><li>b. changes to licensee and station-specific policies, standards, and procedures</li><li>c. amendments to, or exemptions from, regulatory requirements</li><li>d. amendments to the licence or to documents referenced in the licence</li><li>e. station-specific and industry operational experience and operating events</li></ul> The licensee <b>shall</b> deliver the knowledge update training referenced in this regulatory document promptly following the occurrence of the initiating change or event using effective instructional methods, including suitable simulator-based training whenever pertinent.	<b>32.2 Update training</b> Each reactor operator, unit 0 operator, control room shift supervisor and plant shift supervisor must complete update training appropriate to the knowledge and skill requirements of the applicable position, covering: <ul style="list-style-type: none"><li>1. changes to NPP systems;</li><li>2. changes to licensee’s and NPP policies, standards and procedures;</li><li>3. changes to regulatory requirements;</li><li>4. changes to the NPP licence or to documents referenced in the licence; and</li><li>5. NPP and industry experience and operating events.</li></ul>
<b>See comments for 13.1.</b> <b>Possible GAP: review of the following to ensure compliance:</b> <ul style="list-style-type: none"><li><b>N-TQD-103-00001 – Continuing Training and Qualification Description</b></li><li><b>N-TQD-443-00001 RADIATION PROTECTION TRAINING AND QUALIFICATION</b></li></ul>	
<b>15.2.2 Refresher training</b>	<b>32.1 Refresher training</b>

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<p>The pertinent continuing training programs <b>shall</b> incorporate suitable refresher training, including formal knowledge and performance-based evaluations, covering the essential K&amp;S and safety related attributes that certified workers acquired during their initial training and which <b>must</b> be periodically reviewed and applied to ensure adequate retention.</p> <p>The licensee <b>shall</b> deliver the knowledge refresher training referenced in this regulatory document on a regular basis and according to a training cycle not exceeding 5 years using effective instructional methods, including suitable simulator-based training whenever pertinent.</p>	<p>Each reactor operator, unit 0 operator, control room shift supervisor and plant shift supervisor must complete, on a regular basis, refresher training appropriate to the knowledge and skill requirements of the applicable position, covering:</p> <ol style="list-style-type: none"><li>1. a review of the knowledge acquired during initial training that is not maintained through the day-to-day operation of the NPP and that is required to work competently in the applicable position;</li><li>2. simulator-based exercises that cover infrequent normal NPP manoeuvres;</li><li>3. simulator-based exercises that cover a varied number of situations that challenge the diagnostic and decision-making abilities of the person and ensure the person is, at all times, proficient in selecting and using abnormal and emergency operating procedures; and</li><li>4. exercises and drills conducted at the NPP on a regular basis to ensure the person is, at all times, ready to respond to accidents and emergencies.</li></ol>
<p><b>See comments for 13.1.</b></p> <p><b>Possible GAP: review of the following to ensure compliance:</b></p> <ul style="list-style-type: none"><li>• N-TQD-103-00001 – Continuing Training and Qualification Description</li><li>• N-TQD-443-00001 RADIATION PROTECTION TRAINING AND QUALIFICATION</li></ul>	
<p><b>15.2.3 Simulator-based continuing training for operations personnel</b></p> <p>The continuing training programs for operations personnel <b>shall</b> include suitable simulator-based training designed to ensure that operations personnel maintain their qualification by applying their K&amp;S and safety-related attributes through recurrent performance-based training covering varied simulated scenarios under normal, abnormal and, to the extent possible, emergency conditions.</p> <p>At a minimum, the continuing simulator-based training for operations personnel <b>shall</b> include:</p> <ol style="list-style-type: none"><li>a. simulator-based exercises covering the normal reactor manoeuvres and plant evolutions infrequently performed by certified workers while on duty</li><li>b. simulator-based exercises covering varied scenarios:<ol style="list-style-type: none"><li>(i) challenging the diagnostic and decision-making abilities of certified workers</li><li>(ii) ensuring that certified workers remain proficient in selecting and executing the correct operational procedures under abnormal and emergency conditions</li></ol></li><li>c. exercises and drills ensuring that certified workers are ready to respond to accidents and emergencies</li></ol>	N/A
<p><b>See comments for 13.1.</b></p> <p><b>Possible GAP: review of the following to ensure compliance:</b></p> <ul style="list-style-type: none"><li>• N-TQD-103-00001 – Continuing Training and Qualification Description</li></ul>	
<p><b>15.2.4 Nuclear emergency response training</b></p> <p>The licensee <b>shall</b> conduct, on a periodic basis, nuclear emergency response training to ensure that certified workers are adequately prepared to respond to credible beyond-design-basis accidents and manage nuclear emergencies in accordance with the established emergency operating procedures and severe accident management guidelines.</p>	N/A
<p><b>GAP: review of the following to ensure compliance:</b></p> <ul style="list-style-type: none"><li>• N-TQD-103-00001 – Continuing Training and Qualification Description</li><li>• N-TQD-443-00001 RADIATION PROTECTION TRAINING AND QUALIFICATION</li></ul>	
<b>15.3 Training system for reactor facilities</b>	<b>4.3 Systematic approach to training</b>



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<p>The initial and continuing training programs referenced in this regulatory document <b>shall</b> be consistent with a training system for reactor facilities acceptable to the CNSC.</p> <p>When the licensee contracts out, in whole or in part, any aspect of the training referenced in this regulatory document, the licensee <b>shall</b> ensure that the requirements and guidance specified in this and any relevant complementary regulatory document are complied with by the contracted party or parties.</p>	<p>The licensee <b>shall</b> establish and implement the initial and continuing training programs specified in Part II and in Part III of this regulatory document in accordance with the principles of a systematic approach to training.</p>
<p><b>See comments for 13.1.</b> <b>Possible GAP: review of the following to ensure compliance with use of contracting:</b></p> <ul style="list-style-type: none"><li><b>N-TQD-103-00001 – Continuing Training and Qualification Description</b></li><li><b>N-TQD-443-00001 RADIATION PROTECTION TRAINING AND QUALIFICATION</b></li></ul>	
<p><b>15.4 Formal learner evaluations</b> All training programs and tailored training referenced in this regulatory document <b>shall</b> include formal learner evaluations, either knowledge-based or performance-based as appropriate, designed to assess the progress of each learner during the course of said training.</p> <p>The licensee <b>shall</b> administer all such formal learner evaluations in accordance with a documented process specifying:</p> <ol style="list-style-type: none"><li>the number and scope of the formative and summative evaluations deemed necessary to monitor candidate progress in relation to pertinent training segments and milestones</li><li>the requirements and procedures applicable to the design, development, conduct and grading of the evaluations</li><li>the qualification requirements for the personnel tasked with designing, developing, conducting, and grading the evaluations</li></ol> <p>All formal learner evaluations <b>shall</b> be administered either by qualified trainers or by qualified examiners as part of a documented instructional strategy.</p>	<p><b>5. Evaluation of Persons during Training</b> The licensee <b>shall</b> administer the formal evaluations specified in Part II and in Part III of this regulatory document in accordance with a documented process covering:</p> <ol style="list-style-type: none"><li>the requirements applicable to the different types of evaluations;</li><li>the number and scope of the evaluations associated with the different segments of training;</li><li>the procedures covering the preparation, conduct and grading of:<ol style="list-style-type: none"><li>the written and oral evaluations associated with initial training;</li><li>the simulator-based evaluations associated with initial training;</li><li>the performance evaluations associated with initial on-the-job training;</li><li>the knowledge evaluations associated with continuing training; and</li><li>the performance evaluations associated with continuing training.</li></ol></li><li>the requirements and procedures for ensuring the security of the evaluations; and</li><li>the qualification requirements of the persons responsible for the preparation, conduct and grading of:<ol style="list-style-type: none"><li>the written and oral evaluations associated with initial training;</li><li>the simulator-based evaluations associated with initial training;</li><li>the performance evaluations associated with initial on-the-job training;</li><li>the knowledge evaluations associated with continuing training; and</li><li>the performance evaluations associated with continuing training.</li></ol></li></ol>
	<p><b>20.2 Formal evaluations (RHP)</b> The person must complete formal knowledge evaluations that confirm and document that the person has the required knowledge of the topics covered during update training.</p>
	<p><b>23.2.1 General training</b> <b>24.2.1 General training</b> The person must have completed training.... This training <b>shall</b> include formal written evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of a .... The person must complete this training before taking the certification examination specified in paragraph ...</p>
	<p><b>23.2.2 Radiation protection training</b> <b>24.2.2 Radiation protection training</b> The person must have completed training ... This training <b>shall</b> include formal written evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of a ... The person must complete this training before taking the certification examination specified in paragraph ...</p>
	<p><b>23.2.3 Nuclear power plant-specific training</b></p>

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	<b>24.2.3 Nuclear power plant-specific training</b> The person must have completed training ... This training <b>shall</b> include formal written evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of a ... The person must complete this training before taking the certification examination specified in paragraph ...
	<b>25.2.1 Reactor operator training</b> The person must have completed the training for reactor operators specified in paragraphs 23.2.1 to 23.2.3.
	<b>25.2.2 Supplementary nuclear power plant-specific training</b> <b>27.2.2 Supplementary nuclear power plant-specific training</b> <b>28.2 Supplementary nuclear power plant-specific training</b> The person must have completed training .... This training <b>shall</b> include formal written evaluations and, if required, formal oral evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of the control room shift supervisor. The person must complete this training before taking the certification examination specified in paragraph 25.3.3.
	<b>23.2.4 Simulator-based training</b> <b>24.2.4 Simulator-based training</b> <b>25.2.3 Simulator-based training</b> <b>26.3 Simulator-based training</b> <b>27.2.3 Simulator-based training</b> <b>28.3 Simulator-based training</b> The person must have completed training ... This training <b>shall</b> include formal simulator-based evaluations that confirm and document that, at the completion of the training, the person has the required knowledge and skills to perform the duties of a ...
	<b>23.2.5 On-the-job training</b> <b>24.2.5 On-the-job training</b> <b>25.2.4 On-the-job training</b> <b>26.4 On-the-job training</b> <b>27.2.4 On-the-job training</b> <b>28.4 On-the-job training</b> The person must have completed on-the-job training.... This training <b>shall</b> include formal performance evaluations that confirm and document that, at the completion of the training, the person has the required knowledge and skills to perform the duties of a ...
	<b>27.2.1 Reactor operator training</b> The person must have completed the training for reactor operators specified in paragraphs 23.2.1 to 23.2.3.
	<b>32.3 Formal evaluations</b> Each reactor operator, unit 0 operator, control room shift supervisor and plant shift supervisor must complete, on a regular basis, formal knowledge and performance evaluations that confirm and document that the person possesses the knowledge and the skills covered during continuing training.
	Processes governing use of formal evaluations is documented in: <ul style="list-style-type: none"><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel</li><li>N-INS-08920-10005, Standards and Methodology for Certification Training Formal Evaluations</li><li>N-INS-08920-10022, Formal Evaluation Of Responsible Health Physicists.</li><li>N-TQD-101-00001, ANO Initial Training and Qualification Description</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li></ul>

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<ul style="list-style-type: none"><li>N-TQD-103-00001, Continuing Training and Qualification Description</li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description</li><li>N-TQD-443-00001, Radiation Protection Training And Qualification</li></ul> <p><b>Possible GAP: review each document to ensure compliance with 15.4.</b></p>	
<b>15.5 Trainer qualifications</b> The licensee <b>shall</b> ensure that the personnel tasked with administering the training and formal learner evaluations referenced in this regulatory document are duly qualified to administer training and formal learner evaluations to the workers certified or seeking certification by the CNSC.	<b>17.1.3 Documentation of training programs</b> For each position that requires a certification, the licensee <b>shall</b> retain records of: 4. the outcome of the implementation of training programs, including for each course or session in a program: e) the names and positions of the persons who prepared, conducted and graded the formal evaluations of trainees;
<b>See comments for 15.4.</b> <b>Possible GAP: review the following to ensure compliance with 15.5:</b> <ul style="list-style-type: none"><li><b>N-INS-08920-10005, Standards and Methodology for Certification Training Formal Evaluations</b></li><li><b>N-INS-08920-10022, Formal Evaluation Of Responsible Health Physicists</b></li></ul>	
<b>16. Certification Examinations and Requalification Testing</b> <b>16.1 Separation of the training and examination functions</b> The licensee <b>shall</b> ensure that, to the greatest extent possible, adequate separation and an arm’s-length relationship are maintained between the trainers delivering the training referenced in this regulatory document and the examiners administering certification examinations and requalification tests on behalf of the CNSC. At a minimum: <ul style="list-style-type: none"><li>a. no knowledge or performance-based certification examination or requalification test administered in accordance with the requirements specified in this regulatory document <b>shall</b> be designed, developed, conducted, or graded, in whole or in part, by an examiner acting as trainer to any of the candidates undergoing the examination or test</li><li>b. no trainer or examiner <b>shall</b> benefit, financially or otherwise, from the success rate of the candidates undergoing any formal learner evaluation, certification examination, or requalification test referenced in this regulatory document.</li></ul>	N/A
Based on requirements given in CNSC-EG1 & EG2, this is currently addressed in N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified personnel. <b>Possible GAP: review N-INS-08920-10003 to ensure compliance with 16.1. Consider making OPG governance less restrictive (specifically 16.1 b).</b>	
<b>16.2 Certification examinations</b> The licensee <b>shall</b> ensure that the knowledge and performance-based certification examinations referenced in this regulatory document are designed, developed, conducted, and graded by qualified examiners in accordance with the applicable CNSC requirements specified or referenced in the licence or any accompanying documentation.	<b>8. Examinations for Initial Certification</b> The licensee <b>shall</b> prepare, conduct and grade the certification examinations specified in Part III of this document in accordance with the conditions referred to in the NPP licence.
Addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel,</li><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel,</li><li>N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel.</li></ul> <p><b>No impact / no governance revision required.</b></p>	

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<b>16.3 Requalification testing</b> The licensee <b>shall</b> ensure that the knowledge and performance-based requalification tests referenced in this regulatory document are designed, developed, conducted, and graded by qualified examiners in accordance with the applicable CNSC requirements specified or referenced in the licence or any accompanying documentation.	<b>10. Requalification Tests</b> The licensee <b>shall</b> prepare, conduct and grade the requalification tests required in section 33 <b>in accordance with the conditions referred to in the NPP licence.</b>  <b>33. Requalification Tests</b> During the period of certification, each reactor operator, unit 0 operator, control room shift supervisor and plant shift supervisor <b>shall</b> complete the written and simulator-based requalification tests referred to in the NPP licence.
Addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10001, Requalification Testing of Certified Shift Personnel</li><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel.</li></ul> <b>No impact / no governance revision required.</b>	
<b>16.4 Security of certification examinations and requalification tests</b> The licensee <b>shall</b> implement and document effective policies and procedures to control access to, and the use of, the formal learner evaluations, certification examinations and requalification tests referenced in this regulatory document.  The associated security measures <b>shall</b> meet the following minimum requirements: <ul style="list-style-type: none"><li>Only personnel with a valid need to know <b>shall</b> have access to the pertinent formal learner evaluations, certification examinations and requalification tests, as well as any associated documentation and materials providing a direct clue as to their content.</li><li>Trainers <b>shall</b> not have access to, or prior knowledge of, the specific content of any certification examination or requalification test administered to their learners.</li><li>Answers to modified essay question (MEQ) examinations and tests <b>shall</b> be protected from unauthorized access.</li><li>Answer keys to multiple choice question (MCQ) examinations and tests <b>shall</b> be protected from unauthorized access.</li><li>Any repository, physical or virtual, containing MEQ or MCQ examinations and test questions <b>shall</b> be protected from unauthorized access.</li><li>In order to discharge their duties, CNSC staff participating in compliance verification activities <b>shall</b> be exempt from any security measure established by the licensee in accordance with the requirements specified in this subsection.</li></ul>	N/A
Addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified Personnel.</li></ul> <b>No impact / no governance revision required.</b>	
<b>16.5 Examiner qualifications</b> The licensee <b>shall</b> ensure that the personnel tasked with administering the certification examinations and requalification tests referenced in this regulatory document have successfully completed suitable training and are duly qualified to administer certification examinations and requalification tests to the workers certified or seeking certification by the CNSC.	N/A
Addressed by:	



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<ul style="list-style-type: none"><li>N-INS-08920-10001, Requalification Testing of Certified Shift Personnel</li><li>N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel,</li><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified personnel</li><li>N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel</li><li>N-QG-602-00001, OPERATOR TRAINING INSTRUCTOR QUALIFICATION GUIDE</li><li>N-TQD-602-00001, Nuclear Trainer Training and Qualification Description.</li></ul> <p>No impact / no governance revision required.</p>	
<p><b>17 Work Under Supervision</b></p> <p>The licensee <b>shall</b> establish and document, for each pertinent designated position identified in the licence, effective procedures for the administration of the work under supervision (WUS) referenced in this regulatory document.</p> <p>All mandatory WUS periods <b>shall</b> meet the following objectives:</p> <ul style="list-style-type: none"><li>WUS <b>shall</b> provide the worker being evaluated with a meaningful opportunity to demonstrate a functional level of competency and the ability to stand solo shifts as lead operator or shift supervisor</li><li>WUS <b>shall</b> provide operations managers with a sufficient observation period to confirm that the worker being evaluated can be trusted to stand solo shifts as lead operator or shift supervisor and can perform the pertinent duties safely and competently</li></ul> <p>When implemented as part of an initial training program, WUS <b>shall</b> not begin until the responsibility for the learner’s performance has been transferred from the training authority to the operations authority</p>	<p><b>6. Performing Duties under Supervision</b></p> <p>The licensee <b>shall</b> establish and document, for each applicable shift personnel position listed in paragraph 4.1.1, procedures regarding the performance of the duties of the position under the supervision of a certified incumbent of that position, prior to certification.</p> <p><b>23.2.7 Performing duties under supervision</b></p> <p>The person must have performed the duties of a reactor operator under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in paragraphs 23.2.1 to 23.2.5.</p> <p><b>24.2.7 Performing duties under supervision</b></p> <p>The person must have performed the duties of a unit 0 operator under the supervision of a certified incumbent of the position for a minimum of 300 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 228 of those hours must have been worked after the person has met the requirements specified in paragraphs 24.2.1 to 24.2.5</p> <p><b>25.2.6 Performing duties under supervision</b></p> <p>The person must have performed the duties of the control room shift supervisor under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in paragraphs 25.2.1 to 25.2.4.</p> <p><b>26.7 Performing duties under supervision</b></p> <p>The person must have performed the duties of the control room shift supervisor under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in subsections 26.2 to 26.4.</p> <p><b>29.3 Performing duties under supervision</b></p> <p>The person must have performed the duties of the plant shift supervisor under the supervision of a certified incumbent of the position for a minimum of 168 hours on shift to confirm and document that the person can perform those duties competently and safely. Those hours must have been worked after the person has met the requirements specified in subsection 29.2.</p>
<p>The following TQDs for initial training provide direction regarding the performance of the duties of the position under the supervision of a certified incumbent of that position, prior to certification:</p> <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description, 1.1.8 Co-Pilot Phase.</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, 1.1.7 Co-Pilot Phase.</li><li>N-TQD-105-00001, U0CRO Initial Training and Qualification Description, 1.1.8 Co-Pilot Phase.</li></ul> <p>Each TQD refers to N-GUID-09100-10004, Co-pilot Requirements for Certified Staff Candidates.</p>	

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Possible GAP: review N-GUID-09100-10004 to ensure compliance with 17.	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . Possible GAP: TQD-443 should be reviewed to ensure compliance with 17.	
<b>18. Management Interviews</b> The licensee <b>shall</b> establish and document effective procedures for preparing and conducting the various management interviews referenced in this regulatory document.  Each mandatory management interview <b>shall</b> serve an evaluation function and: a. be conducted orally by a minimum of one manager authorized to represent the licensee and to conduct the interview b. provide the worker being evaluated with a meaningful opportunity to demonstrate an adequate level of competency c. provide at least one member of the operations management team with a meaningful opportunity to make a final determination of worker competency d. be recorded in writing or via any other retrievable medium, the record of which <b>shall</b> be retained and made available to the CNSC upon request	<b>7. Nuclear Power Plant Management Interviews</b> The licensee <b>shall</b> establish and document procedures for preparing and conducting the various NPP management interviews specified in Part II and in Part III of this document.  <b>17.1.3 Documentation of training programs</b> For each position that requires a certification, the licensee <b>shall</b> retain records of: 4. the outcome of the implementation of training programs, including for each course or session in a program: f) a copy of all NPP management interviews conducted, with the expected answers; and g) the names and positions of the persons who prepared and conducted the NPP management interviews; and <b>18.4 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the senior health physicist. The person must complete this interview after having met the requirements specified in subsection 18.3 and before taking the CNSC examination specified in subsection 18.5. <b>19.2 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the senior health physicist at the NPP. The person must complete this interview after having met the requirements specified in subsection 19.1 and before taking the CNSC examination specified in subsection 19.3. <b>23.2.8 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of a reactor operator. The person must complete this interview after having met the requirements specified in paragraph 23.2.7 and those regarding certification examinations specified in subsection 23.3. <b>24.2.8 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of a unit 0 operator. The person must complete this interview after having met the requirements specified in paragraph 24.2.7 and those regarding certification examinations specified in subsection 24.3. <b>25.2.7 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the control room shift supervisor. The person must complete this interview after having met the requirements specified in paragraph 25.2.6 and those regarding certification examinations specified in subsection 25.3. <b>26.8 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the control room shift supervisor. The person must complete this interview after having met the requirements specified in subsections 26.6 and 26.7. <b>29.4 Nuclear power plant management interview</b>

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	The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the plant shift supervisor. The person must complete this interview after having met the requirements specified in subsection 29.3.
The following TQDs for initial training provide instructions conducting the various management interviews: <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description, 1.1.9 Line Management Interview.</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description, 1.1.8 Line Management Interview.</li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description, 1.1.9 Line Management Interview.</li></ul> <b>Possible GAP: review TQDs to ensure compliance with 18.</b>	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>Possible GAP: TQD-443 should be reviewed to ensure compliance with 18.</b>	
<b>19. Administrative Policies and Procedures Applicable to Workers in Training</b>  The policies and procedures specified in this section apply to any worker, whether certified or not, who is attending one of the initial training programs referenced in this regulatory document, in the context of, and in relation to, said training.	N/A
<b>No impact / no governance revision required.</b>	
<b>19.1 Reintegration of a worker in training following a prolonged training interruption</b> The licensee <b>shall</b> establish and document an effective process to manage the case of any worker reintegrating an initial training program after a prolonged training interruption. As an integral part of this process, the licensee <b>shall</b> : <ul style="list-style-type: none"><li>a. determine the need for, and perform as necessary, a formal learner evaluation, including knowledge and performance-based testing as warranted, to assess the K&amp;S retention of the worker and to identify any K&amp;S gap that the worker <b>may</b> have developed during the period of absence</li><li>b. determine the need for tailored training based on an individual training needs analysis (ITNA), considering any K&amp;S forgotten by the worker and any changes or updates to the essential K&amp;S and safety-related attributes that occurred during the period of absence</li><li>c. formulate and implement an individual training plan (ITP) as <b>may</b> be necessary</li><li>d. ensure that the worker, at a minimum, successfully completes any training and formal learner evaluation(s) missed during the period of absence</li><li>e. determine a suitable point of re-entry into the pertinent initial training program</li></ul> At a minimum, any worker who is absent from an initial training program for a period of 6 months or more <b>shall</b> undergo a formal reintegration process meeting the requirements specified in this subsection.	N/A
<b>GAP: The following TQDs need to be revised to include instructions for candidates who need to be reintegrated into training:</b> <ul style="list-style-type: none"><li><b>N-TQD-101-00001, ANO Initial Training and Qualification Description, 1.1.9 Line Management Interview.</b></li><li><b>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description.</b></li><li><b>N-TQD-105-00001, UOCRO Initial Training and Qualification Description</b></li><li><b>N-TQD-443-00001 Radiation Protection Training and Qualification.</b></li></ul>	
<b>20. Administrative Policies and Procedures Applicable to Certified Workers</b>	N/A

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The policies and procedures specified in this section apply to all certified workers in the context of, and in relation to, their employment in the pertinent designated position(s).	
<b>No impact / no governance revision required.</b>	
<b>20.1 Fitness for duty</b> The licensee <b>shall</b> implement and document effective fitness-for-duty policies and procedures providing the CNSC with reasonable assurance that certified workers are free of any physical or mental impairment that could hinder their ability to perform the duties of the pertinent designated position(s) safely and competently.  The fitness-for-duty policies and procedures applicable to certified workers <b>shall</b> be implemented consistently with the requirements and guidance specified in this and complementary regulatory documents regarding fitness for duty, including those related to the management of worker fatigue and the management of alcohol and drug use.	<b>11. Fitness-For-Duty Program</b>  <b>11.1 Physical and mental limitations</b> The licensee <b>shall</b> have in place a documented fitness-for-duty program that provides confirmation that any person seeking a certification, holding a certification or seeking renewal of a certification does not have a physical or a mental limitation that would make the person incapable of performing the duties of the applicable position.  <b>11.2 Control of personal information</b> The licensee shall establish and document policies and procedures controlling the use of the personal information related to fitness-for-duty and the access to that information.
<b>GAP to be determined, if any.</b> In 2008, OPG and the CNSC discussed the adequacy of OPG procedures for addressing the Fitness of Duty requirements. In N-CORR-00531-04263, “Request for Licence Amendments for Pickering A, Pickering B, and Darlington to Implement RD-204”, October 7, 2008 it stated: <i>“Per our discussion with CNSC staff, we are assured that documentation provided in Reference 4 describing the fitness-for-duty program meets the regulatory requirements specified in subsection 11.1 of regulatory document RD-204.”</i> Reference 4 is N-CORR-00531-04314, which listed: <b>12. The documents describing the fitness-for-duty program required under subsection 11.1 of RD-204.</b> <ul style="list-style-type: none"><li>• <i>SM Supplemental Initial Training program provides training on fitness-for-duty (reference N-OBJ-60630-00001, N-HO-60630-00001). One of the pre-requisites for this module is CBT 62808 (Continuous Behaviour Observation Program) which incorporates fitness-for-duty requirements. Corporate Safety Rules address fitness-for-duty, as well as N-PROC-HR-0002, "Limits to Hours of Work.</i></li><li>• <i>N-STD-OP-0015 Observation &amp; Coaching</i></li><li>• <i>N-PROG-AS-0002 Human Performance (Section 1.4 refers to requirements for O&amp;C)</i></li><li>• <i>N-STD-TR-0001 Conduct of Training (Section 1.2.3 (f) requires trainers to immediately report fitness for duty concerns if observed in trainees)</i></li><li>• <i>Personnel Module 1 on Counselling &amp; Discipline in SMICRSS Supplemental program (reference N-FORM-10946, associated with TQD 101 &amp; 102) which outlines TIMS IDS for the following:</i><ul style="list-style-type: none"><li>a) <i>Fundamental Skills for Supervisors</i></li><li>b) <i>Observation and Coaching Skills</i></li><li>c) <i>CBOP</i></li><li>d) <i>Wellness</i></li></ul></li><li>• <i>N-PROG-HR-0004 Occupational Health &amp; Safety Management System (Section 1.5.1 speaks to Monitoring of conformance and Compliance and specifically supervisory safety visits &amp; O&amp;C requirements: Section 2 speaks to accountabilities for ensuring workers are competent to perform their work in a safe and healthy manner.)</i></li><li>• <i>N-MAN-03600-10000 Safety Culture (Section 6.5 Qualification &amp; Training refers to requirements for managers to "ensure that their staff are fully competent for their duties" ... and that "For critical tasks in plant operations, judgment of fitness for duties includes physical and psychological considerations.")</i></li><li>• <i>N-INS-09030-10001 Rapid Human Performance Event Analysis &amp; Communication and related N-FORM-10944 Anatomy of an Event Analysis Tool which require consideration of any possible fitness-for-duty factors.</i></li></ul>	
<b>20.2 Minimum employment of certified workers</b> The licensee <b>shall</b> ensure that certified workers are employed in the designated position(s) specified on their certificate(s) to the extent necessary to maintain an adequate competency level throughout the full duration of their certification.	<b>14.1 Assignment to an operationally focused position</b> The licensee <b>shall</b> ensure that each certified operator or shift supervisor temporarily assigned to perform one of the activities listed below meets the requirements specified in paragraphs 14.1.1 to 14.1.4: 1. development and delivery of station-specific training for shift personnel seeking certification; 2. development and delivery of continuing training for shift personnel holding a certification; 3. preparation, conduct and grading of certification examinations and requalification tests for shift personnel seeking or holding a certification; 4. preparation and review of NPP operating documentation for use by certified shift personnel;



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	5. coordination or supervision of NPP operation and maintenance activities; or 6. coordination or supervision of commissioning activities or outages of reactor units or unit 0.
GAP: N-GUID-09110-10000, Certification Requirements For Certified Staff On Rotation, needs to be revised. In addition, need to identify other documents for staff working normally on shift.	
<b>20.2.1 Minimum shift requirement for operations personnel</b> Certified shift workers <b>shall</b> perform the duties of the pertinent designated position(s) for a minimum number acceptable to the CNSC of complete shifts per calendar quarter amounting to a minimum number acceptable to the CNSC of hours of shiftwork per calendar quarter.  Each certified shift worker <b>shall</b> perform the mandated minimum employment as a member of the minimum staff complement, as opposed to in any back-up or supernumerary capacity, and, to the fullest extent possible, in relation to a fuelled and operating reactor or group of reactors.	<b>14.1.1 Minimum performance per calendar quarter</b> The licensee <b>shall</b> ensure that the person acts as a responsible operator or shift supervisor in the position for which the person holds a certification for a minimum of three complete shifts per calendar quarter.
GAP: See comments for 20.2.	
<b>20.2.2 Minimum shift requirement deferment</b> When a certified shift worker fails to meet, during any given calendar quarter, an applicable minimum shift requirement, the omitted number of complete shifts and hours of shiftwork <b>shall</b> be performed in the following calendar quarter, in addition to the minimum shift requirement strictly applicable to said calendar quarter.	<b>14.3 Exemption by nuclear power plant management</b> NPP management <b>may</b> , once in any 12-month period, allow a certified operator or shift supervisor to defer to the next quarter the completion of the required minimum number of shifts specified in paragraph 14.1.1 or 14.2.1 for a given quarter.
GAP: See comments for 20.2.	
<b>20.2.3 Minimum employment of senior health physicists</b> The licensee shall ensure that workers certified for employment as an SHP regularly perform the duties of an SHP throughout the full duration of their certification.	N/A
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . GAP: TQD-443 should be reviewed to ensure compliance with 20.2.3	
<b>20.3 Management of prolonged unemployment</b> Any certified worker <b>shall</b> be formally removed from the duties of the pertinent designated position and assigned an inactive employment status who, for a period lasting 6 consecutive months or more, regardless of the rationale, is or <b>will</b> be unable to: a. attend the scheduled continuing training b. meet an applicable quarterly minimum shift requirement	<b>13. Reinstatement of a Person to the Duties of a Position Following Absence or Removal from those Duties</b>
Possible GAP: need to identify documents to be revised or created.	
<b>20.4 Removal from duty for cause</b> Any certified worker who meets any one of the criteria specified in this subsection <b>shall</b> be formally removed from the duties of the pertinent designated position for cause and assigned either an inactive or uncertified employment status as applicable.	<b>12. Removal of a Person from the Duties of a Position</b> The licensee <b>shall</b> immediately remove a person from the duties of reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor under the conditions specified in subsections 12.1 to 12.4.
GAP: Need to revise: <ul style="list-style-type: none"><li>N-GUID-09110-10000, Certification Requirements For Certified Staff On Rotation</li></ul>	

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• <b>N-TQD-103-00001, Nuclear Certified Shift Personnel Continuing Training and Qualification Description</b>	
<b>20.4.1 Failure to meet a minimum employment requirement</b> The worker has failed to meet an applicable quarterly minimum shift requirement for 2 consecutive calendar quarters.	<b>12.2 Failure to perform minimum shift duties</b> The person, while temporarily assigned to another position at the NPP, has not acted as a responsible operator or supervisor in the position for which the person holds a certification for the minimum number of complete shifts specified in paragraph 14.1.1 or 14.2.1, as appropriate, for two consecutive calendar quarters.
<b>GAP: See comments for 20.4.</b>	
<b>20.4.2 Requalification test failure</b> The worker has failed a requalification test, be it in a lead or supporting role.	<b>12.1 Requalification test failure</b> The person has failed any of the requalification tests required in section 33.
Addressed by N-INS-08920-10001, Requalification Testing of Certified Shift Personnel 1.7 Grading Assessment and Follow-up 1.7.1 Grading (c) When unsatisfactory grade is assigned to individual, the following actions shall be taken: (1) Individual shall not return to duties of position until successful completion of remedial training and requalification testing in accordance with Subsection 1.7.2, Remedial Training.	
<b>GAP: See comments for 20.4.</b>	
<b>20.4.3 Inability to work safely and competently</b> The worker was the subject of a verified positive alcohol or drug test administered in accordance with the fitness-for-duty program mandated by the CNSC, or is otherwise deemed unfit, by the licensee, to perform the duties of a designated position safely and competently for any reason, including, but not limited to: a. a medical or physical condition, be it permanent or temporary b. a mental health condition, be it permanent or temporary c. inadequate performance while on duty, including any action or decision that puts at risk the health and safety of workers, the public or the environment d. a demonstrated unwillingness or failure to take the necessary precautions to protect the health and safety of workers, the public or the environment e. a demonstrated lack of integrity or trustworthiness	<b>12.3 Inability to perform duties</b> In the opinion of the licensee, the person is not capable, for any reason, of performing the duties of the position for which the person holds a certification, including a limitation identified by the fitness-for-duty program referred to in section 11.
Section 1.3.11 of N-TQD-103-00001 - Nuclear Certified Shift Personnel Continuing Training and Qualification Description specifies actions for cases where marginal performance is observed during shift or simulator training.	
<b>GAP: See comments for 20.4.</b>	
<b>20.4.4 Certificate expiry</b> The certificate of the worker has expired.	<b>N/A</b>
<b>GAP: See comments for 20.4.</b>	
<b>20.4.5 Proposed decision not to certify or to decertify</b> The worker was identified by the CNSC as the worker concerned in a proposed decision not to certify, or a proposed decision to decertify, while a final decision by the Commission or a DO remains pending.	<b>12.4 Pending decertification</b> The person and the licensee have been informed in writing that the CNSC has initiated procedures for the decertification of the person.
<b>GAP: See comments for 20.4.</b>	
<b>20.5 Baseline reinstatement process</b>	<b>13.1 Following absence from duties</b> The licensee <b>may</b> reinstate a person who has been absent from the duties of reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor for more than two shift cycles, due to sickness, injury,

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No certified worker who has been formally removed from the duties of a designated position <b>shall</b> be allowed to perform said duties until the worker has successfully undergone a suitable baseline reinstatement process compliant with the requirements specified in this subsection.	pregnancy or other family-related responsibilities or a leave of absence, to the duties of that position if the person meets the requirements specified in paragraphs 13.1.1 to 13.1.8.
N-PROC-TR-0008 section 5.8.1 addresses Remedial Training Plan Development. <b>No impact / no governance revision required.</b>	
<b>20.5.1 Update training</b> The worker <b>must</b> have completed suitable update training covering any relevant technical or operational changes implemented, and any relevant lessons learned, while the worker was formally removed from the duties of the designated position, including, but not limited to: <ul style="list-style-type: none"><li>a. changes to reactor facility systems and subsystems</li><li>b. changes to licensee and station-specific policies, standards, and procedures</li><li>c. amendments to, or exemptions from, regulatory requirements</li><li>d. amendments to the licence or to documents referenced in the licence</li><li>e. station-specific and industry operational experience and operating events</li></ul>	<b>13.1.1 Update training</b> The person must have completed update training, appropriate to the knowledge and skill requirements of the position, covering changes or events that have occurred during the absence of the person from the position, including: <ul style="list-style-type: none"><li>1. changes to NPP systems;</li><li>2. changes to licensee and NPP policies, standards and procedures;</li><li>3. changes to regulatory requirements;</li><li>4. changes to the NPP licence or to documents referenced in the licence; and</li><li>5. NPP and industry experience and operating events.</li></ul> This training <b>shall</b> include formal knowledge and performance evaluations that confirm and document that, at the completion of the training, the person has the required knowledge and skills to perform the duties of the position.
<b>Possible GAP: See comments for 20.4.</b> <b>Need to also revise:</b> N-TQD-103-00001, Nuclear Certified Personnel Continuing Training And Qualification Description  1.3.4 (e) If the individual is absent from the duties of their certified position for more than two shift cycles and is unable to attend Continuing Training, a remedial training program shall be developed (in accordance with Section 13 of REGDOC-2.2.3, Personnel Certification, Volume III: Certification of Persons Working at Nuclear Power Plants) to self-study the relevant training material and provide simulator training/practice to refresh operating knowledge and skills. <ul style="list-style-type: none"><li>(1) Program shall be documented using T-FORM-10065, Remedial Training Plan</li><li>(2) Individual may not perform certified duties until after successful completion of remedial training program.</li></ul>	
<b>20.5.2 Refresher training</b> The worker <b>must</b> have successfully completed suitable refresher training commensurate with the duration of the period of absence or removal from duty of the worker.  At a minimum, this refresher training <b>shall</b> encompass any scheduled refresher training that the worker failed to attend while the worker was formally removed from the duty.	<b>13.1.2 Refresher training</b> The person must have completed refresher training covering the topics from the initial training that must be reviewed and practiced to ensure that the person continues to have the knowledge and the skills required to work competently in the position. The selection of topics <b>shall</b> be based on a documented assessment, performed by the licensee, of the impact of the absence from the position on the person’s competence. This training <b>shall</b> include formal written and performance evaluations that confirm and document that, at the completion of the training, the person has the required knowledge and skills to perform the duties of the position.
<b>Possible GAP: See comments for 20.5.1.</b>	
<b>20.5.3 Simulator-based training</b> For operations personnel, the worker <b>must</b> have successfully completed suitable simulator-based training covering a number and variety of scenarios commensurate with the duration of the period of absence or removal from duty of the worker.	<b>13.1.3 Simulator-based training</b> The person must have completed simulator-based exercises that cover a sufficient number of varied situations that challenge the diagnostic and decision-making abilities of the person to ensure that the person has the knowledge and the skills required to work competently in the position. The selection of exercises <b>shall</b> be based on a documented assessment, performed by the licensee, of the impact of the absence from the position on the person’s competence.

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At a minimum, this simulator-based training <b>shall</b> challenge the diagnostic and decision-making skills of the worker and encompass any scheduled simulator-based training that the worker failed to attend during the period of absence or removal from duty.	This training <b>shall</b> include formal simulator-based evaluations that confirm and document that, at the completion of the training, the person has the required diagnostic and decision-making abilities to perform the duties of the position.
Possible GAP: See comments for 20.5.1.	
<b>20.5.4 Work under supervision</b> For operations personnel, the worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform said duties competently and safely.	<b>13.1.7 Performing duties under supervision</b> The person must have performed the duties of the position under the supervision of a certified incumbent of the position for the number of shifts that the licensee considers necessary to confirm and document that the person can perform those duties competently and safely.
GAP: See comments for 20.5.1.	
<b>20.5.5 Management interview</b> When removed from duty for cause, the worker <b>must</b> have successfully undergone a formal management interview.	<b>13.1.8 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the position. The person must complete this interview after having met the requirements specified in paragraphs 13.1.1 to 13.1.7.
GAP: See comments for 20.5.1.	
<b>20.6 Remediation following removal from duty for cause</b> In addition to the baseline reinstatement process specified in subsection 20.5, no certified worker who has been removed from duty for cause based on one of the criteria defined in subsection 20.4 <b>shall</b> be allowed to perform the duties of the pertinent designated position until the worker has successfully undergone suitable remediation consistent with the applicable cause for the removal, as further specified in this subsection.	<b>13.2 Following removal from duties</b>
GAP: needs to be addressed in governance.	
<b>20.6.1 Failure to meet a minimum employment requirement</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a failure to meet a minimum employment requirement, if: a. the circumstances that prevented the worker from performing the duties of the pertinent designated position no longer exist b. the worker has performed, under the supervision of a qualified worker certified for employment in the pertinent designated position, a number of complete shifts and hours of shiftwork no less than the minimum number of complete shifts and hours of shiftwork that the worker failed to complete in the quarter preceding the removal from duty	<b>13.2.2 Following failure to perform minimum shift duties</b> The licensee <b>may</b> reinstate a person who has been removed from the duties of reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor, under subsection 12.2, to the duties of the position if: 1. the circumstances that prevented the person from performing the duties of the position for which the person holds a certification for the applicable minimum number of shifts no longer exist; and 2. the person meets the requirements specified in paragraphs 13.1.1 to 13.1.8.
GAP: needs to be addressed in governance.	
<b>20.6.2 Requalification test failure</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a requalification test failure once the worker has successfully completed a remedial requalification test equivalent to the failed requalification test. This remedial requalification test <b>shall</b> be equivalent in all respects, but <b>must</b> not be the same as the failed requalification test or any other remedial requalification test the candidate <b>may</b> have failed as part of the reinstatement process. Furthermore, any restrictions set in complementary documents regarding the allowed topic overlap between requalification tests <b>shall</b> apply.	<b>13.2.1 Following a requalification test failure</b> The licensee <b>may</b> reinstate a person who has been removed from the duties of reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor, under subsection 12.1, to the duties of the position if the person has met the applicable conditions referred to in the NPP licence.
Possible GAP. Need to consider Section 20.5, Baseline reinstatement process.	



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See comments for 20.4.2 and 20.6.	
<b>20.6.3 Inability to work safely and competently</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a removal from duty due to an inability to work safely and competently if the basis for the removal from duty has been adequately remedied or mitigated or no longer exists.	<b>13.2.3 Following inability to perform duties</b> The licensee <b>may</b> reinstate a person who has been removed from the duties of reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor, under subsection 12.3, to the duties of the position if: 1. the condition or limitation why the person was not capable of performing the duties of the position for which the person holds a certification has been rectified; and 2. the person meets the requirements specified in paragraphs 13.1.1 to 13.1.8.
GAP: needs to be addressed in governance.	
<b>20.6.4 Certificate expiry</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a certificate expiry if and when officially informed of the Commission’s or DO’s decision to recertify the worker.	N/A
No impact/governance change required.	
<b>20.6.5 Proposed decision not to certify or to decertify</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position who was the subject of a proposed decision not to certify, or a proposed decision to decertify, if and when officially informed of the Commission’s or DO’s decision to certify, or not to decertify, the worker.	<b>13.2.4 Following completion of a decertification hearing</b> The licensee <b>may</b> reinstate a person who has been removed from the duties of reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor, under subsection 12.4, to the duties of the position upon being informed in writing of the CNSC decision not to decertify the person after the person or the licensee has been heard in accordance with the procedure referred to in section 13 of the Class I Nuclear Facilities Regulations.
No impact/governance change required.	
<b>20.7 Notification of change in employment status</b> <b>20.7.1 Notification of removal from duty</b> The licensee <b>shall</b> promptly inform the CNSC of any certified worker removed from the duties of a designated position, be it due to a prolonged period of unemployment or a removal for cause, specifying: a. the full legal name of the worker b. the pertinent designated position c. the resulting employment status assigned to the worker as per subsection 3.2 d. the basis for the removal from duty as per subsection 20.3 or 20.4, as applicable	N/A
<b>Currently addressed by:</b> <ul style="list-style-type: none"><li>N-PROC-RA-0005 Written Reporting To Regulatory Agencies</li><li>N-FORM-10824, CNSC Personnel Notification and Event Report</li><li>Perhaps also N-PROC-RA-0020, Preliminary Event Notifications</li></ul> <b>Possible GAP: needs to be clearly addressed in governance (N-TQD-103-00001).</b>	
<b>20.7.2 Notification of reinstatement to duty</b> The licensee <b>shall</b> promptly inform the CNSC of any certified worker reinstated to the duties of a designated position, to include: a. the full legal name of the worker b. the pertinent designated position c. the resulting employment status assigned to the worker as per subsection 3.2	N/A

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<p><b>d.</b> the basis for the prior removal from duty and a confirmation that said basis no longer exists or has been adequately remedied or mitigated, as applicable</p> <p><b>e.</b> a summary of the baseline reinstatement process successfully completed by the worker</p> <p><b>f.</b> when following a removal for cause, a summary of any remediation action(s) taken to satisfy the applicable requirements specified in subsection 20.6</p>	
<b>Possible GAP: see comments for 20.7.1.</b>	
<p><b>21. Information Management</b> The licensee <b>shall</b> implement and document effective information management policies and procedures ensuring:</p> <ul style="list-style-type: none"><li>a. the retention and ready retrieval of the corporate documentation and proof-of-competency records related to personnel certification</li><li>b. the safeguard and control of sensitive information pertaining to personnel certification</li><li>c. the unrestricted access, by authorized CNSC staff, to the corporate documentation and personnel records specified in this section</li></ul>	<b>N/A</b>
Training RECORDS currently covered by N-PROC-TR-0012, Records and Documentation <b>Possible Gap: Need to review TR-00012 to ensure it fully addresses 21.</b>	
<p><b>21.1 Corporate documentation</b> <b>21.1.1 Roles and responsibilities</b> The licensee <b>shall</b> document, retain, and make available to the CNSC upon request, the roles and responsibilities of:</p> <ul style="list-style-type: none"><li>a. certified workers</li><li>b. all personnel, including management, involved in the training and qualification of workers seeking or holding a certification, including trainers, examiners, and managers delegated with relevant approval authorities</li></ul>	<b>N/A</b>
<p>Currently addressed in:</p> <ul style="list-style-type: none"><li>• N-MAN-08131-10000_CNSC-006; Shift Manager, Darlington Nuclear.</li><li>• N-MAN-08131-10000_CNSC-007; Shift Manager, Pickering Nuclear.</li><li>• N-MAN-08131-10000_CNSC-008; Control Room Shift Supervisor, Darlington Nuclear</li><li>• N-MAN-08131-10000_CNSC-010; Authorized Nuclear Operator</li><li>• N-MAN-08131-10000_CNSC-025; Unit 0 Control Room Operator</li><li>• N-MAN-08131-10000_CNSC-028; Control Room Shift Supervisor, Pickering Nuclear.</li><li>• N-MAN-08131-10000_CNSC-031; Responsible Health Physicist</li><li>• Perhaps also:<ul style="list-style-type: none"><li>○ N-MAN-08131-10000_CNSC-003; DIRECTOR, OPERATIONS AND MAINTENANCE.</li><li>○ N-MAN-08131-10000 S0-0001, Standard Accountabilities For A Manager</li></ul></li></ul> <p><b>Possible Gap: need to ensure documents exist to comply with part b) for management and trainers, OTS/ATS/examiners, Admin, etc.</b></p>	
<p><b>21.1.2 Operational procedures</b> The licensee <b>shall</b> retain, and make available to the CNSC upon request, a copy of the latest version of the licensee and station-specific policies, procedures and technical diagrams referenced by certified workers to perform the duties of the designated positions safely and competently, including those related to:</p> <ul style="list-style-type: none"><li>a. operating policies and principles</li><li>b. worker performance expectations</li></ul>	<p><b>16. Availability of Documents</b> The licensee <b>shall</b> make available to the CNSC a copy of the documents listed below, including the approved revisions of the documents:</p> <ul style="list-style-type: none"><li>1. the licensee’s and NPP policies, standards and procedures related to the management and conduct of NPP operation, including the operating documentation available in the NPP control room;</li><li>2. the licensee’s and NPP policies, standards and procedures related to radiation protection;</li></ul>

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<p>c. radiation protection</p> <p>d. normal and abnormal operations</p> <p>e. abnormal incidents</p> <p>f. power reduction actions</p> <p>g. severe accident management</p>	<p>3. the licensee’s and NPP policies, standards and procedures related to training and qualifying persons seeking a certification;</p> <p>4. the licensee’s and NPP policies, standards and procedures related to training and maintaining the qualification of persons holding a certification;</p> <p>5. the documents used for the training of persons seeking a certification;</p> <p>6. the documents used for the training of persons holding a certification;</p> <p>7. the documents used for the training of non-certified operators on NPP systems; and</p> <p>8. the documents used for the training of non-certified operators in radiation protection.</p>
Already partially addressed in N-PROC-RA-0028, Support Of Canadian Nuclear Safety Commission Type I/II Inspections	
No impact/governance change required.	
<p><b>21.1.3 Training and qualifying governance</b></p> <p>For each designated position referenced in the licence, the licensee <b>shall</b> document, retain, and make available to the CNSC upon request, the policies, standards, and procedures for training and qualifying the workers seeking a certification, and for training and maintaining the qualification of the workers holding a certification, including the procedures for:</p> <p>a. administering the initial and continuing training</p> <p>b. preparing and administering the formal learner evaluations administered as part of the initial and continuing training</p> <p>c. preparing and administering certification examinations and requalification tests</p> <p>d. managing work under supervision (WUS) periods</p> <p>e. preparing and administering management interviews</p> <p>f. maintaining comprehensive and accurate personnel records</p>	<p><b>17.1.1 Governing documentation</b></p> <p>The licensee <b>shall</b> retain the policies, standards and procedures for training and qualifying persons seeking a certification and for training and maintaining the qualification of persons holding a certification, including:</p> <p>1. the procedures for reviewing and approving the outcome of each phase of the systematic approach to training;</p> <p>2. the procedures for preparing, conducting and grading the formal evaluations that must be administered to persons seeking or holding a certification;</p> <p>3. the procedures regarding the performance of the duties of a position under supervision by shift personnel seeking a certification;</p> <p>4. the procedures for preparing, conducting and grading the certification examinations that must be administered to shift personnel seeking a certification;</p> <p>5. the procedures for preparing and conducting the NPP management interviews that must be administered to persons seeking a certification, holding a certification or seeking renewal of a certification;</p> <p>6. the procedures for preparing, conducting and grading the requalification tests that must be administered to shift personnel holding a certification; and</p> <p>7. the procedures for the retention of training records for persons seeking or holding a certification.</p>
<p><b>Training RECORDS currently covered by N-PROC-TR-0012, Records and Documentation</b></p> <p><b>Possible Gap: Need to review TR-00012 to ensure it fully addresses 21.1.3.</b></p> <p><b>Also need to ensure the following TQDs address all of 21.1.3:</b></p> <ul style="list-style-type: none"><li>• N-TQD-101-00001, ANO Initial Training and Qualification Description</li><li>• N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li><li>• N-TQD-103-00001, Continuing Training and Qualification Description</li><li>• N-TQD-105-00001, UOCRO Initial Training and Qualification Description</li><li>• N-TQD-443-00001, Radiation Protection Training and Qualification</li><li>• N-TQD-602-00001, Nuclear Trainer Training and Qualification Description; and</li><li>• N-QG-602-00001, Operator Training Instructor Qualification Guide.</li></ul>	
<p><b>21.1.4 Trainer and examiner qualifications</b></p> <p>The licensee <b>shall</b> document, retain, and make available to the CNSC upon request, a record of the qualifications of the trainers and examiners referenced in this regulatory document.</p>	N/A
Training RECORDS currently covered by N-PROC-TR-0012, Records and Documentation	

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<b>Possible Gap: Need to ensure the following address all of 21.1.4:</b> <ul style="list-style-type: none"><li>N-TQD-602-00001, Nuclear Trainer Training and Qualification Description; and</li><li>N-QG-602-00001, Operator Training Instructor Qualification Guide.</li></ul>	
<b>21.2 Personnel records</b> For each worker certified or seeking certification for employment in a designated position, the licensee <b>shall</b> retain, and make available to the CNSC upon request, adequate personnel records for a retention period equal to the duration of the employment of the worker, be it as an employee or a contractor, plus 5 years after the worker ceases to be employed in any capacity. At a minimum, said personnel records <b>shall</b> encompass:	<b>17.2 Personal records</b> The licensee <b>shall</b> retain the records specified in paragraphs 17.2.1 to 17.2.6 for each person seeking or holding a certification. These records <b>shall</b> be kept for the period that the worker is employed by the licensee and for five years after the worker ceases to be employed, as specified in subsection 14(5) of the Class I Nuclear Facilities Regulations.
Training RECORDS currently covered by N-PROC-TR-0012, Records and Documentation and: <ul style="list-style-type: none"><li>RRC TRN-0002, Retention – Life of Facility plus 80 years.</li><li>RRC TRN-0010, Retention – Employee Termination plus 15 years.</li></ul>	
a. Education or literacy level – The name and address of any educational institution or learning provider from which the worker obtained an accreditation, including any diploma, degree or certificate, and a copy of any diploma, degree or certificate required by the licensee’s personnel selection program.	<b>17.2.1 Records of education</b> The licensee <b>shall</b> retain the name and address of the educational establishments where the diplomas, degrees or certificates required for the position were obtained.
Records currently addressed in TQDs in section 3.0, RECORDS AND REFERENCES <b>Possible GAP: Need to ensure a copy of the diploma, degree or certificate required by the personnel selection program (if any) is filed in ITRs.</b>	
b. Prior work experience – Comprehensive records of any employment period(s) required by the licensee’s personnel selection program, or as part of the mandated plant familiarization training, including, in each case, the name of the employer, the address of the work site, and the effective start and end dates.	<b>17.2.2 Records of experience</b> The licensee <b>shall</b> retain the name and address of the facilities where the experience required for the position was obtained, indicating the type and the number of years of experience.
Records currently addressed in TQDs in section 3.0, RECORDS AND REFERENCES <b>Possible GAP: Need to ensure this information is filed in ITRs.</b>	
c. Personnel selection interviews and tests – Comprehensive records of any personnel selection interview or test, including the effective date and results in each case, administered as part of the licensee’s personnel selection program. d. Personnel transfer – Comprehensive records of any information required or collected as part of a personnel transfer. e. Advancement – Comprehensive records of any information required or collected as part an advancement to a shift supervisor or senior shift supervisor position.	N/A
Records currently addressed in TQDs in section 3.0, RECORDS AND REFERENCES <b>Possible GAP: Need to ensure this information is filed in ITRs.</b>	
f. Training – Comprehensive records of the initial training and continuing training successfully completed by the worker, including the start and end dates of each distinct training period or milestone.	<b>17.2.3 Training records</b> The licensee <b>shall</b> retain records of the initial training and continuing training received, including the dates when training was received.
Records currently addressed in TQDs in section 3.0, RECORDS AND REFERENCES, and in TR-0012. <b>Possible GAP: Need to ensure this information is filed in ITRs.</b>	



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g. Formal learner evaluations – Comprehensive records of the formal learner evaluations administered to the worker as part of their initial or continuing training, including, in each case, the dates on which the evaluations were conducted, the results, and the full legal name(s) of the evaluator(s)	<b>17.2.4 Records of evaluations and interviews</b> The licensee <b>shall</b> retain the dates and the results of all formal evaluations and interviews required for the position.
Records currently addressed in: <ul style="list-style-type: none"><li>TQDs in section 3.0, Records And References, and in TR-0012.</li><li>N-INS-08920-10005 Standards And Methodology For Formal Evaluations</li><li>N-TQD-103-00001, 1.3.8 Evaluation of Knowledge and Performance</li><li>N-INS-09110-10059, Simulator Performance Observations and Crew Critiques.</li></ul> <b>Possible GAP: Need to ensure this information is filed in ITRs and in Records as required.</b>	
h. Work under supervision – Comprehensive records of any WUS performed by the worker, including, in each case, the associated requirement being met, the date of each shift worked under supervision, and the full legal name of, and the CNSC certification held by, the certified worker who supervised the worker.	N/A
<b>Possible GAP: Need to review and update as required N-GUID-09100-10004, Co-pilot Requirements for Certified Staff Candidates</b>	
i. Management interviews – Comprehensive records of the management interviews undergone by the worker, including, in each case, the date of the interview, the full legal name(s) and position(s) of the interviewer(s), and a verbatim or summary description of the questions and answers exchanged during the interview.	<b>17.2.4 Records of evaluations and interviews</b> The licensee <b>shall</b> retain the dates and the results of all formal evaluations and interviews required for the position.
Records currently addressed in TQDs in section 3.0, Records And References, and in TR-0012. <b>Possible GAP: Need to ensure this information is filed in ITRs and in Records as required.</b>	
j. Certification examinations – The certification examination records referenced in the licence or any accompanying documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying documentation.	<b>17.3 Certification examination records</b> The licensee <b>shall</b> retain the certification examination records referred to in the NPP licence.
Currently addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel,</li><li>N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel</li></ul> No impact / no governance revision required.	
k. Requalification tests – The requalification testing records referenced in the licence or any accompanying licensing documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying licensing documentation.	<b>17.4 Requalification test records</b> The licensee <b>shall</b> retain the requalification test records referred to in the NPP licence.
Currently addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10001, Requalification Testing of Certified Shift Personnel</li></ul> No impact / no governance revision required.	
l. Employment records – The employment records specified in subsection 3.3.	<b>17.2.5 Temporary assignments to other positions</b> The licensee <b>shall</b> retain records of any temporary assignment referred to in section 14 that exceeds one shift cycle, including the nature and dates of the assignment.
Records currently addressed in TQDs in section 3.0, Records And References, and in TR-0012. <b>Possible GAP: Need to ensure this information is filed in ITRs and in Records as required.</b>	

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m. Fitness for duty – Any information collected regarding the worker’s fitness for duty, except for any sensitive or privileged information protected by privacy laws.	<b>17.5 Fitness-for-duty records</b> The licensee <b>shall</b> retain, for a minimum of 10 years, records of: 1. the fitness-for-duty program for persons seeking a certification, holding a certification or seeking renewal of a certification; and 2. the policies and procedures controlling the use of the personal information related to fitness-for-duty and the access to that information.
Records currently addressed in TQDs in section 3.0, Records And References, and in TR-0012. <b>Possible GAP: Need to ensure this information is filed in ITRs and in Records as required.</b>	
n. Removals and reinstatements – Comprehensive records of all removals from, and reinstatements to, the duties of a designated position, including, in each case, the effective date of removal and the basis for the removal and, when applicable, the effective date of reinstatement and the actions taken to reinstate the worker.	<b>17.2.6 Temporary removals from the position</b> The licensee <b>shall</b> retain records of any temporary removal of the person from the position by the licensee, including the reasons for the removal and actions taken to reinstate the person in the position.
<b>Currently addressed by:</b> <ul style="list-style-type: none"><li>• <b>N-PROC-RA-0005 Written Reporting To Regulatory Agencies</b></li><li>• <b>N-FORM-10824, CNSC Personnel Notification and Event Report</b></li><li>• <b>Perhaps also N-PROC-RA-0020, Preliminary Event Notifications</b></li></ul> <b>Possible GAP: needs to be clearly addressed in governance.</b>	
<b>Subpart B – Physical Infrastructure</b>	<b>N/A</b>
The licensee <b>shall</b> ensure that the reactor facility is equipped or associated with the physical infrastructure necessary to administer the knowledge and performance-based training, certification examinations and requalification tests specified in this regulatory document, including, at a minimum, the facilities specified in subpart B.	<b>N/A</b>
<b>See comments for 22 to 23.5.4.</b>	
<b>22. Knowledge-Based Examination and Testing Facilities</b> The licensee <b>shall</b> ensure that examiners have access to adequate facilities allowing for the administration of the pertinent knowledge-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures.	<b>N/A</b>
<b>No impact/governance change required.</b>	
<b>23. Performance-Based Examination and Testing Facilities</b> The licensee <b>shall</b> ensure that examiners have access to a full-scope simulator, or an alternate simulator acceptable to the CNSC, that permits the administration of the pertinent performance-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures. All performance-based certification examinations and requalification tests referenced in this regulatory document <b>shall</b> be administered in simulator facilities or using simulation systems acceptable to the CNSC.	<b>15.1 Full-scope simulator</b> The licensee <b>shall</b> ensure that each NPP has a full-scope simulator facility in service for training and examining persons seeking or holding a certification as reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor.
<b>No impact/governance change required.</b>	
<b>23.1 Simulation capabilities</b>	<b>15.1.1 Simulation capabilities</b>

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<p>The simulator <b>shall</b> be capable of simulating, realistically and in real time, all significant plant manoeuvres and transients that <b>may</b> occur under normal and abnormal operating conditions, including:</p> <ul style="list-style-type: none"><li>a. reactor start-up and shutdown</li><li>b. major plant upsets and accident conditions</li><li>c. all significant failures of systems and associated subsystems and equipment, and the consequences of such failures</li><li>d. the system and equipment responses to operator actions</li></ul> <p>For conditions and failures that <b>may</b> vary in magnitude, such as pipe breaks, loss of inventory, loss of flow, loss of pressure and loss of vacuum, the simulator <b>shall</b> have adjustable rates to simulate all possible degrees of severity of a condition or failure that affect system responses or operator actions.</p>	<p>The simulator <b>shall</b> be capable of simulating, realistically and in real time, all significant NPP manoeuvres and transients that <b>may</b> occur under normal and abnormal operating conditions, including:</p> <ul style="list-style-type: none"><li>1. NPP start-ups and shutdowns;</li><li>2. major NPP upsets and accident conditions; and</li><li>3. all significant failures of systems and their equipment and the consequences of such failures.</li></ul> <p>For conditions and failures that <b>may</b> vary in magnitude – such as pipe breaks, loss of inventory, loss of flow, loss of pressure, and loss of vacuum – the simulator <b>shall</b> have adjustable rates to simulate all possible degrees of severity of a condition or failure that impact unit response or operator actions.</p>
No impact/governance change required.	
<p><b>23.2 Physical layout</b></p> <p>To the fullest extent possible, the simulator <b>shall</b> replicate the operating and monitoring systems and equipment available to certified workers in the main control room, as well as the spatial relationships linking these systems and equipment.</p> <p>In cases where the CNSC has accepted the use of a simulator other than a full-scope simulator, either to complement or as an alternative to the full-scope simulator, the alternate simulator <b>shall</b> meet the requirements specified in this section to the fullest extent possible, within the physical restrictions or functional limitations inherent to the alternate simulator.</p>	N/A
No impact/governance change required.	
<p><b>23.3 Simulator operating room</b></p> <p>The simulator operating room <b>shall</b> be shielded from the main control room replica in such a manner as to prevent the candidate(s) who are being evaluated from seeing or hearing any data being recorded, any input entered in the simulator, or any communication between the simulator operator and the examiner(s) and other examination team members.</p>	<p><b>15.3 Location of the simulator operating facility</b></p> <p>The simulator operating facility <b>shall</b> be separated from the control room replica so that the persons being evaluated cannot become aware of the data recorded or of the inputs to the simulator being entered by the simulator operator.</p>
No impact/governance change required.	
<p><b>23.4 Communication systems and equipment</b></p> <p>The simulator <b>shall</b> be equipped with functional replicates of the communication or warning system(s) or equipment used by certified workers in the main control room of the simulated reactor facility, including, as applicable:</p> <ul style="list-style-type: none"><li>a. telephones or other two-way, internal communication system</li><li>b. a radiation emergency warning system, including any visual or audible alarm</li><li>c. a fire emergency warning system, including any visual or audible alarm</li><li>d. a public address system</li></ul>	<p><b>15.1.2 Functional devices</b></p> <p>The simulator <b>shall</b> be equipped with the following functional devices that replicate those of the NPP main control room:</p> <ul style="list-style-type: none"><li>1. telephone system;</li><li>2. radiation emergency warning siren;</li><li>3. fire emergency warning siren; and</li><li>4. public address system.</li></ul>
No impact/governance change required.	
<p><b>23.5 Data-recording systems and equipment</b></p> <p>In order to facilitate the conduct and grading of the performance-based certification examinations and requalification tests referenced in this regulatory document, the simulator <b>shall</b> be equipped with adequate data-recording systems and equipment meeting the minimum requirements specified in this subsection.</p>	<p><b>15.2 Data recording devices</b></p> <p>In addition, for the simulator-based certification examinations and requalification tests for shift personnel specified in Part III, the simulator <b>shall</b> be equipped with data recording devices that meet the requirements specified in paragraphs 15.2.1 to 15.2.3. These devices must be capable of being synchronized to within two seconds of each other.</p>

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<b>No impact/governance change required.</b>	
<b>23.5.1 Recording of operator actions</b> The simulator <b>shall</b> allow for the recording, retrieval, and printing, in chronological order, along with the time of occurrence, of: <b>a.</b> all malfunctions initiated by the simulator operator all the operator actions performed by the candidate(s) via the simulated control panels and instrumentation	<b>15.2.1 Operator action monitor</b> The simulator <b>shall</b> be equipped with an operator action monitor capable of printing in chronological order, with their respective time of occurrence, all malfunctions initiated by the simulator operator and all the actions performed on the control panels during an examination or test.
<b>No impact/governance change required.</b>	
<b>23.5.2 Recording of system parameters</b> The simulator <b>shall</b> allow for: <b>a.</b> the recording, retrieval, and printing of all the system parameter values relevant to: (i) the evaluation of the operator actions performed by the candidate(s) (ii) the verification of the simulator fidelity <b>b.</b> the graphical representation and printing of the variation of said system parameter values in relation to time, based on an adequate sampling frequency, and for a minimum recording period of 2 hours	<b>15.2.2 Recording of system parameters</b> The simulator <b>shall</b> have provisions for either: 1. tracing, with adequate precision, graphics of any selection of 48 system parameters versus time for up to two hours and for printing those graphics; or 2. storing and printing the values versus time of any selection of 48 system parameters sampled at an adequate frequency during a period of up to two hours.
<b>No impact/governance change required.</b>	
<b>23.5.3 Audiovisual recording system</b> The simulator <b>shall</b> be equipped with an audiovisual recording system allowing for: <b>a.</b> recording and replaying the actions performed by each candidate being evaluated <b>b.</b> recording and replaying all vocal communications, including telephone exchanges, between the candidate(s) being evaluated and the other members of the operating team <b>c.</b> the identification of the voice of each candidate being evaluated <b>d.</b> the identification of the operating controls, instruments, and references used by the candidate(s) being evaluated <b>e.</b> the overlay of the time, real or simulated, on the audiovisual recordings	<b>15.2.3 Video system</b> The simulator <b>shall</b> be equipped with a video system that: 1. is capable of recording all the actions each person being evaluated performs in the control room during an examination or test; 2. has sufficient resolution to permit the examiners to identify, with the aid of the corresponding control panel photographs, the controls and instruments used by the persons being evaluated; 3. is capable of displaying time on the recordings; 4. is capable of recording clearly all verbal communications and telephone conversations between the persons being evaluated and other members of the operating team during an examination or test; and 5. allows for unequivocal identification of the voice of each person being evaluated.
<b>No impact/governance change required.</b>	
<b>23.5.4 Control of audiovisual data</b> The licensee <b>shall</b> establish and document effective policies and procedures to control the access to, and the use of, the audiovisual data collected during the design, development and conduct of certification examinations and requalification tests.	<b>15.4 Control of data</b> The licensee <b>shall</b> establish and document policies and procedures controlling the use of the data recorded by the video system specified in paragraph 15.2.3 and the access to those data.
Possible addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10002, Simulator-based Initial Certification Examinations for Shift Personnel,</li><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified personnel</li><li>N-INS-08920-10001, Requalification Testing of Certified Shift Personnel</li></ul> <b>Possible GAP: Need to ensure each INS adequately addresses 23.5.4</b>	
Part III – Worker Qualifications Subpart C – Operations Personnel	<b>N/A</b>
<b>24. Operations Personnel Certification</b> The requirements specified in this section pertain to workers employed or seeking employment in one of the following generic classes of designated positions:	<b>4.1.1 Training and qualifying for initial certification</b> The licensee <b>shall</b> establish and document policies and procedures for training and qualifying persons seeking certification for the positions listed below that are applicable to its nuclear power plants (NPPs):



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a. auxiliary systems operator (ASO) b. reactor operator (RO) c. shift supervisor	1. senior health physicist; 2. reactor operator; 3. unit 0 operator; 4. control room shift supervisor; and 5. plant shift supervisor.
No impact / no governance revision required.	
<b>24.1 Core qualifications for operations personnel</b> Any worker referred to in this section <b>shall</b> meet, at the time of application for certification, the core qualifications for operations personnel specified in this subsection.	<b>23.2 Initial training requirements</b> A person seeking certification as reactor operator at a given NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 23.2.1 to 23.2.8.
	<b>24.2 Initial training requirements</b> A person seeking certification as unit 0 operator at a given multi-unit NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 24.2.1 to 24.2.8.
	<b>25.2 Initial training requirements</b> A person seeking certification as control room shift supervisor at a given multi-unit NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 25.2.1 to 25.2.7.
	<b>27.2 Initial training requirements</b> A person seeking certification as plant shift supervisor at a given single-unit NPP <b>shall</b> , at the time of certification, meet the requirements specified in paragraphs 27.2.1 to 27.2.7.
See comments for section 5.2.	
<b>24.1.1 Personnel selection</b> The worker <b>must</b> have met, prior to the start of their initial training, the basic prerequisites specified in sub-subsection 14.2.1.	N/A
Possible GAPS: See comments for 14.1	
<b>24.1.2 General knowledge</b> The worker <b>must</b> have successfully completed general training based on a training system and <b>must</b> consequently possess the fundamental knowledge, including the applied sciences and engineering principles, relevant to the design and operation of the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.	<b>23.2.1 General training</b> The person must have completed training, appropriate to the knowledge requirements of the position, covering ....:
	<b>24.2.1 General training</b> The person must have completed training, appropriate to the knowledge requirements of the position, covering ....:
	<b>25.2.1 Reactor operator training</b> The person must have completed the training for reactor operators specified in paragraphs 23.2.1 to 23.2.3.
	<b>27.2.1 Reactor operator training</b> The person must have completed the training for reactor operators specified in paragraphs 23.2.1 to 23.2.3.
Possible GAPS: See comments for 14.1	
Currently addressed by: <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li><li>N-TQD-105-00001, U0CRO Initial Training and Qualification Description</li></ul>	

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Should be no impact / no governance revision required (unless program changes).	
<b>24.1.3 Plant familiarization</b> The worker <b>must</b> have successfully completed, prior to the start of the station-specific training specified in sub-subsection 24.1.4, plant familiarization training based on a training system and <b>must</b> consequently possess, at a minimum, a basic understanding of: <ul style="list-style-type: none"><li>a. the physical layout of the reactor facility identified in the licence, including the location and size of the major systems, subsystems, and equipment</li><li>b. the management system and organizational infrastructure necessary to operate said reactor facility under normal, abnormal, and emergency conditions, including the mandate, roles and responsibilities of the key personnel and groups of personnel</li></ul>	<b>23.1.2 Minimum experience</b> 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 .....
	<b>24.1.2 Minimum experience</b> 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 ...
	<b>25.1.2 Minimum experience</b> 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 ...
	<b>27.1.2 Minimum experience</b> 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 ...
Minimum experience currently addressed by: <ul style="list-style-type: none"><li>• TQD-101-00001, ANO Initial Training and Qualification Description</li><li>• N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li><li>• N-TQD-105-00001, U0CRO Initial Training and Qualification Description</li></ul> In each TQD, Section 1.1.2, Entry Level Requirements, Selection, and Development Phase, states: <ul style="list-style-type: none"><li>(a) Entry Level Requirements, Selection, and Development phase shall be implemented in accordance with:<ul style="list-style-type: none"><li>• N-GUID-09100-10002, Entry Level Requirements and Selection Guide For ANOITs/U0 CROITs and CRSSITs.</li></ul></li></ul> <b>Possible GAPS: N-GUID-09100-10002 needs to be revised to comply with 24.1.3.</b>	
<b>24.1.4 Station-specific knowledge</b> The worker <b>must</b> have successfully completed station-specific training based on a training system and <b>must</b> consequently possess the detailed knowledge necessary to safely and competently operate, under normal, abnormal, and emergency conditions, the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.	<b>23.2.3 Nuclear power plant-specific training</b> The person must have completed training, appropriate to the knowledge requirements of the position, covering ...
	<b>24.2.3 Nuclear power plant-specific training</b> The person must have completed training, appropriate to the knowledge requirements of the position, covering ...
	<b>25.2.1 Reactor operator training</b> The person must have completed the training for reactor operators specified in paragraphs 23.2.1 to 23.2.3.
	<b>27.2.1 Reactor operator training</b> The person must have completed the training for reactor operators specified in paragraphs 23.2.1 to 23.2.3.
Currently addressed by: <ul style="list-style-type: none"><li>• N-PROC-TR-0008, Systematic Approach to Training</li><li>• N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>◦ 1.1.5 Station Systems (Part A) and Integrated Plant Operation (Part B) Phases</li></ul></li><li>• N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>◦ 1.1.3 Science Fundamentals and Equipment Principles, Radiation Protection, Station Systems, Integrated Plant Operations</li></ul></li><li>• N-TQD-105-00001, U0CRO Initial Training and Qualification Description</li></ul>	

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○ 1.1.5 Station Systems (Part A) and Integrated Plant Operation (Part B) Phases	
<b>GAPS: Each TQD needs to be revised to comply with revision 2 and to remove references to requirements given in Version 1.</b>	
<b>24.1.5 Nuclear emergency management</b> The worker <b>must</b> possess adequate knowledge of nuclear emergency response and the management of beyond-design-basis accidents, including the roles and responsibilities of certified workers regarding emergency operating procedures and severe accident management.	<b>N/A</b>
<b>POSSIBLE GAP: Each program needs to include Nuclear Emergency Management training to comply with 24.1.5. Need to be prepared to show where this is covered.</b>	
<b>24.1.6 On-the-job training</b> The worker <b>must</b> have successfully completed on-the-job training (OJT) based on a training system covering, at a minimum, the relevant knowledge and skills (K&S) and safety-related attributes acquired or reinforced most effectively through OJT.	<b>23.2.5 On-the-job training</b> The person must have completed on-the-job training, appropriate to the knowledge and skill requirements of the position, covering...:
	<b>24.2.5 On-the-job training</b> The person must have completed on-the-job training, appropriate to the knowledge and skill requirements of the position, covering...:
	<b>25.2.4 On-the-job training</b> The person must have completed on-the-job training, appropriate to the knowledge and skill requirements of the control room shift supervisor, covering ...:
	<b>26.4 On-the-job training</b> The person must have completed the on-the-job training for control room shift supervisors specified in paragraph 25.2.4.
Currently addressed by: <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.6 On-the-Job Training Phase</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.5 On-the-Job Training Phase</li></ul></li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.6 On-the-Job Training Phase</li></ul></li></ul> <b>No impact / no governance revision required.</b>	
<b>24.1.7 Simulator-based training</b> The worker <b>must</b> have successfully completed simulator-based training based on a training system covering, at a minimum, the relevant K&S and safety-related attributes acquired or reinforced most effectively through simulated scenarios	<b>23.2.4 Simulator-based training</b> The person must have completed training on the NPP full-scope simulator, appropriate to the knowledge and skill requirements of the position, covering ...:
	<b>25.2.3 Simulator-based training</b> The person must have completed training on the NPP full-scope simulator, appropriate to the knowledge and skill requirements of the control room shift supervisor and of the plant shift supervisor, covering ...:
	<b>26.3 Simulator-based training</b> The person must have completed, on the NPP full-scope simulator, the components of the training for control room shift supervisors specified in paragraph 25.2.3 covering ...:

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<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.7 Simulator Skills (Part C) Training Phase</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.6 Simulator Skills (Part C) Training Phase</li></ul></li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.7 Simulator Skills (Part C) Training Phase</li></ul></li></ul> <p><b>No impact / no governance revision required.</b></p>	
<p><b>24.1.8 Knowledge-based general certification examination</b></p> <p>The worker <b>must</b> have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the general knowledge necessary to perform the duties of the pertinent designated position safely and competently.</p>	<p><b>23.3.1 General examination</b></p> <p>The person must have successfully completed the general examination for reactor operators before taking the certification examination specified in paragraph 23.3.2 and, subject to the provisions of section 30, within the four-year period prior to certification. This knowledge-based examination samples topics covered in the training specified in paragraph 23.2.1.</p>
	<p><b>24.3.1 General examination</b></p> <p>The person must have successfully completed the general examination for unit 0 operators before taking the certification examination specified in paragraph 24.3.2 and, subject to the provisions of section 30, within the four-year period prior to certification. This knowledge-based examination samples topics covered in the training specified in paragraph 24.2.1.</p>
	<p><b>25.3.1 General examination</b></p> <p>The person must have successfully completed the general examination for reactor operators specified in paragraph 23.3.1 before taking the certification examination specified in paragraph 25.3.2 and, subject to the provisions of section 30, within the four-year period prior to certification.</p>
<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel</li><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.3 Science Fundamentals and Equipment Principles (SF &amp; EP) Training Phase</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.3 Science Fundamentals and Equipment Principles, Radiation Protection, Station Systems, Integrated Plant Operations</li></ul></li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.3 Science Fundamentals and Equipment Principles (SF &amp; EP) Training Phase</li></ul></li></ul> <p><b>Possible Gaps: Need to review version 1 wording verses version 2 wording to ensure current examination methodologies are in compliance with CNSC-EG1 and 24.1.8.</b></p>	
<p><b>24.1.9 Knowledge-based station-specific certification examination</b></p> <p>The worker <b>must</b> have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently.</p>	<p><b>23.3.2 Nuclear power plant-specific examination</b></p> <p>The person must have successfully completed the NPP-specific examination for reactor operators before taking the certification examination specified in paragraph 23.3.3 and, subject to the provisions of section 30, within the two-and-a-half-year period prior to certification. This knowledge-based examination samples topics covered in the training specified in paragraph 23.2.3 and those aspects of reactor unit operation, under normal, abnormal and emergency conditions, that <b>may</b> result in the discharge of radioactivity to the environment, or that could affect the safety of NPP personnel or of members of the public.</p>
	<p><b>24.3.2 Nuclear power plant-specific examination</b></p> <p>The person must have successfully completed the NPP-specific examination for unit 0 operators before taking the certification examination specified in paragraph 24.3.3 and, subject to the provisions of section 30, within the two-and-a-half-year period prior to certification. This knowledge-based examination samples topics covered in</p>



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	<p>the training specified in paragraph 24.2.3 and those aspects of unit 0 operation, under normal, abnormal and emergency conditions, that <b>may</b> result in the discharge of radioactivity to the environment, or that could affect the safety of NPP personnel or of members of the public.</p> <p><b>25.3.2 Nuclear power plant-specific examination</b> The person must have successfully completed the NPP-specific examination for reactor operators specified in paragraph 23.3.2 before taking the certification examination specified in paragraph 25.3.3 and, subject to the provisions of section 30, within the two-and-a-half-year period prior to certification.</p>
<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel</li><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.5 Station Systems (Part A) and Integrated Plant Operation (Part B) Phases</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.3 Science Fundamentals and Equipment Principles, Radiation Protection, Station Systems, Integrated Plant Operations</li></ul></li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.5 Station Systems (Part A) and Integrated Plant Operation (Part B) Phases</li></ul></li></ul> <p><b>Possible Gaps: Need to review version 1 wording verses version 2 wording to ensure current examination methodologies are in compliance with CNSC-EG1 and 24.1.9.</b></p>	
<p><b>24.1.10 Performance-based certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for certification, a performance-based certification examination conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.</p>	<p><b>23.3.3 Simulator-based examination</b> Subject to the provisions of section 30, the person must have successfully completed the simulator-based examination for reactor operators within the one-year period prior to certification. This performance-based examination covers operation of a reactor unit under abnormal and emergency conditions.</p>
	<p><b>24.3.3 Simulator-based examination</b> Subject to the provisions of section 30, the person must have successfully completed the simulator-based examination for unit 0 operators within the one-year period prior to certification. This performance-based examination covers the operation of unit 0 under abnormal and emergency conditions.</p>
	<p><b>25.3.4 Simulator-based examination</b> Subject to the provisions of section 30, the person must have successfully completed the simulator-based examination for control room shift supervisors, within the one-year period prior to certification. This performance-based examination covers:</p> <ol style="list-style-type: none"><li>independent monitoring of NPP systems by the control room shift supervisor under abnormal and emergency conditions;</li><li>independent diagnosis and decision-making by the control room shift supervisor; and</li><li>supervision and direction of NPP operations by the control room shift supervisor under abnormal and emergency conditions.</li></ol>
	<p><b>26.6 Certification examinations</b> The person must have met the requirements regarding certification examinations for control room shift supervisors specified in paragraphs 25.3.3 and 25.3.4.</p>
<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-INS-08920-10002, Simulator-Based Initial Certification Examinations for Shift Personnel</li><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.7 Simulator Skills (Part C) Training Phase</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.6 Simulator Skills (Part C) Training Phase</li></ul></li></ul>	

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<ul style="list-style-type: none"><li>N-TQD-105-00001, U0CRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.7 Simulator Skills (Part C) Training Phase</li></ul></li></ul> <p><b>Possible Gaps:</b></p> <ul style="list-style-type: none"><li>New two-year limit needs to be identified in each TQD.</li><li>Need to review version 1 wording: “<i>This performance-based examination covers operation of a reactor unit under abnormal and emergency conditions</i>” verses version 2 wording of “<i>providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.</i>” to ensure current examination methodologies are in compliance with CNSC-EG2 and 24.1.10.</li></ul>	
<p><b>24.1.11 Work under supervision</b> The worker <b>must</b> have successfully performed a minimum number of hours of work under supervision (WUS) <b><u>acceptable to the CNSC</u></b>, in the pertinent designated position and under the supervision of a qualified worker certified to work in the pertinent designated position.</p>	<p><b>23.2.7 Performing duties under supervision</b> The person must have performed the duties of a reactor operator under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in paragraphs 23.2.1 to 23.2.5.</p>
	<p><b>24.2.7 Performing duties under supervision</b> The person must have performed the duties of a unit 0 operator under the supervision of a certified incumbent of the position for a minimum of 300 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 228 of those hours must have been worked after the person has met the requirements specified in paragraphs 24.2.1 to 24.2.5</p>
	<p><b>25.2.6 Performing duties under supervision</b> The person must have performed the duties of the control room shift supervisor under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in paragraphs 25.2.1 to 25.2.4.</p>
	<p><b>26.7 Performing duties under supervision</b> The person must have performed the duties of the control room shift supervisor under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in subsections 26.2 to 26.4.</p>
<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.8 Co-Pilot Phase</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.7 Co-Pilot Phase</li></ul></li><li>N-TQD-105-00001, U0CRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.8 Co-Pilot Phase</li></ul></li></ul> <p><b>Possible Gaps:</b></p> <ul style="list-style-type: none"><li>Current TQDs need to be revised to align with guidance given in Appendix B:<ul style="list-style-type: none"><li><b>Subsubsection 24.1.11: Minimum number of hours of work under supervision (WUS) required for the certification of operations personnel. The worker shall have successfully performed 360 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.</b></li></ul></li></ul>	

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<p><b>24.1.12 Management interview</b></p> <p>The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently.</p> <p>The management interview <b>shall</b> be conducted after all the other requirements specified in subsection 24.1 have been met.</p>	<p><b>23.2.8 Nuclear power plant management interview</b></p> <p>The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of a reactor operator. The person must complete this interview after having met the requirements specified in paragraph 23.2.7 and those regarding certification examinations specified in subsection 23.3.</p> <p><b>24.2.8 Nuclear power plant management interview</b></p> <p>The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of a unit 0 operator. The person must complete this interview after having met the requirements specified in paragraph 24.2.7 and those regarding certification examinations specified in subsection 24.3.</p> <p><b>25.2.7 Nuclear power plant management interview</b></p> <p>The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the control room shift supervisor. The person must complete this interview after having met the requirements specified in paragraph 25.2.6 and those regarding certification examinations specified in subsection 25.3.</p> <p><b>26.8 Nuclear power plant management interview</b></p> <p>The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the control room shift supervisor. The person must complete this interview after having met the requirements specified in subsections 26.6 and 26.7.</p>
<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.9 Line Management Interview</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.8 Line Management Interview</li></ul></li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.9 Line Management Interview</li></ul></li></ul> <p><b>No impact / no governance revision required.</b></p>	
<p><b>24.2 Supplementary qualifications for shift supervisors</b></p> <p>In addition to the core qualifications for operations personnel specified in subsection 24.1, a worker seeking certification for employment as shift supervisor <b>shall</b> meet, at the time of application for certification, the supplementary requirements specified in this subsection.</p>	<p><b>N/A</b></p>
<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li></ul> <p><b>No impact / no governance revision required.</b></p>	
<p><b>24.2.1 Supplementary personnel selection criteria</b></p> <p>The worker <b>must</b> have met the supplementary prerequisites specified in sub-subsection 14.2.2.</p>	<p><b>N/A</b></p>
<p>Currently addressed by:</p> <ul style="list-style-type: none"><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description</li></ul>	

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No impact / no governance revision required.	
<b>24.2.2 Supplementary station-specific knowledge</b> The worker <b>must</b> have successfully completed supplementary station-specific training based on a training system and <b>must</b> consequently possess the supplementary knowledge specifically required of shift supervisors concerning the design and operation, under normal, abnormal, and emergency conditions, of the reactor(s) and associated systems, subsystems and equipment installed in the reactor facility identified in the licence.	<b>25.2.2 Supplementary nuclear power plant-specific training</b> The person must have completed training, appropriate to the knowledge requirements of the control room shift supervisor and of the plant shift supervisor that are in addition to those of a reactor operator, covering ...:
	<b>26.2 Supplementary nuclear power plant-specific training</b> The person must have completed the training for control room shift supervisors specified in paragraph 25.2.2.
Currently addressed by: <ul style="list-style-type: none"><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.4 SM/CRSS Supplemental Training Phase</li></ul></li></ul>	
No impact / no governance revision required.	
<b>24.2.3 Supplementary knowledge-based station-specific certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the supplementary station-specific knowledge specifically required of shift supervisors to perform their duties safely and competently.	<b>25.3.3 Supplementary nuclear power plant-specific examination</b> The person must have successfully completed the supplementary NPP-specific examination for control room shift supervisors before taking the certification examination specified in paragraph 25.3.4 and, subject to the provisions of section 30, within the two-year period prior to certification. This knowledge-based examination samples topics covered in the training specified in paragraph 25.2.2.
	<b>26.6 Certification examinations</b> The person must have met the requirements regarding certification examinations for control room shift supervisors specified in paragraphs 25.3.3 and 25.3.4.
Currently addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10004, Written and Oral Initial Certification Examinations for Shift Personnel</li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.4 SM/CRSS Supplemental Training Phase</li></ul></li></ul>	
Possible Gap: Need to review version 1 wording versus version 2 wording to ensure current examination methodologies are in compliance with CNSC-EG1 and 24.1.9.	
<b>24.3 Requalification of operations personnel</b> Any worker referred to in this section seeking the renewal of their certification <b>shall</b> meet, at the time of application for certification renewal, the requirements specified in this subsection.	N/A
No impact / no governance revision required.	
<b>24.3.1 Continuing training</b> The certified worker <b>must</b> have successfully completed, within the current certification period, suitable continuing training meeting the requirements specified in subsection 15.2.	<b>9.2 Refresher training delivery for certified shift personnel</b> The licensee <b>shall</b> deliver, on a regular basis, the refresher training for reactor operators, unit 0 operators, control room shift supervisors and plant shift supervisors specified in subsection 32.1. The topics selected for refresher training <b>shall</b> be reviewed over a period not exceeding five years.
	<b>9.3 Update training delivery for certified shift personnel</b> The licensee <b>shall</b> deliver the update training for reactor operators, unit 0 operators, control room shift supervisors and plant shift supervisors specified in subsection 32.2 promptly following the occurrence of the initiating change or event.
Currently addressed by N-TQD-103-00001, Nuclear Certified Shift Personnel Continuing Training and Qualification Description	

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No impact / no governance revision required.	
<b>24.3.2 Knowledge-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for certification renewal, a knowledge-based requalification test or series of tests providing sufficient evidence that the worker has retained the knowledge necessary to perform the duties of the pertinent designated position safely and competently.	<b>10. Requalification Tests</b> The licensee <b>shall</b> prepare, conduct and grade the requalification tests required in section 33 <b>in accordance with the conditions referred to in the NPP licence.</b>
Currently addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10001, Requalification Testing of Certified Shift Personnel</li><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified personnel</li></ul> No impact / no governance revision required.	
<b>24.3.3 Performance-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for certification renewal, and in a lead role, a performance-based requalification test or series of tests conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	<b>10. Requalification Tests</b> The licensee <b>shall</b> prepare, conduct and grade the requalification tests required in section 33 <b>in accordance with the conditions referred to in the NPP licence.</b>
Currently addressed by: <ul style="list-style-type: none"><li>N-INS-08920-10001, Requalification Testing of Certified Shift Personnel</li><li>N-INS-08920-10003, Independence and Security for Initial Certification Examination and Requalification Testing for Certified personnel</li></ul> No impact / no governance revision required.	
<b>24.3.4 Minimum employment of operations personnel</b> The certified worker <b>must</b> have been sufficiently employed in the pertinent designated position to maintain an adequate competency level.	N/A
<b>Possible GAP: review the following to ensure compliance:</b> <ul style="list-style-type: none"><li><b>N-TQD-103-00001 – Continuing Training and Qualification Description</b></li></ul>	
<b>24.4 Qualifying for recertification within 5 years of a certificate expiry</b> Any worker referred to in this section seeking a recertification within 5 years of the expiry of a prior certification for the same position <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	N/A
<b>Possible GAP: management to decide if section 24.4 to be added to governance.</b>	
<b>24.4.1 Tailored training</b> The worker <b>must</b> have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP).	N/A



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At a minimum, this tailored training <b>shall</b> cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the certificate expiry and the application for recertification.	
Possible GAP: management to decide if section 24.4 and subsections to be added to governance.	
<b>24.4.2 Knowledge-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a knowledge-based requalification test or series of tests providing sufficient evidence that the worker has retained the knowledge necessary to perform the duties of the pertinent designated position safely and competently.	<b>10. Requalification Tests</b> The licensee <b>shall</b> prepare, conduct and grade the requalification tests required in section 33 <b>in accordance with the conditions referred to in the NPP licence.</b>
Possible GAP: management to decide if section 24.4 and subsections to be added to governance.	
<b>24.4.3 Performance-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for recertification, and in a lead role, a comprehensive performance-based requalification test conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	<b>10. Requalification Tests</b> The licensee <b>shall</b> prepare, conduct and grade the requalification tests required in section 33 <b>in accordance with the conditions referred to in the NPP licence.</b>
Possible GAP: management to decide if section 24.4 and subsections to be added to governance.	
<b>24.4.4 Work under supervision</b> The worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.	N/A
Possible GAP: management to decide if section 24.4 and subsections to be added to governance.	
<b>24.4.5 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently. The management interview <b>shall</b> be conducted after all other requirements previously specified in subsection 24.4 have been met.	N/A
Possible GAP: management to decide if section 24.4 and subsections to be added to governance.	
<b>24.5 Qualifying for recertification following decertification or certificate expiry after 5 years</b> Any worker referred to in this section seeking a recertification following decertification by the CNSC, or following the expiry of a certificate that occurred more than 5 years before the date of application for recertification, <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	N/A
Possible GAP: management to decide if section 24.5 and subsections to be added to governance.	
<b>24.5.1 Decertification basis remediation</b> When the worker is seeking recertification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker <b>shall</b> no longer exist or <b>shall</b> have been remedied by the licensee to the satisfaction of the CNSC.	N/A

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Possible GAP: management to decide if section 24.5 and subsections to be added to governance.	
<b>24.5.2 Tailored training</b> The worker <b>must</b> have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, the tailored training referenced in this subsection <b>shall</b> cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the decertification or certificate expiry and the application for recertification.	N/A
Possible GAP: management to decide if section 24.5 and subsections to be added to governance.	
<b>24.5.3 Knowledge-based station-specific certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a station-specific knowledge examination providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently. When the worker is seeking certification as a shift supervisor, the licensee <b>shall</b> administer both baseline and supplementary station-specific examinations.	N/A
Possible GAP: management to decide if section 24.5 and subsections to be added to governance.	
<b>24.5.4 Performance-based certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a performance-based certification examination conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	N/A
Possible GAP: management to decide if section 24.5 and subsections to be added to governance.	
<b>24.5.5 Work under supervision</b> The worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.	N/A
Possible GAP: management to decide if section 24.5 and subsections to be added to governance.	
<b>24.5.6 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently. The management interview <b>shall</b> be conducted after all other requirements specified in subsection 24.5 have been met.	N/A
Possible GAP: management to decide if section 24.5 and subsections to be added to governance.	
<b>Subpart D – Senior Health Physicists</b>	
<b>25. Senior Health Physicist Certification</b> The requirements specified in this section pertain to workers employed or seeking employment as senior health physicist (SHP).	<b>18. Requirements for Initial Certification</b> A person seeking certification as senior health physicist <b>shall</b> , at the time of certification at a given nuclear power plant (NPP), meet the requirements specified in subsections 18.1 to 18.5.

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Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2 and to remove references to version 1.</b>	
<b>25.1 Qualifications for senior health physicists</b> A worker seeking certification for employment as an SHP <b>shall</b> meet, at the time of application for certification, the requirements specified in this subsection.	
<b>See comments for 25.</b>	
<b>25.1.1 Personnel selection</b> The worker <b>must</b> have met, prior to the start of their initial training, the basic and supplementary prerequisites specified in sub-subsections 14.2.1 and 14.2.2 respectively.	
<b>See comments for 14.2.1, 14.2.2 and 25.</b>	
<b>25.1.2 Prior education</b> The worker <b>shall</b> : <ul style="list-style-type: none"><li>a. hold a degree in health physics granted by a recognized university, or</li><li>b. hold a baccalaureate in engineering or science granted by a recognized university, and have successfully completed a suitable series of courses offered by a recognized educational institution or learning provider covering current radiation protection principles and methods</li></ul>	<b>18.1 Education</b> The person must have a degree in health physics from a recognized university. An acceptable alternative to this degree is a Baccalaureate in engineering or science from a recognized university and the successful completion of specialized courses, taken at a recognized educational institution, covering radiation protection principles, methods and practices related to the operation of an NPP.
<b>Possible GAP: N-TQD-443-00001 may need to be revised to comply with version 2.</b>	
<b>25.1.3 Prior work experience</b> The worker <b>shall</b> possess, at a minimum, 4 years of relevant experience, including 2 years as a health physicist or an equivalent position at a reactor facility.	<b>18.2 Minimum experience</b> The person must have a minimum of four years related experience at a nuclear facility. At least two years of this experience must be at an NPP with at least six months at the NPP where certification is sought.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.1.4 Initial training</b> The worker <b>must</b> have successfully completed initial training based on a training system covering the general and station-specific knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.	<b>18.3 Initial Training Requirements</b> The person must have completed training, appropriate to the knowledge requirements of the position, covering: <ul style="list-style-type: none"><li>1. the relevant provisions of the Nuclear Safety and Control Act (NSCA);</li><li>2. the regulations made pursuant to the NSCA and, specifically the:<ul style="list-style-type: none"><li>a) General Nuclear Safety and Control Regulations;</li><li>b) Radiation Protection Regulations;</li><li>c) Class I Nuclear Facilities Regulations;</li><li>d) Nuclear Substances and Radiation Devices Regulations; and</li><li>e) Packaging and Transport of Nuclear Substances Regulations, 2015;</li></ul></li><li>3. safety culture;</li><li>4. the responsibilities and authority of the senior health physicist;</li><li>5. the responsibilities and authority of persons who interact with the senior health physicist;</li><li>6. the NPP licence and documents referenced in the licence;</li><li>7. the licensee’s and NPP policies, standards and procedures; and</li><li>8. NPP design, operation and maintenance.</li></ul>
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.1.5 Radiation protection expertise</b>	N/A



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The worker, in consequence of the education, work experience, and initial training previously specified in subsection 25.1, possess knowledge, to an extent commensurate with the duties of an SHP, of radiation theory, including radiation hazards, and of radiation protection theory and practices, including the radiation protection procedures relevant to the operation of the reactor facility identified in the licence under normal, abnormal, and emergency conditions.	
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.1.6 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the initial training referenced in sub-subsection 25.1.4, and before the certification examination specified in sub-subsection 25.1.7.	<b>18.4 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the senior health physicist. The person must complete this interview after having met the requirements specified in subsection 18.3 and before taking the CNSC examination specified in subsection 18.5.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.1.7 Certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination administered by CNSC staff.	<b>18.5 CNSC examination</b> The person must have successfully completed an oral examination administered by CNSC staff that samples the topics specified in subsection 18.3, and current radiation protection principles, methods and practices related to the operation of the NPP.
	<b>19.3 CNSC examination</b> The person must have successfully completed an oral examination administered by CNSC staff that samples the topics specified in subsection 19.1, and current radiation protection principles, methods and practices related to the operation of the NPP where certification is sought.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.2 Requalification of senior health physicists</b> A worker seeking the renewal of a certification for employment as an SHP <b>shall</b> meet, at the time of application for certification renewal, the requirements specified in this subsection	<b>20. Continuing Training Requirements</b> A person who holds a certification as senior health physicist at a given NPP <b>shall</b> , during the period of certification, meet the requirements specified in subsections 20.1 to 20.3. <b>20.1 Update training</b> The person must complete update training appropriate to the knowledge requirements of the position, covering: 1. changes to NPP systems; 2. changes to licensee’s and NPP policies, standards and procedures; 3. changes to regulatory requirements; 4. changes to the NPP licence or to documents referenced in the licence; and 5. NPP and industry experience and operating events.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.2.1 Continuing training</b> The worker have successfully completed refresher and update training based on a training system covering the knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.	<b>9. Continuing Training Delivery</b> <b>9.1 Update training delivery for the senior health physicist</b> The licensee <b>shall</b> deliver the update training for the senior health physicist specified in subsection 20.1 promptly following the occurrence of the initiating change or event.

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	<b>20. Continuing Training Requirements</b> A person who holds a certification as senior health physicist at a given NPP <b>shall</b> , during the period of certification, meet the requirements specified in subsections 20.1 to 20.3. <b>20.1 Update training</b> The person must complete update training appropriate to the knowledge requirements of the position, covering: 1. changes to NPP systems; 2. changes to licensee’s and NPP policies, standards and procedures; 3. changes to regulatory requirements; 4. changes to the NPP licence or to documents referenced in the licence; and 5. NPP and industry experience and operating events.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.2.2 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the continuing training referenced in sub-subsection 25.2.1, and before the requalification test specified in sub-subsection 25.2.3.	<b>20. Continuing Training Requirements</b> A person who holds a certification as senior health physicist at a given NPP <b>shall</b> , during the period of certification, meet the requirements specified in subsections 20.1 to 20.3. <b>20.3 Nuclear power plant management interview</b> The person must complete an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the senior health physicist. The person must complete this interview within the six months prior to the expiry date of the person’s certification and before taking the CNSC requalification test specified in section 21.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.2.3 Requalification testing</b> The worker <b>must</b> have successfully completed a knowledge-based requalification test administered by CNSC staff.	<b>21. CNSC Requalification Test</b> At the time of renewal of certification at a given NPP, a senior health physicist <b>shall</b> have successfully completed an oral requalification test administered by CNSC staff that samples the topics specified in subsection 18.3, and current radiation protection principles, methods and practices related to the operation of the NPP.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.3 Qualifying for recertification following decertification or certificate expiry</b> A worker seeking certification for employment as an SHP following decertification by the CNSC, or following the expiry of the certificate, <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	<b>22. Certification Following Decertification</b>
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.3.1 Decertification basis remediation</b> When the worker is seeking certification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker <b>shall</b> no longer exist or <b>shall</b> have been remedied by the licensee to the satisfaction of the CNSC.	<b>22.1 Requirements within three years</b> Within the three-year period following a decertification as senior health physicist at a given NPP, a person <b>may</b> be certified again as senior health physicist at the same NPP if: 1. the basis for the decertification of the person is no longer applicable; and 2. the person meets the requirements specified in paragraphs 22.1.1 to 22.1.4.

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	<b>22.2 Requirements after more than three years</b> After more than three years following a decertification as senior health physicist at a given NPP, a person <b>may</b> be certified again as senior health physicist at any NPP if: 1. the basis for the decertification of the person is no longer applicable; and 2. the person meets the requirements for initial certification specified in subsections 18.3 to 18.5.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.3.2 Tailored training</b> The worker <b>must</b> have successfully completed tailored training, comprising knowledge and performance-based refresher and update training, based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, the tailored training referenced in this subsection <b>shall</b> cover any scheduled knowledge refresher and knowledge update training that the worker missed during the interim period between decertification or the certificate expiry and the application for certification.	<b>22.1.1 Update training</b> The person must have completed update training, appropriate to the knowledge requirements of the position, covering changes or events that have occurred during the absence of the person from the position, including: 1. changes to NPP systems; 2. changes to licensee’s and NPP policies, standards and procedures; 3. changes to regulatory requirements; 4. changes to the NPP licence or to documents referenced in the licence; and 5. NPP and industry experience and operating events. This training <b>shall</b> include a formal evaluation that confirms and documents that, at the completion of the training, the person has the required knowledge to perform the duties of the senior health physicist.  <b>22.1.2 Refresher training</b> The person must have completed refresher training covering the topics from the initial training specified in subsection 18.3 that must be reviewed to ensure that the person has the knowledge required to work competently in the position. The selection of the topics <b>shall</b> be based on a documented assessment, performed by the licensee, of the impact of the absence from the position on the person’s competence. This training <b>shall</b> include a formal evaluation that confirms and documents that, at the completion of the training, the person has the required knowledge to perform the duties of the senior health physicist.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.3.3 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the tailored training referenced in sub-subsection 25.3.2, and before the certification examination specified in sub-subsection 25.3.4.	<b>22.1.3 Nuclear power plant management interview</b> The person must have completed an interview administered by NPP management that confirms and documents the person’s competence to perform the duties of the senior health physicist. The person must complete this interview after having met the requirements specified in paragraphs 22.1.1 and 22.1.2, and before taking the CNSC examination specified in paragraph 22.1.4.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	
<b>25.3.4 Certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination administered by CNSC staff.	<b>22.1.4 CNSC examination</b> The person must have successfully completed an oral examination administered by CNSC staff covering the topics specified in subsection 18.3, and current radiation protection principles, methods and practices related to the operation of the NPP.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b>	

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Appendix A: Station-Specific Designated Positions			N/A in REGDOC.  Addressed in CNSC EG1 and EG2 (which are now misaligned with ASO).	
A.1 Station-Specific Positions Requiring an Auxiliary Systems Operator (ASO) Certification				
Facility	Darlington	Pickering		
ASO position	Unit 0 Control Room Operator	None		
A.2 Station-Specific Positions Requiring a Reactor Operator (RO) Certification				
Facility	Darlington	Pickering		
RO position	Authorized Nuclear Operator	Authorized Nuclear Operator		
A.3 Station-Specific Positions Requiring a Shift Supervisor Certification				
Facility	Darlington	Pickering		
Shift Supervisor position	Control Room Shift Supervisor	Control Room Shift Supervisor		
Senior Shift Supervisor position	Shift Manager	Shift Manager		
A.4 Station-Specific Positions Requiring a Senior Health Physicist (SHP) Certification				
Facility	Darlington	Pickering		
SHP position	Responsible Health Physicist	Responsible Health Physicist		
Should discuss with CNSC if any governance changes required.				
Appendix B Compliance Schemes Acceptable to the CNSC				
Subsection 24.1.11	Minimum number of hours of work under supervision (WUS) required for the certification of operations personnel.	The worker <b>shall</b> have successfully performed 360 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.	<b>23.2.7 Performing duties under supervision</b> The person must have performed the duties of a reactor operator under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in paragraphs 23.2.1 to 23.2.5.	
			<b>24.2.7 Performing duties under supervision</b> The person must have performed the duties of a unit 0 operator under the supervision of a certified incumbent of the position for a minimum of 300 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 228 of those hours must have been worked after the person has met the requirements specified in paragraphs 24.2.1 to 24.2.5	
			<b>25.2.6 Performing duties under supervision</b> The person must have performed the duties of the control room shift supervisor under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in paragraphs 25.2.1 to 25.2.4.	
			<b>26.7 Performing duties under supervision</b> The person must have performed the duties of the control room shift supervisor under the supervision of a certified incumbent of the position for a minimum of 480 hours on shift to confirm and document that the person can perform those duties competently and safely. At least 360 of those hours must have been worked after the person has met the requirements specified in subsections 26.2 to 26.4.	



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Currently addressed by: <ul style="list-style-type: none"><li>N-TQD-101-00001, ANO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.8 Co-Pilot Phase</li></ul></li><li>N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.7 Co-Pilot Phase</li></ul></li><li>N-TQD-105-00001, UOCRO Initial Training and Qualification Description<ul style="list-style-type: none"><li>1.1.8 Co-Pilot Phase</li></ul></li></ul> <p>Gap: TQDs need to be revised to align with guidance given in Appendix B. See also comments for section 24.1.11.</p>			
Subsection 14.4.1	Minimum experience as shift supervisor prior to advancement to a senior shift supervisor position.	The worker <b>shall</b> have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a minimum of 80 complete shifts amounting to a minimum of 960 hours of shiftwork prior to being selected for advancement to the senior shift supervisor position.	<b>29.1 Minimum experience prior to advancement</b> The person must have safely and competently performed the duties of the control room shift supervisor at the NPP where certification is sought for a minimum of 80 complete shifts immediately prior to being selected for advancement from control room shift supervisor to plant shift supervisor.
Currently addressed by:N-TQD-102-00001, SM/CRSS Initial Training and Qualification Description <ul style="list-style-type: none"><li>1.1.10 Application to Canadian Nuclear Safety Commission for SM Certification</li></ul> <p>Gap: TQD-102 needs to be revised to be fully align with guidance given in Appendix B. See also comments for section 14.4.1.</p>			
Subsection 20.2.1	Minimum shift requirements for operations personnel.	Any worker certified for employment as ASO <b>shall</b> perform the duties of an ASO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter. Any worker certified for employment as RO <b>shall</b> perform the duties of an RO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter. Any worker certified for employment as shift supervisor, but not qualified as senior shift supervisor, <b>shall</b> perform the duties of a shift supervisor for a minimum of 4 complete shifts per	<b>14.1.1 Minimum performance per calendar quarter</b> The licensee <b>shall</b> ensure that the person acts as a responsible operator or shift supervisor in the position for which the person holds a certification for a minimum of three complete shifts per calendar quarter.

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		calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter. Any worker certified for employment as shift supervisor who is duly qualified as senior shift supervisor <b>shall</b> perform the duties of a shift supervisor or senior shift supervisor for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.	
<b>GAP:</b> N-GUID-09110-10000, Certification Requirements For Certified Staff On Rotation, needs to be revised. In addition, need to identify other documents for staff working normally on shift. See also section 20.2.1.			
Appendix C: Senior Health Physicist Examination and Testing Topics			
<b>C.1 Regulations and Reactor Operating Licence</b> The relevant topics include, but are not limited to: a. the relevant provisions of the NSCA b. the relevant regulations made pursuant to the NSCA, namely the: i. General Nuclear Safety and Control Regulations ii. Radiation Protection Regulations iii. Class I Nuclear Facilities Regulations iv. Nuclear Substances and Radiation Devices Regulations v. Packaging and Transport of Nuclear Substances Regulations c. the reactor facility licence and the documentation referenced in the licence  <b>C.2 Radiation Protection</b> The relevant topics include, but are not limited to: a. safety culture b. reactor facility design, operation, and maintenance c. the relevant licensee and station-specific policies, standards, and procedures d. the radiation protection principles, methods and practices related to the operation of the reactor facility identified in licence e. the relevant Canadian, international and industry standards and conventions  <b>C.3 Roles and Responsibilities</b> The relevant topics include, but are not limited to: a. the responsibilities and authority of the senior health physicist b. the responsibilities and authority of the personnel who interact with the senior health physicist			<b>18.5 CNSC examination</b> The person must have successfully completed an oral examination administered by CNSC staff that samples the topics specified in subsection 18.3, and current radiation protection principles, methods and practices related to the operation of the NPP.
Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i> . <b>GAP:</b> N-TQD-443-00001 will need to be revised to comply with version 2. See also comment for Appendix D3.			

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Appendix D: Station-Specific Training Samples	
<b>D.1 Station-Specific Training for Reactor Operators</b> The relevant training areas may include: a. design and operation of reactor facility systems b. integrated operation of reactor facility systems, including, where applicable, interfaces between the systems of a reactor unit and those of other reactor units and common and auxiliary systems c. expected response of reactor facility systems and units to abnormal and accident conditions d. technical bases for emergency operating procedures e. diagnosis of equipment failures and assessment of abnormal plant conditions f. phenomena that may significantly affect reactor core reactivity and neutron flux shape g. reactor fuelling, fuelling limitations, fuel handling and storage, and irradiated fuel cooling h. configuration of systems and equipment isolation required for maintenance activities i. safety culture j. principles of nuclear safety and their application k. the operating licence and the documents referenced in the operating licence l. situations that may result in the violation of the conditions of the operating licence and the operating policies and principles (OPP) m. administrative procedures related to reactor facility operation and maintenance n. the responsibilities and authority of a reactor operator, and of the other members of the reactor facility personnel who interface with the reactor operator	<b>23.2.3 Nuclear power plant-specific training</b> The person must have completed training, appropriate to the knowledge requirements of the position, covering: 1. design and operation of NPP systems; 2. integrated operation of NPP systems including, where applicable, interactions between the systems of a reactor unit and those of other reactor units and of unit 0; 3. expected response of NPP systems and units to accident conditions; 4. technical bases for emergency operating procedures; 5. diagnosis of equipment failures and assessment of abnormal plant conditions; 6. phenomena that may significantly affect reactor core reactivity and neutron flux shape; 7. reactor fuelling, fuelling limitations, fuel handling and storage, and irradiated fuel cooling; 8. configuration of systems and equipment isolation required for maintenance activities; 9. safety culture; 10. principles of nuclear safety and their application; 11. the NPP licence and documents referenced in the licence; 12. situations that may result in the violation of conditions in the NPP licence and operating policies and principles; 13. administrative procedures related to NPP operation and maintenance; and 14. the responsibilities and authority of a reactor operator and of other NPP personnel who interfaces with the reactor operator.  This training shall include formal written evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of a reactor operator. The person must complete this training before taking the certification examination specified in paragraph 23.3.2.
<b>D.2 Supplementary Station-Specific Training for Shift Supervisors</b> The relevant training areas may include, in addition to those relevant to station-specific training for reactor operators: a. reactor physics, principles of reactor operation and fuelling strategies b. phenomena that may significantly affect reactor core reactivity and neutron flux shape c. properties of irradiated fuel, principles of fuel cooling and physics of fuel failures d. operating constraints and limits associated with reactor fuelling and irradiated fuel cooling e. reactor safety, heat transfer mechanisms and fluid mechanics f. primary and back-up heat sinks g. conventional and radiation hazards to reactor facility personnel and to the public, including hazards from postulated accident conditions h. handling of conventional and radiation emergencies i. handling of an intruder or of a terrorist attack j. design requirements of safety-related equipment and systems k. design features and limitations of reactor facility equipment and systems l. chemical control of systems m. diagnosis of equipment failures and assessment of abnormal plant conditions n. expected response of reactor facility systems and units to abnormal and accident conditions o. operating strategies p. reactor facility safety analyses, including major assumptions in the reactor facility accident analyses and technical bases for emergency operating procedures	<b>25.2.2 Supplementary nuclear power plant-specific training</b> The person must have completed training, appropriate to the knowledge requirements of the control room shift supervisor and of the plant shift supervisor that are in addition to those of a reactor operator, covering: 1. reactor physics, principles of reactor operation and fuelling strategies; 2. phenomena that may significantly affect reactor core reactivity and neutron flux shape; 3. properties of irradiated fuel, principles of fuel cooling and physics of fuel failures; 4. operating constraints and limits associated with reactor fuelling and irradiated fuel cooling; 5. reactor safety, heat transfer mechanisms and fluid mechanics; 6. primary and back-up heat sinks; 7. conventional and radiation hazards to NPP personnel and to the public, including hazards from postulated accident conditions; 8. handling of conventional and radiation emergencies; 9. handling of an intruder or of a terrorist attack; 10. design requirements of safety-related equipment and systems; 11. design features and limitations of NPP equipment and systems; 12. chemical control of systems; 13. diagnosis of equipment failures and assessment of abnormal plant conditions; 14. expected response of NPP systems and units to accident conditions; 15. operating strategies; 16. NPP safety analyses, including major assumptions in the NPP accident analyses and technical bases for emergency operating procedures; 17. configuration of systems and equipment isolation required for maintenance activities;

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<p>q. configuration of systems and equipment isolation required for maintenance activities</p> <p>r. design and operation of reactor facility systems for which the reactor operators do not have direct operational control, including common systems and fuel handling systems</p> <p>s. the licensee’s policies, standards, and procedures</p> <p>t. the operating licence and the documents referenced in the operating licence</p> <p>u. situations that may result in the violation of the conditions of the operating licence and the OPP</p> <p>v. requirements pertaining to reactor facility operation in federal and provincial acts and regulations, and any relevant standards and codes</p> <p>w. responsibilities and authority of shift supervisor(s), of the senior shift supervisor, and of other members of the reactor facility personnel who report to, or interface with the shift supervisor and the senior shift supervisor</p> <p>x. qualification requirements of the members of the reactor facility personnel who report to the shift supervisor and the senior shift supervisor</p>	<p>18. design and operation of NPP systems for which the reactor operators do not have direct operational control, including unit 0 and fuel handling systems;</p> <p>19. the licensee’s policies, standards and procedures;</p> <p>20. the NPP licence and documents referenced in the licence;</p> <p>21. situations that may result in the violation of conditions in the NPP licence and operating policies and principles;</p> <p>22. requirements pertaining to NPP operation in federal and provincial acts and regulations, and in relevant standards and codes;</p> <p>23. responsibilities and authority of the control room shift supervisor, of the plant shift supervisor and of other facility personnel who reports to or interfaces with the control room shift supervisor and the plant shift supervisor; and</p> <p>24. qualification requirements of NPP personnel who reports to the control room shift supervisor and the plant shift supervisor.</p> <p>This training shall include formal written evaluations and, if required, formal oral evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of the control room shift supervisor. The person must complete this training before taking the certification examination specified in paragraph 25.3.3.</p>
<p><b>D.3 Station-Specific Training for Senior Health Physicists</b></p> <p>The relevant training areas may include:</p> <p>a. the relevant provisions of the NSCA</p> <p>b. the regulations made pursuant to the NSCA, including the:</p> <p>    i. General Nuclear Safety and Control Regulations</p> <p>    ii. Radiation Protection Regulations</p> <p>    iii. Class I Nuclear Facilities Regulations</p> <p>    iv. Nuclear Substances and Radiation Devices Regulations</p> <p>    v. Packaging and Transport of Nuclear Substances Regulations</p> <p>c. safety culture</p> <p>d. the responsibilities and authority of the senior health physicist</p> <p>e. the responsibilities and authority of the members of the reactor facility personnel who interact with the senior health physicist</p> <p>f. the responsibilities and authority of the members of external organizations who interact with the senior health physicist, notably in the nuclear emergency management context</p> <p>g. the operating licence and the documents referenced in the operating licence</p> <p>h. the licensee and reactor facility policies, standards, and procedures</p> <p>i. reactor facility design, operation, and maintenance</p>	<p><b>18.3 Initial training requirements</b></p> <p>The person must have completed training, appropriate to the knowledge requirements of the position, covering:</p> <p>1. the relevant provisions of the Nuclear Safety and Control Act (NSCA);</p> <p>2. the regulations made pursuant to the NSCA and, specifically the:</p> <p>    a) General Nuclear Safety and Control Regulations;</p> <p>    b) Radiation Protection Regulations;</p> <p>    c) Class I Nuclear Facilities Regulations;</p> <p>    d) Nuclear Substances and Radiation Devices Regulations; and</p> <p>    e) Packaging and Transport of Nuclear Substances Regulations, 2015;</p> <p>3. safety culture;</p> <p>4. the responsibilities and authority of the senior health physicist;</p> <p>5. the responsibilities and authority of persons who interact with the senior health physicist;</p> <p>6. the NPP licence and documents referenced in the licence;</p> <p>7. the licensee’s and NPP policies, standards and procedures; and</p> <p>8. NPP design, operation and maintenance.</p> <p>This training shall include a formal evaluation that confirms and documents that, at the completion of the training, the person has the required knowledge to perform the duties of the senior health physicist.</p>
<p>Certification of the Responsible Health Physicist is addressed in section 4.5 of N-TQD-443-00001 <i>Radiation Protection Training and Qualification</i>.</p> <p><b>GAP: N-TQD-443-00001 will need to be revised to comply with version 2.</b></p> <p>Current training program should be acceptable, as only change is related to splitting the requirement for personnel who interact with the senior health physicist into reactor facility and external personnel.</p>	
<b>Glossary: The list below only includes definitions that may impact authorization training programs.</b>	
<b>complete shift</b>	



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A shift worked in a designated position as a member of the minimum staff complement consisting of a minimum of 4 consecutive hours preceded by a formal turnover of the responsibilities for the shift with an outgoing counterpart and concluded by an equal turnover with an incoming counterpart.	
<b>individual training needs analysis</b> A systematic process whereby the training needs of a single worker are determined by identifying any gap in the knowledge, skills, and safety-related attributes required of the worker to safely and competently perform their duties.	
<b>individual training plan</b> The learning strategy, including learning objectives and learner evaluation(s), resulting from an individual training needs analysis, and serving as basis for the training of an individual learner, as opposed to a group of learners	
<b>senior shift supervisor</b> A certified shift supervisor who exercises authority over any number of shift supervisors as an integral part of the management system and minimum staff complement; for example, shift managers employed at multi-unit CANDU reactor facilities are considered senior shift supervisors.	
<b>tailored training</b> Training that is tailored to meet the specific training needs of an individual learner based on an individual training needs analysis (ITNA) and an individual training plan (ITP), as opposed to an established training program.	
<b>worker competency</b> Inferred ability of a worker or workforce to safely and competently perform the duties of their employment based on demonstrated knowledge, skills, and safety-related attributes.	

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### Appendix A: Training Documents Listed In DCR #0000153357

**Note:** This list printed on November 14, 2023

- (1) N-CMT-22893-00001, INITIAL TRAINING AUTHORIZATION RADIATION PROTECTION – COMMON
- (2) N-CMT-68585-00901, CONTINUING TRAINING - RADIATION PROTECTION TECHNICIAN TRAINING RADIAT
- (3) N-GUID-08920-10026, OPERATIONS TRAINING HANDBOOK
- (4) N-GUID-09100-10013, MANAGING AN UNSUCCESSFUL AS-FOUND PERFORMANCE
- (5) N-INS-08920-10022, FORMAL EVALUATION OF RESPONSIBLE HEALTH PHYSICISTS
- (6) N-HO-68487-00001, INITIAL TRAINING - SIMULATOR-BASED INITIAL CERTIFICATION EXAMINATIONS
- (7) N-JPM-100-00001-OJT, PICKERING 1-4 INITIAL TRAINING ON-THE-JOB TRAINING GUIDE – ANOITS
- (8) N-JPM-100-00002-OJT, PICKERING 1-4 INITIAL TRAINING ON-THE-JOB TRAINING GUIDE - CRSS\SM
- (9) N-JPM-100-00003-OJT, DARLINGTON INITIAL TRAINING ON-THE-JOB TRAINING GUIDE
- (10) N-JPM-100-00004-OJT, PICKERING 5-8 INITIAL ANOIT\CRSSIT TRAINING: ON-THE-JOB TRAINING GUIDE
- (11) N-JTA-100-00209, INITIAL CERTIFICATION EXAMINATIONS (WRITTEN ORAL AND SIMULATOR)
- (12) N-JTA-200-69833, ENTRY LEVEL DEVELOPMENT FOR ANOIT\SSIT CANDIDATE TRAINING NEEDS ANALYS
- (13) N-LP-21563-00001, TEST ITEM DEVELOPMENT
- (14) N-LP-63786-00001, INITIAL TRAINING - SIMULATOR ASSESSMENT COURSE
- (15) N-LP-68487-00001, INITIAL TRAINING - SIMULATOR-BASED INITIAL CERTIFICATION EXAMINATIONS

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**Appendix A (Continued)**

- (16) N-LP-68585-00901, CONTINUING TRAINING - RADIATION PROTECTION TECHNICAIN TRAINING
- (17) N-OBJ-68667-00001, RHP SELF STUDY OBJECTIVES – DARLINGTON
- (18) N-OBJ-68668-00001, RHP SELF STUDY OBJECTIVES – PICKERING
- (19) N-OBJ-78654-00001, INITIAL TRAINING - GENERALS MCQ STYLE EXAMINATIONS
- (20) N-OVH-21563-00001, TEST ITEM DEVELOPMENT (REQUALIFICATION MULTIPLE CHOICE QUESTIONS) PEL
- (21) N-OVH-369-00001, INTRODUCTION TO CODES STANDARDS AND JURISDICTIONAL REQUIREMENTS
- (22) N-OVH-369-00002, INTRODUCTION TO CODES AND JURISDICTIONAL REQUIREMENTS FOR PRESSURE BOU
- (23) N-OVH-61310-00001, CERTIFICATION GENERIC FUNDAMENTALS TRAINING - NUCLEAR THEORY AND R
- (24) N-OVH-65397-00025, INITIAL TRAINING - PART C - INTRODUCTION AND ADMINISTRATIVE DUTY AREAS
- (25) N-OVH-71142-00001, WRITTEN INITIAL CERTIFICATION EXAMINATIONS TRAINING FOR MANAGERS
- (26) N-OVH-78457-00001, REFURBISHMENT RP BETTERMENT PROJECT - CNSC INTERFACE AND RISKS
- (27) N-PLAN-08920-10030, RESPONSIBLE HEALTH PHYSICIST CONTINUING TRAINING PLAN
- (28) N-QC-200-00001, PICKERING A NUCLEAR OPERATOR (GENERATING UNIT) ON -THE-JOB TRAINING GU
- (29) N-QC-200-00002, PICKERING B NUCLEAR OPERATOR (GENERATING UNIT) QUALIFICATION CARD PRO
- (30) N-QC-37433-00001, DARLINGTON NUCLEAR OPERATOR QUALIFICATION CARD U0 GAP TRAINING
- (31) N-QC-37693-00001, DARLINGTON NUCLEAR OPERATOR QUALIFICATION CARD UNIT 0 PORTION

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- (32) N-QC-37753-00001, DARLINGTON NUCLEAR OPERATOR QUALIFICATION CARD COMMON PROCESS AND GENE
- (33) N-QC-69341-00001, QUALIFICATION CARD - CRSSITS ON-THE-JOB TRAINING PROGRAM - PART B
- (34) N-TTM-400-00502, TASK TO TRAINING MATRIX - HEALTH PHYSICIST AND RESPONSIBLE HEALTH PHYS
- (35) NK054-PLAN-01210-00004, DARLINGTON NEW NUCLEAR PROJECT POWER REACTOR SITE PREPARATION LICENCE
- (36) NK38-GUID-09701-10034, GUIDELINE FOR NUCLEAR REFURBISHMENT ENGINEERING RELATED ACTIVITIES
- (37) NK38-PLAN-03680-10005, ASSESSMENT PLAN - DARLINGTON NGS INTEGRATED SAFETY REVIEW – MANAGEMENT
- (38) NK38-PLAN-09701-10007, DARLINGTON REFURBISHMENT- PROJECT TRAINING WORK PLAN
- (39) NK38-PLAN-09701-10113 OPS-01, OPERATIONS - OWNERSHIP TRANSFER PLAN
- (40) NK38-PLAN-09701-10113 PGM-01, O AND M PROGRAMS OWNERSHIP TRANSFER PLAN
- (41) P-PLAN-00990-00007, PICKERING NGS STABILIZATION ACTIVITY PLAN (SAP)

DCR #0000153357 **R001** N-INS-08920-10021 removed, as it has been superseded by N-GUID-08920-10312, Guidelines For The Systematic Approach To Training.

DCR #0000153357 **R002** Removed D-GUID-09110-10004 removed, as it is being superseded by N-GUID-09110-10000.

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### Appendix B: OPG Documents That Reference Version 1 of REGDOC 2.2.3 Volume III

**These documents need to be reviewed and revised if impacted by change in title of Version 2 of REGDOC 2.2.3 Volume III.**

**The list is from POWERSEARCH, on November 14, 2023, using key word “REGDOC 2.2.3”:**

- (1) N-GUID-08920-10026, Operations Training Handbook.
- (2) N-GUID-08920-10307, Development And Administration Of Closed Reference Multiple Choice Questions For Written Initial Certification General Examinations.
- (3) N-GUID-09100-10004, Co-Pilot Requirements For Certified Staff Candidates.
- (4) N-MAN-08131-10000, Corporate Radiation Safety Officer, CNSC-032.
- (5) N-PMP-00120-1217474, PMP 87067 - Dn Simulators Upgrade.
- (6) NK054-PLAN-01210-00004, Darlington New Nuclear Project Power Reactor Site Preparation Licence Renewal Plan.
- (7) N-INS-08920-10022, Formal Evaluation Of Responsible Health Physicists.
- (8) N-HO-68487-00001, Initial Training - Simulator-Based Initial Certification Examinations Regulatory References.
- (9) N-JTA-100-00467, Pickering 5-8 Sm\Crss Supplemental Continuing Training Program Task Analysis.
- (10) N-JTA-400-00502, Job And Task Analysis - Health Physicist And Responsible Health Physicist.
- (11) N-LP-68486-00001, Initial Training - N-Ins-08920-10004 Workshop Written Examinations.
- (12) N-LP-68487-00001, Initial Training - Simulator-Based Initial Certification Examinations For Shift Personnel.
- (13) N-LP-78654-00001, Initial Training - Generals Mcq Style Examinations.
- (14) N-OBJ-68486-00001, Initial Training - Written And Oral Initial Certification Examinations For Shift Personnel.
- (15) N-OBJ-68487-00001, Simulator-Based Initial Certification Examinations for Shift Personnel.
- (16) N-OBJ-68664-00001, Responsible Health Physicist Annual Update Training.

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### Appendix B (Continued)

- (17) N-OBJ-78654-00001, Initial Training - Generals MCQ Style Examinations.
- (18) N-OVH-63786-00001, Initial Training Simulator Assessment PEL 63786.
- (19) N-OVH-66010-00039, Advanced Operations Overview For Managers - Integrated Plant - Accident Response - Introduction (Aims, Crew Transient Response, Emergency Response).
- (20) N-OVH-68486-00001, N-INS-08920-10004 Workshop Written Examinations.
- (21) N-OVH-68487-00001, N-INS-08920-10002 Workshop-Simulator Examinations Pel #68487.
- (22) N-OVH-78654-00001, Generals MCQ Style Examinations.
- (23) N-TQD-101-00001, Authorized Nuclear Operator Initial Training And Qualification Description.
- (24) N-TQD-102-00001, Nuclear Shift Manager\Control Room Shift Supervisor Initial Training And Qualification Description.
- (25) N-TQD-105-00001, Darlington Unit 0 Control Room Operator (CRO) Initial Training And Qualification Description.

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## Appendix C: REGDOC Version 1 Sections No Longer Applicable

The following sections of REGDOC 2.2.3 Volume III Version 1 do not have corresponding sections in Version 2:

### 13.1.4 Training period constraint

The training requirements specified in paragraphs 13.1.1 to 13.1.3 must be met within the one-year period prior to the person being reinstated to the duties of the position by the licensee.

### 13.1.5 Simulator-based requalification tests

The person must have successfully completed simulator-based requalification tests equivalent in types and number to those referred to in the NPP licence that the person would have had to take during the period of absence, if the person had continued to work in the position.

### 13.1.6 Written requalification test

The person must have successfully completed, within the two-year period prior to being reinstated to the duties of the position, one written requalification test that meets the conditions referred to in the NPP licence.

## 14. Temporary Assignment to Other Positions

The licensee shall ensure that each reactor operator, unit 0 operator, control room shift supervisor and plant shift supervisor, who is temporarily assigned to another position at the NPP, maintains the competence necessary to perform the duties of the position for which the person holds a certification by confirming the person meets the requirements specified in subsection 14.1 or 14.2, as appropriate, during the period of temporary assignment.

### 14.1.2 Minimum performance over a three-year period

The licensee shall ensure that the person acts as a responsible operator or shift supervisor in the position for which the person holds a certification for a minimum of 50 complete shifts over a three-year period. This requirement does not apply to persons assigned as:

1. simulator instructor for shift personnel seeking or holding a certification; or
2. examiner for simulator-based certification examinations and simulator-based requalification tests for shift personnel seeking or holding a certification.

### 14.1.3 Continuing training

The licensee shall ensure that the person completes the continuing training applicable to the position for which the person holds a certification and successfully completes the corresponding knowledge and performance evaluations.

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## Appendix C (Continued)

### 14.1.4 Requalification tests

The licensee shall ensure that the person successfully completes all the requalification tests applicable to the position for which the person holds a certification.

### 14.2 Assignment to a non-operationally focused position

The licensee shall ensure that each certified operator or shift supervisor temporarily assigned to perform activities other than those listed in subsection 14.1 meets the requirements specified in paragraphs 14.2.1 to 14.2.4.

#### 14.2.1 Minimum performance per calendar quarter

The licensee shall ensure that the person acts as a responsible operator or shift supervisor in the position for which the person holds a certification for a minimum of five complete shifts per calendar quarter.

#### 14.2.2 Minimum performance after any three-year period

The licensee shall ensure that the person acts as a responsible operator or shift supervisor in the position for which the person holds a certification on a full-time basis for a minimum of 80 complete shifts after any three-year period of assignment.

#### 14.2.3 Continuing training

The licensee shall ensure that the person completes the continuing training applicable to the position for which the person holds a certification and successfully completes the corresponding knowledge and performance evaluations.

#### 14.2.4 Requalification tests

The licensee shall ensure that the person successfully completes all the requalification tests applicable to the position for which the person holds a certification.

### 17.1 Training program records

The licensee shall retain the training program records specified in paragraphs 17.1.1 to 17.1.3 for a minimum period of 10 years.

#### 17.1.2 Responsibilities for training and qualification

The licensee shall retain records of the responsibilities of line management and those of personnel in the training organization with respect to training and qualification of persons seeking or holding a certification.



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## Appendix C (Continued)

### 17.1.3 Documentation of training programs

For each position that requires a certification, the licensee shall retain records of:

1. the outcome of the analysis performed to identify training needs, including:
  - a) a description of the process followed to conduct the analysis;
  - b) the names and qualifications of the persons who participated in the analysis;
  - c) the task list obtained from the analysis;
  - d) the criteria used in selecting tasks for training; and
  - e) the list of the knowledge and skills required to perform the selected tasks.
2. the outcome of the design of training programs, including the training objectives;
3. the outcome of the development of training programs, including:
  - a) the lesson plans, simulator training guides and other training guides; and
  - b) the training manuals and any other training material used by the trainers and the trainees;
4. the outcome of the implementation of training programs, including for each course or session in a program:
  - a) the name and employee number of each trainee;
  - b) the dates when the training was delivered;
  - c) the names and positions of the persons who delivered the course or session;
  - d) a copy of all formal knowledge and performance evaluations conducted, with the expected answers or performance, as applicable; and
5. the outcome of the formal evaluations of training programs conducted by the licensee or by external organizations.

### 23.2.2 Radiation protection training

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

1. radiation fundamentals;
2. radiation hazards;
3. radiation protection theory and practices; and
4. radiation protection procedures used during normal, abnormal and emergency operation of the NPP.

This training shall include formal written evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of a reactor operator. The person must complete this training before taking the certification examination specified in paragraph 23.3.2.

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## Appendix C (Continued)

### 23.2.6 Prerequisite for the simulator-based certification examination

The person must have met the requirements specified in paragraphs 23.2.1 to 23.2.5 before taking the certification examination specified in paragraph 23.3.3.

### 24.2.2 Radiation protection training

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

1. radiation fundamentals;
2. radiation hazards;
3. radiation protection theory and practices; and
4. radiation protection procedures used during normal, abnormal and emergency operation of the NPP.

This training shall include formal written evaluations that confirm and document that, at the completion of the training, the person has the required knowledge to perform the duties of a unit 0 operator. The person must complete this training before taking the certification examination specified in paragraph 24.3.2

### 24.2.6 Prerequisite for the simulator-based certification examination

The person must have met the requirements specified in paragraphs 24.2.1 to 24.2.5 before taking the certification examination specified in paragraph 24.3.3.

### 25.2.5 Prerequisite for the simulator-based certification examination

The person must have met the requirements specified in paragraphs 25.2.1 to 25.2.4 before taking the certification examination specified in paragraph 25.3.4.

### 26.5 Prerequisite for the simulator-based certification examination

The person must have met the requirements specified in subsections 26.2 to 26.4 before taking the certification examination specified in paragraph 25.3.4.

### 27.2.5 Prerequisite for the simulator-based certification examination

The person must have met the requirements specified in paragraphs 27.2.1 to 27.2.4 before taking the certification examination specified in paragraph 27.3.4.

### 28.5 Prerequisite for the simulator-based certification examination

The person must have met the requirements specified in subsections 28.2 to 28.4 before taking the certification examination specified in paragraph 27.3.4.

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## Appendix C (Continued)

### 29.4 Nuclear power plant management interview

The person must have completed an interview administered by NPP management that confirms and documents the person's competence to perform the duties of the plant shift supervisor. The person must complete this interview after having met the requirements specified in subsection 29.3.

### 30. Extending the Validity Period of Certification Examinations

#### 30.1 Conditions for extension

Where a person seeking certification for a given position cannot be certified within the validity period specified after successfully completing an applicable certification examination, that validity period may, on application to the CNSC by the licensee, be extended by a maximum of one year in the case of the simulator-based examination, or three years in the case of a knowledge-based examination, under one or more of the following conditions:

1. the person's training was delayed due to sickness, injury, pregnancy or other family-related responsibilities;
2. the person's training was delayed or extended due to exceptional circumstances that were outside of the person's control;
3. the person had to retake a certification examination;
4. the person had to complete additional training; and
5. the person had to perform the duties of the position under supervision for longer than the minimum time specified for the position.

#### 30.2 Required information

When applying for an extension pursuant to subsection 30.1, the licensee shall submit to the CNSC a request that includes:

1. the name of the person;
2. the name of the relevant certification examination;
3. the conditions of subsection 30.1 that apply; and
4. the measures taken to ensure that the person has maintained the knowledge and skills required to work competently in the position.

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### Appendix C (Continued)

#### 31. Re-Establishing the Validity of Certification Examinations

Where a person seeking certification for a given position cannot be certified within the validity period specified after successfully completing an applicable certification examination, even with the provisions of section 30 taken into account, the person shall successfully complete another certification examination of the same type to demonstrate, prior to certification, that the person still has the knowledge and skills required to work competently in the position.

#### 34.4 Training period constraint

The training requirements specified in subsections 34.1 to 34.3 must be met within the one-year period prior to obtaining the new certification.

#### 35. Requirements After More Than Three Years

After more than three years following a decertification as reactor operator, unit 0 operator, control room shift supervisor or plant shift supervisor, a person may be certified again in the same position at any NPP if:

1. the basis for the decertification of the person is no longer applicable; and
2. the person meets the requirements for initial certification regarding initial training and certification examinations for the applicable position.

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### **Appendix D: REGDOC Version 2 Sections New or Significantly Revised.**

The requirements given in the following subsections of version 2 did not exist in version 1 or are significantly changed from the requirements given in version 1.

#### **1. Introduction**

- 1.4 National and international standards

#### **Part I – Personnel Certification Scheme**

- 2. Background Information
- 3. Employment Stipulations
  - 3.1 Permitted employment
  - 3.2 Employment status
  - 3.3 Employment record

#### **4. Designated Positions**

- 4.1 Station-specific designated positions
- 4.2 Designated position staffing
- 4.3 Roles and responsibilities of certified workers

#### **5. General Provisions Pertinent to All Applications**

- 5.3 Basic information
- 5.4 Transmission

#### **6. Application for Certification**

- 6.5 Application schedule
- 6.6 Effective date of certification
- 6.7 Certification deferment

#### **7. Application for Certification Renewal**

- 7.2 Worker requalification summary
- 7.3 Supporting documentation
- 7.4 Application schedule
- 7.5 Effective date of renewal
- 7.6 Early certification renewal

#### **8. Application for Recertification Within 5 Years of a Certificate Expiry**

- 8.1 Worker competency declaration
- 8.2 Worker requalification summary
- 8.3 Supporting documentation
- 8.4 Application schedule
- 8.5 Effective date of certification

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### Appendix D (Continued)

#### 9. Application for Recertification Following Decertification or Certificate Expiry After 5 Years

- 9.1 Worker competency declaration
- 9.2 Recertification substantiation
- 9.3 Supporting documentation
- 9.4 Application schedule
- 9.5 Effective date of certification

#### 11. Refusal to Certify and Decertification

- 11.1 Background information
- 11.2 Licensee requests for decertification
- 11.3 Requesting an opportunity to be heard
- 11.4 Commission or designated officer decision

#### 12. Administrative Processes

- 12.1 Legal name change
- 12.2 Replacement certificates

#### 14. Personnel Selection Program

- 14.1 Personnel selection program requirements
- 14.2 Personnel selection criteria
  - 14.2.1 Basic prerequisites
- 14.3.2 Personnel selection exemption
- 14.3.3 Notification of selection for shift supervisor training
- 14.4.4 Notification of advancement to senior shift supervisor
- 14.5.1 Personnel transfer process
- 14.5.3 General knowledge training exemption
- 14.5.4 Certification examinations
- 14.5.5 General knowledge examination exemption
- 14.5.6 Notification of personnel transfer

#### 15. Training Programs

- 15.2.3 Simulator-based continuing training for operations personnel
- 15.2.4 Nuclear emergency response training

#### 16. Certification Examination and Requalification Testing

- 16.1 Separation of the training and examination functions
- 16.4 Security of certification examinations and requalification tests
- 16.5 Examiner qualifications

#### 19. Administrative Policies and Procedures Applicable to Workers in Training

- 19.1 Reintegration of a worker in training following a prolonged training interruption

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### Appendix D (Continued)

#### 20. Administrative Policies and Procedures Applicable to Certified Workers

- 20.2.2 Minimum employment of senior health physicists
- 20.4.4 Certificate expiry
- 20.6.4 Certificate expiry
- 20.7 Notification of change in employment status
- 20.7.1 Notification of removal from duty
- 20.7.2 Notification of reinstatement to duty

#### 21. Information Management

- 21.1 Corporate documentation
- 21.1.1 Roles and responsibilities
- 21.1.4 Trainer and examiner qualifications

#### Subpart B – Physical Infrastructure

- 22. Knowledge-Based Examination and Testing Facilities
- 23.2 Physical layout

#### 24. Operations Personnel Certification

- 24.1.1 Personnel selection
- 24.1.5 Nuclear emergency management
- 24.2 Supplementary qualifications for shift supervisors
- 24.2.1 Supplementary personnel selection criteria
- 24.3 Requalification of operations personnel
- 24.3.4 Minimum employment of operations personnel
- 24.4 Qualifying for recertification within 5 years of a certificate expiry
- 24.4.1 Tailored training
- 24.4.4 Work under supervision
- 24.4.5 Management interview
- 24.5 Qualifying for recertification following decertification or certificate expiry after 5 years
- 24.5.1 Decertification basis remediation
- 24.5.1 Tailored training
- 24.5.3 Knowledge-based station-specific certification examination
- 24.5.4 Performance-based certification examination
- 24.5.5 Work under supervision
- 24.5.6 Management interview

#### 25. Senior Health Physicist Certification

- 25.1.1 Personnel selection
- 25.1.5 Radiation protection expertise

**11. PLNGS Email, R. Sears to B. Torrie,  
“PLGS - REGDOC 2.2.3, VOL III, Version  
2 - GAP analysis closure plan”,  
September 19, 2024**



**From:** [Stears, Robert](#)

**Sent:** September 18, 2024 1:27 PM

**To:** Torrie, Brian; [Martel, Francis](#); [Désaulniers, Lucie](#); [Françoise, Corinne](#); [Romanelli, Bruno](#)

**Cc:** Reicker, Nick

**Subject:** PLGS - REGDOC 2.2.3, VOL III, Version 2 - GAP analysis closure plan

**Attachments:** GAP analysis of REGDOC 2.2.3, Volume III, version 2.docx; Items identified as GAPS  
- REGDOC 2.2.3 Volume III version 2.docx;  
Transitional Clauses.xlsx

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EXTERNAL EMAIL – USE CAUTION / COURRIEL EXTERNE – FAITES PREUVE DE PRUDENCE
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Folks,

As requested, please find attached the following;

- GAP analysis; This document examines the *differences* between both versions of REGDOC 2.2.3, Vol III and identifies the GAPS at PLNGS.
- Items identified as GAPS; This document provides all information as requested with respect to changes required to address identified GAPS with the new version of REGDOC 2.2.3, Vol III, V2 at PLNGS.
- Transitional Clauses; Clauses required for PLNGS in order to address current certification training programs currently underway.

Point Lepreau will have all identified GAPS closed no later than Sept 30, 2024. There will be no outstanding GAPS / changes required as of January 31, 2025. Feel free to reach out if you have any further questions or concerns.

Sincerely,

Robert J Stears

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REGDOC 2.2.3 VOL III 2023 Version 2	Issues to be Reviewed / Addressed ASAP
Human Performance Management Personnel Certification, Volume III: Certification of Reactor Facility Workers	Title has been changed
<b>3.2 Employment status</b> The licensee <b>shall</b> assign an employment status to each certified worker in accordance with the following categories: <b>a.</b> an active status is assigned to a worker who: <b>i.</b> holds a valid certificate <b>ii.</b> attends the scheduled continuing training <b>iii.</b> meets the applicable minimum employment requirements <b>iv.</b> continues to be able to perform the duties of the pertinent designated position safely and competently <b>b.</b> an inactive status is assigned to any certified worker who holds a valid certificate, but was formally removed from duty in accordance with subsection 20.3 or subsection 20.4 <b>c.</b> an uncertified status is assigned to a worker whose certificate has expired <b>d.</b> a decertified status is assigned to a worker decertified by the CNSC	Need to be able to demonstrate which employment status each certified worker is and has been in.  Need a continuous and auditable employment record for each certified worker.  Update SDP-01368-P036
<b>3.3 Employment record</b> The licensee <b>shall</b> maintain, in accordance with subsection 21.2, a continuous and auditable employment record for each worker certified by the CNSC, including, at a minimum: <b>a.</b> the employment status assigned to the worker <b>b.</b> the number of complete shifts and hours of work performed in a designated position by the worker, specifying: <b>i.</b> the pertinent designated position <b>ii.</b> the date on which each complete shift and hour of work were performed	
<b>4.2 Designated position staffing</b> The site-specific positions designated in reactor facility licences <b>shall</b> be staffed with workers certified by the CNSC as qualified to perform the duties of said designated positions.	Compliant
<b>5.3 Basic information</b> Applications made under the provisions of this regulatory document <b>shall</b> contain the following information: <b>a.</b> the purpose of the application <b>b.</b> the legal name of the worker, including a first name, a surname, and a middle name or initial when possible <b>c.</b> the designated position in which the worker is or <b>will</b> be employed <b>d.</b> the reactor facility where the worker is or <b>will</b> be employed, including, where applicable, a specific reactor or group of reactors <b>e.</b> the corporate name of the licensee operating said reactor facility <b>f.</b> the effective date of the application <b>g.</b> the legal name, position, contact information, and signature of the authorized applicant <b>h.</b> a valid return mailing or email address	Need to check current application letters for compliance.
<b>6.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: <b>a.</b> meets the applicable qualification requirements referred to in the licence <b>b.</b> has successfully completed the applicable training program and examination referred to in the licence <b>c.</b> is capable, in the opinion of the licensee, of performing the duties of the position	Need to check current application letters for compliance.
<b>6.2 Personnel selection</b> The application <b>shall</b> describe how the applicable prerequisites of the personnel selection program described in section 14 were met, including, at a minimum: <b>a.</b> the worker’s education or literacy level upon selection for initial training <b>b.</b> any education or literacy level equivalency recognized by the licensee <b>c.</b> any prior work experience required by the CNSC or the licensee <b>d.</b> any personnel selection interview undergone by the worker <b>e.</b> any personnel selection test administered to the worker, including any medical screening <b>f.</b> any exemption explicitly sanctioned in this regulatory document that was employed by the licensee	Need to check current application letters for compliance.
<b>6.3 Worker qualification summary</b> The application <b>shall</b> provide a chronological summary of the qualifications achieved by the worker, covering the initial training components, the certification examinations, and all other personnel certification requirements successfully completed by the worker. The worker qualification summary <b>shall</b> offer sufficient evidence that the worker meets all of the applicable qualifications specified in Part III. At a minimum, this summary <b>shall</b> include, as applicable depending on the designated position: <b>a.</b> the date of each summative learner evaluation marking the completion of each initial training component <b>b.</b> the date of each knowledge-based certification examination <b>c.</b> the date of the performance-based certification examination <b>d.</b> any remedial action required by CNSC staff as a result of a certification examination administered by CNSC staff <b>e.</b> the date of completion of any period of work under supervision, including the total number of supervised work hours <b>f.</b> the date of the management interview	Need to check current application letters for compliance.
<b>6.4 Supporting documentation</b> The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records <b>shall</b> be maintained in accordance with subsection 21.2 and made available for verification by the CNSC upon request.	Covered in records section of TRWI’s and records forms

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<b>7.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: <ul style="list-style-type: none"><li>a. has safely and competently performed the duties of the position for which the worker was certified</li><li>b. continues to receive the applicable training referred to in the licence</li><li>c. has successfully completed the applicable requalification tests referred to in the licence for renewing the certification</li><li>d. is capable, in the opinion of the licensee, of performing the duties of the position</li></ul>	Need to check current renewal application letters for compliance.  Letter templates may require updates
<b>7.2 Worker requalification summary</b> The application <b>shall</b> provide a chronological summary of the requalification requirements met by the worker during the current certification period, covering the continuing training components, the requalification tests, and all other personnel certification requirements successfully completed by the worker. The worker requalification summary <b>shall</b> offer sufficient evidence that the worker meets all of the applicable requalification requirements specified in Part III. At a minimum, this summary <b>shall</b> include, as applicable depending on the designated position: <ul style="list-style-type: none"><li>a. a confirmation that the worker attended continuing training and successfully underwent formal learner evaluations compliant with the requirements specified in section 15, including suitable update, refresher, simulator-based and nuclear emergency response training</li><li>b. the dates of all knowledge-based requalification tests successfully completed</li><li>c. the dates of all performance-based requalification tests successfully completed</li><li>d. the total number of complete shifts and hours of shiftwork in the designated position performed by the worker over the current certification period</li><li>e. any remedial action required by CNSC staff as a result of a requalification test administered by CNSC staff</li></ul>	CNSC letter templates requires updates
<b>7.3 Supporting documentation</b> The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records <b>shall</b> be maintained in accordance with subsection 21.2, and made available for verification by the CNSC upon request.	Covered in records section of TRWI's & records forms
<b>8. Application for Recertification Within 5 Years of a Certificate Expiry</b> In addition to the general provisions specified in section 5, an application for recertification submitted no later than 5 years following the expiry of a certificate <b>shall</b> meet the requirements specified in this section.	Not required for PLGS
<b>9 Application for Recertification Following Decertification or Certificate Expiry After 5 Years</b> In addition to the general provisions specified in section 5, an application for the recertification of a worker following decertification by the CNSC, or following a certificate expiry that occurred more than 5 years prior to the effective date of the application for recertification, <b>shall</b> meet the requirements specified in this section.	Not required for PLGS
<b>10. Application for Senior Health Physicist Examination or Requalification Testing</b> An authorized applicant <b>may</b> submit an application for the administration of a certification examination or requalification test to a worker seeking certification or the renewal of a certification for employment as senior health physicist (SHP) once the worker has met the pertinent prerequisites specified in Part III.  The application <b>shall</b> be submitted in writing in accordance with the general provisions of the personnel certification application processes specified in section 5, and <b>shall</b> state that the worker: <ul style="list-style-type: none"><li>a. has successfully completed the applicable training referenced in the licence, specifying the effective date of completion of the initial or continuing training referenced in section 25</li><li>b. has successfully undergone the applicable management interview referenced in section 25, specifying the date of the interview</li></ul>	CNSC Letter templates require update
<b>12. Administrative Processes</b> <b>12.1 Legal name change</b> The licensee <b>shall</b> promptly: <ul style="list-style-type: none"><li>a. inform the CNSC of any change in the legal name of any worker employed or training for employment in a designated position</li><li>b. request that the CNSC issue a replacement certificate for any certified worker who has officially changed their legal name</li></ul>	Needs to be covered in SDP-01368-P036
<b>14.1 Personnel selection program requirements</b> As an integral part of the personnel selection program, at a minimum and for each designated position identified in the licence, the licensee: <ul style="list-style-type: none"><li>a. <b>shall</b> set a minimum prior education level or minimum literacy and numeracy levels commensurate with the duties of the designated position and consistent with the entry level of a suitable initial training program</li><li>b. <b>shall</b> require that candidates selected on the basis of their prior education level provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider</li></ul>	New Process required
<ul style="list-style-type: none"><li>c. <b>may</b> recognize equivalencies to any minimum education, literacy, or numeracy level set by the licensee</li><li>d. <b>shall</b> use standardized tests and proven methods to assess whether or not candidates selected on the basis of a literacy or numeracy level, or a recognized equivalency, do in fact meet the applicable minimum standards</li></ul>	New Process required
<ul style="list-style-type: none"><li>e. <b>shall</b> determine whether or not prior work experience <b>may</b> be desirable or essential and, when deemed essential, develop plans and procedures to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program</li></ul>	New Process required
<ul style="list-style-type: none"><li>f. <b>shall</b> identify attributes and aptitudes deemed essential to safely and competently perform the duties of the designated position, including integrity, leadership, and resilience, as <b>may</b> be pertinent, and select candidates accordingly</li></ul>	New Process required
<ul style="list-style-type: none"><li>g. <b>may</b> use standardized tests and proven methods, or require a medical assessment performed by a licensed physician, to assess whether or not candidates have any permanent, physical or mental limitation that would prevent them from performing the duties of the pertinent designated position safely and competently</li></ul>	New Process required
<b>14.2 Personnel selection criteria</b> <b>14.2.1 Basic prerequisites</b> Candidates selected for entry in any initial training program referenced in this regulatory document <b>shall</b> : <ul style="list-style-type: none"><li>a. have demonstrated literacy and numeracy levels commensurate with the duties of the pertinent designated position</li></ul>	New Process required
<ul style="list-style-type: none"><li>b. have provided sufficient proof of any prior education level required by the CNSC or the licensee</li></ul>	

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c. have gained any prior work experience required by the CNSC or the licensee	
d. possess all the safety-related attributes and aptitudes deemed essential by the licensee	
e. meet all other applicable position-specific selection criteria set by the licensee	
<b>14.2.2 Supplementary prerequisites for shift supervisors and senior health physicists</b> In addition to meeting the applicable basic prerequisites, shift supervisor and senior health physicist (SHP) candidates <b>shall</b> , to the licensee’s knowledge: a. possess known leadership skills or potential b. have consistently demonstrated a high level of integrity	New Process required
<b>14.3 Selection of reactor operators for shift supervisor training</b> A worker certified or previously certified for employment as reactor operator (RO) at the reactor facility identified in the licence <b>may</b> be selected for entry in an initial training program for shift supervisor candidates in accordance with the requirements specified in this subsection. <b>14.3.1 Performance as reactor operator</b> Prior to being selected for shift supervisor training, the worker <b>must</b> : a. have performed the duties of an RO safely and competently b. be known to possess the safety-related attributes and aptitudes required of a shift supervisor	New Process required
<b>14.3.2 Personnel selection exemption</b> The licensee <b>may</b> , if the worker has been regularly employed as a certified RO for at least 4 calendar quarters, exempt the worker from any education level or work experience normally required of shift supervisor candidates.	
<b>14.3.3 Notification of selection for shift supervisor training</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program for shift supervisor candidates. This communication <b>shall</b> include: a. the full legal name of the worker b. a confirmation that the worker performed the duties of an RO safely and competently c. a confirmation that the worker possesses the safety-related attributes and aptitudes required of a shift supervisor d. a summary of any exemption explicitly sanctioned in sub-subsection 14.3.2 and employed as part of the selection of the worker, including the start and end dates of the observation period(s) adding to 4 calendar quarters in total	
<b>14.4 Advancement to senior shift supervisor</b> Any certified shift supervisor who, as a member of the minimum staff complement (MSC), exercises authority over any number of certified shift supervisors <b>shall</b> , prior to being employed in such a senior shift supervisor position, have been selected and trained by the licensee for the express purpose by means of a documented process meeting the requirements specified in this subsection.  The licensee not allow any worker to act as senior shift supervisor who is not duly qualified to exercise authority over other certified shift supervisors in accordance with the aforementioned process.	Not Required for PLGS
<b>14.4.1 Minimum experience as shift supervisor prior to advancement</b> The worker <b>must</b> have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a minimum number of complete shifts and <b>a minimum number of hours of shiftwork acceptable to the CNSC.</b>	Not required at PLGS
<b>14.4.2 Supplemental training</b> The worker <b>must</b> have successfully completed training based on a training system, including some on-the-job training (OJT), covering the K&S and safety-related attributes required to safely and competently perform the duties of the senior shift supervisor, as defined by the licensee’s management system.	Not required at PLGS
<b>14.4.3 Work under supervision</b> The worker <b>must</b> have performed the duties of the senior shift supervisor under the supervision of a qualified senior shift supervisor for a number of complete shifts that the licensee considers necessary to confirm that the worker can perform said duties competently and safely.	Not required at PLGS
<b>14.4.4 Notification of advancement to senior shift supervisor</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker certified as shift supervisor has obtained a senior shift supervisor qualification. This communication <b>shall</b> include: a. the full legal name of the worker b. a summary, showing the effective date of completion in each case, of the requirements successfully met by the worker as part of the advancement process specified in this section	Not required at PLGS
<b>14.5 Personnel transfer</b> The licensee <b>shall</b> implement and document an effective personnel transfer process compliant with the requirements and guidance specified in this subsection.	Not required for PLGS
<b>14.5.1 Personnel transfer process</b> As an integral part of the personnel transfer process, the licensee of the gaining reactor facility: a. <b>shall</b> request, from the licensee of the ceding reactor facility: (i) the training and qualification records and, if applicable, the certification examination history of the worker, including sufficient proof of any certification examination successfully completed by the worker (ii) confirmation that the worker performed their duties in a safe and competent manner, be it in a designated position or not (iii) confirmation that the worker is trustworthy b. <b>shall</b> ensure that the worker meets all of the applicable personnel selection criteria in effect at the gaining reactor facility prior to the worker’s entering one of the initial training programs referenced in this regulatory document c. <b>may</b> administer a single or a series of standardized general knowledge test(s) based on proven methods to identify any gaps in the general knowledge of the worker d. <b>may</b> use the results of the aforementioned general knowledge test(s) as part of the basis for the development of an individual training needs analysis (ITNA) and an individual training plan (ITP), on a case-by-case basis e. <b>may</b> administer a general knowledge certification examination to the worker in order to ascertain that the worker possesses adequate general knowledge f. <b>may</b> employ one or both potential exemptions explicitly sanctioned in this subsection	Not required for PLGS



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<b>14.5.2 Initial training</b> Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.3, the worker <b>shall</b> successfully complete the same initial training that is administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.	Not required for PLGS
<b>14.5.3 General knowledge training exemption</b> The licensee is not obligated to administer additional general knowledge training to the worker if the worker has previously successfully completed general knowledge training that: <ul style="list-style-type: none"><li>a. is equivalent to the general knowledge training administered to all workers seeking employment in the same designated position at the gaining reactor facility</li><li>b. was administered in accordance with the applicable requirements specified in this and complementary regulatory documents</li><li>c. is, in all other respects, acceptable to the gaining reactor facility licensee</li></ul>	
<b>14.5.4 Certification examinations</b> Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.5, the worker <b>shall</b> successfully complete the same certification examinations as those administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.	
<b>14.5.5 General knowledge examination exemption</b> The licensee is not obligated to administer an additional general knowledge certification examination to the transferred worker if the worker previously received a passing grade on a general knowledge examination that: <ul style="list-style-type: none"><li>a. is equivalent to the general knowledge examination administered to all workers seeking employment in the same designated position at the gaining reactor facility</li><li>b. was administered by qualified examiners in accordance with the conditions set in the gaining reactor facility licence or accompanying document, including any detailed requirements specified in documents referenced in the licence or accompanying document</li><li>c. is, in all other respects, acceptable to the gaining reactor facility licensee</li></ul>	
<b>14.5.6 Notification of personnel transfer</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program referenced in this regulatory document. This communication <b>shall</b> include: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. a summary of any exemption(s) explicitly sanctioned in subsection 14.5 and employed as part of the selection of the worker, including, as applicable:<ul style="list-style-type: none"><li>(i) the start and end dates of the general training referenced as basis for the exemption and the licensee and reactor facility responsible for the associated general training program</li><li>(ii) the date on which the general certification examination referenced as basis for the exemption was administered and the licensee and reactor facility responsible for its administration</li></ul></li></ul>	
<b>14.5.7 Added information upon application for certification</b> At the time of application for certification, the worker <b>shall</b> meet all of the personnel certification requirements applicable to any worker seeking certification for employment in the pertinent designated position at the reactor facility identified in the licence. In addition to the requirements specified in subsection 6.2 and the notification specified in this subsection, the application for certification <b>shall</b> include a summary of any ITNA, ITP and certification examination employed as part of the transfer of the worker.	
<b>15.2.4 Nuclear emergency response training</b> The licensee <b>shall</b> conduct, on a periodic basis, nuclear emergency response training to ensure that certified workers are adequately prepared to respond to credible beyond-design-basis accidents and manage nuclear emergencies in accordance with the established emergency operating procedures and severe accident management guidelines.	Compliant
<b>18. Management Interviews</b> The licensee <b>shall</b> establish and document effective procedures for preparing and conducting the various management interviews referenced in this regulatory document. Each mandatory management interview <b>shall</b> serve an evaluation function and: <ul style="list-style-type: none"><li>a. be conducted orally by a minimum of one manager authorized to represent the licensee and to conduct the interview</li><li>b. provide the worker being evaluated with a meaningful opportunity to demonstrate an adequate level of competency</li><li>c. provide at least one member of the operations management team with a meaningful opportunity to make a final determination of worker competency</li><li>d. be recorded in writing or via any other retrievable medium, the record of which <b>shall</b> be retained and made available to the CNSC upon request</li></ul>	Complaint
<b>19.1 Reintegration of a worker in training following a prolonged training interruption</b> The licensee <b>shall</b> establish and document an effective process to manage the case of any worker reintegrating an initial training program after a prolonged training interruption. As an integral part of this process, the licensee <b>shall</b> : <ul style="list-style-type: none"><li>a. determine the need for, and perform as necessary, a formal learner evaluation, including knowledge and performance-based testing as warranted, to assess the K&amp;S retention of the worker and to identify any K&amp;S gap that the worker <b>may</b> have developed during the period of absence</li><li>b. determine the need for tailored training based on an individual training needs analysis (ITNA), considering any K&amp;S forgotten by the worker and any changes or updates to the essential K&amp;S and safety-related attributes that occurred during the period of absence</li><li>c. formulate and implement an individual training plan (ITP) as <b>may</b> be necessary</li><li>d. ensure that the worker, at a minimum, successfully completes any training and formal learner evaluation(s) missed during the period of absence</li><li>e. determine a suitable point of re-entry into the pertinent initial training program</li></ul> At a minimum, any worker who is absent from an initial training program for a period of 6 months or more <b>shall</b> undergo a formal reintegration process meeting the requirements specified in this subsection.	This needs to be included in governance.

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<p><b>20.1 Fitness for duty</b> The licensee <b>shall</b> implement and document effective fitness-for-duty policies and procedures providing the CNSC with reasonable assurance that certified workers are free of any physical or mental impairment that could hinder their ability to perform the duties of the pertinent designated position(s) safely and competently.</p> <p>The fitness-for-duty policies and procedures applicable to certified workers <b>shall</b> be implemented consistently with the requirements and guidance specified in this and complementary regulatory documents regarding fitness for duty, including those related to the management of worker fatigue and the management of alcohol and drug use.</p>	Compliant
<p><b>20.2 Minimum employment of certified workers</b> The licensee <b>shall</b> ensure that certified workers are employed in the designated position(s) specified on their certificate(s) to the extent necessary to maintain an adequate competency level throughout the full duration of their certification.</p>	SDP-01368-P036 requires revision
<p><b>20.2.1 Minimum shift requirement for operations personnel</b> Certified shift workers <b>shall</b> perform the duties of the pertinent designated position(s) for a minimum number <b>acceptable to the CNSC</b> of complete shifts per calendar quarter amounting to a minimum number <b>acceptable to the CNSC</b> of hours of shiftwork per calendar quarter.</p> <p>Each certified shift worker <b>shall</b> perform the mandated minimum employment as a member of the minimum staff complement, as opposed to in any back-up or supernumerary capacity, and, to the fullest extent possible, in relation to a fuelled and operating reactor or group of reactors.</p>	
<p><b>20.2.2 Minimum shift requirement deferment</b> When a certified shift worker fails to meet, during any given calendar quarter, an applicable minimum shift requirement, the omitted number of complete shifts and hours of shiftwork shall be performed in the following calendar quarter, in addition to the minimum shift requirement strictly applicable to said calendar quarter.</p>	SDP-01368-P036 requires revision
<p><b>20.2.3 Minimum employment of senior health physicists</b> The licensee <b>shall</b> ensure that workers certified for employment as an SHP regularly perform the duties of an SHP throughout the full duration of their certification.</p>	This needs to be included in governance.
<p><b>20.3 Management of prolonged unemployment</b> Any certified worker <b>shall</b> be formally removed from the duties of the pertinent designated position and assigned an inactive employment status who, for a period lasting 6 consecutive months or more, regardless of the rationale, is or <b>will</b> be unable to:</p> <ul style="list-style-type: none"> <li>a. attend the scheduled continuing training</li> <li>b. meet an applicable quarterly minimum shift requirement</li> </ul>	SDP-01368-P036 requires revision
<p><b>20.4 Removal from duty for cause</b> Any certified worker who meets any one of the criteria specified in this subsection <b>shall</b> be formally removed from the duties of the pertinent designated position for cause and assigned either an inactive or uncertified employment status as applicable.</p>	SDP-01368-P036 requires revision
<p><b>20.4.1 Failure to meet a minimum employment requirement</b> The worker has failed to meet an applicable quarterly minimum shift requirement for 2 consecutive calendar quarters.</p>	
<p><b>20.4.2 Requalification test failure</b> The worker has failed a requalification test, be it in a lead or supporting role.</p>	
<p><b>20.4.3 Inability to work safely and competently</b> The worker was the subject of a verified positive alcohol or drug test administered in accordance with the fitness-for-duty program mandated by the CNSC, or is otherwise deemed unfit, by the licensee, to perform the duties of a designated position safely and competently for any reason, including, but not limited to:</p> <ul style="list-style-type: none"> <li>a. a medical or physical condition, be it permanent or temporary</li> <li>b. a mental health condition, be it permanent or temporary</li> <li>c. inadequate performance while on duty, including any action or decision that puts at risk the health and safety of workers, the public or the environment</li> <li>d. a demonstrated <b>un</b>will<sup>ing</sup>ness or failure to take the necessary precautions to protect the health and safety of workers, the public or the environment</li> <li>e. a demonstrated lack of integrity or trustworthiness</li> </ul>	
<p><b>20.4.4 Certificate expiry</b> The certificate of the worker has expired.</p>	
<p><b>20.4.5 Proposed decision not to certify or to decertify</b> The worker was identified by the CNSC as the worker concerned in a proposed decision not to certify, or a proposed decision to decertify, while a final decision by the Commission or a DO remains pending.</p>	
<p><b>20.5 Baseline reinstatement process</b> No certified worker who has been formally removed from the duties of a designated position <b>shall</b> be allowed to perform said duties until the worker has successfully undergone a suitable baseline reinstatement process compliant with the requirements specified in this subsection.</p>	SDP-01368-P036 requires revision
<p><b>20.5.1 Update training</b> The worker <b>must</b> have completed suitable update training covering any relevant technical or operational changes implemented, and any relevant lessons learned, while the worker was formally removed from the duties of the designated position, including, but not limited to:</p> <ul style="list-style-type: none"> <li>a. changes to reactor facility systems and subsystems</li> <li>b. changes to licensee and station-specific policies, standards, and procedures</li> <li>c. amendments to, or exemptions from, regulatory requirements</li> <li>d. amendments to the licence or to documents referenced in the licence</li> <li>e. station-specific and industry operational experience and operating events</li> </ul>	CSCTP requires revision
<p><b>20.5.2 Refresher training</b> The worker <b>must</b> have successfully completed suitable refresher training commensurate with the duration of the period of absence or removal from duty of the worker. At a minimum, this refresher training <b>shall</b> encompass any scheduled refresher training that the worker failed to attend while the worker was formally removed from the duty.</p>	

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<b>20.5.3 Simulator-based training</b> For operations personnel, the worker <b>must</b> have successfully completed suitable simulator-based training covering a number and variety of scenarios commensurate with the duration of the period of absence or removal from duty of the worker. At a minimum, this simulator-based training <b>shall</b> challenge the diagnostic and decision-making skills of the worker and encompass any scheduled simulator-based training that the worker failed to attend during the period of absence or removal from duty.	<b>CSTP requires revision</b>
<b>20.5.4 Work under supervision</b> For operations personnel, the worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform said duties competently and safely.	
<b>20.5.5 Management interview</b> When removed from duty for cause, the worker <b>must</b> have successfully undergone a formal management interview.	
<b>20.6 Remediation following removal from duty for cause</b> In addition to the baseline reinstatement process specified in subsection 20.5, no certified worker who has been removed from duty for cause based on one of the criteria defined in subsection 20.4 <b>shall</b> be allowed to perform the duties of the pertinent designated position until the worker has successfully undergone suitable remediation consistent with the applicable cause for the removal, as further specified in this subsection.	<b>This needs to be included in governance.</b>
<b>20.6.1 Failure to meet a minimum employment requirement</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a failure to meet a minimum employment requirement, if: <ul style="list-style-type: none"><li>a. the circumstances that prevented the worker from performing the duties of the pertinent designated position no longer exist</li><li>b. the worker has performed, under the supervision of a qualified worker certified for employment in the pertinent designated position, a number of complete shifts and hours of shiftwork no less than the minimum number of complete shifts and hours of shiftwork that the worker failed to complete in the quarter preceding the removal from duty</li></ul>	
<b>20.6.2 Requalification test failure</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a requalification test failure once the worker has successfully completed a remedial requalification test equivalent to the failed requalification test. This remedial requalification test <b>shall</b> be equivalent in all respects, but <b>must</b> not be the same as the failed requalification test or any other remedial requalification test the candidate <b>may</b> have failed as part of the reinstatement process. Furthermore, any restrictions set in complementary documents regarding the allowed topic overlap between requalification tests <b>shall</b> apply.	
<b>20.6.3 Inability to work safely and competently</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a removal from duty due to an inability to work safely and competently if the basis for the removal from duty has been adequately remedied or mitigated or no longer exists.	
<b>20.6.4 Certificate expiry</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a certificate expiry if and when officially informed of the Commission’s or DO’s decision to recertify the worker.	
<b>20.6.5 Proposed decision not to certify or to decertify</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position who was the subject of a proposed decision not to certify, or a proposed decision to decertify, if and when officially informed of the Commission’s or DO’s decision to certify, or not to decertify, the worker.	
<b>20.7 Notification of change in employment status</b> <b>20.7.1 Notification of removal from duty</b> The licensee <b>shall</b> promptly inform the CNSC of any certified worker removed from the duties of a designated position, be it due to a prolonged period of unemployment or a removal for cause, specifying: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. the pertinent designated position</li><li>c. the resulting employment status assigned to the worker as per subsection 3.2</li><li>d. the basis for the removal from duty as per subsection 20.3 or 20.4, as applicable</li></ul>	
<b>20.7.2 Notification of reinstatement to duty</b> The licensee <b>shall</b> promptly inform the CNSC of any certified worker reinstated to the duties of a designated position, to include: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. the pertinent designated position</li><li>c. the resulting employment status assigned to the worker as per subsection 3.2</li><li>d. the basis for the prior removal from duty and a confirmation that said basis no longer exists or has been adequately remedied or mitigated, as applicable</li><li>e. a summary of the baseline reinstatement process successfully completed by the worker</li><li>f. when following a removal for cause, a summary of any remediation action(s) taken to satisfy the applicable requirements specified in subsection 20.6</li></ul>	<b>Revise CNSC letter templates</b>
<b>21. Information Management</b> The licensee <b>shall</b> implement and document effective information management policies and procedures ensuring: <ul style="list-style-type: none"><li>a. the retention and ready retrieval of the corporate documentation and proof-of-competency records related to personnel certification</li><li>b. the safeguard and control of sensitive information pertaining to personnel certification</li><li>c. the unrestricted access, by authorized CNSC staff, to the corporate documentation and personnel records specified in this section</li></ul>	<b>Complaint</b>



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REGDOC 2.2.3 VOL III 2023 Version 2	Issues to be Reviewed / Addressed ASAP
<b>21.1 Corporate documentation</b> <b>21.1.1 Roles and responsibilities</b> The licensee <b>shall</b> document, retain, and make available to the CNSC upon request, the roles and responsibilities of: a. certified workers b. all personnel, including management, involved in the training and qualification of workers seeking or holding a certification, including trainers, examiners, and managers delegated with relevant approval authorities	Compliant
<b>21.1.4 Trainer and examiner qualifications</b> The licensee <b>shall</b> document, retain, and make available to the CNSC upon request, a record of the qualifications of the trainers and examiners referenced in this regulatory document.	Complaint
<b>21.2 Personnel records</b> For each worker certified or seeking certification for employment in a designated position, the licensee <b>shall</b> retain, and make available to the CNSC upon request, adequate personnel records for a retention period equal to the duration of the employment of the worker, be it as an employee or a contractor, plus 5 years after the worker ceases to be employed in any capacity. At a minimum, said personnel records <b>shall</b> encompass:	Complaint
a. Education or literacy level – The name and address of any educational institution or learning provider from which the worker obtained an accreditation, including any diploma, degree or certificate, and a copy of any diploma, degree or certificate required by the licensee’s personnel selection program.	This needs to be included in governance
b. Prior work experience – Comprehensive records of any employment period(s) required by the licensee’s personnel selection program, or as part of the mandated plant familiarization training, including, in each case, the name of the employer, the address of the work site, and the effective start and end dates.	This needs to be included in governance.
c. Personnel selection interviews and tests – Comprehensive records of any personnel selection interview or test, including the effective date and results in each case, administered as part of the licensee’s personnel selection program.	
d. Personnel transfer – Comprehensive records of any information required or collected as part of a personnel transfer.	
e. Advancement – Comprehensive records of any information required or collected as part an advancement to a shift supervisor or senior shift supervisor position.	
f. Training – Comprehensive records of the initial training and continuing training successfully completed by the worker, including the start and end dates of each distinct training period or milestone.	
g. Formal learner evaluations – Comprehensive records of the formal learner evaluations administered to the worker as part of their initial or continuing training, including, in each case, the dates on which the evaluations were conducted, the results, and the full legal name(s) of the evaluator(s)	
h. Work under supervision – Comprehensive records of any WUS performed by the worker, including, in each case, the associated requirement being met, the date of each shift worked under supervision, and the full legal name of, and the CNSC certification held by, the certified worker who supervised the worker.	
i. Management interviews – Comprehensive records of the management interviews undergone by the worker, including, in each case, the date of the interview, the full legal name(s) and position(s) of the interviewer(s), and a verbatim or summary description of the questions and answers exchanged during the interview.	
j. Certification examinations – The certification examination records referenced in the licence or any accompanying documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying documentation.	
k. Requalification tests – The requalification testing records referenced in the licence or any accompanying licensing documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying licensing documentation.	
l. Employment records – The employment records specified in subsection 3.3.	
m. Fitness for duty – Any information collected regarding the worker’s fitness for duty, except for any sensitive or privileged information protected by privacy laws.	
n. Removals and reinstatements – Comprehensive records of all removals from, and reinstatements to, the duties of a designated position, including, in each case, the effective date of removal and the basis for the removal and, when applicable, the effective date of reinstatement and the actions taken to reinstate the worker.	
Subpart B – Physical Infrastructure	
The licensee <b>shall</b> ensure that the reactor facility is equipped or associated with the physical infrastructure necessary to administer the knowledge and performance-based training, certification examinations and requalification tests specified in this regulatory document, including, at a minimum, the facilities specified in subpart B.	Complaint
<b>22. Knowledge-Based Examination and Testing Facilities</b> The licensee <b>shall</b> ensure that examiners have access to adequate facilities allowing for the administration of the pertinent knowledge-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures.	Complaint
<b>23. Performance-Based Examination and Testing Facilities</b> The licensee <b>shall</b> ensure that examiners have access to a full-scope simulator, or an alternate simulator <b>acceptable to the CNSC</b> , that permits the administration of the pertinent performance-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures. All performance-based certification examinations and requalification tests referenced in this regulatory document <b>shall</b> be administered in simulator facilities or using simulation systems <b>acceptable to the CNSC</b> .	Complaint

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<b>23.1 Simulation capabilities</b> The simulator <b>shall</b> be capable of simulating, realistically and in real time, all significant plant manoeuvres and transients that <b>may</b> occur under normal and abnormal operating conditions, including: <ul style="list-style-type: none"><li>a. reactor start-up and shutdown</li><li>b. major plant upsets and accident conditions</li><li>c. all significant failures of systems and associated subsystems and equipment, and the consequences of such failures</li><li>d. the system and equipment responses to operator actions</li></ul> For conditions and failures that <b>may</b> vary in magnitude, such as pipe breaks, loss of inventory, loss of flow, loss of pressure and loss of vacuum, the simulator <b>shall</b> have adjustable rates to simulate all possible degrees of severity of a condition or failure that affect system responses or operator actions.	Compliant
<b>23.2 Physical layout</b> To the fullest extent possible, the simulator <b>shall</b> replicate the operating and monitoring systems and equipment available to certified workers in the main control room, as well as the spatial relationships linking these systems and equipment. In cases where the CNSC has accepted the use of a simulator other than a full-scope simulator, either to complement or as an alternative to the full-scope simulator, the alternate simulator <b>shall</b> meet the requirements specified in this section to the fullest extent possible, within the physical restrictions or functional limitations inherent to the alternate simulator.	Compliant
<b>23.3 Simulator operating room</b> The simulator operating room <b>shall</b> be shielded from the main control room replica in such a manner as to prevent the candidate(s) who are being evaluated from seeing or hearing any data being recorded, any input entered in the simulator, or any communication between the simulator operator and the examiner(s) and other examination team members.	Compliant
<b>23.4 Communication systems and equipment</b> The simulator <b>shall</b> be equipped with functional replicates of the communication or warning system(s) or equipment used by certified workers in the main control room of the simulated reactor facility, including, as applicable: <ul style="list-style-type: none"><li>a. telephones or other two-way, internal communication system</li><li>b. a radiation emergency warning system, including any visual or audible alarm</li><li>c. a fire emergency warning system, including any visual or audible alarm</li><li>d. a public address system</li></ul>	Compliant
<b>23.5 Data-recording systems and equipment</b> In order to facilitate the conduct and grading of the performance-based certification examinations and requalification tests referenced in this regulatory document, the simulator <b>shall</b> be equipped with adequate data-recording systems and equipment meeting the minimum requirements specified in this subsection.	Compliant
<b>23.5.1 Recording of operator actions</b> The simulator <b>shall</b> allow for the recording, retrieval, and printing, in chronological order, along with the time of occurrence, of: <ul style="list-style-type: none"><li>a. all malfunctions initiated by the simulator operator</li><li>b. all the operator actions performed by the candidate(s) via the simulated control panels and instrumentation</li></ul>	Compliant
<b>23.5.2 Recording of system parameters</b> The simulator <b>shall</b> allow for: <ul style="list-style-type: none"><li>a. the recording, retrieval, and printing of all the system parameter values relevant to:<ul style="list-style-type: none"><li>(i) the evaluation of the operator actions performed by the candidate(s)</li><li>(ii) the verification of the simulator fidelity</li></ul></li><li>b. the graphical representation and printing of the variation of said system parameter values in relation to time, based on an adequate sampling frequency, and for a minimum recording period of 2 hours</li></ul>	Compliant
<b>23.5.3 Audiovisual recording system</b> The simulator <b>shall</b> be equipped with an audiovisual recording system allowing for: <ul style="list-style-type: none"><li>a. recording and replaying the actions performed by each candidate being evaluated</li><li>b. recording and replaying all vocal communications, including telephone exchanges, between the candidate(s) being evaluated and the other members of the operating team</li><li>c. the identification of the voice of each candidate being evaluated</li><li>d. the identification of the operating controls, instruments, and references used by the candidate(s) being evaluated</li><li>e. the overlay of the time, real or simulated, on the audiovisual recordings</li></ul>	Compliant
<b>23.5.4 Control of audiovisual data</b> The licensee <b>shall</b> establish and document effective policies and procedures to control the access to, and the use of, the audiovisual data collected during the design, development and conduct of certification examinations and requalification tests.	Complaint
Part III – Worker Qualifications Subpart C – Operations Personnel	
<b>24. Operations Personnel Certification</b> The requirements specified in this section pertain to workers employed or seeking employment in one of the following generic classes of designated positions: <ul style="list-style-type: none"><li>a. auxiliary systems operator (ASO)</li><li>b. reactor operator (RO)</li><li>c. shift supervisor</li></ul>	
<b>24.1 Core qualifications for operations personnel</b> Any worker referred to in this section <b>shall</b> meet, at the time of application for certification, the core qualifications for operations personnel specified in this subsection.	Compliant
<b>24.1.1 Personnel selection</b> The worker <b>must</b> have met, prior to the start of their initial training, the basic prerequisites specified in sub-subsection 14.2.1.	Compliant

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<b>24.1.2 General knowledge</b> The worker <b>must</b> have successfully completed general training based on a training system and <b>must</b> consequently possess the fundamental knowledge, including the applied sciences and engineering principles, relevant to the design and operation of the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.	Compliant
<b>24.1.3 Plant familiarization</b> The worker <b>must</b> have successfully completed, prior to the start of the station-specific training specified in sub-subsection 24.1.4, plant familiarization training based on a training system and <b>must</b> consequently possess, at a minimum, a basic understanding of: <ul style="list-style-type: none"><li>c. the physical layout of the reactor facility identified in the licence, including the location and size of the major systems, subsystems, and equipment</li><li>d. the management system and organizational infrastructure necessary to operate said reactor facility under normal, abnormal, and emergency conditions, including the mandate, roles and responsibilities of the key personnel and groups of personnel</li></ul>	Compliant
<b>24.1.5 Nuclear emergency management</b> The worker <b>must</b> possess adequate knowledge of nuclear emergency response and the management of beyond-design-basis accidents, including the roles and responsibilities of certified workers regarding emergency operating procedures and severe accident management.	Complaint
<b>24.1.10 Performance-based certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for certification, a performance-based certification examination conducted in a full-scope simulator or approved alternative <b>providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.</b>  <b>Verses current wording of:</b>  <b>This performance-based examination covers operation of a reactor unit under abnormal and emergency conditions.</b>	Compliant
<b>24.1.11 Work under supervision</b> The worker <b>must</b> have successfully performed a minimum number of hours of work under supervision (WUS) <b>acceptable to the CNSC</b> , in the pertinent designated position and under the supervision of a qualified worker certified to work in the pertinent designated position.	Compliant
<b>24.1.12 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently.  The management interview <b>shall</b> be conducted after all the other requirements specified in subsection 24.1 have been met.	Compliant
<b>24.2 Supplementary qualifications for shift supervisors</b> In addition to the core qualifications for operations personnel specified in subsection 24.1, a worker seeking certification for employment as shift supervisor <b>shall</b> meet, at the time of application for certification, the supplementary requirements specified in this subsection.	Compliant
<b>24.2.1 Supplementary personnel selection criteria</b> The worker <b>must</b> have met the supplementary prerequisites specified in sub-subsection 14.2.2.	
<b>24.2.2 Supplementary station-specific knowledge</b> The worker <b>must</b> have successfully completed supplementary station-specific training based on a training system and <b>must</b> consequently possess the supplementary knowledge specifically required of shift supervisors concerning the design and operation, under normal, abnormal, and emergency conditions, of the reactor(s) and associated systems, subsystems and equipment installed in the reactor facility identified in the licence.	
<b>24.2.3 Supplementary knowledge-based station-specific certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the supplementary station-specific knowledge specifically required of shift supervisors to perform their duties safely and competently.	
<b>24.3 Requalification of operations personnel</b> Any worker referred to in this section seeking the renewal of their certification <b>shall</b> meet, at the time of application for certification renewal, the requirements specified in this subsection.	Complaint
<b>24.3.4 Minimum employment of operations personnel</b> The certified worker <b>must</b> have been sufficiently employed in the pertinent designated position to maintain an adequate competency level.	
<b>24.4 Qualifying for recertification within 5 years of a certificate expiry</b> Any worker referred to in this section seeking a recertification within 5 years of the expiry of a prior certification for the same position <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	Not applicable for PLGS, based on a case by case basis
<b>24.4.1 Tailored training</b> The worker <b>must</b> have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, this tailored training <b>shall</b> cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the certificate expiry and the application for recertification.	Not applicable for PLGS
<b>24.4.4 Work under supervision</b> The worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.	

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<b>24.4.5 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently. The management interview <b>shall</b> be conducted after all other requirements previously specified in subsection 24.4 have been met.	Not applicable for PLGS
<b>24.5 Qualifying for recertification following decertification or certificate expiry after 5 years</b> Any worker referred to in this section seeking a recertification following decertification by the CNSC, or following the expiry of a certificate that occurred more than 5 years before the date of application for recertification, <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	
<b>24.5.1 Decertification basis remediation</b> When the worker is seeking recertification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker <b>shall</b> no longer exist or <b>shall</b> have been remedied by the licensee to the satisfaction of the CNSC.	
<b>24.5.2 Tailored training</b> The worker <b>must</b> have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, the tailored training referenced in this subsection <b>shall</b> cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the decertification or certificate expiry and the application for recertification.	
<b>24.5.3 Knowledge-based station-specific certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a station-specific knowledge examination providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently. When the worker is seeking certification as a shift supervisor, the licensee <b>shall</b> administer both baseline and supplementary station-specific examinations.	
<b>24.5.4 Performance-based certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a performance-based certification examination conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	
<b>24.5.5 Work under supervision</b> The worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.	
<b>24.5.6 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently. The management interview <b>shall</b> be conducted after all other requirements specified in subsection 24.5 have been met.	
Subpart D – Senior Health Physicists	
<b>25. Senior Health Physicist Certification</b> The requirements specified in this section pertain to workers employed or seeking employment as senior health physicist (SHP).	Need to check current application letters for compliance.
<b>25.1 Qualifications for senior health physicists</b> A worker seeking certification for employment as an SHP <b>shall</b> meet, at the time of application for certification, the requirements specified in this subsection.	Needs to be reviewed
<b>25.1.1 Personnel selection</b> The worker <b>must</b> have met, prior to the start of their initial training, the basic and supplementary prerequisites specified in sub-subsections 14.2.1 and 14.2.2 respectively.	
<b>25.1.2 Prior education</b> The worker <b>shall</b> : <div><div>a.</div><div>hold a degree in health physics granted by a recognized university, or</div></div> <div><div>b.</div><div>hold a baccalaureate in engineering or science granted by a recognized university, and have successfully completed a suitable series of courses offered by a recognized educational institution or learning provider covering current radiation protection principles and methods</div></div>	
<b>25.1.3 Prior work experience</b> The worker <b>shall</b> possess, at a minimum, 4 years of relevant experience, including 2 years as a health physicist or an equivalent position at a reactor facility.	
<b>25.1.4 Initial training</b> The worker <b>must</b> have successfully completed initial training based on a training system covering the general and station-specific knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.	
<b>25.1.5 Radiation protection expertise</b> The worker, in consequence of the education, work experience, and initial training previously specified in subsection 25.1, possess knowledge, to an extent commensurate with the duties of an SHP, of radiation theory, including radiation hazards, and of radiation protection theory and practices, including the radiation protection procedures relevant to the operation of the reactor facility identified in the licence under normal, abnormal, and emergency conditions.	
<b>25.1.6 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the initial training referenced in sub-subsection 25.1.4, and before the certification examination specified in sub-subsection 25.1.7.	
<b>25.1.7 Certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination administered by CNSC staff.	



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<b>25.2    Requalification of senior health physicists</b> A worker seeking the renewal of a certification for employment as an SHP <b>shall</b> meet, at the time of application for certification renewal, the requirements specified in this subsection	Compliant
<b>25.2.1   Continuing training</b> The worker have successfully completed refresher and update training based on a training system covering the knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.	Compliant
<b>25.2.2   Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the continuing training referenced in sub-subsection 25.2.1, and before the requalification test specified in sub-subsection 25.2.3.	Compliant
<b>25.2.3   Requalification testing</b> The worker <b>must</b> have successfully completed a knowledge-based requalification test administered by CNSC staff.	Complaint
<b>25.3    Qualifying for recertification following decertification or certificate expiry</b> A worker seeking certification for employment as an SHP following decertification by the CNSC, or following the expiry of the certificate, <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	Will be addressed on a case by case basis – will not be imbedded in process
<b>25.3.1   Decertification basis remediation</b> When the worker is seeking certification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker <b>shall</b> no longer exist or <b>shall</b> have been remedied by the licensee to the satisfaction of the CNSC.	
<b>25.3.2   Tailored training</b> The worker <b>must</b> have successfully completed tailored training, comprising knowledge and performance-based refresher and update training, based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, the tailored training referenced in this subsection <b>shall</b> cover any scheduled knowledge refresher and knowledge update training that the worker missed during the interim period between decertification or the certificate expiry and the application for certification.	
<b>25.3.3   Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the tailored training referenced in sub-subsection 25.3.2, and before the certification examination specified in sub-subsection 25.3.4.	
<b>25.3.4   Certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination administered by CNSC staff.	

## Appendix A: Station-Specific Designated Positions

**Need to discuss with CNSC if any changes required. Probably not.**

This appendix specifies which station-specific position(s) correspond(s) to each generic class of designated position referenced in this regulatory document for the pertinent reactor facility in operation at the time of publication of the current version of this regulatory document.

### A.1 Station-Specific Positions Requiring an Auxiliary Systems Operator (ASO) Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
ASO position	Unit 0 Control Room Operator	Unit 0 Control Room Operator	None	None	None

### A.2 Station-Specific Positions Requiring a Reactor Operator (RO) Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
RO position	Authorized Nuclear Operator	Authorized Nuclear Operator	None	Authorized Nuclear Operator	Control Room Operator

### A.3 Station-Specific Positions Requiring a Shift Supervisor Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
Shift Supervisor position	Control Room Shift Supervisor	Control Room Shift Supervisor	None	Control Room Shift Supervisor	Shift Supervisor
Senior Shift Supervisor position	Shift Manager	Shift Manager	None	Shift Manager	None

### A.4 Station-Specific Positions Requiring a Senior Health Physicist (SHP) Certification

CANDU reactor facilities					
Facility	Bruce	Darlington	Gentilly-2	Pickering	Point Lepreau
SHP position	Authorized Health Physicist	Responsible Health Physicist	Responsable technique de radioprotection	Responsible Health Physicist	Senior Health Physicist

## Appendix B Compliance Schemes **Acceptable to the CNSC**

This appendix specifies schemes **acceptable to the CNSC** that the licensee **must** implement at the specified reactor facilities to be compliant with the referenced requirements for the pertinent reactor facilities in service at the time of publication of the current version of this regulatory document.

### Mandatory personnel certification schemes for CANDU reactor facilities

Reference	Description	Requirement(s)
Subsubsection 24.1.11	Minimum number of hours of work under supervision (WUS) required for the certification of operations personnel.	The worker <b>shall</b> have successfully performed 360 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.
		<p><b>Suggest Darlington &amp; BP need this revision?</b></p> <p>Any worker seeking employment as an ASO <b>shall</b> have successfully performed 225 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.</p> <p>Any worker seeking employment as RO or shift supervisor <b>shall</b> have successfully performed 360 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.</p>
Subsubsection 14.4.1	Minimum experience as shift supervisor prior to advancement to a senior shift supervisor position.	The worker <b>shall</b> have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a minimum of 80 complete shifts amounting to a minimum of 960 hours of shiftwork prior to being selected for advancement to the senior shift supervisor position.
Subsubsection 20.2.1	Minimum shift requirements for operations personnel.	<p>Any worker certified for employment as ASO <b>shall</b> perform the duties of an ASO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as RO <b>shall</b> perform the duties of an RO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as shift supervisor, but not qualified as senior shift supervisor, <b>shall</b> perform the duties of a shift supervisor for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as shift supervisor who is duly qualified as senior shift supervisor <b>shall</b> perform the duties of a shift supervisor or senior shift supervisor for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p>

## **Appendix C: Senior Health Physicist Examination and Testing Topics**

The certification examinations and requalification tests administered by CNSC staff to workers seeking certification or the renewal of a certification for employment as senior health physicist cover topics divided into 3 parts, each covering a specific knowledge area, as exemplified in this appendix.

### **C.1 Regulations and Reactor Operating Licence**

The relevant topics include, but are not limited to:

- a. the relevant provisions of the NSCA
- b. the relevant regulations made pursuant to the NSCA, namely the:
  - i. General Nuclear Safety and Control Regulations
  - ii. Radiation Protection Regulations
  - iii. Class I Nuclear Facilities Regulations
  - iv. Nuclear Substances and Radiation Devices Regulations
  - v. Packaging and Transport of Nuclear Substances Regulations
- c. the reactor facility licence and the documentation referenced in the licence

### **C.2 Radiation Protection**

The relevant topics include, but are not limited to:

- a. safety culture
- b. reactor facility design, operation, and maintenance
- c. the relevant licensee and station-specific policies, standards, and procedures
- d. the radiation protection principles, methods and practices related to the operation of the reactor facility identified in licence
- e. the relevant Canadian, international and industry standards and conventions

### **C.3 Roles and Responsibilities**

The relevant topics include, but are not limited to:

- a. the responsibilities and authority of the senior health physicist
- b. the responsibilities and authority of the personnel who interact with the senior health physicist



**Need to review and update governance as required:**

## **Glossary**

**One example:**

**(new)**

### **complete shift**

A shift worked in a designated position as a member of the minimum staff complement consisting of a minimum of 4 consecutive hours, which is preceded by a formal turnover of the responsibilities for the shift with an outgoing counterpart and concluded by an equal turnover with an incoming counterpart.



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
3.2	Employment Status	<p>The licensee <b>shall</b> assign an employment status to each certified worker in accordance with the following categories:</p> <p>a) an active status is assigned to a worker who:</p> <ul style="list-style-type: none"><li>holds a valid certificate</li><li>attends the scheduled continuing training</li><li>meets the applicable minimum employment requirements</li><li>continues to be able to perform the duties of the pertinent designated position safely and competently</li></ul> <p>b) an inactive status is assigned to any certified worker who holds a valid certificate, but was formally removed from duty in accordance with subsection 20.3 or subsection 20.4</p> <p>c) an uncertified status is assigned to a worker whose certificate has expired</p> <p>d) a decertified status is assigned to a worker decertified by the CNSC</p>				<p>SDP-01368-P036, “meeting minimum operational staffing requirements” has been revised accordingly to assign an employment status to each certified worker as required by section 3.2</p>	<p>Details not included in current revision of SDP-01368-P036, “meeting minimum operational staffing requirements”</p>	<p>Update SDP-P036 to include worker “Status” as described in section 3.2</p>	<p>Darren Elliott</p>	<p>No later than Sept 30, 2024</p>	<p>Revision In-Progress</p>	<p><b>ON TRACK</b></p> <p><b>Modified Process</b></p>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
3.3	Employment Record	<p>The licensee <b>shall</b> maintain, in accordance with subsection 21.2, continuous and auditable employment record for each worker certified by the CNSC, including, at a minimum:</p> <p>a) the employment status assigned to the worker</p> <p>b) the number of complete shifts and hours of work performed in a designated position by the worker, specifying:</p> <ul style="list-style-type: none"><li>the pertinent designated position</li><li>the date on which each complete shift and hour of work were performed</li></ul>				SDP-01368-P036, “meeting minimum operational staffing requirements” has been revised to record a continuous & auditable employment record as required by section 3.3	Details not included in current revision of SDP-01368-P036, “meeting minimum operational staffing requirements”	Update SDP-P036 to include continuous & auditable record as required by section 3.3”	Darren Elliott	No later than Sept 30, 2024	Revision In-Progress	<b>ON TRACK</b>  <b>Modified Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
5.3	Basic Information	<p>Applications made under the provisions of this regulatory document <b>shall</b> contain the following information:</p> <p>a) the purpose of the application</p> <p>b) the legal name of the worker, including a first name, a surname, and a middle name or initial when possible</p> <p>c) the designated position in which the worker is or <b>will</b> be employed</p> <p>d) the reactor facility where the worker is or <b>will</b> be employed, including, where applicable, a specific reactor or group of reactors</p> <p>e) the corporate name of the licensee operating said reactor facility</p> <p>f) the effective date of the application</p> <p>g) the legal name, position, contact information, and signature of the authorized applicant a valid return mailing or email address</p>				<p>CNSC letter templates for initial &amp; recertification requests have been revised accordingly</p>	<p>Update CNSC Letter Templates to include required basic information</p>	<p>Update CNSC Letter Templates for Initial Certification requests &amp; recertification requests</p>	Nick Reicker	No later than Sept 30, 2024	In Progress	<p><b>ON TRACK</b></p> <p><b>Modified Process</b></p>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
7.2	Worker Requalification Summary	<p>The application <b>shall</b> provide a chronological summary of the requalification requirements met by the worker during the current certification period, covering the continuing training components, the requalification tests, and all other personnel certification requirements successfully completed by the worker.</p> <p>The worker requalification summary <b>shall</b> offer sufficient evidence that the worker meets all of the applicable requalification requirements specified in Part III. At a minimum, this summary <b>shall</b> include, as applicable depending on the designated position:</p> <ul style="list-style-type: none"><li>a) a confirmation that the worker attended continuing training and successfully underwent formal learner evaluations compliant with the requirements specified in section 15, including suitable update, refresher, simulator-based and nuclear emergency response training</li><li>b) the dates of all knowledge-based requalification tests successfully completed</li><li>c) the dates of all performance-based requalification tests successfully completed</li></ul> <p><b>continued on next page...</b></p>				<p>CNSC letter templates for quarterly updates has been revised accordingly</p>	<p>Update CNSC Letter Templates – Quarterly updates</p>	<p>Update Letter Templates to ensure complete audible list of shifts worked is maintained</p>	Nick Reicker	No later than Sept 30, 2024	In Progress	<p><b>ON TRACK</b></p> <p><b>Modified Process</b></p>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
7.2, <b>continued</b>	Worker Requalification Summary, <b>continued</b>	d) the total number of complete shifts and hours of shiftwork in the designated position performed by the worker over the current certification period e) any remedial action required by CNSC staff as a result of a requalification test administered by CNSC staff				CNSC letter templates for quarterly updates has been revised accordingly	Update CNSC Letter Templates – Quarterly reports	Update CNSC Letter Templates to ensure complete audible list of shifts worked is maintained	Nick Reicker	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>
10.	Application for Senior Health Physicist Examination or Requalification Testing	An authorized applicant <b>may</b> submit an application for the administration of a certification examination or requalification test to a worker seeking certification or the renewal of a certification for employment as senior health physicist (SHP) once the worker has met the pertinent prerequisites specified in Part III. The application <b>shall</b> be submitted in writing in accordance with the general provisions of the personnel certification application processes specified in section 5, and <b>shall</b> state that the worker: a) has successfully completed the applicable training referenced in the licence, specifying the effective date of completion of the initial or continuing training referenced in section 25 has successfully undergone the applicable management interview referenced in section 25, specifying the date of the interview <b>continued on next page...</b>				CNSC letter templates for administering a SHP Certification / Recertification examination has been developed	Update CNSC Letter Templates	Update CNSC Letter Templates. Ensure that these requirements are included in the SHP training program	Nick Reicker	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
10, <b>continued</b>	Application for Senior Health Physicist Examination or Requalification Testing, <b>continued</b>	<p>An authorized applicant <b>may</b> submit an application for the administration of a certification examination or requalification test to a worker seeking certification or the renewal of a certification for employment as senior health physicist (SHP) once the worker has met the pertinent prerequisites specified in Part III.</p> <p>The application <b>shall</b> be submitted in writing in accordance with the general provisions of the personnel certification application processes specified in section 5, and <b>shall</b> state that the worker:</p> <p>b) has successfully completed the applicable training referenced in the licence, specifying the effective date of completion of the initial or continuing training referenced in section 25</p> <p>c) has successfully undergone the applicable management interview referenced in section 25, specifying the date of the interview</p>				CNSC letter templates for administering a SHP Certification / Recertification examination has been developed	Update CNSC Letter Templates	Update CNSC Letter Templates Ensure that these requirements are included in the SHP training program	Nick Reicker	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
11.  11.1	Refusal to Certify and Decertification  Background information	d) In accordance with the relevant legislation, the Commission or a DO <b>may</b> refuse to issue or renew a certification upon receiving an application for certification or the renewal of a certification and <b>may</b> initiate the decertification of a certified worker on its own motion or upon request. Prior to making a final decision, the Commission or a DO <b>will</b> give prior notice of the proposed decision to the licensee and the worker concerned, offering each party an opportunity to be heard, either in support of or against the proposed decision.				CNSC correspondence would be drafted accordingly – no specific letter template is required	No GAP identified	None			Section reviewed – no action required	





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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
11.2	Licensee Requests for Decertification	<p>The licensee <b>may</b> request the decertification of a certified worker employed at the reactor facility identified in the licence. All such requests <b>shall</b> be submitted in writing in accordance with subsection 5.4 and contain the following information:</p> <ul style="list-style-type: none"><li>a) the purpose of the request</li><li>b) the legal name of the worker, as shown on the most recent certificate issued to the worker</li><li>c) the designated position for which the worker is to be decertified</li><li>d) the reactor facility where the worker is employed, including, where applicable, a specific reactor or group of reactors</li><li>e) the corporate name of the licensee operating said reactor facility</li><li>f) a description of the basis for the request</li><li>g) supporting documentation, as <b>may</b> exist, establishing a sufficient basis for decertification</li><li>h) the effective date of the request</li><li>i) the legal name, position, contact information and signature of an authorized licensee representative a valid return mailing or email address</li></ul>				CNSC letter templates updated in accordance for a decertification request.	Update CNSC Letter Templates	Update CNSC Letter Templates Ensure that these requirements are included in the SHP training program	Nick Reicker	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
14	Personnel Selection Program	The licensee <b>shall</b> implement and document a personnel selection program that ensures the selection of suitable candidates for entry in the initial training programs referenced in this regulatory document.				SDP-01368-A008 – “Personnel selection program for certified workers” has been developed to address selection criteria for certified workers	No specific HR process to document selection criteria	Develop HR process document to address selection of certified staff	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>
14.1	Personnel Selection Program Requirements	<p>As an integral part of the personnel selection program, at a minimum and for each designated position identified in the licence, the licensee:</p> <p>a) <b>shall</b> set a minimum prior education level or minimum literacy and numeracy levels commensurate with the duties of the designated position and consistent with the entry level of a suitable initial training program</p> <p><b>shall</b> require that candidates selected on the basis of their prior education level provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider</p> <p>As an integral part of the personnel selection program, at a minimum and for each designated position identified in the licence, the licensee:</p> <p>b) <b>shall</b> set a minimum prior education level or minimum literacy and numeracy levels commensurate with the duties of the designated position and consistent with the entry level of a suitable initial training program</p> <p><b>continued on next page...</b></p>				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers	No specific HR process to document selection criteria	Develop HR process document to address selection of certified staff	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
14.1, <b>continued</b>	Personnel Selection Program Requirements, <b>continued</b>	c) <b>shall</b> require that candidates selected on the basis of their prior education level provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider  d) <b>may</b> recognize equivalencies to any minimum education, literacy, or numeracy level set by the licensee  e) <b>shall</b> use standardized tests and proven methods to assess whether or not candidates selected on the basis of a literacy or numeracy level, or a recognized equivalency, do in fact meet the applicable minimum standards  f) <b>shall</b> determine whether or not prior work experience <b>may</b> be desirable or essential and, when deemed essential, develop plans and procedures to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program  <b>continued on next page...</b>				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers	No specific HR process to document selection criteria	Develop HR process document to address selection of certified staff	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
14.1	Personnel Selection Program Requirements, <b>continued</b>	<p>g) <b>shall</b> determine whether or not prior work experience <b>may</b> be desirable or essential and, when deemed essential, develop plans and procedures to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program</p> <p>h) <b>shall</b> identify attributes and aptitudes deemed essential to safely and competently perform the duties of the designated position, including integrity, leadership, and resilience, as <b>may</b> be pertinent, and select candidates accordingly</p> <p>i) <b>may</b> use standardized tests and proven methods, or require a medical assessment performed by a licensed physician, to assess whether or not candidates have any permanent, physical or mental limitation that would prevent them from performing the duties of the pertinent designated position safely and competently</p>				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers	No specific HR process to document selection criteria	Develop HR process document to address selection of certified staff	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
14.2  14.2.1	Personnel Selection Criteria  Basic Prerequisites	Candidates selected for entry in any initial training program referenced in this regulatory document <b>shall</b> : a) have demonstrated literacy and numeracy levels commensurate with the duties of the pertinent designated position b) have provided sufficient proof of any prior education level required by the CNSC or the licensee c) have gained any prior work experience required by the CNSC or the licensee d) possess all the safety-related attributes and aptitudes deemed essential by the licensee e) meet all other applicable position-specific selection criteria set by the licensee				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers	No specific HR process to document selection criteria	Develop HR process document to address selection of certified staff	Kaitlynnne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>
14.2.2	Supplementary Prerequisites for Shift Supervisors and Senior Health Physicists	In addition to meeting the applicable basic prerequisites, shift supervisor and senior health physicist (SHP) candidates <b>shall</b> , to the licensee’s knowledge: a) possess known leadership skills or potential b) have consistently demonstrated a high level of integrity c) possess known leadership skills or potential d) have consistently demonstrated a high level of integrity				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers	No specific HR process to document selection criteria	Develop HR process document to address selection of certified staff	Kaitlynnne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
14.3	Selection of Reactor Operators for Shift Supervisor Training	e) A worker certified or previously certified for employment as reactor operator (RO) at the reactor facility identified in the licence <b>may</b> be selected for entry in an initial training program for shift supervisor candidates in accordance with the requirements specified in this subsection. A worker certified or previously certified for employment as reactor operator (RO) at the reactor facility identified in the licence <b>may</b> be selected for entry in an initial training program for shift supervisor candidates in accordance with the requirements specified in this subsection.				<b>SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified worker.</b>  <b>This subsection will not apply for PLGS. All applicants for SSIT positions will be selected based on the defined criteria listed in the above SDP.</b>					<b>NOT REQUIRED</b>	
14.3.1	Performance as Reactor Operator	Prior to being selected for shift supervisor training, the worker <b>must</b> : a) have performed the duties of an RO safely and competently be known to possess the safety-related attributes and aptitudes required of a shift supervisor				<b>This subsection will not apply for PLGS. All applicants for SSIT positions will be selected based on the defined criteria listed in the above SDP.</b>					<b>NOT REQUIRED</b>	
14.3.2	Personnel Selection Exemption	b) The licensee <b>may</b> , if the worker has been regularly employed as a certified RO for at least 4 calendar quarters, exempt the worker from any education level or work experience normally required of shift supervisor candidates.				<b>This subsection will not apply for PLGS. All applicants for SSIT positions will be selected based on the defined criteria listed in the above SDP.</b>					<b>NOT REQUIRED</b>	



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
14.3.3	Notification of Selection for Shift Supervisor Training	<p>The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program for shift supervisor candidates. This communication <b>shall</b> include:</p> <ul style="list-style-type: none"><li>a) the full legal name of the worker</li><li>b) a confirmation that the worker performed the duties of an RO safely and competently</li><li>c) a confirmation that the worker possesses the safety-related attributes and aptitudes required of a shift supervisor</li></ul> <p>a summary of any exemption explicitly sanctioned in sub-subsection 14.3.2 and employed as part of the selection of the worker, including the start and end dates of the observation period(s) adding to 4 calendar quarters in total</p>				<p><b>This subsection will no longer apply for PLGS. All applicants for SSIT positions will be selected based on the defined criteria listed in SDP-01368-A008 – Personnel Selection Program for Certified workers.</b></p>					<b>NOT REQUIRED</b>	



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
19.1	Reintegration of a Worker in Training Following a Prolonged Training Interruption	<p>The licensee <b>shall</b> establish and document an effective process to manage the case of any worker reintegrating an initial training program after a prolonged training interruption. As an integral part of this process, the licensee <b>shall</b>:</p> <p>a) determine the need for, and perform as necessary, a formal learner evaluation, including knowledge and performance-based testing as warranted, to assess the K&amp;S retention of the worker and to identify any K&amp;S gap that the worker <b>may</b> have developed during the period of absence</p> <p><b>continued on next page...</b></p>				TRWI's 97177-0001 and 97170-0001 revised to indicate reintegration into initial training following an absence of >6 months.	No formal process to reintegrate a student following prolonged absence, >6 months	<p>Consider Remedial Training Plan requirements or simply re-test incumbents; include in the following formal process documents;</p> <p>TRWI's 97177-0001 and 97170-0001</p>	Rob Stears/Darren Elliott/ Stu Hallett	No later than Sept 30, 2024	In Progress	<p><b>ON TRACK</b></p> <p><b>Modified Process</b></p>





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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
19.1, <b>continued</b>	Reintegration of a Worker in Training Following a Prolonged Training Interruption, <b>continued</b>	<p>b) determine the need for tailored training based on an individual training needs analysis (ITNA), considering any K&amp;S forgotten by the worker and any changes or updates to the essential K&amp;S and safety-related attributes that occurred during the period of absence</p> <p>c) formulate and implement an individual training plan (ITP) as <b>may</b> be necessary</p> <p>d) ensure that the worker, at a minimum, successfully completes any training and formal learner evaluation(s) missed during the period of absence</p> <p>e) determine a suitable point of re-entry into the pertinent initial training program</p> <p>At a minimum, any worker who is absent from an initial training program for a period of 6 months or more <b>shall</b> undergo a formal reintegration process meeting the requirements specified in this subsection.</p>				TRWI's 97177-0001 and 97170-0001 revised to indicate reintegration into initial training following an absence from training of >6 months.	No formal process to reintegrate a student following prolonged absence, >6 months	Consider Remedial Training Plan requirements or simply re-test incumbents; include in the following formal process documents;  TRWI's 97177-0001 and 97170-0001	Rob Stears/Darren Elliott / Stu Hallett	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>
20.2.2	Minimum Employment of Senior Health Physicists	The licensee <b>shall</b> ensure that workers certified for employment as an SHP regularly perform the duties of an SHP throughout the full duration of their certification.				Training Program Description for SHP; TPD- 97215-0001, revised to include specific requirements	Not documented in any formal process	Revise Certified Health Physicist certification training program – TPD-97215-0001 accordingly	Jenn Allen/Krista Galbraith	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
20.3	Management of Prolonged Unemployment	Any certified worker <b>shall</b> be formally removed from the duties of the pertinent designated position and assigned an inactive employment status who, for a period lasting 6 consecutive months or more, regardless of the rationale, is or <b>will</b> be unable to: a) attend the scheduled continuing training b) meet an applicable quarterly minimum shift requirement				SDP-01368-P036, “meeting minimum operational staffing requirements” has been revised accordingly to assign an employment status to each certified worker.	Not included in SDP-01368-P036	Update SDP-P036 to include worker “Status”	Darren Elliott	No later than Sept 30, 2024	In-Progress	<b>ON TRACK</b>
20.4	Removal from Duty for Cause	c) Any certified worker who meets any one of the criteria specified in this subsection <b>shall</b> be formally removed from the duties of the pertinent designated position for cause and assigned either an inactive or uncertified employment status as applicable.				SDP-01368-P036, “meeting minimum operational staffing requirements” has been revised accordingly to assign an employment status to each certified worker.	Not included in SDP-01368-P036	Update SDP-P036 to include worker “Status”	Darren Elliott	No later than Sept 30, 2024	In-Progress	<b>ON TRACK</b>
20.4.2	Requalification Test Failure	The worker has failed a requalification test, be it in a lead or supporting role.				SDP-01368-TR15 has been revised to notify Ops superintendent and update the LMS	No specific direction in TR15 to notify Ops Super & update LMS	Update SDP-01368-TR15 accordingly	Rob Stears Stu Hallett		Completed	Modified Process



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
20.5.1	Update Training	The worker <b>must</b> have completed suitable update training covering any relevant technical or operational changes implemented, and any relevant lessons learned, while the worker was formally removed from the duties of the designated position, including, but not limited to: a) changes to reactor facility systems and subsystems b) changes to licensee and station-specific policies, standards, and procedures c) amendments to, or exemptions from, regulatory requirements d) amendments to the licence or to documents referenced in the licence station-specific and industry operational experience and operating events				TPD 97179-0001 updated and TRWI 97179-0001 developed to address the specific requirements	Specific details are not documented in TPD-97179-01	Develop and update Certified Staff continuing training program accordingly;  TPD-97179-01	Mike Fairweather		Completed	Modified Process
20.5.2	Refresher Training	The worker <b>must</b> have successfully completed suitable refresher training commensurate with the duration of the period of absence or removal from duty of the worker. e) At a minimum, this refresher training <b>shall</b> encompass any scheduled refresher training that the worker failed to attend while the worker was formally removed from the duty.				TPD 97179-0001 updated and TRWI 97179-0001 developed to address the specific requirements	Specific details not documented in TPD-97179-01	Develop and update Certified Staff continuing training program accordingly;  TPD-97179-01	Mike Fairweather		Completed	Modified Process



GAP Analysis Form

Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
20.5.3	Simulator-Bases Training	For operations personnel, the worker <b>must</b> have successfully completed suitable simulator-based training covering a number and variety of scenarios commensurate with the duration of the period of absence or removal from duty of the worker. At a minimum, this simulator-based training <b>shall</b> challenge the diagnostic and decision-making skills of the worker and encompass any scheduled simulator-based training that the worker failed to attend during the period of absence or removal from duty.				TPD 97179-0001 updated and TRWI 97179-0001 developed to address the specific requirements	Specific details not documented in TPD-97179-01	Develop and update Certified Staff continuing training program accordingly;  TPD-97179-01	Mike Fairweather		Completed	Modified Process
20.5.4	Work Under Supervision	For operations personnel, the worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform said duties competently and safely.				TPD 97179-0001 updated and TRWI 97179-0001 developed to address the specific requirements	Specific details not documented in TPD-97179-01	Develop and update Certified Staff continuing training program accordingly;  TPD-97179-01	Mike Fairweather		Completed	Modified Process
20.5.5	Management Interview	When removed from duty for cause, the worker <b>must</b> have successfully undergone a formal management interview.				TPD 97179-0001 updated and TRWI 97179-0001 developed to address the specific requirements	Specific details not documented in TPD-97179-01	Develop and update Certified Staff continuing training program accordingly;  TPD-97179-01	Mike Fairweather		Completed	Modified Process



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
20.6.1	Failure to Meet a Minimum Employment Requirement	<p>The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a failure to meet a minimum employment requirement, if:</p> <p>a) the circumstances that prevented the worker from performing the duties of the pertinent designated position no longer exist</p> <p>the worker has performed, under the supervision of a qualified worker certified for employment in the pertinent designated position, a number of complete shifts and hours of shiftwork no less than the minimum number of complete shifts and hours of shiftwork that the worker failed to complete in the quarter preceding the removal from duty</p>				SDP-01368-P036, “meeting minimum operational staffing requirements” has been revised accordingly to assign an employment status to each certified worker.	Not included in SDP-01368-P036	Update SDP-P036 to include worker “Status”	Darren Elliott	No later than Sept 30, 2024	In-Progress	<b>ON TRACK</b>  <b>Modified Process</b>



GAP Analysis Form

Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
20.6.2	Requalification Test Failure	<p>The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a requalification test failure once the worker has successfully completed a remedial requalification test equivalent to the failed requalification test.</p> <p>b) This remedial requalification test <b>shall</b> be equivalent in all respects but <b>must</b> not be the same as the failed requalification test or any other remedial requalification test the candidate <b>may</b> have failed as part of the reinstatement process. Furthermore, any restrictions set in complementary documents regarding the allowed topic overlap between requalification tests <b>shall</b> apply.</p>				<p>TPD 97179-0001 updated and TRWI 97179-0001 developed to address the specific requirements</p> <p>SDP-01368-TR15 updated to address specific requirements</p>	<p>Not fully Documented in TR15 / TPD-97179-01</p>	<p>Document this in TR15 / TPD-97179-01</p>	<p>Stu Hallett / Mike Fairweather</p>		COMPLETE	Modified Process



GAP Analysis Form

Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
20.7	Notification of Change in Employment Status	The licensee <b>shall</b> promptly inform the CNSC of any certified worker removed from the duties of a designated position, be it due to a prolonged period of unemployment or a removal for cause, specifying: a) the full legal name of the worker b) the pertinent designated position c) the resulting employment status assigned to the worker as per subsection 3.2 the basis for the removal from duty as per subsection 20.3 or 20.4, as applicable				SDP-01368-P036, meeting minimum operational staffing requirements has been revised accordingly to assign an employment status to each certified worker.	Not included in SDP-01368-P036	Update SDP-P036 to include worker “Status”	Darren Elliott	No later than Sept 30, 2024	In-Progress	<b>ON TRACK</b>  <b>Modified Process</b>
20.7.1	Notification of Removal from Duty					CNSC letter templates revised accordingly	Update CNSC letter templates	Update CNSC letter templates	Nick Reicker	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>



GAP Analysis Form

Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
20.7.2	Notification of Reinstatement of Duty	The licensee <b>shall</b> promptly inform the CNSC of any certified worker reinstated to the duties of a designated position, to include: a) the full legal name of the worker b) the pertinent designated position c) the resulting employment status assigned to the worker as per subsection 3.2 d) the basis for the prior removal from duty and a confirmation that said basis no longer exists or has been adequately remedied or mitigated, as applicable e) a summary of the baseline reinstatement process successfully completed by the worker f) when following a removal for cause, a summary of any remediation action(s) taken to satisfy the applicable requirements specified in subsection 20.6				SDP-01368-P036, meeting minimum operational staffing requirements has been revised accordingly to assign an employment status to each certified worker.	Not included in SDP-01368-P036	Update SDP-P036 to include worker “Status”	Darren Elliott	No later than Sept 30, 2024	In-Progress	<b>ON TRACK</b>  <b>Modified Process</b>
						CNSC letter templates revised accordingly	Update CNSC letter templates	Update CNSC letter templates	Nick Reicker	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>





GAP Analysis Form

Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
21.	Information Management	<p>The licensee <b>shall</b> implement and document effective information management policies and procedures ensuring:</p> <p>a) the retention and ready retrieval of the corporate documentation and proof-of-competency records related to personnel certification</p> <p>b) the safeguard and control of sensitive information pertaining to personnel certification</p> <p>c) the unrestricted access, by authorized CNSC staff, to the corporate documentation and personnel records specified in this section</p>				<p>TRWI's 97179-001, 97177-001 and 97170-001 have been revised and developed accordingly to control records of Certified staff.</p> <p>Form's ???? are used to ensure specific criteria is met.</p> <p>SI-01365-A093 "managing information" safeguards and controls sensitive information</p>	No clear process in place for specific criteria	Revise and develop specific criteria for records	Rob Stears/Diane Mcleod/ Pat Manuel		Complete	Modified Process
21.1	Corporate Documentation	<p>The licensee <b>shall</b> document, retain, and make available to the CNSC upon request, the roles, and responsibilities of:</p> <p>a) certified workers</p> <p>b) all personnel, including management, involved in the training and qualification of workers seeking or holding a certification, including trainers, examiners, and managers delegated with relevant approval authorities</p> <p><b>continued on next page...</b></p>				<p>Roles and responsibilities are contained in the following;</p> <p>HR – Position Descriptions Station / Dept. expectations documents Dept. Training dept. process documents for certified staff, training and examiners</p>	Verify that documentation exist for roles & responsibilities	Verify	Rob Stears		COMPLETE	Modified Process
21.1.1	Roles and Responsibilities											



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
21.1  21.1.1, <b>continued</b>	Corporate Documentation  Roles and Responsibilities, <b>continued</b>	c) Personnel selection interviews and tests – Comprehensive records of any personnel selection interview or test, including the effective date and results in each case, administered as part of the licensee’s personnel selection program.  d) Personnel transfer – Comprehensive records of any information required or collected as part of a personnel transfer.  e) Advancement – Comprehensive records of any information required or collected as part an advancement to a shift supervisor or senior shift supervisor position.				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers, including records.  Tracking forms have been developed to address the requirements, PL-0336, PL-0350  Need tracking form for SHP	Include in staffing certified positions/ HR records	Develop process to secure document / retention of records	Kaitlynnne Fitzgerald / Rob Stears / Darren Elliott/ Krista Galbraith	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>
21.1  21.1.1, <b>continued</b>	Corporate Documentation  Roles and Responsibilities, <b>continued</b>	f) Formal learner evaluations – Comprehensive records of the formal learner evaluations administered to the worker as part of their initial or continuing training, including, in each case, the dates on which the evaluations were conducted, the results, and the full legal name(s) of the evaluator(s)  <b>continued on next page...</b>				All associated forms have been updated to reflect Full Legal Name, results and dates	Full legal names of evaluators – ensure included in examination forms	Verify that full legal names are recorded.  TR15 / Forms	Rob Stears / Stu Hallett / Mike Fairweather	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
21.1  21.1.1, <b>continued</b>	Corporate Documentation  Roles and Responsibilities, <b>continued</b>	g) Work under supervision – Comprehensive records of any WUS performed by the worker, including, in each case, the associated requirement being met, the date of each shift worked under supervision, and the full legal name of, and the CNSC certification held by, the certified worker who supervised the worker.				CO-Piloting Process for CRO & SS updated to reflect specific requirement	Co-Piloting log forms require review and update accordingly – CROIT & SSIT	Review & update Co-Pilot Logs	Mike Fairweather	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>Modified Process</b>
21.1  21.1.1, <b>continued</b>	Corporate Documentation  Roles and Responsibilities, <b>continued</b>	h) Removals and reinstatements – Comprehensive records of all removals from, and reinstatements to, the duties of a designated position, including, in each case, the effective date of removal and the basis for the removal and, when applicable, the effective date of reinstatement and the actions taken to reinstate the worker.				SDP-01368-P036, meeting minimum operational staffing requirements has been revised accordingly to assign an employment status to each certified worker.	Not included in SDP-01368-P036	Update SDP-P036 to include worker “Status”	Darren Elliott	No later than Sept 30, 2024	In-Progress	<b>ON TRACK</b>  <b>Modified Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
24.1.3	Plant Familiarization	<p>The worker <b>must</b> have successfully completed, prior to the start of the station-specific training specified in sub-subsection 24.1.4, plant familiarization training based on a training system and <b>must</b> consequently possess, at a minimum, a basic understanding of:</p> <p>a) the physical layout of the reactor facility identified in the license, including the location and size of the major systems, subsystems, and equipment</p> <p>the management system and organizational infrastructure necessary to operate said reactor facility under normal, abnormal, and emergency conditions, including the mandate, roles and responsibilities of the key personnel and groups of personnel</p>				<p>Specific requirements are addressed in both PPO “Initial” training &amp; SPPO “Initial” training including;</p> <p>97132-201 (building structures)</p> <p>97142-229 (management system &amp; organization structure)</p>	<p>Does SPPO training cover the management system &amp; organizational structure? Is it covered somewhere during initials</p>	<p>Verify / include as required</p>	<p>Rob Stears / Rob Richard</p>		<p>No GAP</p>	
24.2.1	Supplementary personnel selection criteria	<p>The worker <b>must</b> have met the supplementary prerequisites specified in sub-subsection 14.2.2.</p>				<p>SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers, including records.</p>	<p>Not defined in “Staffing Certified Positions”</p>	<p>Add to process</p>	<p>Kaitlynnne Fitzgerald</p>	<p>No later than Sept 30, 2024</p>	<p>In Progress</p>	<p>ON TRACK</p> <p>New Process</p>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
25.1	Qualifications for Senior Health Physicist	A worker seeking certification for employment as an SHP <b>shall</b> meet, at the time of application for certification, the requirements specified in this subsection.				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers, including records.	Not defined in “Staffing Certified Positions”	Add to process	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>
25.1.1	Personnel Selection	The worker <b>must</b> have met, prior to the start of their initial training, the basic and supplementary prerequisites specified in sub-subsections 14.2.1 and 14.2.2 respectively.				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers, including records.	Not defined in “Staffing Certified Positions”	Add to process	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>
25.1.2	Prior Education	The worker <b>shall</b> : a) hold a degree in health physics granted by a recognized university, or hold a baccalaureate in engineering or science granted by a recognized university, and have successfully completed a suitable series of courses offered by a recognized educational institution or learning provider covering current radiation protection principles and methods				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers, including records.	Not defined in “Staffing Certified Positions”	Add to process	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>
25.1.3	Prior Work Experience	b) The worker <b>shall</b> possess, at a minimum, 4 years of relevant experience, including 2 years as a health physicist or an equivalent position at a reactor facility.				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers, including records.	Not defined in “Staffing Certified Positions”	Add to process	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	<b>ON TRACK</b>  <b>New Process</b>



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Section	Clause	Requirement	Compliance Assessment	Compliance Code	Point Lepreau Process ID	Evidence of Compliance	Gap(s)	Action Plan	Responsible	Expected Completion Date	Status	Notes
25.1.5	Radiation Protection Expertise	The worker, in consequence of the education, work experience, and initial training previously specified in subsection 25.1, possess knowledge, to an extent commensurate with the duties of an SHP, of radiation theory, including radiation hazards, and of radiation protection theory and practices, including the radiation protection procedures relevant to the operation of the reactor facility identified in the licence under normal, abnormal, and emergency conditions.				SDP-01368-A008 – Personnel selection program for certified workers has been developed to address selection criteria for certified workers, including records.	Needs to be included in the selection criteria for SHP position	Add to process	Kaitlynne Fitzgerald	No later than Sept 30, 2024	In Progress	New Process



# GAP Analysis Form

Document Approval			
Role	Name	Signature	Date (yyyy-mm-dd)
Author	Rob Stears		
Reviewer			
Owner (Approved by)			

## Appendix B Compliance Schemes Acceptable to the CNSC

This appendix specifies schemes acceptable to the CNSC that the licensee **must** implement at the specified reactor facilities to be compliant with the referenced requirements for the pertinent reactor facilities in service at the time of publication of the current version of this regulatory document.

### Mandatory personnel certification schemes for CANDU reactor facilities

Reference	Description	Requirement(s)
Subsubsection 24.1.11	Minimum number of hours of work under supervision (WUS) required for the certification of operations personnel.	<p>Any worker seeking employment as an ASO <b>shall</b> have successfully performed 225 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.</p> <p>Any worker seeking employment as RO or shift supervisor <b>shall</b> have successfully performed 360 hours of WUS in the pertinent designated position, under the supervision of a qualified worker certified to work in said designated position.</p>
Subsubsection 14.4.1	Minimum experience as shift supervisor prior to advancement to a senior shift supervisor position.	The worker <b>shall</b> have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a minimum of 80 complete shifts amounting to a minimum of 960 hours of shiftwork prior to being selected for advancement to the senior shift supervisor position.
Subsubsection 20.2.1	<p>Minimum shift requirements for operations personnel.</p> <p>GAP addressed by revision of SDP-01368-P036 “meeting minimum operational staffing requirements”</p> <p>COMPLETED</p> <p>Modified Process</p>	<p>Any worker certified for employment as ASO <b>shall</b> perform the duties of an ASO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as RO <b>shall</b> perform the duties of an RO for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as shift supervisor, but not qualified as senior shift supervisor, <b>shall</b> perform the duties of a shift supervisor for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p> <p>Any worker certified for employment as shift supervisor who is duly qualified as senior shift supervisor <b>shall</b> perform the duties of a shift supervisor or senior shift supervisor for a minimum of 4 complete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter.</p>



## **Appendix C: Senior Health Physicist Examination and Testing Topics**

The certification examinations and requalification tests administered by CNSC staff to workers seeking certification or the renewal of a certification for employment as senior health physicist cover topics divided into 3 parts, each covering a specific knowledge area, as exemplified in this appendix.

### **C.1 Regulations and Reactor Operating Licence**

The relevant topics include, but are not limited to:

- a. the relevant provisions of the NSCA
- b. the relevant regulations made pursuant to the NSCA, namely the:
  - i. General Nuclear Safety and Control Regulations
  - ii. Radiation Protection Regulations
  - iii. Class I Nuclear Facilities Regulations
  - iv. Nuclear Substances and Radiation Devices Regulations
  - v. Packaging and Transport of Nuclear Substances Regulations
- c. the reactor facility licence and the documentation referenced in the licence

### **C.2 Radiation Protection**

The relevant topics include, but are not limited to:

- a. safety culture
- b. reactor facility design, operation, and maintenance
- c. the relevant licensee and station-specific policies, standards, and procedures
- d. the radiation protection principles, methods and practices related to the operation of the reactor facility identified in licence
- e. the relevant Canadian, international and industry standards and conventions

### **C.3 Roles and Responsibilities**

The relevant topics include, but are not limited to:

- a. the responsibilities and authority of the senior health physicist
- b. the responsibilities and authority of the personnel who interact with the senior health physicist

## **Appendix D: Station-Specific Training Samples**

This appendix contains examples of station-specific knowledge areas covered by station-specific training programs initially implemented at CANDU reactor facilities and found acceptable by the CNSC. These examples are included as additional guidance to newly licensed reactor facility operators trying to establish suitable training programs. Notwithstanding this added guidance, a suitable training program is based on a reactor facility training system found acceptable by the CNSC.

### **D.1 Station-Specific Training for Reactor Operators**

The relevant training areas may include:

- a. design and operation of reactor facility systems
- b. integrated operation of reactor facility systems, including, where applicable, interfaces between the systems of a reactor unit and those of other reactor units and common and auxiliary systems
- c. expected response of reactor facility systems and units to abnormal and accident conditions
- d. technical bases for emergency operating procedures
- e. diagnosis of equipment failures and assessment of abnormal plant conditions
- f. phenomena that may significantly affect reactor core reactivity and neutron flux shape
- g. reactor fuelling, fuelling limitations, fuel handling and storage, and irradiated fuel cooling
- h. configuration of systems and equipment isolation required for maintenance activities
- i. safety culture
- j. principles of nuclear safety and their application
- k. the operating licence and the documents referenced in the operating licence
- l. situations that may result in the violation of the conditions of the operating licence and the operating policies and principles (OPP)
- m. administrative procedures related to reactor facility operation and maintenance
- n. the responsibilities and authority of a reactor operator, and of the other members of the reactor facility personnel who interface with the reactor operator

### **D.2 Supplementary Station-Specific Training for Control Room Shift Supervisors**

The relevant training areas may include, in addition to those relevant to station-specific training for reactor operators:

- a. reactor physics, principles of reactor operation and fuelling strategies
- b. phenomena that may significantly affect reactor core reactivity and neutron flux shape
- c. properties of irradiated fuel, principles of fuel cooling and physics of fuel failures
- d. operating constraints and limits associated with reactor fuelling and irradiated fuel cooling
- e. reactor safety, heat transfer mechanisms and fluid mechanics
- f. primary and back-up heat sinks
- g. conventional and radiation hazards to reactor facility personnel and to the public, including hazards from postulated accident conditions
- h. handling of conventional and radiation emergencies
- i. handling of an intruder or of a terrorist attack
- j. design requirements of safety-related equipment and systems
- k. design features and limitations of reactor facility equipment and systems
- l. chemical control of systems
- m. diagnosis of equipment failures and assessment of abnormal plant conditions

- n. expected response of reactor facility systems and units to abnormal and accident conditions
- o. operating strategies
- p. reactor facility safety analyses, including major assumptions in the reactor facility accident analyses and technical bases for emergency operating procedures
- q. configuration of systems and equipment isolation required for maintenance activities
- r. design and operation of reactor facility systems for which the reactor operators do not have direct operational control, including common systems and fuel handling systems
- s. the licensee's policies, standards, and procedures
- t. the operating licence and the documents referenced in the operating licence
- u. situations that may result in the violation of the conditions of the operating licence and the OPP
- v. requirements pertaining to reactor facility operation in federal and provincial acts and regulations, and any relevant standards and codes
- w. responsibilities and authority of the control room shift supervisor, of the plant shift supervisor, and of other members of the reactor facility personnel who report to, or interface with, the control room shift supervisor and the plant shift supervisor
- x. qualification requirements of the members of the reactor facility personnel who report to the control room shift supervisor and the plant shift supervisor

### **D.3 Station-Specific Training for Senior Health Physicists**

The relevant training areas may include:

- a. the relevant provisions of the NSCA
- b. the regulations made pursuant to the NSCA, including the:
  - i. General Nuclear Safety and Control Regulations
  - ii. Radiation Protection Regulations
  - iii. Class I Nuclear Facilities Regulations
  - iv. Nuclear Substances and Radiation Devices Regulations
  - v. Packaging and Transport of Nuclear Substances Regulations
- c. safety culture
- d. the responsibilities and authority of the senior health physicist
- e. the responsibilities and authority of the members of the reactor facility personnel who interact with the senior health physicist
- f. the responsibilities and authority of the members of external organizations who interact with the senior health physicist, notably in the nuclear emergency management context
- g. the operating licence and the documents referenced in the operating licence
- h. the licensee and reactor facility policies, standards, and procedures
- i. reactor facility design, operation, and maintenance

REG DOC	Section	Transitional requirement
REGDOC 2.2.3, VOL III, V2	6.2 - Personnel Selection 14 - Personnel Selection Program 24.1.1 - Personnel Selection	Certification candidates (CRO & SS) selected up to and including January 31, 2025 will follow REGDOC 2.2.3, Vol III, Version 1, sections 23.1.1 and 23.1.2
REGDOC 2.2.3, VOL III, V2	19.1 - Reintegration following training interruption	Certification candidates (CRO) selected up to and including January 31, 2025 will follow REGDOC 2.2.3, Vol III, Version 1, sections 23.3.1, 23.3.2, 23.3.3 and 30 for certification examinations conducted prior to January 31, 2025

**12. BP Email, J. Smith to B. Torrie, “Bruce Power RegDoc 2.2.3 vol III V. 2 Implementation submission”, September 19, 2024**

**From:** [Jennifer Smith \[Learning & Performance\]](#)

**Sent:** September 19, 2024 3:41 PM

**To:** Torrie, Brian

**Cc:** [PCD / DAP \(CNSC/CCSN\)](#); [Désaulniers, Lucie](#); [Hazelton, Kimberly](#); [Gracie, Brian](#); [Martel, Francis](#); [Alex, Alice](#); [TSB-VPO Administrative Support](#) / [DGST-VP Soutiens Administratif](#); [BNPD Informal CNSC Communication](#); [Eileen Gruberbauer \[Learning & Performance\]](#)

**Subject:** Bruce Power RegDoc 2.2.3 vol III V. 2 Implementation submission.

**Attachments:** Bruce Power RegDoc Gap Analysis for Submission.docx; Compliance Activities for Submission.docx

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EXTERNAL EMAIL – USE CAUTION / COURRIEL EXTERNE – FAITES PREUVE DE PRUDENCE
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Good afternoon,

Please find attached Bruce Power's submission to satisfy the requirements for the RegDoc 2.2.3 Vol III Version 2 implementation.

Attached please find 2 documents:

1. Bruce Power's Gap analysis, which includes the changes from version 1 to version 2. The items that are highlighted in yellow indicate new criteria that may create gaps in Bruce Power training or administrative programs. Any gaps identified are captured in the Compliance Actions document.
2. Compliance Actions document, which formalizes the actions Bruce Power will take to ensure compliance with the new RegDoc. The compliance action document identifies owners, due dates, and descriptions for all actions. This document also provides a brief description of the program or process (document) to be implemented or modified, a summary of the required changes, and outlines which part of the regulation the action is applicable to.

Please note the compliance action document and the gap analysis cross reference each other. Items identified as gaps in the analysis indicate which compliance action has been documented to close the gap.

All actions are scheduled to be completed by 31JAN2025 *except* for Compliance Action #16. Compliance Action #16 is related to the personnel selection program; since Bruce Power does not plan on recruiting for the Certification Program until late 2025 it is appropriate to take more time to ensure the selection process is rigid.

Jennifer Smith (226-930-4297) if you have any questions or Eileen Gruberbauer (519-386-0824).

Thank you very much,

**Jennifer Smith** | Department Manager Operations and Chemistry Training | **Bruce Power** | C:  
226-930-4297

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YELLOW = GAP or Difference between version 2 & 1	
REGDOC 2.2.3 VOL III 2023 Version 2	Bruce Power Gaps
<b>1. Introduction</b> The Canadian Nuclear Safety Commission (CNSC) requires that the reactor facility workers employed in certain positions of immediate relevance to nuclear safety must be certified by the CNSC as qualified to carry out the duties of their employment. For the purpose of this regulatory document, said positions are referred to as designated positions.	
<b>1.1 Purpose</b> The purpose of this regulatory document is to specify the detailed requirements and provide guidance pertinent to the certification of the reactor facility workers employed or seeking employment in designated positions.	
<b>1.2 Scope</b> When referenced in a licence, this regulatory document applies to: a. all workers seeking certification by the CNSC, or seeking to maintain or renew such certification, for employment in one of the designated positions identified in the licence b. the licensee operating the reactor facility identified in the licence c. the personnel identified in this regulatory document and involved in the training and evaluation, or the certification examination and requalification testing, of workers employed or seeking employment in designated positions at the reactor facility identified in the licence  This regulatory document comprises 3 parts, as follows: a. Part I describes the regulatory and procedural devices that make up the CNSC personnel certification scheme relevant to reactor facility workers. b. Part II describes the organizational and physical infrastructures that the licensee must implement to support the personnel certification scheme described in Part I and achieve the worker qualifications specified in Part III. c. Part III specifies the prerequisites that reactor facility workers must meet to be eligible for the personnel certification processes described in Part I.	
<b>1.3 Relevant legislation</b> The following provisions of the Nuclear Safety and Control Act (NSCA) and the regulations made under it are relevant to this document: a. NSCA, paragraphs <b>21(1)(i)</b> , 37(2)(b), <b>44(1)(k)</b> and 44(1)(l)	
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<b>1.3 Relevant legislation</b> The following provisions of the Nuclear Safety and Control Act (NSCA) and the regulations made under it are relevant to this document: c. Class I Nuclear Facilities Regulations, <b>section 10</b> , subsections 9(2), 9(3), 9(4), 11(1), 11(2), 12(1), 12(2), 13(1), 13(2) and 14(5), and paragraph 14(2)(e)	
<b>1.3 Relevant legislation</b> The following provisions of the Nuclear Safety and Control Act (NSCA) and the regulations made under it are relevant to this document: b. General Nuclear Safety and Control Regulations, paragraphs <b>12(1)(a)</b> and 12(1)(b)	
<b>1.3 Relevant legislation</b> The following provisions of the Nuclear Safety and Control Act (NSCA) and the regulations made under it are relevant to this document: b. General Nuclear Safety and Control Regulations, paragraphs 12(1)(a) and <b>12(1)(b)</b>	
<b>1.4 National and international standards</b> The key principles and elements used in developing this document are consistent with national and international standards. The following standards are relevant to this regulatory document: a. IAEA Nuclear Energy Series NG-T-2.8, Systematic Approach to Training for Nuclear Facility Personnel: Processes, Methodology and Practices b. IAEA Safety Standard Series NS-G-2.8, Recruitment, Qualification and Training of Personnel for Nuclear Power Plants c. IAEA TECDOC 525, Guidebook on Training to Establish and Maintain the Qualification and Competence of Nuclear Power Plant Operations Personnel d. IAEA TECDOC 1502, Authorization of Nuclear Power Plant Control Room Personnel: Methods and Practices with Emphasis on the Use of Simulators e. ISO/IEC 17000, Conformity Assessment – Vocabulary and General Principles f. ISO/IEC 17024, Conformity Assessment – General Requirements for Bodies Operating Certification of Persons.	No gap
<b>Part I – Personnel Certification Scheme</b> Part I describes the regulatory and procedural devices that make up the CNSC personnel certification scheme relevant to reactor facility workers.	

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<b>2. Background Information</b> The relevant legislation authorizes the Commission and designated officers (DO) to certify workers as qualified to carry out their duties, to renew the certification of certified workers, and to decertify certified workers following due process. The reactor facility workers certified by the CNSC are issued certificates as proof of certification specifying, among other information, a date of expiry. In accordance with regulations, certifications issued by the CNSC expire 5 years after their date of issuance or renewal. Consequently, authorized applicants must submit applications on behalf of the certified workers seeking the renewal of their certification(s) before the expiry date specified on each certificate.	No gap
<b>3. Employment Stipulations</b> <b>3.1 Permitted employment</b> The certificates issued by the CNSC to reactor facility workers permit the employment of the worker identified on the certificate: <ul style="list-style-type: none"> <li>a. on a full-time, part-time, or temporary basis</li> <li>b. as an employee or a contractor</li> <li>c. by the specified licensee</li> <li>d. at the specified reactor facility or facilities</li> <li>e. in the specified designated position</li> </ul>	<b>Gap</b> – current governance does not include language on all items specified in 3.1 a-e <b>Action</b> – update the applicable Training Quality Description Compliance Action # 7,8, 9
<b>3.2 Employment status</b> The licensee <b>shall</b> assign an employment status to each certified worker in accordance with the following categories: <ul style="list-style-type: none"> <li>a. an active status is assigned to a worker who:               <ul style="list-style-type: none"> <li>i. holds a valid certificate</li> <li>ii. attends the scheduled continuing training</li> <li>iii. meets the applicable minimum employment requirements</li> <li>iv. continues to be able to perform the duties of the pertinent designated position safely and competently</li> </ul> </li> <li>b. an inactive status is assigned to any certified worker who holds a valid certificate, but was formally removed from duty in accordance with subsection 20.3 or subsection 20.4</li> <li>c. an uncertified status is assigned to a worker whose certificate has expired</li> <li>d. a decertified status is assigned to a worker decertified by the CNSC</li> </ul>	<b>Gap</b> – current governance does not include new employment statuses (active, inactive, uncertified, decertified); no process in place on who and how to track employment status <b>Action:</b> Update BP-STND-00146 Compliance Action #1
<b>3.3 Employment record</b> The licensee <b>shall</b> maintain, in accordance with subsection 21.2, a continuous and auditable employment record for each worker certified by the CNSC, including, at a minimum: <ul style="list-style-type: none"> <li>a. the employment status assigned to the worker</li> <li>b. the number of complete shifts and hours of work performed in a designated position by the worker, specifying:               <ul style="list-style-type: none"> <li>i. the pertinent designated position</li> <li>ii. the date on which each complete shift and hour of work were performed</li> </ul> </li> </ul>	<b>Gap</b> – new requirement to maintain employment status in employment records <b>Action:</b> To ensure the recently implemented digital tool for license maintenance will also track the requirements in section 3.3 Compliance Action # 15
<b>4.Designated Positions</b> This regulatory document applies to the certification of the reactor facility workers employed or seeking employment in the following generic classes of designated positions: <ul style="list-style-type: none"> <li>• auxiliary systems operator (ASO)</li> <li>• reactor operator (RO)</li> <li>• shift supervisor</li> <li>• senior health physicist (SHP)</li> </ul>	

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<b>4.1 Station-specific designated positions</b> The station-specific positions corresponding to the generic classes of designated positions are designated in the applicable licences. Appendix A specifies which station-specific position(s) correspond to each generic class of designated position and which CNSC certification is required in each case.	No gap
<b>4.2 Designated position staffing</b> The site-specific positions designated in reactor facility licences <b>shall</b> be staffed with workers certified by the CNSC as qualified to perform the duties of said designated positions.	No gap
<b>4.3 Roles and responsibilities of certified workers</b> When in possession of a valid certificate, workers are deemed qualified to perform the duties of the pertinent site-specific positions listed in Appendix A in accordance with the licensee’s management system.	No gap
<b>5. General Provisions Pertinent to All Applications</b> <b>5.1 Authorized applicant</b> Applications made under the provisions of this regulatory document <b>shall</b> be signed by a signatory officially authorized by the pertinent licensee to represent said licensee.	<b>Gap</b> – Bruce Power current application process does not align with new requirements. <b>Action</b> – Update application process; determine where the application process will be captured and update document(s) Compliance action #5
<b>5.2 Complete application</b> Authorized applicants <b>shall</b> ensure that the applications submitted to the CNSC are complete. Incomplete applications <b>may</b> be rejected by the CNSC without further analysis.	
<b>5.3 Basic information</b> Applications made under the provisions of this regulatory document <b>shall</b> contain the following information: <ul style="list-style-type: none"><li>a. the purpose of the application</li><li>b. the legal name of the worker, including a first name, a surname, and a middle name or initial when possible</li><li>c. the designated position in which the worker is or <b>will</b> be employed</li><li>d. the reactor facility where the worker is or <b>will</b> be employed, including, where applicable, a specific reactor or group of reactors</li><li>e. the corporate name of the licensee operating said reactor facility</li><li>f. the effective date of the application</li><li>g. the legal name, position, contact information, and signature of the authorized applicant</li><li>h. a valid return mailing or email address</li></ul>	
<b>5.4 Transmission</b> An authorized applicant <b>may</b> submit any application made under the provisions of this regulatory document either in printed or electronic form. Printed submissions <b>must</b> be delivered to the following address: Canadian Nuclear Safety Commission 280 Slater Street P.O. Box 1046, Station B Ottawa, ON K1P 5S9 Electronic submissions <b>must</b> be emailed to <a href="mailto:forms-formulaires@cnsccsn.gc.ca">forms-formulaires@cnsccsn.gc.ca</a> and include a complimentary copy (cc) to <a href="mailto:pcd-dap@cnsccsn.gc.ca">pcd-dap@cnsccsn.gc.ca</a> .	<b>Gap</b> – Bruce Power current application process does not align with new requirements. <b>Action</b> – Update application process; determine where the application process will be captured and update document(s) (no formal action required). Compliance action #5
<b>6. Application for Certification</b> In addition to the general provisions specified in section 5, an application for certification <b>shall</b> meet the requirements specified in this section.	

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<b>6.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: <ul style="list-style-type: none"> <li>a. meets the applicable qualification requirements referred to in the licence</li> <li>b. has successfully completed the applicable training program and examination referred to in the licence</li> <li>c. is capable, in the opinion of the licensee, of performing the duties of the position</li> </ul>	
<b>6.2 Personnel selection</b> The application <b>shall</b> describe how the applicable prerequisites of the personnel selection program described in section 14 were met, including, at a minimum: <ul style="list-style-type: none"> <li>a. the worker's education or literacy level upon selection for initial training</li> <li>b. any education or literacy level equivalency recognized by the licensee</li> <li>c. any prior work experience required by the CNSC or the licensee</li> <li>d. any personnel selection interview undergone by the worker</li> <li>e. any personnel selection test administered to the worker, including any medical screening</li> <li>f. any exemption explicitly sanctioned in this regulatory document that was employed by the licensee</li> </ul>	<b>Gap</b> – Bruce Power application process may not include all items in section 6.2. <b>Action</b> – Review process and update accordingly. Compliance action #5
<b>6.3 Worker qualification summary</b> The application <b>shall</b> provide a chronological summary of the qualifications achieved by the worker, covering the initial training components, the certification examinations, and all other personnel certification requirements successfully completed by the worker. The worker qualification summary <b>shall</b> offer sufficient evidence that the worker meets all of the applicable qualifications specified in Part III. At a minimum, this summary <b>shall</b> include, as applicable depending on the designated position: <ul style="list-style-type: none"> <li>a. the date of each summative learner evaluation marking the completion of each initial training component</li> <li>b. the date of each knowledge-based certification examination</li> <li>c. the date of the performance-based certification examination</li> <li>d. any remedial action required by CNSC staff as a result of a certification examination administered by CNSC staff</li> <li>e. the date of completion of any period of work under supervision, including the total number of supervised work hours</li> <li>f. the date of the management interview</li> </ul>	<b>Gap</b> – Bruce Power application process may not include all items in section 6.3. <b>Action</b> – Review process and update accordingly. Compliance action #5
<b>6.4 Supporting documentation</b> The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records <b>shall</b> be maintained in accordance with subsection 21.2 and made available for verification by the CNSC upon request.	See sub-section 21.2
<b>6.5 Application schedule</b> The licensee <b>may</b> apply for the certification of a qualified worker at any time.	No gap
<b>6.6 Effective date of certification</b> Unless the licensee requests a deferment, the effective date of the certification <b>will</b> be that of the certification decision made by the Commission or a DO.	No gap
<b>6.7 Certification deferment</b> The licensee <b>may</b> request that the effective date of certification be delayed up to 60 calendar days from the effective date of application for certification.	No gap
<b>7. Application for Certification Renewal</b> In addition to the general provisions specified in section 5, an application for the renewal of a certification <b>shall</b> meet the requirements specified in this section.	<b>Gap:</b> – Bruce Power application process may not include all items in section 7. <b>Action:</b> Determine where the application process will be captured and update document(s) Compliance action #5

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<b>7.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: <ul style="list-style-type: none"><li>a. has safely and competently performed the duties of the position for which the worker was certified</li><li>b. continues to receive the applicable training referred to in the licence</li><li>c. has successfully completed the applicable requalification tests referred to in the licence for renewing the certification</li><li>d. is capable, in the opinion of the licensee, of performing the duties of the position</li></ul>	<b>Gap</b> – Bruce Power application process may not include all items in section 6.3 <b>Action</b> – Review process, and update accordingly Compliance action #5
<b>7.2 Worker requalification summary</b> The application <b>shall</b> provide a chronological summary of the requalification requirements met by the worker during the current certification period, covering the continuing training components, the requalification tests, and all other personnel certification requirements successfully completed by the worker. The worker requalification summary <b>shall</b> offer sufficient evidence that the worker meets all of the applicable requalification requirements specified in Part III. At a minimum, this summary <b>shall</b> include, as applicable depending on the designated position: <ul style="list-style-type: none"><li>a. a confirmation that the worker attended continuing training and successfully underwent formal learner evaluations compliant with the requirements specified in section 15, including suitable update, refresher, simulator-based and nuclear emergency response training</li><li>b. the dates of all knowledge-based requalification tests successfully completed</li><li>c. the dates of all performance-based requalification tests successfully completed</li><li>d. the total number of complete shifts and hours of shiftwork in the designated position performed by the worker over the current certification period</li><li>e. any remedial action required by CNSC staff as a result of a requalification test administered by CNSC staff</li></ul>	<b>Gap</b> – Bruce Power application process may not include all items in section 6.3 <b>Action</b> – Review process, and update; accordingly, determine where this will be captured and update document(s) Compliance action #5
<b>7.3 Supporting documentation</b> The licensee is not required to append any supporting documentation to the application as proof of competency; however, personnel records <b>shall</b> be maintained in accordance with subsection 21.2, and made available for verification by the CNSC upon request.	<b>No gap</b>
<b>7.4 Application schedule</b> The licensee <b>shall</b> apply for the renewal of the certification of a requalified worker no later than the date of expiry specified on the certificate.	<b>No gap</b>
<b>7.5 Effective date of renewal</b> When the application is signed and dated by an authorized applicant no earlier than 90 calendar days before the certification expiry, the effective date of the certification renewal <b>will</b> be made to coincide with the date of expiry of the existing certification.	<b>No gap</b>
<b>7.6 Early certification renewal</b> When the application is signed and dated by an authorized applicant earlier than 90 calendar days before the certification expiry, the effective date of the certification renewal <b>will</b> be that of the certification decision made by the Commission or a DO.	<b>No gap</b>
<b>8. Application for Recertification Within 5 Years of a Certificate Expiry</b> In addition to the general provisions specified in section 5, an application for recertification submitted no later than 5 years following the expiry of a certificate <b>shall</b> meet the requirements specified in this section.	<b>Gap</b> – application for recertification within 5 Years of Certificate Expiry is a process not currently captured in Bruce Power Governance. <b>Action</b> – Review process and update accordingly. Compliance action #5
<b>8.1 Worker competency declaration</b> In accordance with regulations, the application <b>shall</b> state that the worker: <ul style="list-style-type: none"><li>a. meets the applicable qualification requirements referred to in the licence</li><li>b. has successfully completed the applicable training program and examination referred to in the licence</li><li>c. is capable, in the opinion of the licensee, of performing the duties of the position</li></ul>	

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<p><b>8.2 Worker requalification summary</b></p> <p>The application <b>shall</b> provide a chronological summary of a suitable reinstatement process, specifying the effective date of completion of each step, including, at a minimum:</p> <ul style="list-style-type: none"><li>a. the tailored training, including any knowledge and performance-based refresher and update training, completed by the worker</li><li>b. the knowledge-based requalification test successfully completed by the worker</li><li>c. the performance-based requalification test or series of tests successfully completed by the worker</li><li>d. the work-under-supervision (WUS) hours completed by the worker</li><li>e. the management interview</li></ul> <p>The applicable worker requalification requirements are specified in Part III.</p>	
<p><b>8.3 Supporting documentation</b></p> <p>The following supporting documentation <b>shall</b> be appended to the application:</p> <ul style="list-style-type: none"><li>a. the individual training needs analysis (ITNA) or a summary of the ITNA</li><li>b. the individual training plan (ITP) or a summary of the ITP</li><li>c. the knowledge-based requalification test successfully completed by the worker, including the worker’s answers and the grade obtained, in percentage</li><li>d. the performance-based requalification test or series of tests successfully completed by the worker, including the graded candidate actions</li><li>e. a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker</li><li>f. a recording, a transcript, or the minutes of the mandated management interview</li></ul>	
<p><b>8.4 Application schedule</b></p> <p>The licensee <b>may</b> apply for the recertification of a worker in accordance with section 8 no later than 5 years after the date of expiry specified on the certificate.</p>	
<p><b>8.5 Effective date of certification</b></p> <p>The effective date of the certification <b>will</b> be that of the certification decision made by the Commission or a DO.</p>	
<p><b>9 Application for Recertification Following Decertification or Certificate Expiry After 5 Years</b></p> <p>In addition to the general provisions specified in section 5, an application for the recertification of a worker following decertification by the CNSC, or following a certificate expiry that occurred more than 5 years prior to the effective date of the application for recertification, <b>shall</b> meet the requirements specified in this section.</p>	
<p><b>9.1 Worker competency declaration</b></p> <p>The application <b>shall</b> state that the worker:</p> <ul style="list-style-type: none"><li>a. meets the applicable qualification requirements referred to in the licence</li><li>b. has successfully completed the applicable training program and examination referred to in the licence</li><li>c. is capable, in the opinion of the licensee, of performing the duties of the position</li></ul>	<p><b>Gap</b> – application for recertification following Decertification or Certificate Expiry After 5 Years is a process not currently captured in Bruce Power Governance.</p> <p><b>Action</b> – include this process in BP-STND-00083</p> <p>Compliance action #3</p>
<p><b>9.2 Recertification substantiation</b></p> <p>The application <b>shall</b> present a substantiated argument in support of the recertification of the worker, explaining why the CNSC <b>should</b> recertify a worker previously decertified by the CNSC, or whose certificate expired more than 5 years ago, including:</p> <ul style="list-style-type: none"><li>a. a description of the remedial actions taken by the licensee, including any remedial training, to ensure that any deficiency identified as part of the basis for the prior decertification has been adequately remedied or mitigated, as applicable</li></ul>	



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<p><b>b.</b> a summary of a suitable reinstatement process and the effective date of completion of each step, including:</p> <ul style="list-style-type: none"><li><b>i)</b> the tailored training, including any knowledge and performance-based refresher and update training, completed by the worker</li><li><b>ii)</b> the knowledge-based certification examination successfully completed by the worker</li><li><b>iii)</b> the performance-based certification examination successfully completed by the worker</li><li><b>iv)</b> the WUS hours completed by the worker</li><li><b>v)</b> the management interview</li></ul>	
<p><b>c.</b> a description of any relevant mitigating circumstances</p> <p>vi) The applicable worker requalification requirements are specified in Part III.</p>	
<p><b>9.3 Supporting documentation</b></p> <p>The following supporting documentation <b>shall</b> be appended to the application:</p> <ul style="list-style-type: none"><li><b>a.</b> the individual training needs analysis (ITNA) or a summary of the ITNA</li><li><b>b.</b> the individual training plan (ITP) or a summary of the ITP</li><li><b>c.</b> the knowledge-based certification examination successfully completed by the worker, including the worker’s answers and the grade obtained, in percentage</li><li><b>d.</b> the performance-based certification examination successfully completed by the worker, including the graded candidate actions</li><li><b>e.</b> a suitable record, signed by an authorized licensee representative, of the WUS hours completed by the worker</li><li><b>f.</b> a recording, a transcript, or the minutes of the mandated management interview</li><li><b>g.</b> any other documentation deemed essential in support of the application</li></ul>	
<p><b>9.4 Application schedule</b></p> <p>The licensee <b>may</b> apply for the recertification of a worker following decertification at any time after being informed of the Commission’s or DO’s decision to decertify the worker.</p> <p>The licensee <b>may</b> apply for the recertification of a worker following certificate expiry in accordance with section 9 no earlier than 5 years after the effective date of expiry specified on the certificate of the worker.</p>	
<p><b>9.5 Effective date of certification</b></p> <p>The effective date of the certification <b>will</b> be that of the certification decision made by the Commission or a DO.</p>	
<p><b>10. Application for Senior Health Physicist Examination or Requalification Testing</b></p> <p>An authorized applicant <b>may</b> submit an application for the administration of a certification examination or requalification test to a worker seeking certification or the renewal of a certification for employment as senior health physicist (SHP) once the worker has met the pertinent prerequisites specified in Part III.</p> <p>The application <b>shall</b> be submitted in writing in accordance with the general provisions of the personnel certification application processes specified in section 5, and <b>shall</b> state that the worker:</p> <ul style="list-style-type: none"><li><b>a.</b> has successfully completed the applicable training referenced in the licence, specifying the effective date of completion of the initial or continuing training referenced in section 25</li><li><b>b.</b> has successfully undergone the applicable management interview referenced in section 25, specifying the date of the interview</li></ul>	

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<b>11. Refusal to Certify and Decertification</b> <b>11.1 Background information</b> In accordance with the relevant legislation, the Commission or a DO <b>may</b> refuse to issue or renew a certification upon receiving an application for certification or the renewal of a certification, and <b>may</b> initiate the decertification of a certified worker on its own motion or upon request. Prior to making a final decision, the Commission or a DO <b>will</b> give prior notice of the proposed decision to the licensee and the worker concerned, offering each party an opportunity to be heard, either in support of or against the proposed decision.	No gap
<b>11.2 Licensee requests for decertification</b> The licensee <b>may</b> request the decertification of a certified worker employed at the reactor facility identified in the licence. All such requests <b>shall</b> be submitted in writing in accordance with subsection 5.4 and contain the following information: <ul style="list-style-type: none"><li>a. the purpose of the request</li><li>b. the legal name of the worker, as shown on the most recent certificate issued to the worker</li><li>c. the designated position for which the worker is to be decertified</li><li>d. the reactor facility where the worker is employed, including, where applicable, a specific reactor or group of reactors</li><li>e. the corporate name of the licensee operating said reactor facility</li><li>f. a description of the basis for the request</li><li>g. supporting documentation, as <b>may</b> exist, establishing a sufficient basis for decertification</li><li>h. the effective date of the request</li><li>i. the legal name, position, contact information and signature of an authorized licensee representative</li><li>j. a valid return mailing or email address</li></ul>	
<b>11.3 Requesting an opportunity to be heard</b> A licensee or a worker who has received notice of a proposed decision <b>may</b> request an opportunity to be heard within 30 calendar days of the receipt of the notice. All such requests <b>shall</b> be submitted in writing in accordance with subsection 5.4.	
<b>11.4 Commission or designated officer decision</b> On completion of an opportunity to be heard, the licensee and the worker concerned <b>will</b> be notified in writing of the Commission or DO decision and the rationale for the decision.	
<b>12. Administrative Processes</b> <b>12.1 Legal name change</b> The licensee <b>shall</b> promptly: <ul style="list-style-type: none"><li>a. inform the CNSC of any change in the legal name of any worker employed or training for employment in a designated position</li><li>b. request that the CNSC issue a replacement certificate for any certified worker who has officially changed their legal name</li></ul>	<b>Gap:</b> Not currently captured in BP-PROC-00833; process required for initial candidates co-pilot binder – what if a candidate changes their legal name during their initial training? <b>Action:</b> Update required to BP-PROC-00833; possible update to BP-STND-00036 Compliance action # 13



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<b>12.2 Replacement certificates</b> The licensee <b>may</b> request that the CNSC reissue a certificate on behalf of a certified worker if: a. the certificate has been lost b. some of the information shown on the certificate is no longer legible c. the legal name of the worker was officially changed, as mandated in subsection 12.1. All requests for a replacement certificate <b>shall</b> be submitted in writing in accordance with subsection 5.4 and contain the following information: a. the purpose and the rationale for the request b. the legal name of the worker, as shown on the most recent certificate issued to the worker c. the new legal name that is to appear on the replacement certificate, as applicable d. the title of the designated position shown on the certificate e. the corporate name of the licensee employing the worker f. the legal name, position, contact information and signature of an authorized licensee representative g. the effective date of the request	No gap
<b>Part II – Licensee Organizational and Physical Infrastructures</b> <b>Subpart A – Organizational Infrastructure</b>	
<b>13. Policies and Procedures</b> <b>13.1 Training and qualifying workers for initial certification</b> The licensee <b>shall</b> establish and document effective policies and procedures to train and qualify the workers seeking certification for employment in designated positions.	
<b>13.2 Maintaining the qualification of certified workers</b> The licensee <b>shall</b> establish and document effective policies and procedures to train and maintain the qualification of the certified workers employed in designated positions.	
<b>14. Personnel Selection Program</b> The licensee <b>shall</b> implement and document a personnel selection program that ensures the selection of suitable candidates for entry in the initial training programs referenced in this regulatory document. <b>14.1 Personnel selection program requirements</b> As an integral part of the personnel selection program, at a minimum and for each designated position identified in the licence, the licensee: a. <b>shall</b> set a minimum prior education level or minimum literacy and numeracy levels commensurate with the duties of the designated position and consistent with the entry level of a suitable initial training program b. <b>shall</b> require that candidates selected on the basis of their prior education level provide a diploma or other official proof of successful completion of a suitable course of study issued by a recognized educational institution or learning provider c. <b>may</b> recognize equivalencies to any minimum education, literacy, or numeracy level set by the licensee d. <b>shall</b> use standardized tests and proven methods to assess whether or not candidates selected on the basis of a literacy or numeracy level, or a recognized equivalency, do in fact meet the applicable minimum standards	<b>Gap</b> – Bruce Power does not have a documented personnel selection program. <b>Action</b> – Bruce Power to define and document the personnel selection program. HR and Station alignment required. Training to ensure Initial Entry Requirements form and TQDs are updated. Compliance action # 16

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e. <b>shall</b> determine whether or not prior work experience <b>may</b> be desirable or essential and, when deemed essential, develop plans and procedures to ensure candidates gain relevant work experience prior to their entry in a suitable initial training program	
f. <b>shall</b> identify attributes and aptitudes deemed essential to safely and competently perform the duties of the designated position, including integrity, leadership, and resilience, as <b>may</b> be pertinent, and select candidates accordingly	
g. <b>may</b> use standardized tests and proven methods, or require a medical assessment performed by a licensed physician, to assess whether or not candidates have any permanent, physical or mental limitation that would prevent them from performing the duties of the pertinent designated position safely and competently	
<b>14.2 Personnel selection criteria</b> <b>14.2.1 Basic prerequisites</b> Candidates selected for entry in any initial training program referenced in this regulatory document <b>shall</b> : <ul style="list-style-type: none"><li>a. have demonstrated literacy and numeracy levels commensurate with the duties of the pertinent designated position</li><li>b. have provided sufficient proof of any prior education level required by the CNSC or the licensee</li><li>c. have gained any prior work experience required by the CNSC or the licensee</li><li>d. possess all the safety-related attributes and aptitudes deemed essential by the licensee</li><li>e. meet all other applicable position-specific selection criteria set by the licensee</li></ul>	
<b>14.2.2 Supplementary prerequisites for shift supervisors and senior health physicists</b> In addition to meeting the applicable basic prerequisites, shift supervisor and senior health physicist (SHP) candidates <b>shall</b> , to the licensee's knowledge: <ul style="list-style-type: none"><li>a. possess known leadership skills or potential</li><li>b. have consistently demonstrated a high level of integrity</li></ul>	<b>Gap</b> – Bruce Power does not have a current method of meeting the requirements of 14.2.2. <b>Action</b> – Bruce Power to define and document the personnel selection program. HR and Station alignment required. Training to ensure Initial Entry Requirements form and TQDs are updated. Compliance action # 16
<b>14.3 Selection of reactor operators for shift supervisor training</b> A worker certified or previously certified for employment as reactor operator (RO) at the reactor facility identified in the licence <b>may</b> be selected for entry in an initial training program for shift supervisor candidates in accordance with the requirements specified in this subsection.	
<b>14.3.1 Performance as reactor operator</b> Prior to being selected for shift supervisor training, the worker <b>must</b> : <ul style="list-style-type: none"><li>a. have performed the duties of an RO safely and competently</li><li>b. be known to possess the safety-related attributes and aptitudes required of a shift supervisor</li></ul>	
<b>14.3.2 Personnel selection exemption</b> The licensee <b>may</b> , if the worker has been regularly employed as a certified RO for at least 4 calendar quarters, exempt the worker from any education level or work experience normally required of shift supervisor candidates.	<b>Gap</b> – Ensure this documented in the personnel selection program. <b>Action</b> - Bruce Power to define and document the personnel selection program. HR and Station alignment required. Training to ensure Initial Entry Requirements form and TQDs are updated. Compliance action # 16

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<b>14.3.3 Notification of selection for shift supervisor training</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program for shift supervisor candidates. This communication <b>shall</b> include: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. a confirmation that the worker performed the duties of an RO safely and competently</li><li>c. a confirmation that the worker possesses the safety-related attributes and aptitudes required of a shift supervisor</li><li>d. a summary of any exemption explicitly sanctioned in sub-subsection 14.3.2 and employed as part of the selection of the worker, including the start and end dates of the observation period(s) adding to 4 calendar quarters in total</li></ul>	<b>Gap</b> – New notification requirement. <b>Action</b> – Ensure new requirement to notify CNSC of selection for shift supervisor in training is documented; update BP-PROC-00833. Compliance action # 13
<b>14.4 Advancement to senior shift supervisor</b> Any certified shift supervisor who, as a member of the minimum staff complement (MSC), exercises authority over any number of certified shift supervisors <b>shall</b> , prior to being employed in such a senior shift supervisor position, have been selected and trained by the licensee for the express purpose by means of a documented process meeting the requirements specified in this subsection. The licensee <b>shall</b> not allow any worker to act as senior shift supervisor who is not duly qualified to exercise authority over other certified shift supervisors in accordance with the aforementioned process.	
<b>14.4.1 Minimum experience as shift supervisor prior to advancement</b> The worker <b>must</b> have safely and competently performed the duties of a shift supervisor at the reactor facility identified in the licence for a minimum number of complete shifts and a minimum number of hours of shiftwork acceptable to the CNSC.	
<b>14.4.2 Supplemental training</b> The worker <b>must</b> have successfully completed training based on a training system, including some on-the-job training (OJT), covering the K&S and safety-related attributes required to safely and competently perform the duties of the senior shift supervisor, as defined by the licensee’s management system.	
<b>14.4.3 Work under supervision</b> The worker <b>must</b> have performed the duties of the senior shift supervisor under the supervision of a qualified senior shift supervisor for a number of complete shifts that the licensee considers necessary to confirm that the worker can perform said duties competently and safely.	
<b>14.4.4 Notification of advancement to senior shift supervisor</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker certified as shift supervisor has obtained a senior shift supervisor qualification. This communication <b>shall</b> include: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. a summary, showing the effective date of completion in each case, of the requirements successfully met by the worker as part of the advancement process specified in this section</li></ul>	<b>Gap</b> – new requirement in the regulations due to Shift Manager no longer being a certification. <b>Action</b> - update BP-PROC-00833 Compliance action # 13
<b>14.5 Personnel transfer</b> The licensee <b>shall</b> implement and document an effective personnel transfer process compliant with the requirements and guidance specified in this subsection.	

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<b>14.5.1 Personnel transfer process</b> As an integral part of the personnel transfer process, the licensee of the gaining reactor facility: <ul style="list-style-type: none"><li>a. <b>shall</b> request, from the licensee of the ceding reactor facility:<ul style="list-style-type: none"><li>(i) the training and qualification records and, if applicable, the certification examination history of the worker, including sufficient proof of any certification examination successfully completed by the worker</li><li>(ii) confirmation that the worker performed their duties in a safe and competent manner, be it in a designated position or not</li><li>(iii) confirmation that the worker is trustworthy</li></ul></li><li>b. <b>shall</b> ensure that the worker meets all of the applicable personnel selection criteria in effect at the gaining reactor facility prior to the worker’s entering one of the initial training programs referenced in this regulatory document</li><li>c. <b>may</b> administer a single or a series of standardized general knowledge test(s) based on proven methods to identify any gaps in the general knowledge of the worker</li><li>d. <b>may</b> use the results of the aforementioned general knowledge test(s) as part of the basis for the development of an individual training needs analysis (ITNA) and an individual training plan (ITP), on a case-by-case basis</li><li>e. <b>may</b> administer a general knowledge certification examination to the worker in order to ascertain that the worker possesses adequate general knowledge</li><li>f. <b>may</b> employ one or both potential exemptions explicitly sanctioned in this subsection</li></ul>	<b>Gap</b> – This is a new requirement. <b>Action</b> – document this process in the same process as personnel selection. Compliance action # 16
<b>14.5.2 Initial training</b> Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.3, the worker <b>shall</b> successfully complete the same initial training that is administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.	
<b>14.5.3 General knowledge training exemption</b> The licensee is not obligated to administer additional general knowledge training to the worker if the worker has previously successfully completed general knowledge training that: <ul style="list-style-type: none"><li>a. is equivalent to the general knowledge training administered to all workers seeking employment in the same designated position at the gaining reactor facility</li><li>b. was administered in accordance with the applicable requirements specified in this and complementary regulatory documents</li><li>c. is, in all other respects, acceptable to the gaining reactor facility licensee</li></ul>	<b>Follow regular exemption process per BP-PROC-01071 – no gap</b>
<b>14.5.4 Certification examinations</b> Except for the potential exemption explicitly sanctioned in sub-subsection 14.5.5, the worker <b>shall</b> successfully complete the same certification examinations as those administered to all workers seeking certification for employment in the pertinent designated position at the gaining reactor facility.	
<b>14.5.5 General knowledge examination exemption</b> The licensee is not obligated to administer an additional general knowledge certification examination to the transferred worker if the worker previously received a passing grade on a general knowledge examination that: <ul style="list-style-type: none"><li>a. is equivalent to the general knowledge examination administered to all workers seeking employment in the same designated position at the gaining reactor facility</li><li>b. was administered by qualified examiners in accordance with the conditions set in the gaining reactor facility licence or accompanying document, including any detailed requirements specified in documents referenced in the licence or accompanying document</li><li>c. is, in all other respects, acceptable to the gaining reactor facility licensee</li></ul>	

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<b>14.5.6 Notification of personnel transfer</b> The licensee <b>shall</b> notify the CNSC within a reasonable time frame when a worker referred to in this subsection enters an initial training program referenced in this regulatory document. This communication <b>shall</b> include: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. a summary of any exemption(s) explicitly sanctioned in subsection 14.5 and employed as part of the selection of the worker, including, as applicable:<ul style="list-style-type: none"><li>(i) the start and end dates of the general training referenced as basis for the exemption and the licensee and reactor facility responsible for the associated general training program</li><li>(ii) the date on which the general certification examination referenced as basis for the exemption was administered and the licensee and reactor facility responsible for its administration</li></ul></li></ul>	<b>Gap</b> – This is a new requirement for Bruce Power notifications. <b>Action</b> –Reg Affairs to implement this new notification requirement; revise BP-PROC-000833 Compliance action # 13
<b>14.5.7 Added information upon application for certification</b> At the time of application for certification, the worker <b>shall</b> meet all of the personnel certification requirements applicable to any worker seeking certification for employment in the pertinent designated position at the reactor facility identified in the licence. In addition to the requirements specified in subsection 6.2 and the notification specified in this subsection, the application for certification <b>shall</b> include a summary of any ITNA, ITP and certification examination employed as part of the transfer of the worker.	<b>Gap</b> – new regulatory requirement. <b>Action</b> - BP-STND-00083 to be updated with governance around ITNAs and ITPs Compliance action # 3
<b>15 Training Programs</b> <b>15.1 Initial training programs</b> The licensee <b>shall</b> implement and document initial training programs specifically designed to prepare workers for employment in each designated position identified in the licence, and to qualify the said workers for certification by the CNSC in accordance with the applicable worker qualifications specified in Part III.	
<b>15.2 Continuing training programs</b> The licensee <b>shall</b> implement and document continuing training programs specifically designed to maintain the competency of workers employed in each designated position identified in the licence, and to requalify the said workers prior to the renewal of their certification by the CNSC in accordance with the applicable worker requalification requirements specified in Part III.	
<b>15.2.1 Update training</b> The pertinent continuing training programs <b>shall</b> include suitable update training, including formal knowledge and performance-based evaluations, covering any relevant technical or procedural changes implemented at the reactor facility identified in the licence, as well as the relevant lessons learned by the industry over time, including, but not limited to: <ul style="list-style-type: none"><li>a. changes to reactor facility systems and subsystems</li><li>b. changes to licensee and station-specific policies, standards, and procedures</li><li>c. amendments to, or exemptions from, regulatory requirements</li><li>d. amendments to the licence or to documents referenced in the licence</li><li>e. station-specific and industry operational experience and operating events</li></ul> The licensee <b>shall</b> deliver the knowledge update training referenced in this regulatory document promptly following the occurrence of the initiating change or event using effective instructional methods, including suitable simulator-based training whenever pertinent.	

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<b>15.2.2 Refresher training</b> The pertinent continuing training programs <b>shall</b> incorporate suitable refresher training, including formal knowledge and performance-based evaluations, covering the essential K&S and safety related attributes that certified workers acquired during their initial training and which <b>must</b> be periodically reviewed and applied to ensure adequate retention. The licensee <b>shall</b> deliver the knowledge refresher training referenced in this regulatory document on a regular basis and according to a training cycle not exceeding 5 years using effective instructional methods, including suitable simulator-based training whenever pertinent.	
<b>15.2.3 Simulator-based continuing training for operations personnel</b> The continuing training programs for operations personnel <b>shall</b> include suitable simulator-based training designed to ensure that operations personnel maintain their qualification by applying their K&S and safety-related attributes through recurrent performance-based training covering varied simulated scenarios under normal, abnormal and, to the extent possible, emergency conditions. At a minimum, the continuing simulator-based training for operations personnel <b>shall</b> include: <ul style="list-style-type: none"><li>a. simulator-based exercises covering the normal reactor manoeuvres and plant evolutions infrequently performed by certified workers while on duty</li><li>b. simulator-based exercises covering varied scenarios:<ul style="list-style-type: none"><li>(i) challenging the diagnostic and decision-making abilities of certified workers</li><li>(ii) ensuring that certified workers remain proficient in selecting and executing the correct operational procedures under abnormal and emergency conditions</li></ul></li><li>c. exercises and drills ensuring that certified workers are ready to respond to accidents and emergencies</li></ul>	
<b>15.2.4 Nuclear emergency response training</b> The licensee <b>shall</b> conduct, on a periodic basis, nuclear emergency response training to ensure that certified workers are adequately prepared to respond to credible beyond-design-basis accidents and manage nuclear emergencies in accordance with the established emergency operating procedures and severe accident management guidelines.	<b>Gap</b> – new guidance in regulatory document <b>Action</b> - Bruce Power does provide Nuclear Emergency response training, but a TNA to be conducted to ensure we are fully aligned with this version. Compliance action # 12
<b>15.3 Training system for reactor facilities</b> The initial and continuing training programs referenced in this regulatory document <b>shall</b> be consistent with a training system for reactor facilities acceptable to the CNSC. When the licensee contracts out, in whole or in part, any aspect of the training referenced in this regulatory document, the licensee <b>shall</b> ensure that the requirements and guidance specified in this and any relevant complementary regulatory document are complied with by the contracted party or parties.	
<b>15.4 Formal learner evaluations</b>	

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<p>All training programs and tailored training referenced in this regulatory document <b>shall</b> include formal learner evaluations, either knowledge-based or performance-based as appropriate, designed to assess the progress of each learner during the course of said training.</p> <p>The licensee <b>shall</b> administer all such formal learner evaluations in accordance with a documented process specifying:</p> <ul style="list-style-type: none"><li>a. the number and scope of the formative and summative evaluations deemed necessary to monitor candidate progress in relation to pertinent training segments and milestones</li><li>b. the requirements and procedures applicable to the design, development, conduct and grading of the evaluations</li><li>c. the qualification requirements for the personnel tasked with designing, developing, conducting, and grading the evaluations</li></ul> <p>All formal learner evaluations <b>shall</b> be administered either by qualified trainers or by qualified examiners as part of a documented instructional strategy.</p>	<p><b>Gap</b> – new language on Learning Evaluations implies these evaluations are what we consider Progress Tests.</p> <p><b>Action</b> – Update BP-STND-00036 on new regulatory requirements for learner evaluations on the conduct and grading of learner evaluations.</p> <p>NOTE – Learner Evaluations should follow SAT process per BP-PROC-01071 for design and development</p> <p>Compliance action # 10</p>
<p><b>15.5 Trainer qualifications</b></p> <p>The licensee <b>shall</b> ensure that the personnel tasked with administering the training and formal learner evaluations referenced in this regulatory document are duly qualified to administer training and formal learner evaluations to the workers certified or seeking certification by the CNSC.</p>	<p><b>Gap</b> – new requirement for formal learner evaluations to be administered by qualified trainers</p> <p><b>Action</b> – complete Analysis on what qualifications would be required.</p> <p>Compliance action # 10</p>
<p><b>16. Certification Examination and Requalification Testing</b></p> <p><b>16.1 Separation of the training and examination functions</b></p> <p>The licensee <b>shall</b> ensure that, to the greatest extent possible, adequate separation and an arm’s-length relationship are maintained between the trainers delivering the training referenced in this regulatory document and the examiners administering certification examinations and requalification tests on behalf of the CNSC. At a minimum:</p> <ul style="list-style-type: none"><li>a. no knowledge or performance-based certification examination or requalification test administered in accordance with the requirements specified in this regulatory document <b>shall</b> be designed, developed, conducted, or graded, in whole or in part, by an examiner acting as trainer to any of the candidates undergoing the examination or test</li><li>b. no trainer or examiner <b>shall</b> benefit, financially or otherwise, from the success rate of the candidates undergoing any formal learner evaluation, certification examination, or requalification test referenced in this regulatory document.</li></ul>	
<p><b>16.2 Certification examinations</b></p> <p>The licensee <b>shall</b> ensure that the knowledge and performance-based certification examinations referenced in this regulatory document are designed, developed, conducted, and graded by qualified examiners in accordance with the applicable CNSC requirements specified or referenced in the licence or any accompanying documentation.</p>	
<p><b>16.3 Requalification testing</b></p> <p>The licensee <b>shall</b> ensure that the knowledge and performance-based requalification tests referenced in this regulatory document are designed, developed, conducted, and graded by qualified examiners in accordance with the applicable CNSC requirements specified or referenced in the licence or any accompanying documentation.</p>	



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<p><b>16.4 Security of certification examinations and requalification tests</b></p> <p>The licensee <b>shall</b> implement and document effective policies and procedures to control access to, and the use of, the formal learner evaluations, certification examinations and requalification tests referenced in this regulatory document.</p> <p>The associated security measures <b>shall</b> meet the following minimum requirements:</p> <ul style="list-style-type: none"><li>a. Only personnel with a valid need to know <b>shall</b> have access to the pertinent formal learner evaluations, certification examinations and requalification tests, as well as any associated documentation and materials providing a direct clue as to their content.</li><li>b. Trainers <b>shall</b> not have access to, or prior knowledge of, the specific content of any certification examination or requalification test administered to their learners.</li><li>c. Answers to modified essay question (MEQ) examinations and tests <b>shall</b> be protected from unauthorized access.</li><li>d. Answer keys to multiple choice question (MCQ) examinations and tests <b>shall</b> be protected from unauthorized access.</li><li>e. Any repository, physical or virtual, containing MEQ or MCQ examinations and test questions <b>shall</b> be protected from unauthorized access.</li><li>f. In order to discharge their duties, CNSC staff participating in compliance verification activities <b>shall</b> be exempt from any security measure established by the licensee in accordance with the requirements specified in this subsection.</li></ul>	<p><b>Gap</b> – Security for learner evaluations is not clearly outlined.</p> <p><b>Action</b> – include language in BP-STND-00036 on security requirements for learner evaluations.</p> <p>Compliance action # 10</p>
<p><b>16.5 Examiner qualifications</b></p> <p>The licensee <b>shall</b> ensure that the personnel tasked with administering the certification examinations and requalification tests referenced in this regulatory document have successfully completed suitable training and are duly qualified to administer certification examinations and requalification tests to the workers certified or seeking certification by the CNSC.</p>	
<p><b>17 Work Under Supervision</b></p> <p>The licensee <b>shall</b> establish and document, for each pertinent designated position identified in the licence, effective procedures for the administration of the work under supervision (WUS) referenced in this regulatory document.</p> <p>All mandatory WUS periods <b>shall</b> meet the following objectives:</p> <ul style="list-style-type: none"><li>a. WUS <b>shall</b> provide the worker being evaluated with a meaningful opportunity to demonstrate a functional level of competency and the ability to stand solo shifts as lead operator or shift supervisor</li><li>b. WUS <b>shall</b> provide operations managers with a sufficient observation period to confirm that the worker being evaluated can be trusted to stand solo shifts as lead operator or shift supervisor and can perform the pertinent duties safely and competently</li></ul> <p>When implemented as part of an initial training program, WUS <b>shall</b> not begin until the responsibility for the learner’s performance has been transferred from the training authority to the operations authority</p>	



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<b>18. Management Interviews</b> The licensee <b>shall</b> establish and document effective procedures for preparing and conducting the various management interviews referenced in this regulatory document.  Each mandatory management interview <b>shall</b> serve an evaluation function and: <ul style="list-style-type: none"><li>a. be conducted orally by a minimum of one manager authorized to represent the licensee and to conduct the interview</li><li>b. provide the worker being evaluated with a meaningful opportunity to demonstrate an adequate level of competency</li><li>c. provide at least one member of the operations management team with a meaningful opportunity to make a final determination of worker competency</li><li>d. be recorded in writing or via any other retrievable medium, the record of which <b>shall</b> be retained and made available to the CNSC upon request</li></ul>	<b>Gap</b> – new requirement in regulations <b>Action</b> - update BP-STND-00036 with clear wording to reflect Regulatory requirements. Compliance action # 10  <b>Gap</b> – new requirement in regulations <b>Action</b> - update BP-STND-00036 with clear wording to reflect Regulatory requirements. Compliance action # 10
<b>19. Administrative Policies and Procedures Applicable to Workers in Training</b> The policies and procedures specified in this section apply to any worker, whether certified or not, who is attending one of the initial training programs referenced in this regulatory document, in the context of, and in relation to, said training.	
<b>19.1 Reintegration of a worker in training following a prolonged training interruption</b> The licensee <b>shall</b> establish and document an effective process to manage the case of any worker reintegrating an initial training program after a prolonged training interruption. As an integral part of this process, the licensee <b>shall</b> : <ul style="list-style-type: none"><li>a. determine the need for, and perform as necessary, a formal learner evaluation, including knowledge and performance-based testing as warranted, to assess the K&amp;S retention of the worker and to identify any K&amp;S gap that the worker <b>may</b> have developed during the period of absence</li><li>b. determine the need for tailored training based on an individual training needs analysis (ITNA), considering any K&amp;S forgotten by the worker and any changes or updates to the essential K&amp;S and safety-related attributes that occurred during the period of absence</li><li>c. formulate and implement an individual training plan (ITP) as <b>may</b> be necessary</li><li>d. ensure that the worker, at a minimum, successfully completes any training and formal learner evaluation(s) missed during the period of absence</li><li>e. determine a suitable point of re-entry into the pertinent initial training program</li></ul> At a minimum, any worker who is absent from an initial training program for a period of 6 months or more <b>shall</b> undergo a formal reintegration process meeting the requirements specified in this subsection.	<b>Gap</b> – ITNA is a new requirement – BP-STND-00083 <b>Action</b> – Bruce Power to determine the template and process for creating ITNA, and update BP-STND-00083 accordingly; develop FORM for ITNA/ITP Compliance action # 3
<b>20. Administrative Policies and Procedures Applicable to Certified Workers</b> The policies and procedures specified in this section apply to all certified workers in the context of, and in relation to, their employment in the pertinent designated position(s).	<b>No gap</b>

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<b>20.1 Fitness for duty</b> The licensee <b>shall</b> implement and document effective fitness-for-duty policies and procedures providing the CNSC with reasonable assurance that certified workers are free of any physical or mental impairment that could hinder their ability to perform the duties of the pertinent designated position(s) safely and competently. The fitness-for-duty policies and procedures applicable to certified workers <b>shall</b> be implemented consistently with the requirements and guidance specified in this and complementary regulatory documents regarding fitness for duty, including those related to the management of worker fatigue and the management of alcohol and drug use.	
<b>20.2 Minimum employment of certified workers</b> The licensee <b>shall</b> ensure that certified workers are employed in the designated position(s) specified on their certificate(s) to the extent necessary to maintain an adequate competency level throughout the full duration of their certification.	
<b>20.2.1 Minimum shift requirement for operations personnel</b> Certified shift workers <b>shall</b> perform the duties of the pertinent designated position(s) for a minimum number acceptable to the CNSC of complete shifts per calendar quarter amounting to a minimum number acceptable to the CNSC of hours of shiftwork per calendar quarter. Each certified shift worker <b>shall</b> perform the mandated minimum employment as a member of the minimum staff complement, as opposed to in any back-up or supernumerary capacity, and, to the fullest extent possible, in relation to a fuelled and operating reactor or group of reactors.	<b>Gap</b> – new requirement for License Maintenance Shifts <b>Action</b> – update BP-STND-000146 Compliance action # 1
<b>20.2.2 Minimum shift requirement deferment</b> When a certified shift worker fails to meet, during any given calendar quarter, an applicable minimum shift requirement, the omitted number of complete shifts and hours of shiftwork <b>shall</b> be performed in the following calendar quarter, in addition to the minimum shift requirement strictly applicable to said calendar quarter.	
<b>20.2.3 Minimum employment of senior health physicists</b> The licensee <b>shall</b> ensure that workers certified for employment as an SHP regularly perform the duties of an SHP throughout the full duration of their certification.	<b>Gap</b> – new requirement for License Maintenance Shifts <b>Action</b> – update BP-STND-00095 Compliance action # 4
<b>20.3 Management of prolonged unemployment</b> Any certified worker <b>shall</b> be formally removed from the duties of the pertinent designated position and assigned an inactive employment status who, for a period lasting 6 consecutive months or more, regardless of the rationale, is or <b>will</b> be unable to: <ul style="list-style-type: none"> <li>a. attend the scheduled continuing training</li> <li>b. meet an applicable quarterly minimum shift requirement</li> </ul>	
<b>20.4 Removal from duty for cause</b> Any certified worker who meets any one of the criteria specified in this subsection <b>shall</b> be formally removed from the duties of the pertinent designated position for cause and assigned either an inactive or uncertified employment status as applicable.	
<b>20.4.1 Failure to meet a minimum employment requirement</b> The worker has failed to meet an applicable quarterly minimum shift requirement for 2 consecutive calendar quarters.	
<b>20.4.2 Requalification test failure</b> The worker has failed a requalification test, be it in a lead or supporting role.	

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<b>20.4.3 Inability to work safely and competently</b> The worker was the subject of a verified positive alcohol or drug test administered in accordance with the fitness-for-duty program mandated by the CNSC, or is otherwise deemed unfit, by the licensee, to perform the duties of a designated position safely and competently for any reason, including, but not limited to: <ul style="list-style-type: none"><li>a. a medical or physical condition, be it permanent or temporary</li><li>b. a mental health condition, be it permanent or temporary</li><li>c. inadequate performance while on duty, including any action or decision that puts at risk the health and safety of workers, the public or the environment</li><li>d. a demonstrated unwillingness or failure to take the necessary precautions to protect the health and safety of workers, the public or the environment</li><li>e. a demonstrated lack of integrity or trustworthiness</li></ul>	
<b>20.4.4 Certificate expiry</b> The certificate of the worker has expired.	No gap
<b>20.4.5 Proposed decision not to certify or to decertify</b> The worker was identified by the CNSC as the worker concerned in a proposed decision not to certify, or a proposed decision to decertify, while a final decision by the Commission or a DO remains pending.	
<b>20.5 Baseline reinstatement process</b> No certified worker who has been formally removed from the duties of a designated position <b>shall</b> be allowed to perform said duties until the worker has successfully undergone a suitable baseline reinstatement process compliant with the requirements specified in this subsection.	<b>Gap</b> – new requirement for reinstatement <b>Action</b> – update BP-STND-00095 Compliance action # 4
<b>20.5.1 Update training</b> The worker <b>must</b> have completed suitable update training covering any relevant technical or operational changes implemented, and any relevant lessons learned, while the worker was formally removed from the duties of the designated position, including, but not limited to: <ul style="list-style-type: none"><li>a. changes to reactor facility systems and subsystems</li><li>b. changes to licensee and station-specific policies, standards, and procedures</li><li>c. amendments to, or exemptions from, regulatory requirements</li><li>d. amendments to the licence or to documents referenced in the licence</li><li>e. station-specific and industry operational experience and operating events</li></ul>	
<b>20.5.2 Refresher training</b> The worker <b>must</b> have successfully completed suitable refresher training commensurate with the duration of the period of absence or removal from duty of the worker. At a minimum, this refresher training <b>shall</b> encompass any scheduled refresher training that the worker failed to attend while the worker was formally removed from the duty.	
<b>20.5.3 Simulator-based training</b> For operations personnel, the worker <b>must</b> have successfully completed suitable simulator-based training covering a number and variety of scenarios commensurate with the duration of the period of absence or removal from duty of the worker. At a minimum, this simulator-based training <b>shall</b> challenge the diagnostic and decision-making skills of the worker and encompass any scheduled simulator-based training that the worker failed to attend during the period of absence or removal from duty.	
<b>20.5.4 Work under supervision</b> For operations personnel, the worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform said duties competently and safely.	

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<b>20.5.5 Management interview</b> When removed from duty for cause, the worker <b>must</b> have successfully undergone a formal management interview.	
<b>20.6 Remediation following removal from duty for cause</b> In addition to the baseline reinstatement process specified in subsection 20.5, no certified worker who has been removed from duty for cause based on one of the criteria defined in subsection 20.4 <b>shall</b> be allowed to perform the duties of the pertinent designated position until the worker has successfully undergone suitable remediation consistent with the applicable cause for the removal, as further specified in this subsection.	<b>Gap</b> – new requirement. <b>Action</b> – update BP-STND-00095. Compliance action # 4
<b>20.6.1 Failure to meet a minimum employment requirement</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a failure to meet a minimum employment requirement, if: <ul style="list-style-type: none"> <li>a. the circumstances that prevented the worker from performing the duties of the pertinent designated position no longer exist</li> <li>b. the worker has performed, under the supervision of a qualified worker certified for employment in the pertinent designated position, a number of complete shifts and hours of shiftwork no less than the minimum number of complete shifts and hours of shiftwork that the worker failed to complete in the quarter preceding the removal from duty</li> </ul>	
<b>20.6.2 Requalification test failure</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a requalification test failure once the worker has successfully completed a remedial requalification test equivalent to the failed requalification test. This remedial requalification test <b>shall</b> be equivalent in all respects, but <b>must</b> not be the same as the failed requalification test or any other remedial requalification test the candidate <b>may</b> have failed as part of the reinstatement process. Furthermore, any restrictions set in complementary documents regarding the allowed topic overlap between requalification tests <b>shall</b> apply.	
<b>20.6.3 Inability to work safely and competently</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a removal from duty due to an inability to work safely and competently if the basis for the removal from duty has been adequately remedied or mitigated or no longer exists.	
<b>20.6.4 Certificate expiry</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position following a certificate expiry if and when officially informed of the Commission's or DO's decision to recertify the worker.	<b>No gap</b>
<b>20.6.5 Proposed decision not to certify or to decertify</b> The licensee <b>may</b> reinstate a worker to the duties of the pertinent designated position who was the subject of a proposed decision not to certify, or a proposed decision to decertify, if and when officially informed of the Commission's or DO's decision to certify, or not to decertify, the worker.	
<b>20.7 Notification of change in employment status</b> <b>20.7.1 Notification of removal from duty</b> The licensee <b>shall</b> promptly inform the CNSC of any certified worker removed from the duties of a designated position, be it due to a prolonged period of unemployment or a removal for cause, specifying: <ul style="list-style-type: none"> <li>a. the full legal name of the worker</li> <li>b. the pertinent designated position</li> <li>c. the resulting employment status assigned to the worker as per subsection 3.2</li> <li>d. the basis for the removal from duty as per subsection 20.3 or 20.4, as applicable</li> </ul>	<b>Gap</b> – new notification requirements. <b>Action</b> - revision to BP-PROC-00833. Compliance action # 13

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<b>20.7.2 Notification of reinstatement to duty</b> The licensee <b>shall</b> promptly inform the CNSC of any certified worker reinstated to the duties of a designated position, to include: <ul style="list-style-type: none"><li>a. the full legal name of the worker</li><li>b. the pertinent designated position</li><li>c. the resulting employment status assigned to the worker as per subsection 3.2</li><li>d. the basis for the prior removal from duty and a confirmation that said basis no longer exists or has been adequately remedied or mitigated, as applicable</li><li>e. a summary of the baseline reinstatement process successfully completed by the worker</li><li>f. when following a removal for cause, a summary of any remediation action(s) taken to satisfy the applicable requirements specified in subsection 20.6</li></ul>	<b>Gap</b> – new notification requirements. <b>Action</b> - revision to BP-PROC-00833. Compliance action # 13
<b>21. Information Management</b> The licensee <b>shall</b> implement and document effective information management policies and procedures ensuring: <ul style="list-style-type: none"><li>a. the retention and ready retrieval of the corporate documentation and proof-of-competency records related to personnel certification</li><li>b. the safeguard and control of sensitive information pertaining to personnel certification</li><li>c. the unrestricted access, by authorized CNSC staff, to the corporate documentation and personnel records specified in this section</li></ul>	<b>Gap</b> – new requirements for information management. <b>Action</b> - Ensure BP-STND-00043 reflect new regulatory requirements. Compliance action # 11
<b>21.1 Corporate documentation</b> <b>21.1.1 Roles and responsibilities</b> The licensee <b>shall</b> document, retain, and make available to the CNSC upon request, the roles and responsibilities of: <ul style="list-style-type: none"><li>a. certified workers</li><li>b. all personnel, including management, involved in the training and qualification of workers seeking or holding a certification, including trainers, examiners, and managers delegated with relevant approval authorities</li></ul>	
<b>21.1.2 Operational procedures</b> The licensee <b>shall</b> retain, and make available to the CNSC upon request, a copy of the latest version of the licensee and station-specific policies, procedures and technical diagrams referenced by certified workers to perform the duties of the designated positions safely and competently, including those related to: <ul style="list-style-type: none"><li>a. operating policies and principles</li><li>b. worker performance expectations</li><li>c. radiation protection</li><li>d. normal and abnormal operations</li><li>e. abnormal incidents</li><li>f. power reduction actions</li><li>g. severe accident management</li></ul>	

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<b>21.1.3 Training and qualifying governance</b> For each designated position referenced in the licence, the licensee shall document, retain, and make available to the CNSC upon request, the policies, standards, and procedures for training and qualifying the workers seeking a certification, and for training and maintaining the qualification of the workers holding a certification, including the procedures for: <ul style="list-style-type: none"> <li>a. administering the initial and continuing training</li> <li>b. preparing and administering the formal learner evaluations administered as part of the initial and continuing training</li> <li>c. preparing and administering certification examinations and requalification tests</li> <li>d. managing work under supervision (WUS) periods</li> <li>e. preparing and administering management interviews</li> <li>f. maintaining comprehensive and accurate personnel records</li> </ul>	<b>Gap</b> – new requirement for records. <b>Action</b> – update BP-STND-00095. Compliance action # 4
<b>21.1.4 Trainer and examiner qualifications</b> The licensee shall document, retain, and make available to the CNSC upon request, a record of the qualifications of the trainers and examiners referenced in this regulatory document.	
<b>21.2 Personnel records</b> For each worker certified or seeking certification for employment in a designated position, the licensee shall retain, and make available to the CNSC upon request, adequate personnel records for a retention period equal to the duration of the employment of the worker, be it as an employee or a contractor, plus 5 years after the worker ceases to be employed in any capacity. At a minimum, said personnel records shall encompass:	<b>Gap</b> – Ensure BP-STND-00043 aligns with new regulatory requirements. <b>Action</b> - Ensure BP-STND-00043 reflect new regulatory requirements. Compliance action # 11
a. Education or literacy level – The name and address of any educational institution or learning provider from which the worker obtained an accreditation, including any diploma, degree or certificate, and a copy of any diploma, degree or certificate required by the licensee’s personnel selection program.	
b. Prior work experience – Comprehensive records of any employment period(s) required by the licensee’s personnel selection program, or as part of the mandated plant familiarization training, including, in each case, the name of the employer, the address of the work site, and the effective start and end dates.	
c. Personnel selection interviews and tests – Comprehensive records of any personnel selection interview or test, including the effective date and results in each case, administered as part of the licensee’s personnel selection program. d. Personnel transfer – Comprehensive records of any information required or collected as part of a personnel transfer. e. Advancement – Comprehensive records of any information required or collected as part an advancement to a shift supervisor or senior shift supervisor position.	<b>Gap</b> – Ensure this documented in the personnel selection program. <b>Action</b> - Bruce Power to define and document the personnel selection program. HR and Station alignment required. Training to ensure Initial Entry Requirements form and TQDs are updated. Compliance action # 16
f. Training – Comprehensive records of the initial training and continuing training successfully completed by the worker, including the start and end dates of each distinct training period or milestone.	<b>Gap</b> – Ensure BP-STND-00043 aligns with new regulatory requirements. <b>Action</b> - Ensure BP-STND-00043 reflect new regulatory requirements Compliance action # 11
g. Formal learner evaluations – Comprehensive records of the formal learner evaluations administered to the worker as part of their initial or continuing training, including, in each case, the dates on which the evaluations were conducted, the results, and the full legal name(s) of the evaluator(s)	<b>Gap</b> – Ensure BP-STND-00043 aligns with new regulatory requirements. <b>Action</b> - Ensure BP-STND-00043 reflect new regulatory requirements Compliance action # 11
h. Work under supervision – Comprehensive records of any WUS performed by the worker, including, in each case, the associated requirement being met, the date of each shift worked under supervision, and the full legal name of, and the CNSC certification held by, the certified worker who supervised the worker.	



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i. Management interviews – Comprehensive records of the management interviews undergone by the worker, including, in each case, the date of the interview, the full legal name(s) and position(s) of the interviewer(s), and a verbatim or summary description of the questions and answers exchanged during the interview.	<b>Gap</b> – Ensure BP-STND-00043 aligns with new regulatory requirements. <b>Action</b> - Ensure BP-STND-00043 reflect new regulatory requirements Compliance action # 11
j. Certification examinations – The certification examination records referenced in the licence or any accompanying documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying documentation.	
k. Requalification tests – The requalification testing records referenced in the licence or any accompanying licensing documentation, or any complementary regulatory document referenced in this regulatory document, the licence or any accompanying licensing documentation.	
l. Employment records – The employment records specified in subsection 3.3.	
m. Fitness for duty – Any information collected regarding the worker’s fitness for duty, except for any sensitive or privileged information protected by privacy laws.	
n. Removals and reinstatements – Comprehensive records of all removals from, and reinstatements to, the duties of a designated position, including, in each case, the effective date of removal and the basis for the removal and, when applicable, the effective date of reinstatement and the actions taken to reinstate the worker.	
<b>Subpart B – Physical Infrastructure</b>	
The licensee <b>shall</b> ensure that the reactor facility is equipped or associated with the physical infrastructure necessary to administer the knowledge and performance-based training, certification examinations and requalification tests specified in this regulatory document, including, at a minimum, the facilities specified in subpart B.	
<b>22. Knowledge-Based Examination and Testing Facilities</b> The licensee <b>shall</b> ensure that examiners have access to adequate facilities allowing for the administration of the pertinent knowledge-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures.	
<b>23. Performance-Based Examination and Testing Facilities</b> The licensee <b>shall</b> ensure that examiners have access to a full-scope simulator, or an alternate simulator acceptable to the CNSC, that permits the administration of the pertinent performance-based certification examinations and requalification tests in compliance with the applicable CNSC requirements referenced in the licence or any accompanying documentation, including the required security measures. All performance-based certification examinations and requalification tests referenced in this regulatory document <b>shall</b> be administered in simulator facilities or using simulation systems acceptable to the CNSC.	
<b>23.1 Simulation capabilities</b> The simulator <b>shall</b> be capable of simulating, realistically and in real time, all significant plant manoeuvres and transients that <b>may</b> occur under normal and abnormal operating conditions, including: <ul style="list-style-type: none"><li>a. reactor start-up and shutdown</li><li>b. major plant upsets and accident conditions</li><li>c. all significant failures of systems and associated subsystems and equipment, and the consequences of such failures</li><li>d. the system and equipment responses to operator actions</li></ul> For conditions and failures that <b>may</b> vary in magnitude, such as pipe breaks, loss of inventory, loss of flow, loss of pressure and loss of vacuum, the simulator <b>shall</b> have adjustable rates to simulate all possible degrees of severity of a condition or failure that affect system responses or operator actions.	

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<b>23.2 Physical layout</b> To the fullest extent possible, the simulator <b>shall</b> replicate the operating and monitoring systems and equipment available to certified workers in the main control room, as well as the spatial relationships linking these systems and equipment. In cases where the CNSC has accepted the use of a simulator other than a full-scope simulator, either to complement or as an alternative to the full-scope simulator, the alternate simulator <b>shall</b> meet the requirements specified in this section to the fullest extent possible, within the physical restrictions or functional limitations inherent to the alternate simulator.	No gap
<b>23.3 Simulator operating room</b> The simulator operating room <b>shall</b> be shielded from the main control room replica in such a manner as to prevent the candidate(s) who are being evaluated from seeing or hearing any data being recorded, any input entered in the simulator, or any communication between the simulator operator and the examiner(s) and other examination team members.	
<b>23.4 Communication systems and equipment</b> The simulator <b>shall</b> be equipped with functional replicates of the communication or warning system(s) or equipment used by certified workers in the main control room of the simulated reactor facility, including, as applicable: <ul style="list-style-type: none"><li>a. telephones or other two-way, internal communication system</li><li>b. a radiation emergency warning system, including any visual or audible alarm</li><li>c. a fire emergency warning system, including any visual or audible alarm</li><li>d. a public address system</li></ul>	
<b>23.5 Data-recording systems and equipment</b> In order to facilitate the conduct and grading of the performance-based certification examinations and requalification tests referenced in this regulatory document, the simulator <b>shall</b> be equipped with adequate data-recording systems and equipment meeting the minimum requirements specified in this subsection.	
<b>23.5.1 Recording of operator actions</b> The simulator <b>shall</b> allow for the recording, retrieval, and printing, in chronological order, along with the time of occurrence, of: <ul style="list-style-type: none"><li>a. all malfunctions initiated by the simulator operator</li><li>b. all the operator actions performed by the candidate(s) via the simulated control panels and instrumentation</li></ul>	
<b>23.5.2 Recording of system parameters</b> The simulator <b>shall</b> allow for: <ul style="list-style-type: none"><li>a. the recording, retrieval, and printing of all the system parameter values relevant to:<ul style="list-style-type: none"><li>(i) the evaluation of the operator actions performed by the candidate(s)</li><li>(ii) the verification of the simulator fidelity</li></ul></li><li>b. the graphical representation and printing of the variation of said system parameter values in relation to time, based on an adequate sampling frequency, and for a minimum recording period of 2 hours</li></ul>	



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<b>23.5.3 Audiovisual recording system</b> The simulator <b>shall</b> be equipped with an audiovisual recording system allowing for: <ul style="list-style-type: none"><li>a. recording and replaying the actions performed by each candidate being evaluated</li><li>b. recording and replaying all vocal communications, including telephone exchanges, between the candidate(s) being evaluated and the other members of the operating team</li><li>c. the unequivocal identification of the voice of each candidate being evaluated</li><li>d. the identification of the operating controls, instruments, and references used by the candidate(s) being evaluated</li><li>e. the overlay of the time, real or simulated, on the audiovisual recordings</li></ul>	
<b>23.5.4 Control of audiovisual data</b> The licensee <b>shall</b> establish and document effective policies and procedures to control the access to, and the use of, the audiovisual data collected during the design, development and conduct of certification examinations and requalification tests.	
<b>Part III – Worker Qualifications</b> <b>Subpart C – Operations Personnel</b>	
<b>24. Operations Personnel Certification</b> The requirements specified in this section pertain to workers employed or seeking employment in one of the following generic classes of designated positions: <ul style="list-style-type: none"><li>a. auxiliary systems operator (ASO)</li><li>b. reactor operator (RO)</li><li>c. shift supervisor</li></ul>	
<b>24.1 Core qualifications for operations personnel</b> Any worker referred to in this section <b>shall</b> meet, at the time of application for certification, the core qualifications for operations personnel specified in this subsection.	
<b>24.1.1 Personnel selection</b> The worker <b>must</b> have met, prior to the start of their initial training, the basic prerequisites specified in sub-subsection 14.2.1.	
<b>24.1.2 General knowledge</b> The worker <b>must</b> have successfully completed general training based on a training system and <b>must</b> consequently possess the fundamental knowledge, including the applied sciences and engineering principles, relevant to the design and operation of the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.	
<b>24.1.3 Plant familiarization</b> The worker <b>must</b> have successfully completed, prior to the start of the station-specific training specified in sub-subsection 24.1.4, plant familiarization training based on a training system and <b>must</b> consequently possess, at a minimum, a basic understanding of: <ul style="list-style-type: none"><li>c. the physical layout of the reactor facility identified in the licence, including the location and size of the major systems, subsystems, and equipment</li><li>d. the management system and organizational infrastructure necessary to operate said reactor facility under normal, abnormal, and emergency conditions, including the mandate, roles and responsibilities of the key personnel and groups of personnel</li></ul>	<b>Gap</b> – Training programs currently do not define the requirement as stipulated in the new RegDoc. Action – Determine the qualifications or program elements that meet this requirement and determine where to document in applicable Bruce Power governance. Compliance action # 6

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<b>24.1.4 Station-specific knowledge</b> The worker <b>must</b> have successfully completed station-specific training based on a training system and <b>must</b> consequently possess the detailed knowledge necessary to safely and competently operate, under normal, abnormal, and emergency conditions, the reactor(s) and associated systems, subsystems, and equipment installed in the reactor facility identified in the licence.	
<b>24.1.5 Nuclear emergency management</b> The worker <b>must</b> possess adequate knowledge of nuclear emergency response and the management of beyond-design-basis accidents, including the roles and responsibilities of certified workers regarding emergency operating procedures and severe accident management.	<b>Gap</b> – new guidance in regulatory document <b>Action</b> - Bruce Power does provide Nuclear Emergency response training, but a TNA to be conducted to ensure we are fully aligned with this version. Compliance action # 12
<b>24.1.6 On-the-job training</b> The worker <b>must</b> have successfully completed on-the-job training (OJT) based on a training system covering, at a minimum, the relevant knowledge and skills (K&S) and safety-related attributes acquired or reinforced most effectively through OJT.	
<b>24.1.7 Simulator-based training</b> The worker <b>must</b> have successfully completed simulator-based training based on a training system covering, at a minimum, the relevant K&S and safety-related attributes acquired or reinforced most effectively through simulated scenarios	
<b>24.1.8 Knowledge-based general certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the general knowledge necessary to perform the duties of the pertinent designated position safely and competently.	
<b>24.1.9 Knowledge-based station-specific certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently.	
<b>24.1.10 Performance-based certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for certification, a performance-based certification examination conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	
<b>24.1.11 Work under supervision</b> The worker <b>must</b> have successfully performed a minimum number of hours of work under supervision (WUS) acceptable to the CNSC, in the pertinent designated position and under the supervision of a qualified worker certified to work in the pertinent designated position.	

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<b>24.1.12 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently. The management interview <b>shall</b> be conducted after all the other requirements specified in subsection 24.1 have been met.	
<b>24.2 Supplementary qualifications for shift supervisors</b> In addition to the core qualifications for operations personnel specified in subsection 24.1, a worker seeking certification for employment as shift supervisor <b>shall</b> meet, at the time of application for certification, the supplementary requirements specified in this subsection.	No gap
<b>24.2.1 Supplementary personnel selection criteria</b> The worker <b>must</b> have met the supplementary prerequisites specified in sub-subsection 14.2.2.	<b>Gap</b> – Bruce Power does not have a current method of meeting the requirements of 14.2.2. <b>Action</b> – Bruce Power to define and document the personnel selection program. HR and Station alignment required. Training to ensure Initial Entry Requirements form and TQDs are updated. Compliance action # 16
<b>24.2.2 Supplementary station-specific knowledge</b> The worker <b>must</b> have successfully completed supplementary station-specific training based on a training system and <b>must</b> consequently possess the supplementary knowledge specifically required of shift supervisors concerning the design and operation, under normal, abnormal, and emergency conditions, of the reactor(s) and associated systems, subsystems and equipment installed in the reactor facility identified in the licence.	
<b>24.2.3 Supplementary knowledge-based station-specific certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination providing sufficient evidence that the worker possesses the supplementary station-specific knowledge specifically required of shift supervisors to perform their duties safely and competently.	
<b>24.3 Requalification of operations personnel</b> Any worker referred to in this section seeking the renewal of their certification <b>shall</b> meet, at the time of application for certification renewal, the requirements specified in this subsection.	
<b>24.3.1 Continuing training</b> The certified worker <b>must</b> have successfully completed, within the current certification period, suitable continuing training meeting the requirements specified in subsection 15.2.	
<b>24.3.2 Knowledge-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for certification renewal, a knowledge-based requalification test or series of tests providing sufficient evidence that the worker has retained the knowledge necessary to perform the duties of the pertinent designated position safely and competently.	
<b>24.3.3 Performance-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for certification renewal, and in a lead role, a performance-based requalification test or series of tests conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	
<b>24.3.4 Minimum employment of operations personnel</b> The certified worker <b>must</b> have been sufficiently employed in the pertinent designated position to maintain an adequate competency level.	

YELLOW = GAP or Difference between version 2 & 1	
REGDOC 2.2.3 VOL III 2023 Version 2	Bruce Power Gaps
<b>24.4 Qualifying for recertification within 5 years of a certificate expiry</b> Any worker referred to in this section seeking a recertification within 5 years of the expiry of a prior certification for the same position <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	<b>Gap</b> – new process for recertification <b>Action</b> – update BP-STND-00083 Compliance Action # 3
<b>24.4.1 Tailored training</b> The worker <b>must</b> have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, this tailored training <b>shall</b> cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the certificate expiry and the application for recertification.	<b>Gap</b> – new guidance in regulatory document <b>Action</b> – update BP-STND-00083 Compliance Action # 3
<b>24.4.2 Knowledge-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a knowledge-based requalification test or series of tests providing sufficient evidence that the worker has retained the knowledge necessary to perform the duties of the pertinent designated position safely and competently.	
<b>24.4.3 Performance-based requalification testing</b> The certified worker <b>must</b> have successfully completed, within 2 years of the application for recertification, and in a lead role, a comprehensive performance-based requalification test conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	
<b>24.4.4 Work under supervision</b> The worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.	<b>Gap</b> – new guidance in regulatory document <b>Action</b> – update BP-STND-00083 Compliance Action # 3
<b>24.4.5 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently. The management interview <b>shall</b> be conducted after all other requirements previously specified in subsection 24.4 have been met.	
<b>24.5 Qualifying for recertification following decertification or certificate expiry after 5 years</b> Any worker referred to in this section seeking a recertification following decertification by the CNSC, or following the expiry of a certificate that occurred more than 5 years before the date of application for recertification, <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	
<b>24.5.1 Decertification basis remediation</b> When the worker is seeking recertification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker <b>shall</b> no longer exist or <b>shall</b> have been remedied by the licensee to the satisfaction of the CNSC.	
<b>24.5.2 Tailored training</b> The worker <b>must</b> have successfully completed tailored training comprising knowledge and performance-based refresher and update training based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, the tailored training referenced in this subsection <b>shall</b> cover any scheduled refresher training and update training, including any simulator-based training, that the worker missed during the interim period between the decertification or certificate expiry and the application for recertification.	

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<b>24.5.3 Knowledge-based station-specific certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a station-specific knowledge examination providing sufficient evidence that the worker possesses the station-specific knowledge necessary to perform the duties of the pertinent designated position safely and competently. When the worker is seeking certification as a shift supervisor, the licensee <b>shall</b> administer both baseline and supplementary station-specific examinations.	
<b>24.5.4 Performance-based certification examination</b> The worker <b>must</b> have successfully completed, within 2 years of the application for recertification, a performance-based certification examination conducted in a full-scope simulator or approved alternative providing sufficient evidence that the worker can perform the duties of the pertinent designated position safely and competently.	
<b>24.5.5 Work under supervision</b> The worker <b>must</b> have successfully performed the duties of the pertinent designated position under the supervision of a qualified worker certified for employment in the same designated position, and for a number of complete shifts deemed sufficient by the licensee to confirm that the worker can perform the duties of the pertinent designated position safely and competently.	
<b>24.5.6 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of the pertinent designated position safely and competently. The management interview <b>shall</b> be conducted after all other requirements specified in subsection 24.5 have been met.	
<b>Subpart D – Senior Health Physicists</b>	
<b>25. Senior Health Physicist Certification</b> The requirements specified in this section pertain to workers employed or seeking employment as senior health physicist (SHP).	
<b>25.1 Qualifications for senior health physicists</b> A worker seeking certification for employment as an SHP <b>shall</b> meet, at the time of application for certification, the requirements specified in this subsection.	
<b>25.1.1 Personnel selection</b> The worker <b>must</b> have met, prior to the start of their initial training, the basic and supplementary prerequisites specified in sub-subsections 14.2.1 and 14.2.2 respectively.	<b>Gap</b> – Ensure current governance is aligned with new requirements. <b>Action</b> – update BP-STND-00095 Compliance action # 4
<b>25.1.2 Prior education</b> The worker <b>shall</b> : <ul style="list-style-type: none"><li>a. hold a degree in health physics granted by a recognized university, or</li><li>b. hold a baccalaureate in engineering or science granted by a recognized university, and have successfully completed a suitable series of courses offered by a recognized educational institution or learning provider covering current radiation protection principles and methods</li></ul>	
<b>25.1.3 Prior work experience</b> The worker <b>shall</b> possess, at a minimum, 4 years of relevant experience, including 2 years as a health physicist or an equivalent position at a reactor facility.	
<b>25.1.4 Initial training</b> The worker <b>must</b> have successfully completed initial training based on a training system covering the general and station-specific knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.	

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REGDOC 2.2.3 VOL III 2023 Version 2	Bruce Power Gaps
<b>25.1.5 Radiation protection expertise</b> The worker, in consequence of the education, work experience, and initial training previously specified in subsection 25.1, possess knowledge, to an extent commensurate with the duties of an SHP, of radiation theory, including radiation hazards, and of radiation protection theory and practices, including the radiation protection procedures relevant to the operation of the reactor facility identified in the licence under normal, abnormal, and emergency conditions.	<b>Gap</b> – Ensure current governance is aligned with new requirements. <b>Action</b> – update BP-STND-00095 Compliance action # 4
<b>25.1.6 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the initial training referenced in sub-subsection 25.1.4, and before the certification examination specified in sub-subsection 25.1.7.	
<b>25.1.7 Certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination administered by CNSC staff.	
<b>25.2 Requalification of senior health physicists</b> A worker seeking the renewal of a certification for employment as an SHP <b>shall</b> meet, at the time of application for certification renewal, the requirements specified in this subsection	
<b>25.2.1 Continuing training</b> The worker <b>must</b> have successfully completed refresher and update training based on a training system covering the knowledge, skills and safety-related attributes required to safely and competently perform the duties of an SHP employed at the reactor facility identified in the licence.	
<b>25.2.2 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the continuing training referenced in sub-subsection 25.2.1, and before the requalification test specified in sub-subsection 25.2.3.	
<b>25.2.3 Requalification testing</b> The worker <b>must</b> have successfully completed a knowledge-based requalification test administered by CNSC staff.	
<b>25.3 Qualifying for recertification following decertification or certificate expiry</b> A worker seeking certification for employment as an SHP following decertification by the CNSC, or following the expiry of the certificate, <b>shall</b> meet, at the time of application for recertification, the requirements specified in this subsection.	
<b>25.3.1 Decertification basis remediation</b> When the worker is seeking certification following decertification, any deficiency identified as part of the basis provided by the CNSC for the decertification of the worker <b>shall</b> no longer exist or <b>shall</b> have been remedied by the licensee to the satisfaction of the CNSC.	

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REGDOC 2.2.3 VOL III 2023 Version 2	Bruce Power Gaps
<b>25.3.2 Tailored training</b> The worker <b>must</b> have successfully completed tailored training, comprising knowledge and performance-based refresher and update training, based on a documented individual training needs analysis (ITNA) and a documented individual training plan (ITP). At a minimum, the tailored training referenced in this subsection <b>shall</b> cover any scheduled knowledge refresher and knowledge update training that the worker missed during the interim period between decertification or the certificate expiry and the application for certification.	
<b>25.3.3 Management interview</b> The worker <b>must</b> have successfully undergone a formal management interview conducted by a manager authorized by the licensee to represent the licensee, who thereby verified that the worker is capable, in the opinion of the licensee, of performing the duties of an SHP safely and competently. The management interview <b>shall</b> be conducted after the worker has successfully completed the tailored training referenced in sub-subsection 25.3.2, and before the certification examination specified in sub-subsection 25.3.4.	
<b>25.3.4 Certification examination</b> The worker <b>must</b> have successfully completed a knowledge-based examination administered by CNSC staff.	



**Attachment A: COMPLIANCE ACTION ITEMS**

	Subject	RegDoc Section	Description	Alert Group	Due Date	Controlled Documents
1	Minimum Shift Requirement (Certification Maintenance) And Employment Status	<b>3.2</b> Employment status. <b>20.2.1</b> Minimum Shift requirement for operations personnel	Implement new requirement for Certified Operations staff to perform a minimum of 4 compete shifts per calendar quarter amounting to a minimum of 48 hours of shiftwork per calendar quarter. Employment status to be recorded	Bruce A – DPTOWM  Bruce B – DPTBBOSV	31JAN2025	BP-STND-00146, <i>Normal Station Operations</i>
2	Full Scope Simulator Physical Infrastructure and Simulation Capabilities	<b>23.3</b> Simulator operating room	Verify compliance with RegDoc 2.2.3 Version 2 Section 2.	SECSIMM	Complete	BP-STND-00041, <i>Simulator Validation, Capability, And Fidelity</i>
3	Removal and Reinstatement of Certified Workers	<b>9.2</b> Recertification substantiation <b>19.1</b> Reintegration of a worker in training following a prolonged training interruption <b>20.5</b> Baseline reinstatement process <b>20.6</b> Remediation following removal from duty for cause <b>24.3</b> Requalification of operations personnel <b>24.4</b> Qualifying for recertification within 5 years of a certificate expiry <b>24.5</b> Qualifying for recertification following decertification or certificate expiry after 5 years <b>14.5.7</b> Added information upon application for certification	Revise and reissue STND-00083, <i>Certification Training - Removal And Reinstatement Of A Person From Main Control Room Duties</i> to comply with applicable sections of RegDoc 2.2.3 Version 2	DPTOT	31JAN2025	BP-STND-00083, <i>Certification Training - Removal And Reinstatement Of A Person From Main Control Room Duties</i>
4	Authorized Health Physicist Training Documentation	<b>10</b> Application for Senior Health Physicist Examination or Requalification Testing <b>25</b> Senior Health Physicist <b>20.3.2</b> Minimum employment of senior health physicists <b>20.6</b> Remediation following removal from duty for cause. <b>21.1.3</b> Training and qualifying and governance	Revise and reissue governance; update document to align with RegDoc 2.2.3 version 2.	SECRPT	31JAN2025	BP-STND-00095, <i>Conduct Of Projects And Safety Training</i>  TQD-00075, <i>Training and Qualifications Description, Health Physicist - Authorized Health Physicist</i>
5	Applications for Certification and Recertification	<b>5</b> General Provisions Pertinent to All Applications <b>6</b> Application for Certification <b>7</b> Application for Certification Renewal <b>8</b> Application for Recertification Within 5 Years of a Certificate Expiry <b>9</b> Application for Recertification Following Decertification or Certificate Expiry <b>14.5.7</b> Added information upon application for certification (re: personnel transfer process)	Verify Application letter templates for compliance to new requirements and develop new templates where required	SECCTE	31JAN2025	Application letter templates



		<b>19.1</b> Reintegration of a worker in training following a prolong training interruption				
6	Define and document Plant Familiarization program	<b>24.1.3</b> Plant Familiarization	Determine the qualifications or program elements that meet the requirements for plant familiarization and determine where to document in applicable Bruce Power governance.	DPTOT	31JAN2025	TQD-00012 Bruce A And Bruce B Authorized Nuclear Operator Initial Training Training And Qualifications Description TQD-00013, <i>Bruce A And Bruce B Control Room Shift Supervisor/Shift Manager Training And Qualifications Description</i> TQD-00015, <i>Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description</i>
7	Revise and reissue TQD-00012 Bruce A And Bruce B Authorized Nuclear Operator Initial Training Training And Qualifications Description	<b>3.1</b> Permitted Employment <b>15.1</b> Initial Training Programs	Revise and reissue Training Qualifications Descriptions as per Document Change Requests	CR-CTO	31JAN2025	TQD-00012 Bruce A And Bruce B Authorized Nuclear Operator Initial Training Training And Qualifications Description
8	Revise and reissue TQD-00013, Bruce A And Bruce B Control Room Shift Supervisor/Shift Manager Training And Qualifications Description	<b>3.1</b> Permitted Employment <b>15.1</b> Initial Training Programs	Revise and reissue Training Qualifications Descriptions as per Document Change Requests	CR-CTO	31JAN2025	TQD-00013, <i>Bruce A And Bruce B Control Room Shift Supervisor/Shift Manager Training And Qualifications Description</i>
9	Revise and reissueTQD-00015, Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description	<b>3.1</b> Permitted Employment <b>15.1</b> Initial Training Programs	Revise and reissue TQD-00015 Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description; ensure regulatory requirement for program sequence is removed. Update document to align with RegDoc 2.2.3 version 2.	CR-CTO	31JAN2025	TQD-00015, <i>Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description</i>
10	Revise and reissue BP-STND-00036, Certification Training – Conduct of Initial Training	<b>15.1</b> Initial Training Programs <b>15.4</b> Formal learner evaluations <b>15.5</b> Trainer qualifications <b>16.4</b> part (a) security requirements <b>18</b> Management Interviews (part d)	Revise and reissue BP-STND-00036 Certification Training – Conduct of Initial Training. Update document to align with RegDoc 2.2.3 version 2.	CR-CTO	31JAN2025	BP-STND-00036, <i>Certification Training – Conduct of Initial Training</i>
11	Revise and reissue BP-STND-00043, Certification Training - Filing And Retention Of Certification Training Records	<b>21</b> Information Management <b>21.2</b> Personnel records (f,g,i)	Revise and reissue STND-00043, Certification Training - Filing And Retention Of Certification Training. Update document to align with RegDoc 2.2.3 version 2.	CR-CTO	31JAN2025	BP-STND-00043, <i>Certification Training - Filing And Retention Of Certification Training Records</i>
12	Determine Nuclear Emergency Response training requirement	<b>15.2.4</b> Nuclear emergency response training	Perform a Training Needs Analysis for Certified Staff to determine the training needs for Emergency Mitigating Equipment per RegDoc 2.2.3 version 2.	CR-CTO	31JAN2025	N/A
13	Update governance with new notification requirements	<b>12.1</b> Legal name change <b>14.3</b> Selection of reactor operators for shift supervisor training <b>14.3.3</b> Notification of selection for shift supervisor in training <b>14.4</b> Advancement to senior shift supervisor	Ensure required notifications are identified in governance:	SECLIC	31JAN2025	BP-PROC-00833 <i>Reporting to CNSC</i> BP-PROC-00165 <i>Reporting to CNSC Power Reactor Operating Licences</i>

		<b>14.4.4</b> Notification of advancement to senior shift supervisor <b>14.5.6</b> Notification of personnel transfer <b>20.7.1</b> Notification of removal from duty <b>20.7.2</b> Notification of reinstatement to duty				
14	Ensure alignment with BP-PROG-02.02. and Certification Standard changes	<b>Regulation name change</b>	Submit Document Change Request against BP-PROG-02.02 for any Certification standards that have intent changes to ensure the changes are updated in the program document. Communicate to Learning Governance Oversight and Support DCR has been submitted.	DPTOT	31JAN2025	BP-PROG-02.02, <i>Worker Learning And Qualification</i>
15	Employment records for License Maintenance and employment status	<b>13.3</b> Employment record	Bruce Power to employ a continuous and auditable employment record for each worker certified by the CNSC, including, at a minimum: a. the employment status assigned to the worker b. the number of complete shifts and hours of work performed in a designated position by the worker, specifying: i. the pertinent designated position ii. the date on which each complete shift and hour of work were performed	DPTOT	31JAN2025	
<b>Changes to be Implemented within 6 months</b>						
16	Personnel Selection Program needs to be defined and documented	<b>14</b> Personnel Selection Program <b>14.3.2</b> Personnel selection exemption <b>14.5.1</b> Personnel transfer process <b>21.2 part c - e</b>	Recruitment and Station leadership need to align on requirements set out in sections 14.1, 14.2, and 14.2.2  New requirements for records retention for selection process.  Training to update applicable TQDs with new selection requirements	DPTOT	31JUL2025 – no recruitment planned until Q3 2025	TQD-00012 Bruce A And Bruce B Authorized Nuclear Operator Initial Training Training And Qualifications Description  TQD-00013, <i>Bruce A And Bruce B Control Room Shift Supervisor/Shift Manager Training And Qualifications Description</i>  TQD-00015, <i>Bruce A And Bruce B Certified Unit 0 Control Room Operator Initial Training And Qualification Description</i>