27-H1 - CNSC Staff Submission

Renewal Application for Western Waste Management Facility Operating Licence

Classification	UNCLASSIFIED
CMD Type	Original
CMD Number	27-H1
Reference CMD(s)	17-H3, 22-H104, 24-M35, 24-H3.82, 24-H5.53, 24-H5.53A, 25-H2.80, 26-H7.41
Type of Licensing CMD	A Licence Renewal
Hearing	Commission public hearing: one-part (CNSC staff and applicant and public intervention)
Date of Hearing	February 22, 2027 – February 26, 2027
Summary	This Commission Member Document (CMD) presents information about the following matters of regulatory interest, as well as CNSC staff's assessments and recommendations, with respect to Ontario Power Generation Inc.'s (OPG) application to: ▪ Renew the operating licence for the Western Waste Management Facility (WWMF) for a period of 10 years CNSC staff recommend that the Commission: ▪ Authorize OPG to continue operation of the WWMF ▪ Issue a 10-year operating licence for the WWMF The following items are attached: ▪ the current licence, WFOL-W4.314.01/2027 ▪ the proposed licence, WFOL-W4.314.00/2037, and change summary ▪ the draft licence conditions handbook
Actions required	CNSC staff request the Commission to render a decision on OPG's request to renew the WWMF operating licence.

27-H1 – Mémoire du personnel de la CCSN

Demande de renouvellement du permis d'exploitation de l'installation de gestion des déchets Western

Classification	NON CLASSIFIÉ
Type de CMD	Version initiale
Numéro de CMD	27-H1
CMD(s) de référence	17-H3, 22-H104, 24-M35, 24-H3.82, 24-H5.53, 24-H5.53A, 25-H2.80, 26-H7.41
Type de CMD relatif à une décision de permis	Renouvellement d'un permis
Audience	Audience publique de la Commission: Audience en une seule partie (personnel de la CCSN, demandeur et interventions du public)
Date de l'audience	22 février 2027 - 26 février 2027
Résumé	Le présent document à l'intention des commissaires (CMD) présente des renseignements sur des questions d'intérêt réglementaire, ainsi que l'évaluation et les recommandations du personnel de la CCSN au sujet de la demande de permis d'Ontario Power Generation Inc. visant ce qui suit : ▪ le renouvellement du permis d'exploitation de l'installation de gestion des déchets Western (IGDW) pour une période de 10 ans Le personnel de la CCSN recommande que la Commission : ▪ autorise OPG à poursuivre l'exploitation de l'IGDW ▪ délivre un permis d'exploitation de 10 ans pour l'IGDW Les pièces suivantes sont jointes : ▪ le permis en vigueur, WFOL-W4.314,01/2027. ▪ le permis proposé, WFOL-W4.314.00/2037, avec un résumé des modifications ▪ l'ébauche du manuel des conditions de permis
Mesures requises	Le personnel de la CCSN demande à la Commission de rendre une décision sur la demande d'OPG concernant le renouvellement du permis d'exploitation de l'installation de gestion des déchets Western.

CMD 27-H1

Renewal Application for Western Waste Management Facility Operating Licence

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Land acknowledgement

The Canadian Nuclear Safety Commission (CNSC) acknowledges that the Western Waste Management Facility (WWMF) is located in the Municipality of Kincardine, on the eastern shore of Lake Huron, within Saukiing Anishinaabekiing. This is the traditional territory of the Saugeen Ojibway Nation (SON), the shared treaty and traditional territory of the Saugeen First Nation and the Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing). The Western Waste Management Facility is also located on the traditional harvesting territories of the Métis Nation of Ontario (MNO) Region 7 and the Historic Saugeen Métis (HSM) peoples.

CNSC staff are committed to ongoing, respectful engagement with Indigenous Nations and communities, promoting open dialogue, supporting reconciliation, and working together to ensure the safe regulation of nuclear activities.

Plain Language Summary

Ontario Power Generation's (OPG) Western Waste Management Facility (WWMF) is located at the Bruce nuclear site in the Municipality of Kincardine Ontario. The WWMF is made up of several buildings and structures used to handle and store used nuclear fuel from the Bruce Power nuclear generating stations, as well as low- and intermediate-level wastes generated by operating nuclear generating stations in Ontario. The operating licence for the WWMF is valid until May 31, 2027.

In December 2025, OPG applied to renew the WWMF licence for a period of 10 years. The application was amended in May 2026 to remove the proposed construction of 2 additional used fuel storage buildings. During the proposed licence period, OPG is seeking authorization to continue the activities currently authorized under the existing licence.

The CNSC made funding available through its Participant Funding Program to assist Indigenous Nations and communities, members of the public, and interested parties in participating in the regulatory process and to provide value-added information to the Commission through informed and topic-specific interventions. Based on recommendations from an external Funding Review Committee, the CNSC awarded $180,649.30 to 5 applicants.

Based on their assessment of OPG's application and supporting documents CNSC staff determined that the application meets regulatory requirements and that OPG's performance during the current licence period (2017-2027) was satisfactory.

CNSC staff recommend that the Commission renew the WWMF operating licence for a 10-year period from June 1, 2027, to May 31, 2037, with no change to the currently authorized activities.

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

CMD Structure

This Commission Member Document (CMD) includes the following:

- An overview of the matter being presented
- Overall conclusions and overall recommendations
- General discussion pertaining to the safety and control areas (SCAs) that are relevant to this submission
- Discussion about other matters of regulatory interest
- Appendices that complement the contents of this CMD, including:
  - Current licence
  - Any proposed changes to the conditions, licensing period, or formatting of an existing licence
  - Proposed licence
  - Draft licence conditions handbook (LCH)

1 Overview

1.1 Background

The Western Waste Management Facility (WWMF) is located at the Bruce nuclear site which is within the traditional territory of the Saugeen Ojibway Nation, on the west shore of Lake Huron in the Municipality of Kincardine Ontario. Ontario Power Generation (OPG) owns and operates the WWMF under a Class 1B Waste Facility Operating Licence (WFOL), WFOL-W4-314.01/2027.

The WWMF was established in 1974 and is dedicated to the management, processing and interim storage of low and intermediate level waste (L&ILW) arising from the operation of Ontario's nuclear generating stations, and other facilities currently or previously owned by OPG, as well as the interim storage of used fuel from the Bruce Power nuclear generating stations.

The WWMF consists of a variety of buildings and structures to support the authorized activities including:

- above ground storage structures for L&ILW,
- various in-ground containers,
- trenches, tile holes, and quadricells,
- an administration building,
- a Waste Volume Reduction Building (WVRB),
- a Transportation Package Maintenance Building (TPMB),
- a Dry Storage Container (DSC) processing building and
- DSC storage buildings.

The DSC processing and storage buildings are located in security-protected areas whereas the L&ILW facilities are located in the remaining licenced area.

In June 2017, the Commission renewed the WFOL for the WWMF for a 10-year period expiring on May 31, 2027. The current WFOL is included in Appendix C.

1.2 Highlights

On December 18, 2025, OPG submitted a licence application to renew the WWMF WFOL for a period of 10 years from June 1, 2027 to May 31, 2037. This application also requested authorization to construct 2 additional DSC storage buildings. In May 2026, OPG amended its application [1] to remove this request to allow additional time for engagement with SON on the proposed buildings. OPG has confirmed that the currently authorized storage capacity is sufficient to support operations for the proposed 10-year licence period. Accordingly, the amended application before the Commission, hereafter referred to as "Application", is to continue the activities currently authorized under the WFOL for the proposed 10-year licence period.

The current WWMF WFOL authorizes the construction of additional storage buildings and structures, some of which were constructed during the current licence period. OPG constructs additional storage structures that have been authorized by the Commission at the WWMF as the existing facilities approach capacity. OPG has programs in place to minimize the generation of waste and reduce the volume of existing wastes. These programs have enabled OPG to defer the construction of several storage buildings authorized under its current licence, however these buildings and structures are anticipated to be required during the proposed licence period. Accordingly, OPG has requested that existing authorizations be carried forward into the proposed licence period, including the construction and operation of:

- 2 storage structures for used fuel,
- 10 storage buildings for low and intermediate level waste,
- 216 in-ground containers (IC-18s),
- 30 in-in ground containers (IC-HX),
- 1 Large Object Processing Building, and
- 1 Waste Sorting Facility.

OPG's Application also states that it is considering the storage of waste streams resulting from the production of medical isotopes, including waste from third-party processors, such as waste associated with the production of Lu-177 at Bruce Power. OPG would apply its existing processes for acceptance of waste. Acceptance would be contingent on the waste meeting the existing WWMF waste acceptance criteria and the availability of suitable waste storage facilities authorized under the current WWMF WFOL.

1.3 Overall conclusions

CNSC staff have reviewed OPG's licence renewal Application and supporting documents and determined that the Application meets regulatory requirements and provides an adequate licensing basis for the continued operations of the WWMF. CNSC staff also found that OPG's performance during the current licensing term was satisfactory and consistently met regulatory requirements.

1.4 Overall recommendations

CNSC staff recommend that the Commission:

1. **Find,** pursuant to paragraph 24(4)(a) and (b) of the ***Nuclear Safety and Control Act*** **(NSCA), that OPG**
   a. **Is qualified** to carry on the activities authorized by the licence
   b. **Will 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
2. **Renew** the proposed licence
3. **Delegate** authority as set out in section 5.4 of this CMD.

2 Environmental protection review

CNSC staff reviewed the licence renewal Application for the WWMF to determine if an environmental review was required and if so, the type of environmental review that would be required. As part of this process, CNSC staff assessed whether an impact assessment or a federal lands review under the Impact Assessment Act (IAA) is required. For this licence application, it was concluded that neither are required. The Application does not include activities that are listed in the *IAA Physical Activities Regulations* and the project location is not on federal lands. Additionally, no environmental assessment is required under provincial jurisdiction or land claim agreement.

CNSC staff conduct Environmental Protection Reviews (EPR) for all licence applications with potential environmental interactions, in accordance with the CNSC mandate under the NSCA and associated regulations. The EPR informs the Commission's conclusion on whether the proposal provides adequate protection of the environment and the health of people.

An EPR (found in section 3.9 of this CMD) was conducted for this licence renewal Application. CNSC staff determined that the information provided by OPG regarding environmental protection is sufficient to meet the applicable regulatory requirements under the NSCA and associated regulations.

CNSC staff will continue to verify, through ongoing licensing and compliance verification activities and reviews, that the environment and the health of persons are protected and will continue to be protected over the proposed licence period.

3 General assessment of SCAs

CNSC staff review and assess an applicant's proposed measures and controls, and, if applicable, a licensee's past performance in each safety and control area (SCA).

A list of all SCAs and their corresponding definitions and safety performance rating levels can be found on the CNSC website at Safety and Areas and Rating Definitions.

The specific areas that comprise the SCAs for the WWMF are identified in Appendix A.3. If specific areas are listed for an SCA in section 3, then related regulated activities/information about them are provided in Appendix A to this document. If specific areas are not listed for a given SCA in section 3, then a decision has been made to encompass them in an overall approach to that SCA.

3.1 Management System

The management system SCA covers the framework that establishes the processes and programs required to ensure an organization achieves its safety objectives, continuously monitors its performance against these objectives, and fosters a healthy safety culture.

The specific areas that comprise this SCA at OPG's WWMF include:

- Management system

- Organization
- Performance assessment, improvement, and management review
- Operating experience (OPEX), Problem Identification and Resolution (PI&R)
- Change management
- Safety culture
- Configuration management
- Records management
- Supply and Contractor Management
- Business continuity

3.1.1 Trends

The following table indicates the overall rating trends for the management system SCA over the current licensing period:

TRENDS FOR MANAGEMENT SYSTEM									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the management system SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.1.2 Discussion

Section 2.1 of OPG's Application [1] provides information on the management system SCA at the WWMF.

OPG is required to implement and maintain a management system that meets the requirements set out in CSA N286-12, *Management System Requirements for Nuclear Facilities*. The management system brings together, in a planned and integrated manner, the processes necessary to ensure that requirements are met and licensed activity at the WWMF are carried out safety. During the current licence period, OPG has implemented and maintained a management system that meets regulatory requirements.

During the current licence period, CNSC staff conducted compliance verification activities to evaluate OPG's performance in the management system SCA at the WWMF. These activities include inspections related to program implementation, change management, records management, supply management, the operating experience (OPEX) program, and the event investigation process, among others.

CNSC staff conducted 3 management system focused inspections in 2020, 2024 and 2026. CNSC staff have found that OPG met regulatory requirements and proposed or implemented satisfactory corrective actions to address findings for the issued inspection reports in the management system SCA.

Management System

The WWMF is governed under the umbrella of the overall OPG corporate management system. OPG's nuclear management system is documented in N-CHAR-AS-0002, *Nuclear Management System* (the Charter) and takes its authority from N-POL-0001, *Nuclear Safety & Security Policy*. The Charter provides a framework for programs and governance to operate and maintain the WWMF in accordance with the licensed activities and licence conditions authorized under the current WFOL and described in the associated LCH.

OPG's Chief Nuclear Officer (CNO) is accountable to the Chief Executive Officer (CEO) and Board of Directors for establishing a management system that fosters nuclear safety and security for the WWMF. The CNO is accountable for the implementation and the effectiveness of the nuclear management system, in accordance with CSA N286-12, including activities conducted by external organizations on behalf of OPG at the WWMF.

OPG's Nuclear Management System meets the requirements of the NSCA and its regulations, as well as the requirements of the WFOL.

Organization

N-STD-AS-0020, *Nuclear Management Systems Organizations*, describes OPG's organizational structure and associated responsibilities, including those applicable to the WWMF. CNSC staff verify that OPG's programs and processes describe the authorities, accountabilities, and responsibilities of positions, how and by whom decisions are made, and interfacing organizations.

During the current licence period, CNSC staff reviewed the roles and responsibilities of WWMF employees against those established in OPG's programs and processes. Based on these reviews, CNSC staff remain satisfied that the roles and responsibilities and associated organizational arrangements meet regulatory requirements for activities licensed and conducted at the WWMF.

Performance Assessment, Improvement and Management Review

OPG maintains a Nuclear Independent Assessment program to assess the effectiveness of its Nuclear Management System. This program includes the review of all the programs in the Nuclear Management System, including those maintained and Implemented by the corporate business units. OPG program N-PROG-RA-0010, *Independent Assessment* provides independent assessment (internal and external) processes for the comprehensive evaluation of activities affecting OPG nuclear facilities, including the WWMF.

During the current licence period, CNSC staff have confirmed that the programs that make up the Nuclear Management System are assessed independently by the OPG Nuclear Oversight division. The frequency and scope of audits and assessments are based on program risk analysis and range from a 1 year to 5-years. CNSC found that both the audit and self-assessment programs meet the requirements of CSA N286-12.

The owner of each program as outlined in N-CHAR-AS-0002, *Nuclear Management System*, completes a Fleetview Program Health and Performance Report at minimum annually. The reports support continuous improvement efforts and sustainable performance.
The oversight provided by Nuclear Executive Committee ensures that gaps are self-identified and self-corrected through corrective actions. The most recent Independent Assessment of the Nuclear Management System Administration (NMSA) Program was conducted in 2022. The NMSA audit frequency is 5 years, with the next one being planned for 2027.

CNSC staff have also verified that WWMF management conducts self-assessments within its area of responsibility to identify early indications of declining performance and opportunities for continual improvement, and to confirm that work is performed in accordance with management system requirements and OPG's self-assessment and benchmarking procedure.

Operating Experience (OPEX), Problem Identification and Resolution (PI&R)

During the current licence period, CNSC staff have verified that WWMF employees document and report adverse conditions, including malfunctions, errors, defects, non-compliances, events, problems and gaps without fear of reprisal. First line management reviews reported adverse conditions, which are then categorized in accordance with the OPG's *Processing Station Condition Records* procedure. Once categorized, adverse conditions are reviewed within 7 calendar days by management and those deemed significant are reviewed by the corrective action review board.

OPG implements and maintains N-PROC-RA-0035, *Operating Experience Process,* to meet the requirements of clause 4.12 of N286-12. The OPEX process is comprised of 3 elements:

- External OPEX: Review external OPEX events for lessons learned and take action when required to prevent similar events at OPG's waste management facilities.
- Internal OPEX: Identify internal OPEX events for lessons learned to be shared with INPO and non-incident OPG sites.
- Use of OPEX: Make OPEX repositories available for convenient access by all OPG staff, in support of daily activities.

OPEX is communicated across the entire OPG organization. OPEX is shared via pre-job briefs (PJB), crew learnings, weekly tailboards and various meetings.

OPG uses its OPEX database to distribute external OPEX received from Conexus Nuclear Inc. (formerly called the CANDU Owner's Group) to departmental OPEX Single Points of Contact, manage OPEX reviews, and document initial assessments or dispositions from site departments. The OPEX database also provides a readily available repository of previous external OPEX and associated site reviews and responses.

Change Management and Configuration Management

During the current licence period, CNSC staff have verified that changes are controlled, tracked to completion, and traceable throughout the life of the facility. OPG's engineering change control procedure defines the process for all design basis changes, including modifications to, removal of, or abandonment of any systems, structures or components (SSCs), software, and engineering tooling designs. The change control process also ensures that changes are within the safe operating envelope (SOE), safety and design envelope, design basis, and licensing basis. Adverse configuration management issues are documented using Station Condition Records.

During the current licence period, CNSC staff have found that the physical configuration of the facilities is consistent with the applicable documentation. CNSC staff also confirmed that records are readily available to demonstrate effective implementation of the process for initiating, reviewing, verifying, approving and closing the engineering changes.

Organizational change within OPG's management system includes changes to all components of the organization, including but not limited to safe and effective operations, work, people, processes and practices technology systems, governance/policies, programs, organization design, financial performance, culture, information systems, and internal and external stakeholder relationships and agreements.

All changes made to documents listed in the LCH are managed through OPG's document control process. A summary of changes to these documents is reported annually to the CNSC through OPG's annual compliance report.

Safety Culture

OPG has established a corporate policy, N-POL-0001, *Nuclear Safety and Security Culture*. The policy sets out the organization's commitment to prioritizing nuclear safety and security over any other consideration, including cost, schedule, or production. In accordance with the policy, the CNO is accountable to the CEO and the Board of Directors to establish a management system that fosters nuclear safety and security as the overriding priority.

OPG standard, N-STD-AS-0023, *Nuclear Safety Oversight*, establishes the framework and accountabilities for nuclear safety oversight as well as the external and internal processes used for oversight and assessment of nuclear safety. This standard applies to nuclear operations and activities undertaken at, or in support of, the WWMF.

OPG conducts safety culture assessments at least every 5 years in accordance with CNSC REGDOC-2.1.2, *Safety Culture*. In October 2022, OPG's Nuclear Sustainability Services (NSS) conducted a site-wide Nuclear Safety and Security Culture Assessment to identify areas of strength and opportunities for improvement. The assessment determined that NSS has a healthy nuclear safety culture. Results were communicated to staff by senior leadership within a month following the assessment and action plans were developed with input from the NSS leadership and assessment team members. OPG has tentatively scheduled the next assessment of the WWMF for 2027.

In addition, OPG maintains a Nuclear Safety and Security Culture Monitoring Panel (NSSCMP) and has developed the "NSSCMP Power App", which enables frontline station personnel to evaluate the attributes of a healthy nuclear safety and security culture and provide input directly to the NSSCMP.

OPG's leadership development program integrates the nuclear safety and security culture traits at all levels, including the incorporation of nuclear safety culture into employee orientation, leadership fundamentals training, and continuing leadership training.

During the current licence period, CNSC staff have found that OPG preserves records demonstrating its commitment to nuclear safety and security culture in accordance with regulatory requirements.

Records Management

OPG has implemented a nuclear quality assurance records procedure at the WWMF that establishes instructions for the preservation of nuclear quality assurance (QA) records and the management of QA vaults. The procedure ensures that electronic and paper-based records are protected against deterioration and destruction during their retention period.

OPG is planning to develop a new application to be used to further automate OPG's client service processes. Once completed, the tool will embed key information management processes to improve control for the many OPG workers who handle confidential security information, and to automate external information exchange and legal hold processes.

OPG also plans to modernize its document access process to take advantage of evolving encryption protections and to automate the approvals and Asset Suite access.

During the current licence period, CNSC staff have found that records at the WWMF were preserved in accordance with regulatory requirements. CNSC staff are satisfied with OPG's records management practices and the actions taken to maintain compliance with CSA N286-12.

Supply and Contractor Management

Contractors and suppliers are qualified by OPG Supply Chain Quality Services under a process that ensures each contractor has developed and implemented a management system that meets the applicable requirements outlined in CSA N286-12. OPG assesses a contractor's capability to work at OPG nuclear facilities through an audit of the contractor's processes, to ensure they can perform the necessary work, with OPG oversight as the licensee at each stage. Once OPG is assured of a contractor's capabilities,

they are placed on OPG's approved suppliers list, as approved contractors. OPG requires that all sub-contractors work under the contractor's quality program, to ensure there is an assurance that the agreed upon quality standards and expectations will be met, regardless of who is performing the work in the field. Field surveillance and verification activities are performed by OPG personnel (Contract Monitoring Officers) to ensure that the quality program requirements are being achieved.

OPG maintains responsibility and liability for conventional safety, environmental safety, and radiation protection (RP) of the contractor work. OPG retains the responsibility that the facility remains compliant with the operating licence. As such, OPG is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public, workers, and environment are protected. This accountability cannot be delegated through contractual arrangements.

During the current licence period CNSC staff found that OPG oversees the activities of contractors, including through surveillance of activities and review and acceptance of all plans and deliverables. CNSC staff will verify that WWMF continues to maintain the necessary measures for contractor oversight during any work performed by contractors.

OPG maintains a list of qualified suppliers for its nuclear activities and CNSC staff have verified that WWMF takes measures to ensure that suppliers have controls in place for the prevention and detection of counterfeit, fraudulent, and suspect items.

During the current licence period, CNSC staff found that purchasing requirements were complete and adequate, that the verification of services was completed as planned, that purchased items were examined when received, and that storage and handling were adequate.

Business continuity

CNSC staff have found that OPG has developed adequate contingency plans to maintain or restore critical safety and business functions in the event of disabling circumstances such as a pandemic, severe weather, or labour actions. OPG revised these plans to incorporate lessons learned from the COVID-19 pandemic, and the most recent update was completed in 2024. CNSC staff have been satisfied with OPG's implementation of these plans and with OPG's business continuity performance.

3.1.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.1.3.1 Past Performance

CNSC staff confirm that OPG's management system continues to meet regulatory requirements and that OPG maintained satisfactory performance in the management system SCA during the current licence period at the WWMF.

3.1.3.2 Regulatory Focus

CNSC staff will continue to verify OPG's performance at the WWMF in the management system SCA through regulatory oversight activities, including inspections and reviews of licensee submissions. CNSC staff's oversight will include a particular focus on verifying that the nuclear waste management program continues to meet regulatory requirements, including requirements related to oversight of contractors.

3.1.3.3 Proposed Improvements

No major changes are proposed to OPG's nuclear management system. CNSC staff expect OPG to continue to identify and implement improvements to support the ongoing effectiveness of its management system.

3.1.4 Conclusion

Based on CNSC staff's assessment of OPG's Application, supporting documentation and performance during the current licence period, CNSC staff conclude that OPG's management system meets CNSC regulatory requirements, including CSA N286-12. CNSC staff further conclude that the information pertaining to the management system SCA included in OPG's Application meets CNSC regulatory requirements and demonstrates that OPG remains qualified to perform the activities sought to be authorized at the WWMF in the proposed licence.

3.2 Human Performance Management

The human performance management SCA covers activities that enable effective human performance through the development and implementation of processes that ensure a sufficient number of licensee personnel are in all relevant job areas and have the necessary knowledge, skills, procedures and tools in place to safely carry out their duties.

The specific areas that comprise this SCA at OPG's WWMF include:

- Human performance program
- Work Organization and Job Design
- Fitness for Duty
- Personnel training

3.2.1 Trends

The following table indicates the overall rating trends for the human performance management SCA over the current licensing period:

TRENDS FOR HUMAN PERFORMANCE MANAGEMENT									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the human performance management SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.2.2 Discussion

Section 2.2 of OPG's Application [1] provides information pertaining to the human performance management SCA at the WWMF.

The regulatory requirements in the human performance management SCA are under paragraphs 12(1)(a) and (b) of the *General Nuclear Safety and Control Regulations* (GNSCR) and section 6 of the *Class I Nuclear Facilities Regulations* (CINFR).

During the current licence period, CNSC staff conducted compliance verification activities to evaluate OPG's performance in the human performance management SCA at the WWMF. These activities include inspections related to program implementation and desktop reviews of licensee submissions. CNSC staff have found that OPG met regulatory requirements and proposed or implemented satisfactory corrective actions to address findings in this SCA.

Details of CNSC staff's assessment of this SCA are presented in the following sections.

Human Performance Program

OPG has implemented and maintained a comprehensive Human Performance Program (HPP) at the WWMF. During the current licence period, CNSC staff conducted verification activities to assess the implementation of the HPP, including dedicated HPP inspections in 2022 and 2026. The 2026 HPP inspection report has not been issued as of the publication date of this CMD. During the 2022 HPP inspection CNSC staff verified aspects of the HPP related to the appropriate use of human performance tools, including procedure use and adherence, communications, and worker support were compliant with regulatory requirement. The 2022 HPP inspection identified 1 non-compliant finding related to insufficient human resources to carry out the planned work activity. OPG management acknowledged the staffing shortages at the WWMF and subsequently provided CNSC staff with a staffing plan to address the issue. In follow-up compliance verification activities,

CNSC staff confirmed that OPG had hired additional resources to address the identified staff shortages.

Work Organization and Job Design

All Class I nuclear facility licensees are required to ensure the presence of a sufficient number of qualified workers to carry out the licensed activity safely and in accordance with the NSCA, the regulations made under the NSCA, and the facility licence. One aspect of this is defining the minimum number of workers with specific qualifications who will be available to the nuclear facility at all times, known as the minimum staff complement. The number and qualifications of workers in the minimum staff complement should be adequate to successfully respond to all credible events, including the most resource-intensive conditions for any facility state. Given the activities and risk level of the WWMF, there are no positions at the WWMF associated with minimum shift complement.

Fitness for Duty: Managing Worker Fatigue

OPG monitors the number of hours worked by workers performing safety-sensitive work at WWMF in accordance with REGDOC-2.2.4, *Fitness for Duty: Managing Worker Fatigue.* OPG has a process to ensure that workers do not exceed hours of work limits and have sufficient recovery periods between shifts. Currently, the only safety-sensitive workers at the WWMF are Nuclear Security Officers.

Fitness for Duty: Managing Alcohol and Drugs

REGDOC-2.2.4, *Fitness for Duty, Volume II: Managing Alcohol and Drug Use, Version 3* sets out requirements and guidance for managing the fitness for duty of workers occupying safety-sensitive and safety-critical positions in relation to alcohol and drug use at all high-security sites. OPG implemented REGDOC-2.2.4, Volume II in July 2021, except for random and pre-placement testing, which was put on hold pending a legal review. In January 2026, OPG fully implemented the requirements of REGDOC-2.2.4 Volume II. CNSC staff will verify the implementation of random and pre-placement testing in future compliance activities. Currently, the only safety-sensitive and safety-critical workers at the WWMF are Nuclear Security Officers.

Personnel training

OPG's training program establishes the training requirements for employees, contractors, temporary personnel and other personnel assigned work at the WWMF. The program incorporates a systematic approach to training (SAT) and is supported by associated processes, procedures, instructions and job aids.

During the current licence period, CNSC staff assessed OPG's training programs at the WWMF and found that the training system continued to meet the applicable requirements of REGDOC-2.2.2, *Personnel Training*. CNSC staff also found that training programs were defined, designed and developed in accordance with OPG's established training system

3.2.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.2.3.1 Past Performance

OPG's human performance, fitness for duty and training programs at WWMF met CNSC regulatory requirements. CNSC staff confirm that OPG maintained satisfactory performance in the human performance SCA during the current licence period for the WWMF.

3.2.3.2 Regulatory Focus

CNSC staff will continue to verify OPG's performance in the human performance SCA through regulatory oversight activities including inspections and reviews of licensee submissions.

3.2.3.3 Proposed Improvements

There are no proposed major changes to OPG's human performance programs. CNSC staff expect that OPG will continually identify and implement improvements to its human performance programs.

3.2.4 Conclusion

Based on CNSC staff's assessment of OPG's Application, supporting documentation, and performance during the current licence period, CNSC staff conclude that OPG's human performance programs at the WWMF meet CNSC regulatory requirements. CNSC staff further conclude that the information pertaining to the human performance management SCA demonstrates that OPG meets CNSC regulatory requirements and remains qualified to perform the activities sought to be authorized in the proposed licence and makes adequate provisions to ensure that workers are qualified to perform their assigned duties.

3.3 Operating Performance

The operating performance SCA includes an overall review of the conduct of the licensed activities and the activities that enable effective operating performance.

The specific areas that comprise this SCA at OPG's WWMF include:

- Conduct of licensed activity
- Reporting and trending

3.3.1 Trends

The following table indicates the overall rating trends for the operating performance SCA over the current licensing period:

TRENDS FOR OPERATING PERFORMANCE									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the operating performance SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.3.2 Discussion

Section 2.3 of OPG's Application [1] provides information pertaining to the operating performance SCA at the WWMF.

OPG is required through the NSCA and its regulations to ensure policies, programs, methods and procedures are in place for the safe operation and maintenance of its licensed nuclear facilities. REGDOC-3.1.2, *Reporting Requirements, Volume I: Non-Power Reactor Class I Facilities and Uranium Mines and Mills*, is the governing document dealing with reporting.

CNSC staff verify OPG's compliance with the requirements of this SCA through compliance activities ranging from desktop reviews of annual reports and event reports, related corrective actions and inspections. This included an operating performance focused inspection conducted in 2023. CNSC staff confirmed through these compliance verification activities that OPG has implemented operations programs at the WWMF that provides safe and secure facility operation with adequate regard for health, safety, security and international obligations.

Details of CNSC staff's assessment of this SCA are presented in the following sections.

Conduct of Licenced Activities

This section is divided into the following subsections: High-Level Waste Operations, Low and Intermediate Level Waste Operations, and Construction Activities.

High-Level Waste Operations

Used fuel from the Bruce Power nuclear generating stations A and B is cooled in the stations' irradiated fuel bays (IFBs) for a minimum of 10 years before being loaded into dry storage containers (DSCs). The DSCs are then transferred to the WWMF for processing and storage.

Processing of DSCs at the WWMF includes activities such as lid seal welding, weld inspections, vacuum drying, helium backfilling, leak testing and painting. Following processing, the DSCs are moved to a designated storage location within a Used Fuel Dry Storage Buildings (UFDSB). Each UFDSB is identified by a building number (e.g., SB 1, SB 2, etc.).

The WWMF has 6 UFDSBs, each with a nominal capacity of 500 DSCs. DSCs are free standing reinforced concrete containers with an inner steel liner and outer steel shell used for on-site transfer and storage of used CANDU fuel.

At the end of 2025, there were a total of 2272 DSCs in storage at the WWMF. Table 1 outlines the number of DSCs that were received at the WWMF on an annual basis over the current licence period.

Table 1: Number of DSCs received at the WWMF

Year	Number of DSCs Received
2017	112
2018	106
2019	108
2020	110
2021	115
2022	115
2023	113
2024	115
2025	115
Total	1009

Low and Intermediate Level Waste Operations

Under the current WFOL, OPG is authorized to process radioactive waste at the WWMF. The WWMF processes low level waste (LLW) and stores LLW and intermediate level waste (ILW) generated by Ontario's operating nuclear generating stations. Approximately 60% of the LLW received at the WWMF is volume reduced through either incineration or compaction to reduce the storage capacity and future disposal volumes. Incineration and compaction reduce waste volume by approximately 37:1 and 5:1, respectively.

Intermediate level waste is sent directly to designated storage facilities at the WWMF.

Storage of LLW and ILW is provided in designated storage buildings and in-ground containers. Further details of the structures are provided in the physical design section of this CMD.

Construction Activities

The current WWMF licence authorizes the construction of additional storage buildings and structures. During the current licence period, OPG constructed the storage buildings and structures listed in Table 2.

OPG is required to submit commissioning reports for CNSC staff review and acceptance before carrying out operational activities in newly constructed structures, as specified in the current WWMF licence. Commissioning reports document the results of commissioning activities to record results, assess compliance with the acceptance criteria, and identify actions taken to address any deficiencies. For civil structures, where conventional commissioning may not be applicable, OPG verifies conformance with design requirements through field verification of critical design attributes during construction.

During the current licence period, CNSC staff reviewed and accepted commissioning reports for the WWMF buildings and structures listed in Table 2.

Table 2: Buildings and structures constructed during the current licence period

Storage Buildings / Structures	Construction date	Total Structures
Storage structures for used fuel	2022	2 (SB 5 and SB 6)
Storage buildings for low and intermediate level waste	2025	1 (Multi-Purpose Storage Building)
In-ground containers	2022	54 (Batch 6 of IC-18)

During the current licence period USDSBs SB 5 and SB 6 were constructed and placed into service. SB 5 and SB 6 consist of a single combined UFDSB located in its own security protected area. The current WFOL for WWMF also authorized the construction of 2 additional storage buildings (SB 7 and SB 8) with a combined estimated nominal capacity of 1000 DSCs; however, these buildings were not constructed within the current licence period. OPG has requested to carry forward this authorization into the proposed licence period.

The Multi-Purpose Storage Building (MPSB) is a steel framed fabric structure built to accommodate 64 steam generators (SGs) from the Bruce Power Major Component Replacement project. CNSC staff verified the field configuration during an inspection conducted on August 26, 2025 and confirmed that the MPSB was constructed in accordance with relevant design documentation.

The ‘IC’ series of in-ground containers have been used to store both LLW and ILW. IC-18s make up the majority of in-ground containers at the WWMF and have a storage capacity of 18 m^3. IC-18s provide storage of ILW (e.g., resins, tile hole equivalent liner (THEL) waste) to support continued operations at Ontario’s nuclear generating stations. THELs allow for the storage of narrow diameter ILW packages such as filters, irradiated core components and ion exchange columns. The IC-18s are steel structures within boreholes

that are lined with concrete. Multiple IC-18s are typically constructed at the same time and referred to as a 'batch'. During the current licence period, batch 6 of the ICs were constructed. Batch 6 consisted of an additional 54 IC-18s that are of the same design as the existing IC-18s. CNSC staff reviewed the commissioning reports for batch 6 and found that the design requirements were met. The current WFOL authorizes construction for an additional 216 IC-18's that OPG requests are carried over into the proposed licence period. As per OPG's licence application, batch 7 is planned for 2027.

Reporting and Trending

OPG submits reports for the WWMF in accordance with REGDOC-3.1.2, *Reporting Requirements, Volume I: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills,* which OPG implemented in February 2019. These reports include required event reports, as well as routine reports such as annual compliance reports. OPG will continue to be required to submit reports for the WWMF in accordance with REGDOC-3.1.2 during the proposed licence period. Table 3 lists the number of events reported to the CNSC by the licensee over the current licence period.

Table 3: Events reported by OPG for WWMF during the current licence period

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total	6	4	4	3	5	0	3	5	2

CNSC staff review all reported events to identify if there are any regulatory concerns and report significant events to the Commission at public meetings of the Commission. Reported events during the current licence period included damaged or degraded IAEA seals on DSCs, transportation incidents, activation of the Crisis Management Communication Centre (CMCC) in response to the COVID-19 global pandemic, an unexpected neutron hazard (refer to section 3.7.2 for more information) and missed or delayed inspections and drills. All reportable events were considered low safety significance, OPG identified and implemented appropriate corrective actions and all events are now considered closed.

Overall, during the current licence period, CNSC staff found that OPG continued to meet regulatory requirements with respect to reporting and trending.

3.3.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.3.3.1 Past Performance

OPG's operations programs at the WWMF continue to meet CNSC regulatory requirements, and OPG maintained satisfactory performance in the specific areas of this SCA during the current licence period, including compliance with reporting requirements of REGDOC-3.1.2.

As part of its regulatory oversight, CNSC staff performed commissioning inspections of newly constructed structures and facilities to independently verify that they were constructed in accordance with design requirements.

3.3.3.2 Regulatory Focus

CNSC staff will continue to verify OPG's performance and compliance with regulatory requirements in all aspects of the operating performance SCA through regulatory oversight activities, including inspections and reviews of compliance reports and other licensee submissions. CNSC staff will monitor the construction and commissioning of authorized storage facilities to verify compliance with regulatory requirements.

3.3.3.3 Proposed Improvements

OPG has identified potential improvement opportunities to operations at the WWMF, including additional storage buildings and structures, replacement or refurbishment of the incinerator, upgrades to existing systems and changes to the DSC lid-to-base welding process. CNSC staff will review these proposed changes to ensure that they remain within the approved licensing basis for the WWMF.

3.3.4 Conclusion

Based on CNSC staff's assessment of OPG's Application, supporting documentation, and performance during the current licence period, CNSC staff conclude that OPG's existing operations programs at the WWMF meet CNSC regulatory requirements. CNSC staff further conclude that the information pertaining to the operating performance SCA included in OPG's Application meets CNSC regulatory requirements and demonstrates that OPG remains qualified to perform the activities sought to be authorized in the proposed licence and makes adequate provisions to ensure the safe operations of the WWMF.

3.4 Safety Analysis

The Safety Analysis SCA covers the maintenance of the safety analysis that supports the overall safety case for the facility. Safety analysis is a systematic evaluation of the potential hazards associated with the conduct of a proposed activity or facility and considers the effectiveness of preventative measures and strategies in reducing the effects of such hazards.

The specific areas that comprise this SCA at OPG's WWMF include:

- Deterministic safety analysis
- Hazard analysis
- Criticality safety

3.4.1 Trends

The following table indicates the overall rating trends for the safety analysis SCA over the current licensing period:

TRENDS FOR SAFETY ANALYSIS									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. OPG submitted a safety analysis report for the WWMF every 5 years that effectively identified facility hazards and items relied on for safety to control or mitigate these hazards. Overall, CNSC staff conclude that OPG's programs within the safety analysis SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.4.2 Discussion

Section 2.4 of OPG's Application [1] provides information pertaining to the safety analysis SCA at the WWMF.

Paragraph 6(c) of the CINFR requires that an application for a licence to operate include a final Safety Analysis Report (SAR). A safety analysis must include an analysis of the postulated sequences of events and the consequences of the conditions that could arise from initiating events and associated hazards.

During the current licence period, CNSC staff conducted compliance verification activities to evaluate OPG's performance in the safety analysis SCA at the WWMF. These activities included desktop review of the SAR on a periodic basis and when updates were made to reflect changes at the WWMF. Safety analysis focused inspections were also conducted in 2021 and 2025. CNSC staff found that OPG's safety analysis program for the WWMF meets regulatory requirements.

Details of CNSC staff's assessment of this SCA are presented in the following sections.

Deterministic Safety Analysis and Hazard Analysis

OPG maintains a safety analysis report for the WWMF which contains information on deterministic safety analysis and hazard analysis. The safety analysis report includes a description of the facility and the measures in place to protect the safety of workers, the public, and the environment under normal operations, abnormal operations, and credible accident conditions. It is prepared, reviewed and maintained in accordance with OPG's procedures.

OPG reviews the safety analysis report at a minimum of every 5 years to confirm its accuracy and validity. The most recent revision to this document was submitted to CNSC staff in 2022. CNSC staff reviewed the updated safety analysis report and accepted the report in 2024. CNSC staff expect the next revision of the safety analysis report for WWMF, scheduled for submission in 2027, to fully implement the requirements of REGDOC-2.4.4, *Safety Analysis for Class 1B Nuclear Facilities*.

Criticality Safety

Currently, OPG handles and stores fuel bundles containing irradiated natural or depleted uranium at the WWMF. These types of fissionable materials cannot become critical in air or in water; therefore, CNSC staff conclude that OPG is not required to maintain a nuclear criticality safety program at the WWMF.

3.4.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.4.3.1 Past Performance

CNSC staff's regulatory oversight activities included desktop reviews of annual compliance reports and revisions to OPG's relevant program documentation, as well as an inspection of the safety analysis program. CNSC staff found that OPG's WWMF safety analysis report adequately identifies facility hazards and items relied on for safety to control or mitigate those hazards. Based on these oversight activities, CNSC staff determined that OPG has implemented and maintains an effective safety analysis program at WWMF that meets regulatory requirements. CNSC staff rated OPG's performance for the safety analysis SCA as satisfactory throughout the current licence period.

3.4.3.2 Regulatory Focus

CNSC staff will continue to monitor OPG's performance in the safety analysis SCA through regulatory oversight activities, including onsite inspections, desktop reviews of annual compliance reports and relevant program documentation.

3.4.3.3 Proposed Improvements

In support of continuous improvement, OPG is planning the following enhancements related to its safety analysis program for the proposed licensing period:

- update Safety Analysis Report to incorporate CNSC REGDOC-2.4.4, *Safety Analysis for Class 1B Nuclear Facilities* requirements;
- routinely review and update the methodology for performing safety assessments to ensure it is up-to-date and accurate;

- update safety analyses to ensure that the designs of the additional structures listed in the WWMF operating licence are adequate and that all safety requirements provided in the NSCA and its Regulations are met.

CNSC staff will verify these improvements through review of the updated safety analysis report.

3.4.4 Conclusion

CNSC staff have assessed OPG's documentation and analyses for the WWMF under the safety analysis SCA and have found them to meet regulatory requirements. CNSC staff conclude that the overall performance for the SCA is satisfactory and that OPG is qualified to perform the activities sought to be authorized in the proposed licence.

3.5 Physical Design

The physical design SCA relates to activities that impact the ability of structures, systems and components to meet and maintain their design basis given new information arising over time and taking changes in the external environment into account.

The specific areas that comprise this SCA at OPG's WWMF include:

- Design governance
- Facility design
- Structure design
- Pressure Boundary

3.5.1 Trends

The following table indicates the overall rating trends for the physical design SCA over the current licensing period:

TRENDS FOR PHYSICAL DESIGN									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the physical design SCA meet regulatory requirements.									
[1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.5.2 Discussion

Section 2.5 of OPG's Application [1] provides information pertaining to the physical design SCA at the WWMF.

OPG is required to implement and maintain a physical design program such that the design of facilities and changes made to its facilities are managed and within the licence basis.

CNSC staff reviewed the information provided in OPG's Application and found that it includes a clear description of the proposed licensed activities, including future activities such as construction of additional storage buildings and structures. OPG's Application includes a figure showing the existing licensed area as well as areas that have been assessed for future construction.

For facility design, OPG's Application refers to safety reports and design manuals for additional details.

Details of CNSC staff's assessment of this SCA are presented in the following sections.

Design governance

Over the current licensing period, OPG has continuously maintained an effective design program at the WWMF, implementing design changes with established control processes to stay within the design basis and licensing basis of the facility.

Management of design basis at WWMF is governed by OPG's design program, in accordance with a set of program documents that are periodically reviewed and updated as necessary. Under the design program, OPG conducts design-related activities using the design management process and the engineering change control process in accordance with requirements set out by a set of modern codes and standards, as specified in the facility LCH with the applicable version in effect.

CNSC staff conduct reviews of periodic updates of OPG's design program governance documents and conducted compliance verifications of OPG's construction activities at the WWMF.

Facility and structure design

For structure design, OPG's Application describes the existing buildings and structures at the WWMF site, including the number of units, capacities, service dates, functions, structural system and characteristics. These include the Low-Level Storage Buildings (LLSBs), Retube Component Storage Buildings, MPSB, quadricells, in-ground containers, concrete trenches, DSC, and DSC storage buildings. The Application also provides a general description of the Large Object Processing Building, and Waste Sorting Facility, which represent new structure types at the WWMF.

Within the current licence term, OPG demonstrated satisfactory performance in the Physical Design SCA in relation to the construction and commissioning of the storage structures listed in Table 2 of section 1.2 of this CMD. OPG applied an established engineering change control process to implement facility design modification and maintain the design basis and licensing basis of the facility.

OPG's Application provided design information suitable to support licence renewal but does not include a specific construction request for future additional storage buildings and structures that are not currently authorized under the existing licence.

For new construction of already authorized structures and buildings, the proposed WWMF licence includes facility-specific licence conditions requiring OPG to make specified submissions for CNSC staff review. Specifically, the WWMF LCH requires OPG to submit construction plans prior to the commencement of construction activities. CNSC staff's review of construction plans confirm that appropriate design requirements have been developed and that the proposed design and construction remain within the licensing basis.

If the Commission approves the Application, OPG requests that the authorizations for structures that were not constructed during the current licence term would be carried forward into the proposed licence period. For these structures, OPG would be required to submit construction plans as per Licence Condition 15.1. CNSC staff would review the construction plans to confirm that appropriate design requirements have been developed before construction begins. Before operations, OPG would be required to submit a commissioning report as per Licence Condition 15.2. CNSC staff would review this report to confirm that the project design requirements and the licensing basis have been met.

OPG is requesting that the authorization for the following currently authorized but unconstructed buildings be carried forward into the proposed licence period:

- 2 storage structures for used fuel,
- 10 storage buildings for low and intermediate level waste,
- 216 in-ground containers (IC-18s),
- 30 in-in ground containers (IC-HX),
- 1 Large Object Processing Building, and
- 1 Waste Sorting Facility.

OPG states that these previously authorized but unconstructed buildings and structures would provide additional storage capacity that is essential for supporting the ongoing and future operations of Ontario's nuclear generating stations. With OPG's ongoing efforts in waste minimization and waste volume reduction, the required in-service dates of some storage buildings and structures may not be known exactly. As a result, the required in-service dates for some structures have not yet been established, and OPG would proceed with construction as additional capacity is required. CNSC staff consider this approach reasonable and support carrying forward the authorization for these structures into the proposed licence period.

OPG provides that these structures will not alter the fundamental purpose and activities associated with the WWMF and were previously authorized.

OPG is considering providing interim storage at the WWMF for waste streams generated from isotope production (production of lutetium-177). OPG would apply its existing processes for acceptance of waste. Acceptance would be contingent on the waste meeting the existing WWMF waste acceptance criteria and the availability of suitable waste storage facilities authorized under the current WWMF WFOL. Should OPG propose this activity during the proposed licence period, CNSC staff would assess any potential impacts on the WWMF design and licensing basis prior to implementation.

OPG also proposes a change to Licence Condition 15.2. Under the current licence, Table 2 and Table 3 of WFOL-W4-314.01/2027 list structures that require acceptance of commissioning reports by the Commission and by a person authorized by the Commission, respectively. OPG proposes consolidating these tables into a single table identifying the previously authorized but unconstructed structures carried into the proposed licence. Commissioning reports for these structures would require acceptance by a person authorized by the Commission. CNSC staff support this proposed change. Further information on this proposed licence change is included in Appendix C.

Pressure Boundary

The WWMF LCH requires that OPG implement and maintain a pressure boundary program and have in place a formal agreement with an Authorized Inspection Agency (AIA).

Over the current licence term, OPG has maintained a mature pressure boundary program, ensuring that pressure boundary activities at the WWMF are in accordance with codes and standards required by the WFOL. OPG has a contractual agreement in place with the Technical Standards and Safety Authority (TSSA) that establishes the TSSA as the AIA for the inspection of pressure boundaries.

3.5.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.5.3.1 Past Performance

OPG's physical design program at the WWMF continues to meet CNSC regulatory requirements, and OPG has maintained satisfactory performance in the specific areas of this SCA during the current licence period.

3.5.3.2 Regulatory Focus

OPG described the construction activities planned for the proposed licence period to build additional storage buildings and structures that are within the current licence basis. The planned in-service dates of each will coincide with and determined by OPG's business decisions.

CNSC staff will continue to assess OPG's performance in the physical design SCA when OPG makes submissions on modifications to existing structures, and on the construction and commissioning activities associated with new storage buildings and structures. Staff will assess all submissions for potential impacts on existing structures.

3.5.3.3 Proposed Improvements

There are no proposed major changes to OPG's physical design programs. CNSC staff expect that OPG will continually identify and implement improvements to its physical design program.

3.5.4 Conclusion

Based on CNSC staff assessments of OPG's Application, supporting documents and past performance, CNSC staff conclude that OPG's physical design program and implementation continue to be effective, meet applicable regulatory requirements, and support a satisfactory performance rating. There is sufficient evidence to support that OPG will continue to maintain an effective design program and to implement modifications to the facility in accordance with established control processes to stay within the design basis and licensing basis, over the proposed licence period.

3.6 Fitness for Service

The fitness for service SCA covers activities that impact the physical condition of structures, systems and components (SSCs) to ensure that they remain effective over time. This area includes programs that ensure all equipment is available to perform its intended design function when called upon to do so.

The specific areas that comprise this SCA at OPG's WWMF include:

- Equipment reliability
- Maintenance
- Structural integrity
- Aging management

3.6.1 Trends

The following table indicates the overall rating trends for the fitness for service SCA over the current licensing period:

TRENDS FOR FITNESS FOR SERVICE									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the fitness for service SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.6.2 Discussion

Section 2.6 of OPG's Application [1] provides information pertaining to the fitness for service SCA at the WWMF.

OPG is required to implement and maintain a fitness for service program to cover activities that affect the physical condition of structures, systems and components (SSCs) to ensure that they remain effective over time. OPG is also required to maintain an aging management program in accordance with REGDOC-2.6.3, *Aging Management*. Aging management includes practices which address physical aging of SSCs as well as obsolescence issues as technology changes.

CNSC staff verify OPG's compliance with the requirements of this SCA through compliance activities ranging from desktop reviews of annual reports on the condition of key SSC's and through on-site inspections of the physical condition of SSCs at the WWMF. CNSC staff have found that OPG met regulatory requirements and proposed or implemented satisfactory corrective actions to address findings in this SCA.

Details of CNSC staff's assessment of this SCA are presented in the following sections.

Equipment Reliability

CNSC staff have verified that OPG has adequate processes and procedures in place to monitor the fitness for service of SSCs to ensure continued safe operation of the WWMF during the proposed licence period. System performance monitoring is performed on identified systems and components using a risk-based model.

CNSC staff are satisfied that equipment performance at the WWMF meets regulatory requirements.

Maintenance

OPG has policies, processes, and procedures in place at the WWMF that provide direction and support for its maintenance program. OPG's enterprise management software is used for scheduling and tracking preventative and corrective maintenance tasks.

CNSC staff are satisfied that maintenance at the WWMF meets regulatory requirements.

Structural Integrity

OPG has processes in place to assess and monitor the structural integrity of DSCs and civil structures including the inspection of DSC seal welds after fuel loading, inspecting filled DSCs for aging related degradation, the inspection of storage facilities for the presence of water infiltration, and groundwater monitoring around structures. Each trench, quadricell, tile hole, IC-18, and storage building is checked for the presence of water on a routine basis. Tritium and gamma spectrum analysis is performed on any water detected in these structures. The results of these water checks are included in annual compliance reports.

CNSC staff are satisfied that the structural integrity of DSCs and civil structures are being maintained at the WWMF in accordance with regulatory requirements.

Aging Management

OPG has implemented the REGDOC-2.6.3, *Aging Management*. OPG has established an integrated aging management program. OPG maintains aging management plans and inspection plans for DSCs that are stored at the WWMF. Detailed aging management inspection reports for the DSCs are submitted to CNSC staff on an annual basis.

OPG monitors L&ILW storage structures and containers for the impacts of identified aging mechanisms.

CNSC staff are satisfied that aging management being performed at the WWMF meets regulatory requirements.

3.6.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.6.3.1 Past Performance

OPG's fitness for service programs at the WWMF continue to meet CNSC regulatory requirements, and OPG has maintained satisfactory performance in the specific areas of this SCA during the current licence period.

3.6.3.2 Regulatory Focus

CNSC staff continue to monitor OPG's performance in this area through regulatory oversight activities including onsite inspections and desktop reviews of compliance reporting and revisions to relevant program documentation for the WWMF pertaining to this SCA.

3.6.3.3 Proposed Improvements

There are no major changes anticipated for this SCA. In their Application, OPG identified that they will perform upgrades to the DSC lid-to-base welding system, replace various facility components, will continue with maintenance and inspection of the L&ILW storage structures and containers, and upgrade the incinerator to improve reliability and maintainability. CNSC staff will verify these initiatives through desktop reviews and on-site inspections. CNSC staff expect that OPG will continually identify and implement improvements to its fitness for service programs.

3.6.4 Conclusion

Based on CNSC staff assessments of OPG's Application, supporting documents and past performance, CNSC staff conclude that OPG's fitness for service program and implementation continue to be effective, meet applicable regulatory requirements, and support a satisfactory performance rating.

3.7 Radiation Protection

The radiation protection SCA covers the implementation of a radiation protection (RP) program in accordance with the *Radiation Protection Regulations*. The program must ensure that contamination levels and radiation doses received by individuals are monitored, controlled and maintained as low as reasonably achievable (ALARA).

The specific areas that comprise this SCA at OPG's WWMF include:

- Application of ALARA
- Worker dose control
- Radiation protection program performance
- Radiological hazard control

3.7.1 Trends

The following table indicates the overall rating trends for the radiation protection SCA over the current licensing period:

TRENDS FOR RADIATION PROTECTION									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. No worker received a radiation dose in excess of regulatory limits as a result of the licenced activities conducted at the WWMF. Overall, CNSC staff conclude that OPG's programs within the radiation protection SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.7.2 Discussion

Section 2.7 of OPG's Application [1] provides information pertaining to the radiation protection SCA at the WWMF.

The *Radiation Protection Regulations* require licensees to implement a radiation protection program. As part of that program, licensees must keep effective and equivalent doses received by, and committed to, persons as low as reasonably achievable (ALARA), taking into account economic and social factors, through the implementation of:

- Management control over work practices
- Personnel qualification and training
- Control of occupational and public exposures to radiation
- Planning for unusual situations

The *Radiation Protection Regulations* also prescribe dose limits for Nuclear Energy Workers (NEWs) and persons who are not NEWs.

CNSC staff confirmed that OPG has implemented and continues to maintain an RP program that ensures contamination levels and radiation doses received by individuals are monitored, controlled, and maintained ALARA. CNSC staff conducted general compliance verification inspections regularly as well as RP focused inspections in 2018, 2022 and 2024.

Details of CNSC staff's assessment of the radiation protection SCA are presented in the following sub-sections.

Application of ALARA

OPG's Application of the ALARA principle is documented in its RP governance, N-PROG-RA-0013, *Radiation Protection*, which includes requirements for management commitment and oversight, personnel qualification and training, exposure control and contamination control. The program integrates ALARA into planning, scheduling, and work control at the WWMF.

During RP focused inspections and desktop reviews, CNSC staff confirmed that OPG develops annual ALARA dose targets for the WWMF. The target values are based on the planned processing and storage of DSCs and L&ILW for the year and are informed by historical trends. OPG's ALARA dose targets and performance against those targets are reported to CNSC staff on a yearly basis. CNSC staff's review of these submissions confirmed that OPG ensures that doses to workers are maintained ALARA in all areas of operations at this facility.

CNSC staff are satisfied that OPG has effectively applied the ALARA principle at the WWMF over the current licence period and identified no regulatory concern in this specific area that would preclude licence renewal.

Worker dose control

OPG's RP program is designed to ensure that worker exposures are controlled and that their doses do not exceed regulatory limits.

OPG uses CNSC licensed dosimetry services to monitor, assess, record and report doses from ionizing radiation received by employees, visitors and contractors as a result of activities at the WWMF. Doses for individuals are reported to the National Dose Registry. The OPG Dosimetry program is documented in the following OPG documents: N-MAN-03416-10000, *Radiation Dosimetry Program – General Requirements*; N-MAN-03416.1-10000, *Radiation Dosimetry Program – External Dosimetry* and N-MAN-03416.2-10000; and *Radiation Dosimetry Program – Internal Dosimetry*.

The criteria and methods for the use of radiation dosimetry are implemented in OPG's N-PROC-RA-0012, *Dosimetry and Dose Reporting*.

All radiological work at the WWMF is planned and executed according to the requirements defined in N-PROC-RA-0027, *Radioactive Work Planning, Execution and Close Out*. Exposure control levels (ECLs) and administrative dose limits (ADLs), as defined in OPG's N-PROC-RA-0019, *Dose Limits and Exposure Control*, are utilized at the WWMF to ensure doses to workers are controlled.

During the current licence period, OPG has maintained radiation doses to NEWs at the WWMF below regulatory dose limits. Table 4 lists the non-zero average effective doses and the maximum individual effective doses received by a NEW at the WWMF from 2017 to 2025. These data show that the annual non-zero average effective doses ranged from 0.3 mSv to 0.76 mSv, and the maximum individual effective doses ranged from 0.8 mSv to 3.90 mSv.

The largest maximum individual annual effective dose (3.90 mSv) during this period was received in 2025. The increases in maximum doses for 2024 and 2025 are associated with the receipt and storage of steam generators from the Bruce Power Major Component Replacement Project.

Table 4: Average and maximum effective doses to NEWs at the WWMF from 2017 to 2025

AVERAGE AND MAXIMUM EFFECTIVE DOSES TO WORKERS										
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**Regulatory Limit**
Average Effective Dose[1]	0.3	0.4	0.6	0.5	0.6	0.43	0.4	0.51	0.76	N/A
Maximum Individual Effective Dose	0.8	2.5	1.8	2.5	1.8	1.18	1.81	3.18	3.90	50 mSv/one-year dosimetry period
Note 1: arithmetic average dose values are based on the non-zero results only.										

The *Radiation Protection Regulations* establish a fixed 5-year dosimetry period for NEWs. For the 2016 to 2020 and 2021 to 2025 dosimetry periods, the maximum individual effective doses received by a NEW were 7.65 mSv and 6.16 mSv, respectively, representing approximately 8% and 6 % of the 100 mSv regulatory dose limit over a 5-year dosimetry period.

At the WWMF, RP action levels are established for unplanned dose. There were no radiation protection action level exceedances during the current licence period.

As the WWMF is located within the Bruce nuclear site, it is possible for non-NEWs to pass near the facility. To assess the dose received by non-NEWs, OPG installed Thermoluminescent Dosimeters (TLDs) at various locations along the WWMF perimeter fence. These TLDs are analyzed quarterly and OPG uses the results to calculate potential dose rates to confirm they do not exceed an upper-bound value of 0.5 µGy/h. This target value is conservatively based on an annual occupancy of 2,000 hours at any one of the perimeter locations by a non-NEW who has a 1 mSv/year regulatory effective dose limit. These dose rate results are reported to CNSC staff annually. During the current licence period, none of OPG's reported perimeter dose rates exceeded the target, and no measurable dose was assigned to a non-NEW at the WWMF.

During the July 2022 RP focused inspection at the WWMF, CNSC staff identified 1 non-compliant finding of low safety significance related to worker dose control. The finding concerned OPG's programmatic requirements for performance monitoring of collective dose against established target values. OPG implemented a corrective action plan which CNSC staff confirmed satisfactory, and the finding was subsequently closed.

CNSC staff are satisfied with OPG's efforts over the current licence period to control the radiation doses received by workers at the WWMF. CNSC staff have no regulatory concern regarding the specific area of worker dose control that would preclude renewal of the WWMF licence.

Radiation protection program performance

CNSC staff assess OPG's RP program performance at the WWMF through various compliance verification activities, including technical reviews of OPG's regular performance reports and RP focused inspections conducted in 2018, 2022 and 2024. CNSC staff's review of the regular performance reports submitted by OPG during the current licence period found that the reported information met the regulatory requirements specified in REGDOC-3.1.2 and identified no adverse trends.

CNSC found that OPG's implementation of its RP program has been effective in protecting workers at the WWMF.

In June 2024, CNSC staff issued a letter to OPG pursuant to subsection 12(2) of the *General Nuclear Safety and Control Regulations* (GNSCR) following the discovery of unanticipated neutron hazards emitted from irradiated reactor components removed during refurbishment. This matter was reported to the Commission in CMD 24-M35, *Potential Neutron Exposure of Workers* [2]. In response, OPG initiated revisions to its neutron monitoring and neutron dose assessment procedures and took steps to modernize its portable neutron monitoring instrumentation.

CNSC staff also conducted a reactive inspection at the WWMF and were satisfied that there were no adverse impacts or appreciable increased risks on the health and safety of persons or the environment. CNSC staff were satisfied with OPG's response to the event.

CNSC staff are satisfied with the performance of OPG's RP program at the WWMF over the current licence period. CNSC staff have no regulatory concern regarding the specific area of Radiation Protection Program Performance that would preclude renewal of the WWMF licence.

Radiological hazard control

OPG's RP program requires monitoring and control of all radiological hazards at the WWMF. Radiological hazard control includes radiological zoning, contamination control, dose rate control, and area and airborne radiation monitoring and control. Radiological hazard monitoring at the WWMF includes performing routine contamination surveys of the facilities and performing non-routine surveys during the conduct or radiological work. Signage is used to identify the locations and magnitude of hazards that exist within the WWMF. The requirements for radiological hazard monitoring and posting are defined in OPG's N-PROC-RA-0024, *Hazard Surveys, Posting, and Labeling*.

OPG establishes RP action levels for contamination control. There were no radiation protection action level exceedances during the current licence period related to contamination control.

CNSC staff identified 7 non-compliant findings of low safety significance related to radiological hazard control through RP focused inspections conducted during the current licence period. The findings related to workplace monitoring and routine surveys, hazard-area boundaries and barriers, record keeping associated with alpha hazard characterization and calibration sources, controls for temporary drinking water stations in radiological zones, and pre-operational checks of radiation detection instruments. CNSC staff required OPG to develop and implement corrective action plans to address each of the findings. CNSC staff subsequently verified the implemented appropriate corrective actions, and all of the findings have been resolved to CNSC staff's satisfaction.

CNSC staff are satisfied with OPG's efforts to continue to implement its radiological hazard controls to protect workers and ensure radioactive contamination is controlled within the WWMF. CNSC staff have no regulatory concern regarding the specific area of Radiological Hazard Control that would preclude renewal of the WWMF licence.

3.7.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.7.3.1 Past Performance

CNSC staff have assessed OPG's programs under the radiation protection SCA and found that OPG continues to meet regulatory requirements. OPG has maintained satisfactory performance across the specific areas of this SCA during the current licence period at the WWMF.

3.7.3.2 Regulatory Focus

CNSC staff will continue to verify OPG's performance and compliance with regulatory requirements in all aspects of the radiation protection SCA, including maintaining radiation protection instruments and equipment, mitigating and controlling contamination, and verifying that the protection of workers is optimized and that worker doses are kept ALARA.

3.7.3.3 Proposed Improvements

OPG has not identified any plans to make substantive changes to its radiation protection program for the proposed licensing period.

Based on OPG's effective implementation of their current radiation protection program, CNSC staff find OPG's continued use of its corporate radiation protection program at WWMF to be acceptable.

3.7.4 Conclusion

Based on CNSC staff's assessment of OPG's Application, associated supporting information, and performance during the current licence period, CNSC staff are satisfied that OPG will implement and maintain an effective radiation protection program that meets regulatory requirements under the radiation protection SCA. CNSC staff conclude that OPG met regulatory requirements related to the radiation protection SCA throughout the current licence period. CNSC staff are satisfied that if effectively implemented, OPG's radiation protection program and implementing procedures will continue to adequately control radiological hazards within the facility and will continue to maintain worker doses both below regulatory limits and ALARA.

3.8 Conventional Health and Safety

The conventional health and safety SCA relates to the implementation of a program to manage workplace safety hazards and to protect workers.

The specific areas that comprise this SCA at OPG's WWMF include:

- Performance
- Practices
- Awareness

3.8.1 Trends

The following table indicates the overall rating trends for the conventional health and safety SCA over the current licensing period:

TRENDS FOR CONVENTIONAL HEALTH AND SAFETY									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the conventional health and safety SCA meet regulatory requirements.									
[1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.8.2 Discussion

Section 2.8 of OPG's Application [1] provides information pertaining to the conventional health and safety SCA at the WWMF.

A conventional health and safety program minimizes the risk to the health and safety of workers posed by conventional (non-radiological) hazards in the workplace. Pursuant to regulations made under the *Canada Labour Code*, OPG's conventional health and safety program is regulated by the Ontario Ministry of Labour, Immigration, Training and Skills Development in accordance with the *Ontario Occupational Health and Safety Act* (OHSA) and the *Ontario Labour Relations Act*. Related legislation includes the *Ontario Workplace Safety and Insurance Act* and the *Ontario Human Rights Code*.

During the current licence period, CNSC staff have observed safe work practices during inspections and other regulatory oversight activities at the WWMF. This includes observations of good housekeeping, compliance with applicable labour codes (e.g., worker protection such as barriers and hazard signs), and proper use of personal protective equipment. OPG has continued to take appropriate corrective actions to address any CNSC staff findings. CNSC staff have found that OPG has met regulatory requirements and adequately addressed any findings with respect to the conventional health and safety SCA at the WWMF.

Details pertaining to the specific areas within this SCA are presented in the following subsections.

Performance

In accordance with REGDOC-3.1.2, *Reporting Requirements, Volume I: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills,* OPG reports on conventional health and safety occurrences related to non-radiological health and safety activities. The key performance indicators are the Total Recoverable Injury Frequency (TRIF), Accident Severity Rate (ASR), and Serious Injury Incident Rate (SIIR).

The TRIF is defined as the number of fatalities, lost time injuries, restricted work, and medically treated injuries divided by exposure hours and multiplied by 200,000. A recordable loss time injury is defined as an injury that takes place at work, and results in the worker being unable to return to work and carry out their duties for a period of time. There were no recordable loss time injuries at the WWMF during the current licence period. OPG tracks the TRIF for the entire Nuclear Sustainability Services organization, which includes WWMF. OPG began tracking the TRIF in 2018. OPG had an internal TRIF target of 0.20 from 2018-2024 and a target of 0.47 from 2024-2026. The TRIF from 2018-2025 is shown in Table 5. There were 5 medically treated injuries that contributed to the TRIF reported at the WWMF during the current licence period: an ankle laceration (2017), a shoulder strain (2020), a thumb laceration (2021), a case of back pain (2021) and a knee strain (2022).

The ASR is defined as the total number of calendar days lost due to work-related injury multiplied by 200,000 person-hours, divided by the total exposure hours worked. As shown in Table 5, the ASR at the WWMF remained zero throughout the current licence period.

The SIIR is defined as the number of work-related accidents for all OPG employees that result in injuries or fatalities, per 200,000 person-hours worked. The SIIR from 2017-2025 is listed in Tabe 5. The WWMF SIIR has remained zero since the introduction of this metric in 2000.

Table 5: Conventional health and safety performance indicators

TRENDS FOR CONVENTIONAL HEALTH AND SAFETY				
Year	**Recordable Loss Time Injury (RLTI)**	**Accident Severity Rate (ASR)**	**Serious Injury Incident Rate (SIIR)**	**Total Recordable Injury Frequency (TRIF)**
2017	0	0	N/A	0.53
2018	0	0	N/A	0
2019	0	0	N/A	0
2020	0	0	0	0.49
2021	0	0	0	0.86
2022	0	0	0	0.79
2023	0	0	0	0
2024	0	0	0	0
2025	0	0	0	0

Overall, OPG has maintained acceptable levels of performance related to worker safety during the current licence period. CNSC staff are satisfied with OPG's performance with respect to this SCA during the current licence period.

Practices

In its Application [1], OPG indicated that it maintains a joint health and safety committee at the WWMF to improve health and safety in the workplace. All OPG facilities apply an internal responsibility system where employees are encouraged to raise concerns on potential safety issues to ensure that hazards are addressed promptly and effectively.

The CNSC has a Memorandum of Understanding with the Ontario Ministry of Labour, Immigration, Training and Skills Development (MLITSD) to cooperate and exchange information and technical expertise related to their respective areas of jurisdiction, such as occupational health and safety practices at nuclear facilities.

Awareness

During the current licence period, CNSC staff confirmed that the conventional health and safety work practices at the WWMF continued to achieve a high degree of personnel safety. OPG personnel at all levels exhibit a proactive attitude towards anticipating work related hazards and preventing unsafe conditions. CNSC staff found that there continues to be a safe and efficient working environment where situational awareness and safe work practices are ensured.

3.8.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.8.3.1 Past Performance

OPG's conventional health and safety programs at the WWMF continued to meet CNSC regulatory requirements, and OPG has maintained satisfactory performance in the specific areas of this SCA during the current licence period.

3.8.3.2 Regulatory Focus

CNSC staff continue to monitor OPG's performance in this area through regulatory oversight activities including onsite inspections and desktop reviews of compliance reporting and revisions to relevant program documentation for the WWMF pertaining to this SCA.

3.8.3.3 Proposed Improvements

There are no major changes anticipated for this SCA. CNSC staff expect that OPG will continually identify and implement improvements to its occupational health and safety programs.

3.8.4 Conclusion

CNSC staff concluded that OPG has effectively managed workplace safety hazards at the WWMF. Compliance verification activities will continue to be conducted at the facility to confirm that OPG continues to view conventional health and safety as an important consideration.

Based on CNSC staff assessments of OPG's Application, supporting documents and past performance, CNSC staff concluded that OPG's conventional health and safety program and implementation continue to be effective, meet applicable regulatory requirements, and are rated as satisfactory.

3.9 Environmental Protection

The environmental protection SCA covers the measures and programs that identify, control and monitor all releases of radioactive nuclear and hazardous substances and their effects on the environment from facilities or as a result of licensed activities.

The program underpinning this SCA is the environmental risk assessment, which allows for the determination, quantification, and characterization of the risks posed by contaminants and physical stressors in the environment to humans and other receptors.

The specific areas that comprise this SCA at OPG's WWMF include:

- Environmental risk assessment (ERA)
- Effluent and emission control (releases)

- Assessment and monitoring
- Protection of the public
- Environmental management system (EMS)

3.9.1 Trends

The following table indicates the overall rating trends for the environmental protection SCA over the current licensing period:

TRENDS FOR ENVIRONMENTAL PROTECTION									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has established and maintains an environmental protection program which is effectively implemented at the WWMF and that satisfies regulatory requirements.									
[1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.9.2 Discussion

Section 2.9 of OPG's Application [1] provides information pertaining to the environmental protection SCA at the WWMF.

The NSCA and its associated Regulations require that every licensee takes all reasonable precautions to protect the environment and control the release of nuclear and hazardous (non-radiological) substances into the environment. To do this, OPG is required to establish a program to control releases of nuclear and hazardous substances and to assess the effects of these releases on the environment. OPG is also required to have an environmental protection policy and maintain and implement procedures to ensure the protection of the environment.

During the current licence period, CNSC staff have verified OPG's performance with respect to environmental protection through compliance inspections and the reviews of OPG's submissions.

During the current licence period, CNSC staff conducted 2 environmental protection focused compliance inspections in 2019 and 2024. The 2019 inspection revealed a minor non-compliance of low safety significance regarding missing waterborne effluent samples from sample station (SS) #2. The 2024 inspection identified a non-compliance of low safety significance where a replaced stack monitor flow controller was not retested after installation. CNSC staff reviewed and accepted OPG's corrective actions for both non-compliances, and the findings were subsequently closed.

Details of CNSC staff's assessment of this SCA are presented in the following sections.

Environmental Risk Assessment

An environmental risk assessment (ERA) of nuclear facilities is a systematic process used by licensees to identify, quantify, and characterize the risk posed by releases of radiological and hazardous substances and physical stressors on representative human and non-human biota receptors, including the magnitude and extent of the potential effects associated with a facility.

REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures* includes a requirement for an ERA in accordance with CSA N288.6, *Environmental Risk Assessments at Nuclear Facilities and Uranium Mines and Mills*. Facility ERAs are to be reviewed on a 5-year cycle or more frequently if major facility changes are proposed that would alter the potential risks or make the previous assessment invalid such that a new predictive assessment is required. During the current licensing period, OPG submitted 2 ERAs, which are summarized below.

In December 2021, OPG submitted an ERA that covered the period from 2014 to 2020. The 2021 ERA update built on a previous ERA completed in 2016 and included analysis of additional baseline data as well as data collected as part of the ongoing environmental monitoring programs. The 2021 ERA also included an assessment for the Radioactive Waste Operations Site 1 (RWOS1). CNSC staff reviewed the 2021 ERA and confirmed that it is compliant with REGDOC-2.9.1, version 1.1 (2017) and CSA N288.6-12 (reaffirmed 2017). CNSC staff concluded that human health and the environment in the vicinity of the WWMF remained protected.

In November 2024, OPG submitted a Predictive Effects Assessment (PEA) Addendum in support of its construction of a Multi-Purpose Storage Building (MPSB) at the WWMF. The 2024 PEA Addendum was essentially a predictive ERA that was prepared to demonstrate that any potential risks to human health or the environment resulting from the construction and operation of the MPSB are bounded by the results and conclusions presented in the 2016 PEA, which had been submitted to the CNSC in 2016 as part of a licence renewal Application. CNSC staff reviewed the 2024 PEA Addendum and confirmed that it is compliant with REGDOC-2.9.1, version 1.2 (2020) and CSA N288.6-22. CNSC staff concluded that the construction of the MPSB would not cause unreasonable risks to human health and the environment.

Most recently, in April 2026, OPG submitted an updated retrospective ERA that covered the period from 2020 to 2025. The 2026 ERA built on previous ERAs completed for the WWMF and included analysis of additional environmental data collected specifically for the ERA, as well as data collected as part of the ongoing environmental monitoring programs. The 2026 ERA is currently under review by CNSC staff. CNSC staff provided initial comments to OPG on August 13, 2026. OPG responded to these comments on October 27, 2026. Although the technical assessment remains in progress, CNSC staff have confirmed that the 2026 ERA was prepared in compliance with REGDOC-2.9.1, version 1.2 (2020) and CSA N288.6-22.

Overall, CNSC staff are satisfied that the continued operation of the WWMF does not pose an unreasonable risk to human health and the environment. Furthermore, CNSC staff are satisfied that OPG has implemented the current versions of REGDOC-2.9.1 (2020) and CSA N288.6 (2022) for the purposes of the ERA at WWMF.

Effluent and Emissions Control (Releases)

OPG has processes and programs in place to effectively monitor and control airborne and liquid releases from the activities at the WWMF. These programs meet regulatory requirements and are discussed in the following subsections.

Radiological Substance Releases

OPG controls and monitors liquid and airborne releases to the environment through the implementation of environmental and radiation protection programs. During the current licence period, releases of both airborne emissions and liquid effluents were well below the derived release limits.

Derived Release Limits

OPG's release limits are based on the derived release limits (DRLs) established for the WWMF. OPG updated its DRLs for the WWMF in 2025 to reflect new site and meteorological data as well as updated methodology presented in CSA N288.1-20. CNSC staff reviewed and accepted OPG's revised DRLs for the WWMF. OPG completed the implementation of the revised DRLs at the beginning of 2026. The release limits are summarized in Table 6.

Table 6: Derived release limits for WWMF

Release Category	Radionuclide	DRL 2017-2025 (Becquerel/year)	DRL 2026-present (Becquerel/year)
Air	Tritium (HTO)	3.45E+17	2.52E+17
	Iodine (mixed fission products)	1.99E+12	1.22E+12
	Carbon-14	2.41E+15	1.11E+15
	Particulate	6.65E+11	6.94E+11
	Gross Alpha	3.36E+11	3.73E+11
Water	Tritium	3.59E+15	N/A
	Carbon-14	7.02E+12	N/A
	Gross Alpha	7.09E+09	N/A
	Gross Beta-Gamma	4.01E+10	N/A

Atmospheric Emissions

OPG monitors emissions from various stacks for a number of radiological parameters weekly to ensure the air emissions remain below the regulatory limits and action levels as follows:

- The incinerator – tritium, carbon-14, particulate matter, and iodine-131;
- Waste Volume Reduction Building ventilation exhaust stack – tritium, particulate matter and iodine-131;
- Transportation Package Maintenance Building ventilation stack – tritium and particulate matter.

The annual total emissions for each radiological parameter from all stacks are shown in Table 7. Stack emissions continue to be effectively controlled and remained below the licence limits for the current licence period.

Table 7: Air emissions monitoring results (Bq/year, 2017-2025)

	2017*	2018*	2019*	2020	2021	2022	2023	2024	2025
Tritium oxide	1.72E+13	3.24E+12	1.03E+13	1.73E+13	2.16E+13	1.42E+13	1.51E+13	1.40E+13	4.89E+12
I-131	1.38E+05	8.00E+04	0.00	0.00	1.05E+03	5.21E+03	1.25E+05	4.50E+03	2.80E+04
Particulate gamma	4.52E+03	8.11E+04	6.52E+02	1.37E+04	2.72E+03	0.00	5.11E+05	1.80E+03	0.00
C-14	4.09E+09	1.57E+09	2.62E+09	3.05E+10	5.63E+09	5.20E+09	2.12E+10	5.30E+09	1.30E+10

*Reporting started in 2019

Liquid effluent

OPG has submitted a revised effluent monitoring program in accordance with CSA N288.5 *Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills*. This revision relocates surface water and subsurface drainage ground water monitoring from the effluent monitoring program to the environmental monitoring program and groundwater monitoring program, respectively.

As the water collected from the WWMF building sumps or storage structures is transferred to Bruce Power for treatment and reported as part of Bruce Power's Active Liquid Waste (ALW) system releases, liquid effluent monitoring results are no longer reported under the WWMF effluent program since 2021.

Table 8: Liquid effluent monitoring results (Bq/year, 2017 – 2020)

	2017*	2018*	2019*	2020
Tritium oxide	2.59E+11	3.65E+11	1.60E+11	1.42E+11
Gross β	2.85E+08	1.69E+08	5.72E+07	9.55E+07

* Reporting started in 2019

Environmental Action Level Exceedances

OPG has environmental action levels (EALs) approved by CNSC that are used to provide assurance that the licence release limits will not be exceeded. EALs provide early indication of a potential loss of control of part of the environmental protection program. The EALs are assessed periodically using operating experience from the previous years in accordance with CSA N288.8-17 to ensure that they reflect current operating practices. The EALs are provided in Table 9.

During the current licence period there were no EAL exceedances at the WWMF.

Table 9: WWMF environmental action levels

Release Category	Radionuclide	EALs: Gaseous Releases (Becquerel/week)
Air	Tritium (HTO)	6.91E+14
	Iodine (mfp)	3.98E+09
	Carbon-14	4.82E+12
	Particulate	1.33E+09
	Gross Alpha	6.72E+08
Release Category	**Radionuclide**	**EALs: Liquid Releases (Becquerel/month)**
Water	Tritium	2.87E+13
	Carbon-14	5.62E+10
	Gross Alpha	5.67E+07
	Gross Beta-Gamma	3.20E+08

In January 2022, OPG submitted a report to CNSC staff that concluded that no EALs were required for the WWMF. This conclusion was reached by following the methodology for determining EALs in accordance with CSA N288.8-17. The report demonstrated that the maximum expected releases from the WWMF are far below the established DRLs.

CNSC staff performed a technical review of the report and accepted OPG's conclusion that no EALs were required for the WWMF. Therefore, OPG has requested that LC 9.1 in the proposed licence be amended to remove the following text: "… which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days." CNSC staff support this proposed change. Further information on this proposed licence change is included in Appendix C.

Hazardous Substance Releases

Under an Ontario Ministry of Environment and Climate Change Environmental Compliance Approval (ECA), OPG monitors the WWMF's incinerator emissions continuously for carbon monoxide, nitrogen oxides, and hydrochloric acids. OPG also performs annual source testing for particulate matter, mercury, dioxin and furans, and total hydrocarbons. The results are compared to the allowable limits in the ECA. Copies of annual reports to the Ministry of the Environment, Conservation and Parks are provided to CNSC staff. Source testing of incinerator emissions is also completed once a year to quantify overall emission rates of particulate matter, metals, polychlorinated biphenyls, dioxins and furans, polycyclic aromatic hydrocarbons and volatile organic compounds. The annual source testing results indicate that incinerator emissions are well within the regulatory limits.

Assessment and Monitoring

OPG maintains an Environmental Monitoring Program in accordance with CSA N288.4-10, *Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills*, at the WWMF. Operating in coordination with Bruce Power's site-wide program for estimating the dose to the public, OPG monitors surface water, subsurface drainage, groundwater, direct gamma radiation, and fugitive airborne Carbon-14 (C-14). CNSC staff reviewed OPG's annual environmental monitoring reports and are satisfied with the results.

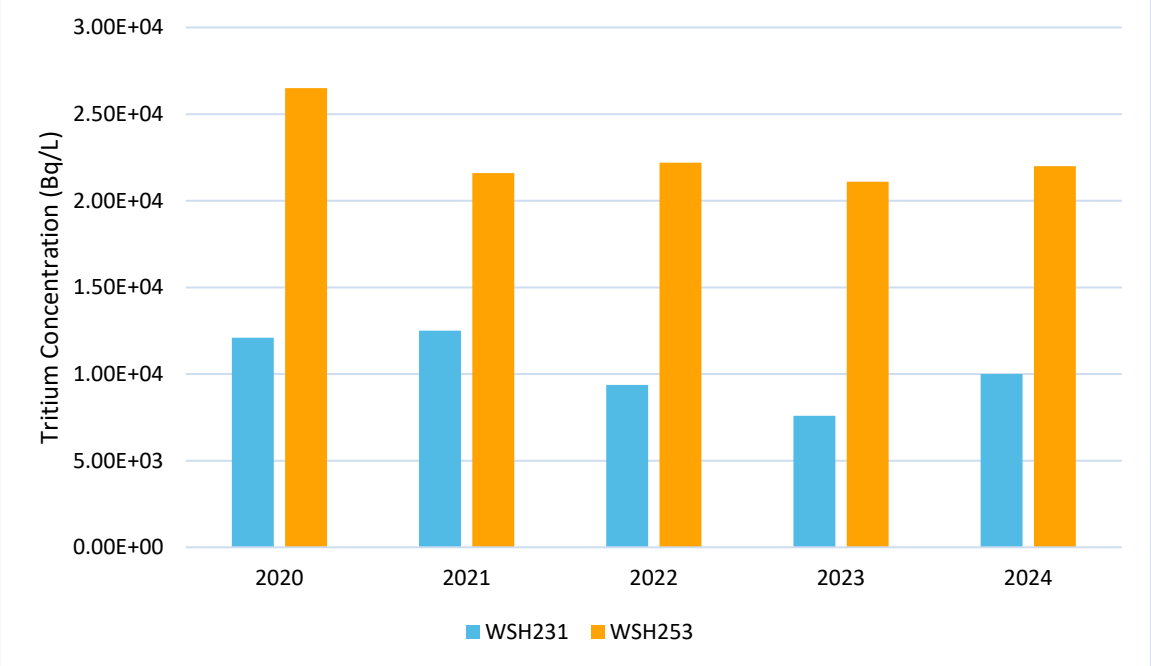
Groundwater Monitoring

OPG has updated and implemented the groundwater program in accordance with the CSA Group standard N288.7-23, *Groundwater protection programs at Class I nuclear facilities*. OPG monitors tritium in more than 40 groundwater wells at the WWMF. The wells are referred to as water sampling holes (WSH). In 2024, the 29 WWMF wells had annual average tritium concentrations below 500 Bq/L, indicating that most groundwater monitoring locations remained within a low concentration range. This is consistent with the long-term understanding of the site: elevated tritium concentrations are primarily observed in known localized areas within the site and there is no evidence of uncontrolled dispersion or migration off site. For the limited number of wells showing increasing trends, OPG reported that WSH230, WSH264, WSH272, WSH282, WSH283, WSH285, WSH286 and WSH287 showed minor increases. Most of these wells tritium results continued to be generally within the historical range observed from 2017 to 2024.

Localized higher concentrations are primarily associated with the Middle Sand Aquifer area near WSH231 and WSH253. Figure 1 shows the average annual tritium concentrations for WSH231 and WSH253 during the period of 2020-2025. In 2024, tritium concentrations at WSH231 were 8,530 Bq/L in Q2 and 11,500 Bq/L in Q4, while concentrations at WSH253 were 22,300 Bq/L in Q2 and 21,600 Bq/L in Q4. These results indicate that this area remains a known localized area of elevated concentrations within the site. WSH231 showed a decreasing trend from 2020 to 2024. Although WSH253 did not show a statistically significant decreasing trend after the 2024 results were included, the groundwater monitoring results have shown gradual improvement since monitoring at this well began in 2017. Therefore, CNSC staff find that the known localized high-concentration area is not continuing to increase, is being continuously monitored and is showing signs of gradual improvement.

Tritium concentrations for groundwater well WSH-231 have been showing elevated tritium concentrations since the late 1990's. WSH-231 is near the Low-Level Storage Buildings (LLSBs). It is 1 of 3 wells screened in the Middle Sand Aquifer while the remaining wells are in bedrock. After numerous studies, OPG determined in 2010 that electrical conduits exiting the LLSBs and leading to electrical manholes that interacted with the local mid sand aquifer acted as a pathway for tritium to reach onsite groundwater. In order to eliminate this pathway, OPG sealed the LLSB sumps and some of the electrical cable floor penetrations. Subsequent groundwater monitoring results to date indicate a declining trend of tritium concentrations at well WSH-231 since these corrective actions were implemented in 2011.

Figure 1: Tritium concentrations in groundwater monitoring well WSH-231 and WSH-253



With respect to recent trends in the known elevated area within the Middle Sand Aquifer, OPG has increased the frequency of Electrical Manhole pump-outs from twice per year to 4 planned campaigns in 2026 to help mitigate elevated tritium levels in the subsurface drainage system. These measures indicate that the observed changes are under control, tracked, and have been incorporated into appropriate follow-up management. CNSC staff are satisfied that OPG has adequate measures in place to protect the public and the environment from releases from the WWMF.

Overall, the 2017–2024 groundwater monitoring results support the conclusion that site-related impacts remain primarily confined to known areas. The results of the vast majority of groundwater wells continue to show low concentrations. The known localized high-concentration area has not shown deterioration, the key well WSH231 shows a statistically significant decreasing trend, and boundary wells do not indicate uncontrolled impacts. In addition, OPG has taken, or committed to continue taking, measures to address potential preferential pathways, drainage system concentration fluctuations and the trend at WSH230. These measures include design controls, excavation approval requirements, increased Electrical Manhole pump-out frequency, trend tracking and adaptive management. Based on the above information, CNSC staff are satisfied that the existing environmental protection measures and monitoring system are appropriate.

Perimeter Dose Monitoring

OPG monitors the fence line using environmental thermoluminescent dosimeters (TLDs). The TLDs are analyzed quarterly, and the results are incorporated into the Bruce Power Radiological Environmental Monitoring Program, which informs the estimated dose to the public calculation. The Bruce Power Radiological Environmental Monitoring Program calculates the dose for the whole Bruce nuclear site, including the contribution from the WWMF.

CNSC staff are satisfied that the perimeter dose monitoring at WWMF is appropriate.

CNSC's Independent Environmental Monitoring Program

The objective of the CNSC's Independent Environmental Monitoring Program (IEMP) is to build Indigenous and public trust in the CNSC's regulation of the nuclear industry, via an independent, technical and accessible environmental sampling program around nuclear facilities. It is separate from, but complementary to, the CNSC's ongoing compliance verification program.

As the WWMF is located within the Bruce nuclear site, the IEMP for the Bruce nuclear site is considered to encompass WWMF. The Bruce IEMP consists of measurements of potential contaminants of interest in the environment based on the potential releases from the Bruce nuclear site.

CNSC staff conducted IEMP sampling campaigns around the Bruce nuclear site in 2013, 2015, 2016, 2019, 2022 and 2025. The IEMP results are consistent with the results submitted by Bruce Power, supporting CNSC staff's assessment that OPG's environmental protection program at the WWMF is effective. The results add to the body of evidence that people and the environment in the vicinity of Bruce site are protected and that there are no anticipated health impacts from the operation of the WWMF.

Protection of People

OPG is required to demonstrate that the health and safety of the public is protected from exposures to hazardous (non-radiological) substances released from the facility. The emissions monitoring currently conducted by OPG is used to verify that releases of hazardous substances do not result in environmental concentration that may affect public health.

CNSC staff have reviewed OPG's programs and conclude that they are protective of the public.

Estimated Dose to the Public

Ongoing operations at the WWMF are conducted in a manner to ensure the protection of the public in accordance with the Radiation Protection Regulations. The estimated maximum dose to the public (per Bruce Power's annual environmental reports) have remained low (<10 µSv) for the past decade, compared to the regulatory limit of 1 mSv/yr (1,000 µSv/yr), for which the WWMF represents a small fraction of the total dose calculation for the Bruce site. The estimated dose to the public is presented in Table 10.

Table 10. The estimated dose to the public at Bruce site, 2017-2025

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimated Dose to Public (µSv/year)	2.1	1.7	1.5	1.8	1.6	2.4	1.4	1.1	3.9

Environmental Management System

OPG has established and implemented an environmental management system in accordance with REGDOC-2.9.1 version 1.2 that is registered and certified under the international standards organization 14001 *Standard, Environmental Management Systems – Requirements with Guidance for Use* and compliant with CSA N288.0-22, *Environment management of nuclear facilities: Common requirements* of the CSA N288 series of Standards. OPG's environmental management system and its supporting governing documents establish the provision of the protection of the environment at the WWMF as well as continual improvement of environmental performance as required by REGDOC-2.9.1 version 1.2.

The current OPG ISO 14001 EMS certificate was issued in 2024 following a successful external audit; it is valid for 3 years.

3.9.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.9.3.1 Past Performance

OPG's environmental protection program at the WWMF continues to meet CNSC regulatory requirements, and OPG has maintained satisfactory performance in the specific areas of this SCA during the current licence period.

3.9.3.2 Regulatory Focus

CNSC staff will continue to monitor OPG's performance in this area through regulatory oversight activities including onsite inspections and desktop reviews of compliance reporting and revisions to relevant program documentation for the WWMF pertaining to this SCA.

CNSC staff oversight for this SCA will focus on effluent and emissions control, as well as environmental monitoring, to ensure the continued protection of the public and the environment.

3.9.3.3 Proposed Improvements

OPG is expected to conduct a gap analysis and prepare an implementation plan on CSA N288.4:19 *Environmental monitoring programs at nuclear facilities and uranium mines and mills* for the proposed licence period. OPG has conducted a preliminary review of the CSA N288.4-19 standard against the WWMF's current Environmental Monitoring Program and no significant gaps were found.

3.9.4 Conclusion

CNSC staff have assessed OPG's documentation and analysis under the environmental protection SCA and have found them to be acceptable. CNSC staff conclude that OPG is qualified to carry out the activities sought to be authorized in the proposed licence in this SCA. CNSC staff expect no adverse effects on human health and the environment during the operation of the facility.

3.10 Emergency Management and Fire Protection

The emergency management and fire protection SCA covers emergency plans and emergency preparedness programs that exist for emergencies and for non-routine conditions.

The specific areas that comprise this SCA at OPG's WWMF include:

- Nuclear emergency preparedness and response;
- Fire emergency preparedness and response.

3.10.1 Trends

The following table indicates the overall rating trends for the emergency management and Fire Protection SCA over the current licensing period:

TRENDS FOR EMERGENCY MANAGEMENT AND FIRE PROTECTION									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the emergency management and fire protection SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.10.2 Discussion

Section 2.10 of OPG's Application [1] provides information pertaining to the emergency management and fire protection SCA at the WWMF.

The emergency management and fire protection SCA covers the provisions for a licensee to have in place an emergency preparedness plan and response capability which is designed to mitigate the effects of accidental releases of radiological and hazardous substances into the environment during emergency and non-routine conditions. This SCA also includes implementation of a fire protection program (FPP) to prevent or minimize the risk that fire poses to the environment, the health and safety of employees and the public.

OPG's *Employee Emergency Response Procedure,* W-PROC-ES-0002, identifies emergency response requirements at WWMF for fire, medical and radiation emergencies. Emergency response is provided by Bruce Power Emergency Protective Services.

During the current licence period, CNSC staff conducted compliance verification activities to evaluate OPG's performance in the emergency management and fire protection SCA at the WWMF. These activities include inspections related to program implementation, observation of fire response drills and desktop reviews of licensee submissions. CNSC staff have found that OPG met regulatory requirements and proposed or implemented satisfactory corrective actions to address findings in this SCA.

Details of CNSC staff's assessment of this SCA are presented in the following sections.

Nuclear emergency preparedness and response

OPG implements an emergency management program at the WWMF, as required by REGDOC-2.10.1, *Nuclear Emergency Preparedness and Response, Version 2.* OPG continues to improve its emergency management programs based on updates to regulatory requirements, as well as lessons learned from events, exercises, and drills.

An incident or accident at the WWMF is not expected to require activation of the nuclear emergency response organization. The WWMF Facility Manager may request support from the Emergency Response Organization, if required; however, such a response would not constitute activation of the full emergency response process.

In accordance with the Provincial Nuclear Emergency Response Plan and the Bruce Power Nuclear Emergency Response Plan, OPG staff at the WWMF follow the emergency response instructions from Bruce Power for a station emergency at either Bruce Power nuclear generating stations A or B.

Fire emergency preparedness and response

OPG has a mutual aid agreement in place with Bruce Power to provide emergency services to the WWMF. This arrangement is tested routinely during the conduct of joint training, drills, and exercises.

All drills and exercises are documented, and deficiencies are tracked to ensure that appropriate corrective actions are taken.

A full-scale fire response drill was conducted at the WWMF with Bruce Power Emergency Protective Services on July 10, 2025, per the facility's Fire Safety Plan (W-PLAN-09076-00001), Fire Response Needs Analysis (W-REP-71400-00017), and Bruce Power Memorandum of Understanding. The drill was conducted effectively and received an overall rating of PASS. In total, there were 23 objectives evaluated during this drill; 14 objectives were met with a satisfactory result, 4 were assessed as marginal, and 3 were unsatisfactory. The unsatisfactory results were addressed during the drill, with the First Line Manager (FLM) performing the accounting of personnel in place of a Qualified Assembly Area Supervisor, as documented in drill report, W-REP-09076-1688562.

In total, CNSC staff conducted 3 focused emergency response inspections in 2018, 2021, 2024, and 1 focused fire protection inspection in 2017. CNSC staff are satisfied with the corrective actions, which were implemented, and all action items have been closed

Fire protection at the WWMF is achieved through the implementation of a comprehensive fire protection program to minimize risk to the health and safety of persons and to the environment from fire, through appropriate fire protection system design, fire safe operation and fire prevention.

CNSC staff confirmed that the WWMF has a FPP that complies with the *National Fire Code of Canada 2020* (NFCC), *National Building Code of Canada 2020* (NBCC), and CSA N393:22, *Fire Protection for Facilities that Process, Handle, or Store Nuclear Substances*. OPG maintains a FPP to minimize both the likelihood of occurrence and the severity of consequences due to fire at the facility. This is achieved through appropriate fire protection system design, fire safe operation, and fire prevention. OPG's FPP has been established to comply with the requirements of CSA N393, the NFCC, and the NBCC.

As part of the FPP implementation, OPG is required to conduct an Annual Facility Condition Inspection (AFCI). CNSC staff has reviewed previous reports including corrective actions for identified findings and found it to be generally acceptable. The AFCI, consisting of a visual inspection of the WWMF, was performed on May 20 and 21, 2025.

The inspection resulted in the identification of 16 findings of non-compliance. The findings were of low safety significance. Since the inspection, OPG has closed all of the findings.

In addition, OPG maintains a fire hazard assessment (FHA) for the WWMF in accordance with the requirements of the CSA N393. The FHA is typically conducted to ensure that the mitigation measures in place provide adequate life safety and environmental protection, and that the applicable fire code requirements were satisfied.

OPG continues to effectively implement emergency management and FPP programs, which adequately protect workers, the public, and the environment from emergency or non-routine conditions. OPG maintains a FPP that minimizes the risk to health, safety, and the environment due to fire. The implementation of the fire protection program ensures that OPG is able to efficiently and effectively control and respond to fire situations.

CNSC staff are satisfied with the emergency management and fire protection measures taken by OPG during the current licensing period with respect to this SCA and concluded that they meet CNSC regulatory requirements.

3.10.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.10.3.1 Past Performance

OPG's emergency management and fire protection programs at the WWMF continues to meet CNSC regulatory requirements, and OPG has maintained satisfactory performance in the specific areas of this SCA during the current licence period.

3.10.3.2 Regulatory Focus

CNSC staff continue to monitor OPG's performance in this area through regulatory oversight activities including onsite inspections and desktop reviews of compliance reporting and revisions to relevant program documentation for the WWMF pertaining to this SCA.

3.10.3.3 Proposed Improvements

There are no proposed improvements for this SCA. OPG's current Emergency Management and Fire Protection Program at the WWMF is considered satisfactory.

3.10.4 Conclusion

OPG continues to maintain their emergency management and fire protection program at the WWMF. CNSC staff conclude that OPG is in compliance with regulatory requirements and that the WWMF is performing satisfactorily with respect to this SCA.

3.11 Waste Management

The waste management SCA covers internal waste-related programs that form part of the facility's operations up to the point where the waste is removed from the facility to a separate waste management facility. This area also covers the planning for decommissioning.

The specific areas that comprise this SCA at OPG's WWMF include:

- Waste characterization
- Waste minimization
- Waste management practices
- Decommissioning plans

3.11.1 Trends

The following table indicates the overall rating trends for the waste management SCA over the current licensing period:

TRENDS FOR WASTE MANAGEMENT									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the waste management SCA meet regulatory requirements.									
[1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.11.2 Discussion

Section 2.11 of OPG's Application [1] provides information pertaining to the waste management SCA at the WWMF.

OPG has implemented and maintained a waste management program at the WWMF in accordance with CNSC regulatory requirements. OPG's waste management program describes how waste is managed throughout its lifecycle to the point of disposal. This includes waste generation, storage, processing, recycling, and removal/transfer activities. OPG also maintains a preliminary decommissioning plan (PDP) for the WWMF. The current PDP covers the 2023 to 2027 period and is required to be revised and resubmitted every 5 years.

During the current licence period, CNSC staff conducted compliance verification activities to evaluate OPG's performance in the Waste Management SCA. These activities include inspections, reviews of quarterly reports and other required submissions (e.g., PDPs). CNSC staff have found that OPG has met the regulatory requirements and proposed or implemented satisfactory corrective actions to address any findings related to the Waste Management SCA.

Details pertaining to the specific areas within the SCA are presented in the following subsections.

Waste Characterization, Minimization and Management

OPG has implemented a waste characterization program (W-PROC-WM-0096, *Nuclear Waste Characterization)* at the WWMF to identify the characteristics (i.e., physical, chemical, biological, and radiological) of waste. CNSC staff have assessed this program and the supporting documents and found that it complies with CSA N292.8-21, *Characterization of radioactive waste and irradiated fuel*.

OPG has implemented strategies and procedures to minimize waste generated at WWMF. Waste from the maintenance and operation of the WWMF is segregated at the point of generation into separate streams: conventional, radioactive, and hazardous waste. All radioactive waste managed at the WWMF, including that received from offsite, is further categorized as low-level waste (LLW), intermediate-level waste (ILW), or high-level waste (HLW), to meet the waste acceptance criteria for the waste receiving facilities. Non-radioactive waste is further segregated as conventional waste or hazardous chemical waste. To segregate and reduce active waste volumes, LLW is sorted into 3 categories: incinerable, compactable, and non-processible.

OPG's "Likely Clean" program further supports waste minimization by diverting material believed to be uncontaminated from the radioactive waste stream. Material is surveyed and, where confirmed to be free of contamination, managed as conventional waste. In 2025, the program achieved a diversion rate of 28% at the WWMF.

Decommissioning

The WWMF PDP was submitted in 2022 for the review period 2023-2027. The PDP is reviewed on a 5-year basis, with the next regular submission is expected in 2027, together with the financial guarantee update, for the review period 2028-2032. In its Application, OPG has committed to meeting the applicable requirements of CNSC REGDOC-2.11.2, *Decommissioning* as well as CSA N294, *Decommissioning of facilities containing nuclear substances.* CNSC staff will assess the revised PDP against those requirements when it is submitted.

CNSC staff are satisfied that the current PDP for the WWMF meets regulatory requirements and will verify that OPG continues to meet the minimum update frequency of at least every 5 years for these plans.

3.11.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.11.3.1 Past Performance

OPG's waste management programs at the WWMF continue to meet CNSC regulatory requirements, and OPG has maintained satisfactory performance in the specific areas of this SCA during the current licence period. OPG also maintains a satisfactory PDP for the WWMF.

3.11.3.2 Regulatory Focus

CNSC staff will continue to verify OPG's performance and compliance with regulatory requirements in all aspects of the Waste Management SCA through regulatory oversight activities, including inspections and reviews of compliance reports and other licensee submissions, such as updated decommissioning plans.

3.11.3.3 Proposed Improvements

OPG has committed to implementing the 2024 version of CSA N292.0, *Radioactive Waste Management: Common Requirements of the CSA N292 Series of Standards* during the proposed licence period.

3.11.4 Conclusion

Based on CNSC staff's assessment of OPG's Application, supporting documentation, and performance during the current licence period, CNSC staff conclude that OPG's waste management programs at the WWMF meet CNSC regulatory requirements. CNSC staff further conclude that OPG remains qualified to perform the activities sought to be authorized in the proposed licence.

3.12 Security

The security SCA covers the programs required to implement and support the security requirements stipulated in the regulations, the licence, and the LCH.

The specific areas that comprise this SCA at OPG's WWMF include:

- Facilities and equipment
- Response arrangements

3.12.1 Trends

The following table indicates the overall rating trends for the security SCA over the current licensing period:

TRENDS FOR SECURITY									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the security SCA meet regulatory requirements. [1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.12.2 Discussion

Section 2.12 of OPG's Application [1] provides information pertaining to the security SCA at the WWMF.

The OPG physical security program for the WWMF is implemented through contracted security services provided by Bruce Power Security through the Site Services Agreement. Bruce Power Security implements OPG's security program at the WWMF in accordance with OPG's policies and procedures. The Bruce Site Security program has been rated as satisfactory in all CNSC's annual Regulatory Oversight Reports for Nuclear Power Generating sites. OPG's nuclear security program, N-PROG-RA-0011, *Nuclear Security*, contains the programs and processes for the equipment, personnel and procedures used to maintain security at the WWMF.

Details pertaining to the specific areas within this SCA are presented in the following subsections.

Facilities and Equipment

OPG's Security Program ensures the possession, deployment and operation of required facilities and equipment at the WWMF in accordance with the *Nuclear Security Regulations*, and REGDOC-2.12.1, *High-Security Facilities, Volume II: Criteria for Nuclear Security Systems and Devices*.

Response Arrangements

Bruce Power has written arrangements with Ontario Provincial Police (OPP) to provide off-site armed response force support to the WWMF. Throughout the current licence period, OPG submitted its annual threat and risk assessment in accordance with regulatory requirements. CNSC staff confirm that the 2025 submission met the requirements of the *Nuclear Security Regulations*.

3.12.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.12.3.1 Past Performance

During the current licence period for the WWMF, CNSC staff have been satisfied with OPG's performance in the Security SCA. CNSC staff maintain oversight of OPG's security program for the WWMF through periodic meetings, desktop reviews and on-site inspection conducted every 18 months. Any areas of non-compliances have been found to be of low safety significance. CNSC staff are satisfied that OPG continues to implement appropriate corrective actions to address identified deficiencies and that the issues do not pose an immediate risk to safety or security.

3.12.3.2 Regulatory Focus

CNSC staff will continue to verify OPG's performance and compliance with regulatory requirements in all aspects of the Security SCA through regulatory oversight activities, inspections, Bi-Annual Security exercises at the WWMF, and reviews of compliance reports and other licensee submissions.

3.12.3.3 Proposed Improvements

There are no major changes anticipated for this SCA.

3.12.4 Conclusion

CNSC staff's assessment of OPG's Application, supporting documentation, and performance during the current licence period, conclude that OPG's security program implemented at the WWMF in conjunction with Bruce Power's physical security contract is adequate to support the activities sought to be authorized in the proposed licence.

3.13 Safeguards and Non-Proliferation

The safeguards and non-proliferation SCA covers the programs and activities required for the successful implementation of the obligations arising from the Canada/International Atomic Energy Agency (IAEA) Safeguards Agreement, as well as other measures arising from the *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT). This SCA comprises a safeguards program and non-proliferation requirements.

The specific areas that comprise this SCA at OPG's WWMF include:

- Nuclear material accountancy and control;
- Access and assistance to the International Atomic Energy Agency;
- Operational and design information;
- Safeguards equipment, containment and surveillance.

3.13.1 Trends

The following table indicates the overall rating trends for the safeguards and non-proliferation SCA over the current licensing period:

TRENDS FOR SAFEGUARDS AND NON-PROLIFERATION									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the Safeguards and Non-Proliferation SCA meet regulatory requirements.									
[1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.13.2 Discussion

Section 2.13 of OPG's Application [1] provides information pertaining to the safeguards and non-proliferation SCA at the WWMF.

Pursuant to the NPT, Canada has entered into a Comprehensive Safeguards Agreement and an Additional Protocol with the IAEA (safeguards agreements). The objective of the safeguards agreements is for the IAEA to provide annual assurance to Canada and to the international community that all declared nuclear material is in peaceful, non-explosive uses, and that there is no indication of undeclared material.

The CNSC provides the mechanism, through the NSCA, regulations and licences, for the implementation of safeguards. Conditions for the application of safeguards are contained in CNSC facility operating licences and the criteria to meet those conditions are contained in the LCH and in regulatory document REGDOC-2.13.1, *Safeguards and Nuclear Material Accountancy*. Compliance includes the timely provision of reports on the movement and location of nuclear material, provision of access and assistance to IAEA inspectors for safeguards activities, support for IAEA equipment, and the submission of annual operational information, additional protocol updates as well as accurate design information.

CNSC REGDOC-2.13.1 sets out requirements and guidance for safeguards programs for applicants and licensees who possess nuclear material, operate a uranium and/or thorium mine, carry out specified types of nuclear fuel-cycle related research and development work, and/or carry out specified types of nuclear-related manufacturing activities. The requirements and guidance in this document are essential to Canadian compliance with the safeguards agreements entered into with the IAEA and are consistent with modern national and international practices.

CNSC staff are satisfied with OPG's safeguards program at the WWMF and find the program meets the requirements set out in REGDOC-2.13.1. The program conforms to measures required by the CNSC to meet Canada's international safeguards obligations as well as other measures arising from the NPT.

CNSC staff are satisfied that an effective licensing and compliance program of nuclear and nuclear-related dual-use items, and risk-significant sealed sources has been implemented at the WWMF.

Details pertaining to the specific areas within this SCA are presented in the following subsections.

Nuclear material accountancy and control

CNSC staff determined that the OPG has complied with CNSC's regulatory requirements in accordance with REGDOC-2.13.1, *Safeguards and Nuclear Material Accountancy*.

Access and assistance to the IAEA

CNSC staff confirmed that OPG's WWMF has granted adequate access and assistance to the IAEA for safeguards activities. During 2017-2025, the IAEA performed inspections and verifications that included 9 Physical Inventory Verifications, 9 Design Information Verifications, 44 Unannounced Inspections, 4 Interim Inventory Verifications, 2 Complementary Accesses, and routine DSC sealing activities. In all cases, OPG provided the IAEA with the necessary access and assistance to perform the activities and complied with all regulatory requirements.

None of the IAEA inspections resulted in major issues and the inspection results for the WWMF were satisfactory.

Operational and design information

CNSC staff are satisfied that annual operational programs, annual updates to the additional protocol, design information questionnaires, and other required information have been submitted to the IAEA and the CNSC in a timely manner.

Safeguards equipment, containment and surveillance

CNSC staff are satisfied that adequate support for the operation and maintenance of IAEA safeguards equipment, including cameras and safeguards seals, has been provided by OPG's WWMF.

3.13.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.13.3.1 Past Performance

CNSC staff are satisfied that an effective safeguards program has been implemented at the facility and expect this to continue under OPG's WWMF.

3.13.3.2 Regulatory Focus

CNSC staff will continue to monitor and evaluate OPG's WWMF's performance and compliance in all aspects of the safeguards and non-proliferation SCA including through participation in IAEA inspections, evaluations independent of the IAEA, nuclear material accountancy and control, safeguards equipment, and containment and surveillance.

3.13.3.3 Proposed Improvements

No changes are anticipated for this SCA.

3.13.4 Conclusion

Based on CNSC staff assessment of the proposed safety and control measures outlined in OPG's WWMF's licence renewal Application, supporting documents and past performance, OPG's WWMF's implementation of the safeguards and non-proliferation SCA has met and continues to meet all applicable regulatory requirements.

3.14 Packaging and Transport

The packaging and transport SCA covers the safe packaging and transport of nuclear substances to and from the licensed facility.

The specific areas that comprise this SCA at the WWMF include:

- Package design and maintenance
- Packaging and transport
- Registration for use

3.14.1 Trends

The following table indicates the overall rating trends for the packaging and transport SCA over the current licensing period:

TRENDS FOR PACKAGING AND TRANSPORT									
Overall Compliance Ratings									
2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026[1]**
SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Comments									
OPG has demonstrated satisfactory (SA) performance in this SCA during the current licence period at the WWMF. Overall, CNSC staff conclude that OPG's programs within the packaging and transport SCA meet regulatory requirements.									
[1] Note: This rating covers the period from January 1, 2026 until the publication date of this CMD.									

3.14.2 Discussion

Section 2.14 of OPG's Application [1] provides information pertaining to the packaging and transport SCA at the WWMF.

OPG has effectively implemented and maintains a packaging and transport program at the WWMF. This program ensures that the transportation of radioactive material is conducted in accordance with the requirements of the *Transportation of Dangerous Goods Regulations*, SOR/2001-286 (TDGR) and the *Packaging and Transport of Nuclear Substances Regulations, 2015*, SOR/2015-14 (PTNSR 2015).

During the current licence period, CNSC staff conducted compliance verification activities to evaluate OPG's performance in the packaging and transport SCA at the WWMF. CNSC staff found that the packaging and transport of radioactive materials at the WWMF continue to meet regulatory requirements. On-site SCA focused inspections for transportation and packaging were conducted in 2019 and 2026.

Details pertaining to the specific areas within this SCA are presented in the following subsections.

Package Design and Maintenance

The PTNSR 2015 applies to the packaging and transport of nuclear substances, including the design, production, use, inspection, maintenance and repair of packages, and the preparation, consigning, handling, loading, carriage and unloading of packages. OPG's package design and maintenance program meets these requirements.

The WWMF has a dedicated on-site facility for the maintenance of packages known as the Transport Package Maintenance Building (TPMB). CNSC staff witnessed maintenance activities and reviewed maintenance procedures and records during an on-site inspection of the WWMF in July 2026.

Packaging and Transport

OPG has programs in place to ensure compliance with the requirements of both the PTNSR 2015 and the TDGR for all shipments of nuclear substances to and from the WWMF.

In accordance with the TDGR, OPG personnel who handle, offer for transport, or transport dangerous goods at the WWMF site must receive training and be issued a training certificate by OPG. CNSC staff witnessed shipping activities and reviewed training records during inspections of the WWMF in 2019 and 2026. There were 2 non-compliant findings of low safety significance related to signage and procedures during the 2019 inspection. CNSC staff reviewed and accepted OPG's corrective actions for both non-compliances, and the findings were subsequently closed. During the 2026 inspection, 2 non-compliant findings of low safety significance were identified related to the completion of shipping documents. CNSC staff have asked OPG to provide proposed corrective actions and will follow-up once they have been submitted.

Overall, CNSC staff conclude that OPG's packaging and transport program meets regulatory requirements.

Registration for Use

OPG's packaging and transport program covers the registration for use of certified packages as required by the regulations.

3.14.3 Summary

A summary of OPG's past performance, CNSC staff's regulatory focus, and proposed improvements are presented in the following subsections.

3.14.3.1 Past Performance

OPG's packaging and transport programs at the WWMF continue to meet CNSC regulatory requirements, and OPG has maintained satisfactory performance in the specific areas of this SCA during the current licence period.

3.14.3.2 Regulatory Focus

CNSC staff will continue to monitor OPG's performance in this area through regulatory oversight activities including onsite inspections and desktop reviews of compliance reporting and revisions to relevant program documentation for the WWMF pertaining to this SCA.

3.14.3.3 Proposed Improvements

There are no proposed major changes to OPG's packaging and transport program. CNSC staff expect that OPG will continually identify and implement improvements to its packaging and transport.

3.14.4 Conclusion

Based on CNSC staff's assessment of OPG's Application, supporting documentation, on-site inspection and performance during the current licence period, CNSC staff conclude that OPG's existing packaging and transport programs at the WWMF meet CNSC regulatory requirements. CNSC staff further conclude that the information pertaining to the packaging and transport SCA included in OPG's Application meets CNSC regulatory requirements and demonstrates that OPG remains qualified to perform the activities sought to be authorized in the proposed licence.

4 Consultation and engagement

4.1 Indigenous consultation and engagement

The Crown has a common-law duty to consult with Indigenous Nations and communities when it contemplates actions that may adversely affect asserted or established Aboriginal and/or treaty rights, as defined in section 35 of the *Constitution Act, 1982* (collectively referred to in this document as "Indigenous rights"). The CNSC ensures that, when making licensing decisions under the NSCA, it upholds the honour of the Crown and its consultation and accommodation obligations under the *Constitution Act, 1982*, and the common law. Based on the information in the Application, and information received from Indigenous Nations and communities to date, CNSC staff's assessment is that the Application is unlikely to cause new adverse impacts to the exercise of asserted or established Indigenous rights. CNSC staff therefore recommend that the Commission find that the duty to consult is not formally triggered.

However, the CNSC approaches consultation and engagement in alignment with the *United Nations Declaration on the Rights of Indigenous Peoples* [3] (UN Declaration) and the *United Nations Declaration on the Rights of Indigenous Peoples Act* [4] (UNDA). In the spirit of the UN Declaration and the Honour of the Crown, CNSC staff provided clear and accessible information to Indigenous Nations and communities, identified and supported engagement opportunities on topics of interest, and sought to understand the views and address the concerns of Indigenous Nations and communities to support recommendations to the Commission regarding potential impacts of the licence application.

4.1.1 CNSC Staff's Engagement Activities

CNSC staff are committed to building long-term relationships with Indigenous Nations and communities who are interested in or potentially affected by CNSC-regulated facilities within their traditional and/or treaty territories. The CNSC's Indigenous engagement activities include sharing information, discussing topics of interest, seeking feedback and input on CNSC processes, building capacity, collaboration on assessments and regulatory oversight, and providing opportunities to participate in the CNSC's Independent Environmental Monitoring Program and certain compliance activities.

Indigenous Nations and communities engaged by CNSC staff

CNSC staff conducted an analysis to identify Indigenous Nations and communities that may have an interest in OPG's licence renewal application for the WWMF within the SON's territory, Saukiing Anishnaabekiing, in Tiverton, Ontario. This analysis was based on information in Crown-Indigenous Relations and Northern Affairs Canada's Aboriginal and Treaty Rights Information System and other mapping tools, as well as the proximity of Indigenous Nations and communities' treaty areas and territories to the Bruce nuclear site. CNSC staff also considered information gathered and shared by OPG and information provided directly by Indigenous Nations and communities, including any of their previous expressions of interest by Nations in remaining informed about CNSC-licenced activities occurring in or nearby the Bruce site.

Indigenous Nations and communities with established rights in relation to the WWMF include:

- Saugeen Ojibway Nation (SON), which is comprised of Saugeen First Nation and the Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing)

Indigenous Nations and communities with asserted rights in relation to WWMF include:

- Métis Nation of Ontario (MNO)
- Historic Saugeen Métis (HSM)

Indigenous Nations and communities with an interest in the WWMF include:

- Chippewas of Kettle and Stony Point First Nation (CKSPFN)

The CNSC has signed Terms of References for long-term engagement with the SON, MNO, and HSM, and is currently in the process of establishing a Terms of Reference relating to ongoing engagement for sites and activities of interest to CKSPFN.

The CNSC received an application from OPG on December 18, 2025, and notified the SON, MNO, HSM, and the CKSPFN (collectively referred to as 'engaged Indigenous Nations and communities' hereafter) of this submission by email on January 9, 2026. During the initial sufficiency review of the application, OPG amended their application and provided this revised version to CNSC staff on May 1, 2026. CNSC staff notified the engaged Indigenous Nations and communities of the revised submission and provided information about participant funding and the deadline to participate in the Commission hearing in an email on May 20, 2026. A further letter was sent to the engaged Indigenous Nations and communities on August 6, 2026. These letters provided information regarding the licence renewal application, opportunities to participate in the Commission's hearing process, and information about available funding to facilitate participation in the hearing and regulatory review process.

CNSC staff discussed OPG's Application in regular meetings with SON's Environment Office. Staff were responsive to requests to provide documentation and discuss concerns raised with respect to the Application. CNSC staff identified and tracked issues of interest to the SON and followed up with other relevant subject matter experts and organizations as needed to support timely resolution of issues. The SON's concerns include legacy issues around the development and operation of nuclear facilities in their territory without their engagement and Free, Prior, and Informed Consent (FPIC). The SON continues to discuss these issues with OPG, Natural Resources Canada, and other licensees in the area, as relevant. Key specific meetings and correspondence with the SON, apart from those referenced above for all engaged Indigenous Nations and communities, include:

- a letter from the SON to CNSC regarding their position with respect to the Application on May 19, 2026, and CNSC response of June 22, 2026;
- a meeting with SON leadership and CNSC staff to discuss the Application on April 28, 2026;

- letters exchanged between the SON and CNSC regarding SON's request for disclosure of correspondence between CNSC and OPG, dated August 5, 2026, August 21, 2026, and September 11, 2026; and
- meetings with SON staff to discuss the Application on June 16, 2026, June 23, 2026, July 28, 2026, September 1, 2026, and October 2, 2026.

Further details regarding CNSC staff's collaborative work and engagement with the SON will be provided in a supplemental submission prior to the Commission hearing.

CNSC staff met with MNO, HSM, and CKSPFN to discuss issues of interest with respect to OPG's Application and provided updates on opportunities to participate throughout the process. HSM and CKSPFN noted that they did not have any concerns regarding the Application to date.

All engaged Indigenous Nations and communities have been encouraged to participate in the regulatory review process and in the Commission hearing through written and/or oral interventions, to advise the Commission directly of any concerns they may have in relation to this licence application.

Participant Funding Program

The CNSC provides funding support, through its Participant Funding Program (PFP) and Indigenous and Stakeholder Capacity Fund (ISCF), for Indigenous Nations and communities to meaningfully participate in Commission proceedings and ongoing regulatory activities. The CNSC awarded $102,350.00 in participant funding to the SON to support their participation and engagement in the regulatory process for the Application.

Independent Environmental Monitoring Program

As part of the CNSC's Independent Environmental Monitoring Program (IEMP), sampling was conducted near the Bruce nuclear site in 2019, 2022, and 2025. CNSC staff reached out to interested Indigenous Nations and communities to participate in the IEMP sampling near the WWMF, including participating in site sampling with the IEMP team and providing input on the sampling plan. In the 2019 and 2022 campaigns, representatives from the SON, MNO, and HSM joined the IEMP team for sampling. The SON also identified other species of interest, including creeping juniper and milkweed, for inclusion in the 2022 campaign, and provided samples of whitefish and trout to the IEMP team for testing. In the 2025 campaign, CKSPFN also had representatives join the IEMP team for sampling.

4.1.2 Issues raised by Indigenous Nations and communities to CNSC staff

At the time of drafting the CMD, MNO, HSM, and CKSPFN have not raised any concerns in relation to the Application. A supplemental CMD will include tables tracking Indigenous Nations and communities' issues and concerns, including responses from CNSC staff and OPG.

The SON has continued to raise concerns about the transfer and storage of waste in their territory, noting that the Nation never consented to the development and operations of the WWMF and opposes the continued accumulation and storage of nuclear waste in their territory without their consent. The SON has raised these concerns, both in the context of this Application, as well as in Commission hearings for other OPG facilities that could produce waste for management, processing, and interim storage at the WWMF, including the licence renewals for the Pickering Nuclear Generating Station [5] and Darlington Nuclear Generating Station [6], the licence to construct for the Darlington New Nuclear Project [7], and the extension of the Pickering Nuclear Generating Station licence to operate [8][9]. The SON also provided information about the impacts of waste management on their community to the joint review panel for the Nuclear Waste Management Organization's Deep Geological Repository [10] and issued a 2025 moratorium from the Joint Chiefs and Councils [11] with respect to nuclear intensification and transfer of waste into SON's territory.

Key issues raised by the SON include:

- CNSC staff's recommendation that the duty to consult was not triggered for the Application;
- The SON has not given its FPIC for the storage of waste in its territory, which they assert is required under the UN Declaration; and
- CNSC's approach to staged renewals across a variety of waste streams, which has resulted in a limited consideration of the cumulative effects associated with the continued and open-ended accumulation of hazardous waste within the SON's territory.

Duty to consult and accommodate assessment

The SON raised issue with CNSC staff's recommendation to the Commission that the Application does not trigger the duty to consult and accommodate. The SON has asserted that the continued storage of waste in the territory without their consent would "contribute to the erosion of SON's inherent right to self-determination" by limiting their decision-making power over activities occurring in the territory [5]. Further, the facility was originally licenced prior to when the Crown's duty to consult and accommodate obligation was first formally affirmed by the Supreme Court of Canada in the *Haida Nation v. British Columbia (Minister of Forests)* [12] decision, meaning that the SON was not consulted on the original licensing of the WWMF facility.

In their intervention in the Darlington Nuclear Generating Station licence renewal, the SON referenced the Federal Court decision for *Kwicksutaineuk Ah-Kwa-Mish First Nation v. Canada (Attorney General)* [13], which states that:

> "the duty to consult arises each time a licence is renewed, because each new licence may potentially affect the claim right or title, if only incrementally. Otherwise, the duty to consult would be spent once the initial licence has been granted, for however long a period it is renewed and irrespective of the impacts the renewed licences may have down the road. Such a reasoning would make a mockery of the duty to consult and of the honour of the Crown" [13].

In the Record of Decision [14] for the Darlington Nuclear Generating Station licence renewal, the Commission directed CNSC staff that the duty to consult is not triggered for "the renewal of a licence that will not change the characteristics of the site, authorize new activities, or result in the construction of new facilities" because, "while continuing impacts associated with the facility's operation are acknowledged, none are new or novel".

The SON has highlighted the continued psycho-social impacts of the transportation and storage of hazardous waste within their territory – including increased perceived risk and fear and disrupted connection to the land (further described in the section below) – as an infringement on their rights: "these historic decisions are not past grievances—they represent ongoing and compounding harms" [9].

The Nation highlighted that "for SON, the legacy of the nuclear industry is one of exclusion and is marred by the systematic denial of SON's rights and interests" [9]. The cumulative effects of the ongoing operations of the WWMF and historical context were considered as part of CNSC staff's analysis regarding the duty to consult and accommodate, distinct from past decisions with respect to the Bruce nuclear site. However, the activities being proposed by OPG as part of the licence renewal all fall within the existing licensing basis, with no new hazards introduced and no new or novel impacts on human health or the environment. All waste at the WWMF would be subject to the same waste acceptance criteria and safety standards, or it would not be allowed to be stored on-site (further details in section 3.5.2 of this CMD). As such, CNSC staff's perspective is that there is no causal relationship between the Commission's decision on the Application and a potential for new adverse impacts on Indigenous rights that would trigger the duty to consult.

CNSC staff notified the SON of upcoming timelines and funding opportunities, provided documents as requested by the Nation, and remained available to discuss and identify options to address the issues of concern both with respect to the Application and outside the scope of the Application.

Free, prior, and informed consent

The SON has asserted that "the Commission is obliged to ensure that no hazardous materials are stored in SON Territory without a robust process in place to obtain SON's FPIC" [5]. Moreover, the Nation has asserted that "at a minimum, article 29(2) of UNDRIP requires the CNSC to recognize that every licence amendment leading to additional waste in SON Territory impacts SON rights", characterizing the article as "nothing short of a necessary precondition for the very survival of SON and its People" [9].

The SON has repeatedly emphasized, both in this application and in other licensing processes, that they have never given their FPIC for the transportation and storage of nuclear waste in their territory. In their intervention for the renewal of the Pickering Nuclear Generating Station, the SON stated that "the storage of nuclear waste in SON Territory without SON's FPIC is an affront to the dignity of SON People, and a direct threat to the well-being and survival of SON" [5]. The SON also highlighted the psycho-social impacts of storage activity on community members:

> "The dread and stigma of SON's perpetual status as a nuclear waste waystation disrupts SON's connection to place, resulting in withdrawal from traditional practices and the loss of knowledge transfer across generations. The impacts of allowing continued high-volume importation of nuclear waste into SON Territory are not limited to the physical and environmental—they are cultural, spiritual, and identity-based" [5].

The SON has further stated that these psycho-social impacts, including heightened perceived risk and fear, are cumulative in nature, as effects compound over time [10].

CNSC staff recognize the SON's long-standing, clear articulation of their position of impacts to their communities and rights. In particular, in their submission to the joint review panel for the Deep Geological Repository project [15], the SON identified their rights as including, but not being limited to:

- the right to maintain their culture, language, and way of life;
- the right to be sustained by their lands, waters, and resources;
- the right to harvest for sustenance, cultural, and livelihood purposes; and
- the right to be meaningfully involved in decisions that will affect the territory and to be stewards of their territory.

The SON have asserted that the ongoing psycho-social effects could result in changes to land users' behaviours, as community members may have decreased trust in the quality of resources within the environment and may be on or use the land less or in a different manner than they otherwise would have. Lack of connection to the environment and changes to land users' behaviours could result in a disruption of intergenerational knowledge transfer and cultural continuity, affecting the exercise of the right to maintaining their way of life. Further, the SON's lack of control over the future of the facility affects their right to self-determination and stewardship over the territory [10] which could in turn create further psycho-social impacts as community members' sense of risk and disconnection from place intensify.

CNSC staff continue to work collaboratively with the SON to understand their perspectives with respect to their FPIC, including information on their community-led FPIC seeking process. CNSC staff are planning to provide supplemental information to the Commission following further discussions and engagement with the SON with respect to their concerns and perspectives with respect to the UN Declaration, impacts to their rights, their FPIC position and FPIC seeking process in relation to the Application.

Saugeen Ojibway Nation's concerns regarding staged renewals across various waste streams

The SON has raised specific concerns with respect to the CNSC's approach to staged licences, which from the Nation's perspective allows projects to advance through the licence to prepare site and licence to construct stages without needing to establish a radioactive waste management strategy. In a letter to CNSC on May 19, 2026, regarding the Application, the SON noted that the staged licensing approach does not allow for a

thorough analysis of impacts on their territory. The letter stated that this is “not a reasonable regulatory approach” as it defers important decisions about the future of facilities to later stages and supports the continued accumulation of waste in the territory without their FPIC. In their intervention on the Pickering Nuclear Generation Station extension, the SON further emphasized that compartmentalizing projects “undermines the credibility of the regulatory assessment process”, “frustrates consultation and inadvertently supports OPG’s continued exploitation of unconscionable decisions and authorizations made decades ago” [5]. Further, as the SON noted in their intervention in the Darlington New Nuclear Project licence to construct process:

> “the longer the CNSC fails to acknowledge and resolve the waste issue, the more likely the CNSC is to help create a looming crisis in which storage options are reduced and the threat of OPG transporting its waste to SON Territory becomes a real possibility. In this way, the CNSC’s actions themselves contribute to the threats and impacts to SON rights” [7].

To this end, the SON has requested that OPG be required to develop solutions for on-site storage rather than relying on sending waste to the WWMF for several OPG facilities licenced by the CNSC. During the licence renewal for the Darlington Nuclear Generating Station, the SON provided comments on CNSC staff’s proposed licence conditions, requesting that OPG be required to demonstrate efforts to obtain their FPIC and arrive at a mutually accepted arrangement respecting the transfer of waste to their territory. The SON also participated in the Joint Review Panel for the licence to prepare site process and the licence to construct process for the Darlington New Nuclear Project; in those processes, the SON asserted that it would not accept the transportation of waste from the project to their territory without their consent. Similarly, in a letter to the CNSC, dated February 11, 2026, the SON noted that they do not approve of the transportation and storage of waste from OPG’s New Nuclear at Wesleyville project to the WWMF and requested that the CNSC not grant a licence to OPG to store waste from the project in the SON’s territory.

Most recently, during the licence renewal for the Pickering Nuclear Generating Station, the SON proposed measures through which the Commission could require OPG to secure the SON’s FPIC prior to planning for any waste to be transported to their territory. The SON’s position is that any project planning to send radioactive waste to the WWMF should include the SON as an affected Nation, as the downstream effects of nuclear projects outside of their territory inevitably affect the Nation and their exercise of rights [9].

The SON’s requests to limit the transport and storage of waste from other projects to the WWMF have been considered by CNSC staff in the context of those projects’ specific licensing proceedings. However, CNSC staff consider the key concerns underlying these requests to be within the scope of the WWMF’s ongoing operations and activities. The SON, apart from providing their perspective through interventions and public hearings, have collaborated with CNSC staff on the development of facility-specific licence condition handbook compliance verification criteria text, which require OPG to engage with the SON on their concerns regarding waste management activities in their territory. However, the SON have noted that these licence conditions have not adequately

integrated their requested measures. Further, the Commission and CNSC staff have maintained that the Nation's concerns and requests with respect to waste management in their territory is best considered and addressed through the WWMF renewal application, with the Commission noting in its Record of Decision for the Darlington New Nuclear Project that, "should the Commission receive a future application from OPG regarding waste management activities on SON territory, the SON will be owed consultation on that application" [16].

As a result, the SON has expressed concerns that CNSC staff's current assessment is that the WWMF renewal application did not trigger the duty to consult. In their intervention on the Pickering Nuclear Generating Station renewal, the SON summarized their frustration with CNSC's positions that the WWMF renewal does not give rise to the duty to consult and that the Commission does not direct or interfere with OPG's business decisions regarding waste management: "despite CNSC staff's stated willingness to hear SON's concerns, these positions leave SON deeply concerned that there may be no meaningful forum within the existing regulatory framework to address the open-ended accumulation of nuclear waste in SON Territory. The issue has been treated as outside the scope of proceedings for the facilities that generate the waste, and now risks being excluded from the renewal process for the facility where that waste is received, managed, and stored" [5].

However, as a result of the concerns raised by the SON, CNSC staff undertook additional steps and activities over the course of the regulatory review process for this Application, to ensure that the Nation's views were integrated and reflected in CNSC staff's documents for the Commission and the public hearing. These steps, including the allocation of funding, opportunity to participate in the Commission hearing, and discussions about issues of interest, are highlighted in sections above and further details, including an issues and concerns table with CNSC and OPG responses, will be provided in the supplemental information submitted to the Commission prior to the hearing.

The SON has also asked the Commission to require OPG to provide a definitive end date on the operation of the WWMF, but it has been CNSC staff's view that this is decision that is to be determined by OPG. While the Commission has mandated that OPG communicate with the SON about its plans for waste management with respect to its various projects, the SON have noted that this communication has not been sufficient and highlighted that OPG has not provided firm written commitments or timelines regarding the volume and type of waste anticipated to be transported to or stored at the WWMF and when that is expected to occur. The SON has raised concern that the open-ended accumulation of waste in their territory will lead to the WWMF becoming a de-facto permanent storage solution for a large portion of Ontario's nuclear waste, without the Nation ever having been consulted on the full scope of that waste or being provided the opportunity to give their consent for the facility. To this point, the Nation emphasized that "SON's ability to avoid having its Territory designated as the default nuclear waste dumping ground forever is undermined with every additional truckload of waste entering the Territory" [9].

Staff response

The SON's concerns, as described above, outline a series of important considerations for the Commission:

- whether a renewal application triggers the duty to consult and accommodate;
- how FPIC is weighed by the CNSC as Canada's nuclear regulator; and
- the cumulative effects of nuclear waste continuing to be transported to and managed within their territory for the long-term without a specific end date.

It is CNSC staff's view that the duty to consult is not triggered for the Application as there are no new or novel impacts on rights. However, in the spirit of Reconciliation and in consideration of the UN Declaration, CNSC staff have made efforts to engage with the SON commensurate to the level of concerns raised, historic context, and cumulative effects, including proposing potential solutions to addressing their concerns. As such, CNSC staff are of the view that, should the Commission determine that the duty to consult was triggered, CNSC staff's conduct, as well as the Commission hearing, would be adequate to fulfill the Commission's duty to consult obligations, should they arise.

Additionally, regarding the SON's FPIC, CNSC staff continue to work with the SON to understand their position and analyze the intersections between the Application and the UN Declaration. Further information will be provided to the Commission on this work through CNSC staff's supplemental submission prior to the hearing.

Lastly, CNSC staff recognize the SON's perspective about the harms of the continued operation of nuclear activities and facilities in their territory without consultation or consent. While CNSC staff understand that this perspective informs the Nation's FPIC position, these are considered legacy issues outside the scope of the Commission's decision with respect to this Application. OPG, Natural Resources Canada, and the SON are currently in discussions regarding the potential resolution of legacy issues, and CNSC staff continue to track issues for follow up, as needed, to advance these discussions.

CNSC staff have recommended that the Commission require Licence Condition G.5, per section 6 of REGDOC-3.2.2, *Indigenous Engagement*, wherein OPG would be required to continue to engage Indigenous Nations and communities and update the CNSC about their ongoing Indigenous engagement activities. This could include reporting on the implementation and effectiveness of mitigation and accommodation measures and commitments to Indigenous Nations and communities. CNSC staff will continue to work with all engaged Indigenous Nations and communities, and in particular the SON, on the development of the compliance verification criteria for the Licence Condition.

In general, all engaged Indigenous Nations and communities have been encouraged to notify CNSC staff and the Commission of their position with respect to the Application, and any concerns they may have about potential impacts on their community, through their intervention. CNSC staff are committed to working collaboratively with all engaged Nations and communities to support timely issues resolution.

4.1.3 Licensee Engagement Activities

REGDOC-3.2.2, *Indigenous Engagement* sets out requirements and guidance for licensees whose proposed projects may raise the Crown's duty to consult. Although OPG's licence application does not raise the formal requirements of REGDOC-3.2.2, CNSC staff encouraged OPG to conduct engagement activities with potentially interested Indigenous Nations and communities in relation to their licence application. In addition to OPG's broader Indigenous engagement policy and activities, OPG's engagement specific to this licence application has consisted of:

- providing monthly briefing notes to Indigenous Nations and communities with updates on the Application, monitoring activities, and ongoing risk assessments;
- providing yearly reports to Indigenous Nations and communities regarding project operations, the waste volumes received and processed, environmental management and monitoring initiatives, and upcoming renewals for other sites;
- creating opportunities to tour the site and participate in environmental monitoring;
- offering funding and capacity support to Indigenous Nations and communities to support their participation in engagement activities; and
- requesting information from the SON regarding potential impacts of the activities on their exercise of Indigenous rights.

OPG has additionally agreed, in collaboration with the SON, to continue discussions about the WWMF in parallel to discussions regarding legacy issues related to waste in the Nation's territory. In this case, legacy issues have been defined by the SON as "the historical and on-going impacts of the nuclear industry on the lands, waters, air, and animals of SON Territory, on the health and well-being of SON People, on the health of its economy, on its cultural and spiritual connection to the land, and on its right to make decisions to protect its lands and waters for its future generation" [6].

CNSC staff are satisfied with OPG's engagement activities to date and recommend that OPG continue their efforts to enhance their public and Indigenous engagement programs and activities throughout their licensing term. CNSC staff encourage OPG to continue working and engaging with the SON to identify a path forward and resolution to both the identified concerns with respect to legacy issues and the ongoing operations of the WWMF. It is also recommended that OPG continue engaging with Indigenous Nations and communities that have expressed interest in their operations and activities and continue to focus on making Indigenous engagement more tailored and direct to better address the needs and preferences of the communities involved.

4.1.4 Conclusion

As OPG's licence application does not propose changes to the activities at the WWMF, CNSC staff conclude that the requested licensing decision will not cause any new or novel adverse impacts to any asserted or established Indigenous rights. For this Application, both OPG and the CNSC conducted engagement activities with Indigenous Nations and communities to ensure they had the opportunity to identify any specific issues or concerns regarding the Application and participate in the regulatory review process, including the Commission hearing. The CNSC and OPG have worked to identify potential solutions and commitments to address the concerns raised by Indigenous Nations and communities to date. CNSC staff plan to submit supplemental information to the Commission in advance of the hearing to update the Commission on the status of engagement work with the SON.

CNSC staff are committed to ongoing engagement and collaboration with interested Indigenous Nations and communities and will continue to provide opportunities for meaningful long-term engagement and collaboration with respect to OPG's activities and operations in relation to the WWMF should a licence be granted. CNSC staff have also encouraged OPG to continue engagement with Indigenous Nations and communities regarding their ongoing operations at the WWMF.

CNSC staff will provide more information with respect to CNSC staff and OPG's engagement activities and recommendations in relation the Application as part of a supplemental submission to the Commission in advance of the Commission hearing.

4.2 Public consultation and engagement

The NSCA mandates the CNSC to disseminate objective scientific, technical and regulatory information to the public concerning its activities and the activities it regulates. CNSC staff fulfill this mandate in a variety of ways, including in-person and virtual information sessions, regulatory reports and proactive disclosures via media resources.

4.2.1 Discussion

CNSC staff post information about Commission proceedings, regulatory actions, and events on the CNSC website regarding the WWMF.

In accordance with section 17 of the *Canadian Nuclear Safety Commission Rules of Procedure*, a Notice of Public hearing was issued and posted on the CNSC website on March 26, 2026, inviting written comments and requests for appearances before the Commission. A revised Notice of Public hearing was posted on May 15, 2026. CNSC staff also informed the public of OPG's application, the public Commission hearing, and participant funding availability via the CNSC's website, email subscription list, and social media channels.

CNSC staff have reported on the regulatory oversight and safety performance of the WWMF through the Regulatory Oversight Reports for Canadian Nuclear Power Generating Sites. These reports provided opportunities for the public and Indigenous Nations and communities to review CNSC staff's regulatory oversight activities and licensee performance. Past regulatory oversight reports are available on the CNSC website. Moving forward regulatory oversight and monitoring dashboard reports will be posted on the CNSC website to provide interactive data and trends on the regulatory oversight of waste management facilities in Canada. This data will include information on compliance performance, reportable events and effective doses to workers.

CNSC staff engage directly with the public around the Bruce nuclear site by attending events within local communities on a regular basis. At these events, CNSC staff organize information booths and provide informative materials to the public, as well as answer any questions the public may have about CNSC and the facilities it regulates, including the WWMF. Recently, since the submission of the licence application for the WWMF, CNSC staff attended the HSM Rendezvous on August 8, 2026 and the SON Scone Fest on September 19, 2026.

4.2.2 Conclusion

CNSC staff will continue to disseminate objective scientific, technical, and regulatory information to the public regarding the WWMF, in accordance with the CNSC mandate.

4.3 Licensee public information and engagement

A Public Information and Disclosure Program (PIDP) is a regulatory requirement for licence applicants and licensees of Class I nuclear facilities, uranium mines and mills and certain Class II nuclear facilities. These requirements are found in REGDOC-3.2.1, *Public Information and Disclosure*.

The primary goal of the PIDP is to ensure that information related to the health, safety and security of persons and the environment, and other issues associated with the lifecycle of nuclear facilities are effectively communicated to the public. The program must include a commitment to, and protocol for ongoing, timely communication of information related to the licensed facility during the course of the licence period.

CNSC's expectations of a licensee's public information program and disclosure protocol are commensurate with the level of risk of the facility, as well as the level of public interest in the licensed activities. The program and protocol may be further influenced by the complexity of the nuclear facility's lifecycle and activities, and the risks to public health and safety and the environment perceived to be associated with the facility and activities.

4.3.1 Discussion

OPG maintains a fleet wide PIDP that meets CNSC regulatory requirements. The WWMF adheres to the program outlined by OPG and fulfills the regulatory requirements of REGDOC-3.2.1 by providing accessible information to interested parties and the public regarding OPG's nuclear and waste facilities, including events, activities, and operations.

Annual reports prepared by OPG summarize the PIDP program and key communications activities. CNSC staff assess these reports against the requirements of REGDOC-3.2.1 to determine compliance and identify opportunities for improvement. OPG has been responsive to CNSC staff's recommendations and continues to demonstrate interest in continuous improvement. CNSC staff expect that OPG will continue to provide these reports annually during the proposed licence period.

4.3.2 Conclusion

Based on CNSC staff's assessment of OPG's PIDP, OPG's responsiveness to CNSC staff's recommendations, and the information provided in the Application, CNSC staff conclude that OPG's PIDP for the WWMF continues to meet regulatory requirements and is adequate for the proposed licence period.

4.4 Participant funding program

The CNSC established the Participant Funding Program (PFP) in 2011 to:

1. enhance the participation of Indigenous Nations and communities, members of the public, and interested parties in the CNSC's Commission proceedings, including environmental assessment and licensing processes for major nuclear facilities (e.g., uranium mines, nuclear power plants, nuclear substance processing, or nuclear waste facilities)
2. assist Indigenous Nations and communities, members of the public, and interested parties to bring value-added information to the Commission through informed and topic-specific interventions (i.e., new, distinctive and relevant information that contributes to a better understanding of the anticipated effects of a project).

4.4.1 Discussion

The CNSC awarded participant funding through its PFP to assist interested Indigenous Nations, communities and organizations, members of the public and other interested parties in participating in the regulatory review process for OPG's Application to renew its licence for the WWMF. The PFP supports recipients in preparing for and participating in the Commission's public hearing process and providing informed, topic specific interventions to the Commission.

A Funding Review Committee (FRC) reviewed the funding applications received and made recommendations on the allocation of funding to eligible applicants.

Based on recommendations from the Funding Review Committee, the CNSC awarded a total of $180,649.30 to the following recipients:

- Saugeen Ojibway Nation
- Paul Sedran
- Canadian Association of Nuclear Host Communities
- Canadian Coalition for Nuclear Responsibility
- Northwatch

The details of this offering can be found in the online announcement here.

CNSC staff will continue to encourage the public and Indigenous Nations and communities to participate in the Commission's public proceedings with value-added information and perspectives.

4.4.2 Conclusion

Through the PFP, the CNSC has offered funding to assist interested members of the public, Indigenous Nations and communities, and interested parties to prepare for and participate in the Commission's public hearing.

5 Events and other matters of regulatory interest

5.1 Cost recovery

Paragraph 24(2)(c) of the NSCA requires that a licence application is accompanied by the prescribed fee. The *CNSC Cost Recovery Fees Regulations* (CRFR) set out the specific requirements based on the activities to be licensed. An applicant for a Class I facility licence is subject to Part 2 of CRFR, which is based on Regulatory Activity Plan fees.

5.1.1 Discussion

CNSC staff have determined that OPG remains in good standing with respect to CRFR requirements for the WWMF. OPG is subject to paragraph 5(2) of the NSCA, which relates to quarterly invoices sent to licensees.

5.1.2 Conclusion

After reviewing CNSC records, CNSC staff conclude OPG is in good standing with respect to CRFR requirements for the WWMF.

5.2 Financial guarantees

Under subsection 24(5) of the NSCA, the licensee is required to provide a financial guarantee in a form that is acceptable to the Commission. *General Nuclear Safety and Control Regulations* (GNSR), paragraph 3(1)(l) stipulates that, "an application for a licence shall contain a description of any proposed financial guarantee related to the activity for which a licence application is submitted." The financial guarantee for decommissioning is established to fund the activities described in the Preliminary Decommissioning Plan (PDP). These requirements are found in REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities*.

5.2.1 Discussion

OPG maintains a consolidated financial guarantee for the decommissioning of OPG- and Bruce Power-operated nuclear facilities in Ontario, including the WWMF. The Commission accepted OPG's revised consolidated financial guarantee for the 2023-2027 period on December 6, 2022 [17].

In accordance with the current WFOL, and as described in section G.3 of the draft WWMF LCH (refer to Appendix C), OPG is required to revise its financial guarantee at least every 5-years or when requested by the Commission. This 5-year cycle is separate from the licence period of OPG's active licences, and OPG's next financial guarantee submission is due in 2027.

OPG's financial guarantee includes the Ontario Nuclear Funds Agreement comprising the Decommissioning Segregated Funds (DSF) and the Used Fuel Segregated Funds established between OPG and the Province of Ontario, as well as the trust fund for the management of used nuclear fuel established pursuant to the Nuclear Fuel Waste Act. The total required amount for each year in the 2023-2027 period is deemed adequate without the need for a provincial guarantee because the projected value of the Nuclear Funds exceeds the decommissioning liability.

OPG is required to submit annual reports on its financial guarantee. As of 2025, the required financial guarantee amount for all OPG's decommissioning and waste management liabilities was $22,093 million, while the value of the nuclear funds was $27,920 million. CNSC staff's review of OPG's 2025 report and applicable financial statements confirmed that OPG's available funds are sufficient to cover the required financial guarantee.

CNSC staff are satisfied that the financial guarantee amount remains adequate and in effect.

5.2.2 Conclusion

OPG maintains a financial guarantee for the WWMF in accordance with regulatory requirements, which the Commission accepted in 2022 for the 2023-2027 period. CNSC staff conclude that the current financial guarantee remains adequate for the activities proposed under the WWMF WFOL.

5.3 Nuclear liability insurance

Pursuant to section 7 of the *Nuclear Liability and Compensation Act* (NLCA), which came into force on January 1, 2017, and previously under the *Nuclear Liability Act*, the licensee is required to maintain nuclear liability insurance for designated nuclear installations. This legislation is administered by Natural Resources Canada.

5.3.1 Discussion

The WWMF is authorized to contain nuclear material as defined in the *NLCA*, and is designated a "Nuclear Fuel Waste Management Facility" as defined in subsection 4(1)(d) of the *Nuclear Liability and Compensation Regulations* (NLCR) and listed in Column 4 of Item 16 in the Schedule.

OPG's liability amount is currently prescribed at $13 million according to subsection 5(c) of the NLCR. However, changes to the NLCR comes into force on January 1, 2027, which will increase this liability limit to $16.4 million.

5.3.2 Conclusion

CNSC staff confirmed that OPG is currently compliant with the NLCA financial security obligations. CNSC staff will follow-up on the increased amount, as appropriate.

5.4 Delegation of authority

Pursuant to subsection 24(5) of the NSCA, the Commission may include in a licence any condition it considers necessary for the purposes of the NSCA. The Commission may delegate authority to CNSC staff with respect to the administration of licence conditions, or portions thereof.

There are 4 proposed licence conditions (LC) in the proposed licence for the WWMF that contain the phrase "the Commission or a person authorized by the Commission":

- LC 3.2 "The licensee shall implement and maintain a program for reporting to the Commission or a person authorized by the Commission."
- LC 12.2 "The licensee shall not carry out the activities referred to in paragraph (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of the proposed security arrangements and measures for the new building, or any potential modifications to the protected area that may be associated with this new building, that is acceptable to the Commission or a person authorized by the Commission."
- LC 15.1 "The licensee shall not carry out the activities referred to in paragraph (v) of Part IV of this licence until the submission of an environmental management plan, a construction verification plan, the project design requirements and a preliminary safety analysis report and without prior written approval of the Commission or a person authorized by the Commission."

- LC 15.2 “The licensee shall not carry out the activities referred to in paragraphs (ii) and (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of a commissioning report that is acceptable to the Commission or a person authorized by the Commission.”

CNSC staff recommend the Commission delegate its authority for the purposes described in licence conditions 3.2, 12.2, 15.1 and 15.2 to the following staff:

- Director, Wastes and Decommissioning Division;
- Director General, Directorate of Nuclear Cycle and Facilities Regulation; and
- Interim Vice-President, Advanced Reactor Technologies and Nuclear Facilities Regulation.

There are 2 draft compliance verification sections of the draft LCH that contain the phrase “the Commission or a person authorized by the Commission”:

- LC 5.2 “The licensee shall implement and maintain a pressure boundary program and have in place a formal agreement with an Authorized Inspection Agency.”
- LC 13.1 “The licensee shall implement and maintain a safeguards program.”

CNSC staff recommend the Commission delegate its authority for the purposes described in the compliance verification section of the draft LCH related to licence condition 5.2 to the following staff:

- Director, Wastes and Decommissioning Division;
- Director General, Directorate of Nuclear Cycle and Facilities Regulation; and
- Interim Vice-President, Advanced Reactor Technologies and Nuclear Facilities Regulation.

CNSC staff recommend the Commission delegate its authority for the purposes described in the compliance verification section of the draft LCH related to licence condition 13.1 to the following staff:

- Director, International Safeguards Division;
- Director General, Directorate of Security and Safeguards; and
- Vice-President, Technical Support Branch.

6 Overall Conclusions and Recommendations

CNSC staff's conclusions and recommendations consider an overall assessment of OPG's compliance with the NSCA and its regulations during the current licence period (2017-2027). CNSC staff conclude that OPG has programs, resources, and measures in place at the WWMF to ensure the health and safety of persons and the environment and of the measures related to security and Canada's international obligations during the proposed licence period.

CNSC staff's assessment determined that the Application complies with regulatory requirements and establishes an adequate licensing basis for the continued operations of the WWMF. CNSC staff found that OPG's performance during the current licensing term was satisfactory and consistently met regulatory requirements.

Based on above conclusions, CNSC staff recommend that the Commission:

1. **Find,** pursuant to paragraphs 24(4)(a) and (b) of the *Nuclear Safety and Control Act* in that OPG:
   a) **Is qualified** to carry on the activities authorized by the licence.
   b) **Will make adequate provisions** 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.
2. **Renew** the WWMF WFOL, for a period of 10 years from June 1, 2027 to May 31, 2037
3. **Delegate** authority as set out in section 5.4 of this CMD

7 References

[1] **Ontario Power Generation Letter.** *Western Waste Management Facility Licence Renewal Application*. May 1, 2026. CD# W-CORR-0531-02106. QIRNJZWB17KO-1891975360-91.

[2] **CNSC Staff CMD**. *Potential Neutron Exposure of Workers*. September 12, 2024. CMD 24-M35.

[3] **United Nations General Assembly.** *United Nations Declaration on the Rights of Indigenous Peoples.* 2007. (A/RES/61/295).

[4] **Government of Canada.** *United Nations Declaration on the Rights of Indigenous Peoples Act.* June 21, 2021. S.C. 2021. c. 14.

[5] **SON CMD.** *Written Submissions of the Saugeen Ojibway Nation – Ontario Power Generation's Renewal Application for Pickering Nuclear Generating Station Power Reactor Operating Licence and Pickering Waste Facility Operating Licence*. August 12, 2026. CMD 26-H7.41.

[6] **SON CMD.** *Written Submissions of the Saugeen Ojibway Nation – Ontario Power Generation's request for 30-year licence renewal of Darlington Nuclear Generating Station Power Reactor Operating Licence, PROL 13.03/2025.* May 15, 2025. CMD 25-H2.80.

[7] **SON CMD.** *Saugeen Ojibway Nation Request to Intervene and Written Submission in Ontario Power Generation's application for a Licence to Construct the Darlington New Nuclear Power Project.* November 12, 2024. CMD 24-H3.82.

[8] **SON CMD.** *Saugeen Ojibway Nation Written Submissions and Request to Intervene – Ontario Power Generation's request for amendment to Pickering Nuclear Generating Station Power Reactor Operating Licence, PROL 48.01/2028 for authorization to operate Units 5 to 8 until December 31, 2026.* June 19, 2024. CMD 24-H5.53

[9] **SON CMD**. *Saugeen Ojibway Nation Supplemental Written Submissions – Ontario Power Generation's request for amendment to Pickering Nuclear Generating Station Power Reactor Operating Licence, PROL 48.01/2028 for authorization to operate Units 5 to 8 until December 31, 2026.* June 19, 2024. CMD 24-H5.53A.

[10] **SON Letter.** *Re: Draft Tailored Impact Statement Guidelines and Indigenous Engagement Partnership Plan for the NWMO DGR Project*. May 7, 2026.

[11] **SON Letter.** *Important Update from the Joint Chiefs and Councils to SON Members: Moratorium on nuclear intensification and importation of waste if no progress on legacy issues*. January 22, 2025.

[12] **Supreme Court of Canada**. *Haida Nation v. British Columbia (Minister of Forests)*. November 18, 2024. 2004 SCC 73.

[13] **Federal Court.** *Kwicksutaineuk Ah-Kwa-Mish First Nation v. Canada (Attorney General),* May 3, 2012. 2012 FC 517 (CanLII).

[14] **CNSC Commission Decision.** *Record of Decision - Application to Renew the Power Reactor Operating Licence for the Darlington Nuclear Generating Station*. September 24, 2025. DEC 25-H2.

[15] **SON Letter.** *Letter from the Saugeen Ojibway Nation to the CNSC with Statement of Rights and Concerns attached*. February 20, 2013. Deep Geologic Repository Project for Low and Intermediate Level Radioactive Waste comment reference number 894.

[16] **CNSC Commission Decision.** *Record of Decision - Application for a Licence to Construct one BWRX-300 Reactor at the Darlington New Nuclear Project Site.* April 4, 2025. DEC 24-H3.

[17] **CNSC Commission Decision.** *Record of Decision - Application for Acceptance of Ontario Power Generation's Revised Consolidated Financial Guarantee.* December 6, 2022. DEC 22-H104.

8 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.

Additional terms and acronyms used in this CMD are listed below.

AFCI	Annual Facility Condition Inspection
AIA	Authorized Inspection Agency
ALARA	as low as reasonably achievable
ALW	Active Liquid Waste
ASR	Accident Severity Rate
CEO	Chief Executive Officer
CINFR	Class I Nuclear Facilities Regulations
CKSPFN	Chippewas of Kettle and Stony Point First Nation
CNO	Chief Nuclear Officer
CMCC	Crisis Management Communication Centre
CMD	Commission Member Document
CRFR	*Cost Recovery Fees Regulations*
CSA	Canadian Standards Association
DSC	Dry Storage Container
DSF	Decommissioning Segregated Funds
DRLs	derived release limits
EALs	environmental action levels
ECA	Environmental Compliance Approval
EMS	environmental management system
EPR	Environmental Protection Reviews
ERA	environmental risk assessment
FHA	fire hazard assessment
FLM	First Line Manager
FPIC	Free, Prior, and Informed Consent
FPP	fire protection program
FRC	Funding Review Committee
GNSCR	*General Nuclear Safety and Control Regulations*
HLW	high-level waste

HPP	Human Performance Program
HSM	Historic Saugeen Métis
IAA	*Impact Assessment Act*
IAEA	International Atomic Energy Agency
IC	In-ground Container
IEMP	Independent Environmental Monitoring Program
IFB	irradiated fuel bay
ILW	intermediate level waste
ISCF	Indigenous and Stakeholder Capacity Fund
ISO	International Organization for Standardization
L&ILW	low and intermediate level waste
LC	licence condition
LCH	Licence Conditions Handbook
LLSB	Low-Level Storage Building
LLW	low level waste
MLITSD	Ministry of Labour, Immigration, Training and Skills Development
MNO	Métis Nation of Ontario
MPSB	Multi-Purpose Storage Building
NBCC	*National Building Code of Canada*
NEW	Nuclear Energy Worker
NFCC	*National Fire Code of Canada*
NLCA	*Nuclear Liability and Compensation Act*
NLCR	*Nuclear Liability and Compensation Regulations*
NMSA	Nuclear Management System Administration
NPT	*Treaty on the Non-Proliferation of Nuclear Weapons*
NSCA	*Nuclear Safety and Control Act*
NSS	Nuclear Sustainability Services
NSSCMP	Nuclear Safety and Security Culture Monitoring Panel
OHSA	*Ontario Occupational Health and Safety Act*
OPG	Ontario Power Generation Inc.
OPEX	Operating experience
PDP	preliminary decommissioning plan
PEA	Predictive Effects Assessment

PFP	Participant Funding Program
PIDP	Public Information and Disclosure Program
PI&R	Problem Identification and Resolution
PJB	pre-job briefs
PTNSR	*Packaging and Transport of Nuclear Substances Regulations*
QA	quality assurance
RP	radiation protection
RWOS1	Radioactive Waste Operations Site 1
SA	satisfactory
SAR	Safety Analysis Report
SAT	systematic approach to training
SB	Storage Building
SCAs	Safety and Control Areas
SG	steam generator
SIIR	Serious Injury Incident Rate
SOE	safe operating envelope
SON	Saugeen Ojibway Nation
SS	sample station
SSCs	systems, structures or components
TDGR	*Transportation of Dangerous Goods Regulations*
TLD	Thermoluminescent Dosimeter
TPMB	Transportation Package Maintenance Building
TRIF	Total Recoverable Injury Frequency
TSSA	Technical Standards and Safety Authority
UNDA	*United Nations Declaration on the Rights of Indigenous Peoples Act*
UFDSB	Used Fuel Dry Storage Buildings
WFOL	Waste Facility Operating Licence
WSH	water sampling holes
WVRB	Waste Volume Reduction Building
WWMF	Western Waste Management Facility

Appendix

APPENDIX A: Basis for the Recommendation(s)

A1: Detailed Summary of CNSC Assessment of Application

CNSC's staff assessment of OPG's licence Application included a completeness check, a sufficiency check, and a technical assessment against regulatory requirements. The completeness check verified whether the application included the prescribed information in accordance with the *Nuclear Safety and Control Act* and applicable regulations. For all facilities (i.e., Class I facilities), it is important to consider and address all licence application requirements within the applicable CNSC regulations. OPGs Application is subject to the requirements set out in sections 3 and 6 of the *General Nuclear Safety and Control Regulations* (GNSCR), as well as sections 3 and 6 of the *Class I Nuclear Facilities Regulations* (CINFR).

The sufficiency check verified whether the Application included sufficient and quality information in order for CNSC staff to conduct the technical assessment. The technical assessment verified whether the Application included adequate safety and control measures to address CNSC requirements. Documents originally submitted as part of the Application may have been revised, updated, or replaced over the course of the assessment to address CNSC requirements.

Pursuant to Section 3 of the *General Nuclear Safety and Control Regulations* Licences – General Application Requirements	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(1) An application for a licence shall contain the following information:				
(a) the applicant's name and business address;	Cover letter	Y	Y	Y
(b) the activity to be licensed and its purpose;	Section 1.0	Y	Y	Y
(c) the name, maximum quantity, and form of any nuclear substance to be encompassed by the licence;	Appendix C	Y	Y	Y

Pursuant to Section 3 of the *General Nuclear Safety and Control Regulations* Licences – General Application Requirements	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(d) a description of any nuclear facility, prescribed equipment, or prescribed information to be encompassed by the licence;	Sections 2.12	Y	Y	Y
(e) the proposed measures to ensure compliance with the *Radiation Protection Regulations*, the *Nuclear Security Regulations* and the *Packaging and Transport of Nuclear Substances Regulations, 2015;*	Sections 2.7, and 2.12	Y	Y	Y
(f) any proposed action level for the purpose of section 6 of the *Radiation Protection Regulations*;	Sections 2.7 and 2.9	Y	Y	Y
(g) the proposed measures to control access to the site of the activity to be licensed and the nuclear substance, prescribed equipment, or prescribed information;	Section 2.12	Y	Y	Y
(h) the proposed measures to prevent loss or illegal use, possession, or removal of the nuclear substance, prescribed equipment, or prescribed information;	Sections 2.12 and 2.13	Y	Y	Y

Pursuant to Section 3 of the *General Nuclear Safety and Control Regulations* Licences – General Application Requirements	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(i) a description and the results of any test, analysis or calculation performed to substantiate the information included in the application;	Section 2.4	Y	Y	Y
(j) the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, including waste that may be stored, managed, processed, or disposed of at the site of the activity to be licensed, and the proposed method for managing and disposing of that waste;	Section 2.11, Appendix C and Appendix D	Y	Y	Y
(k) the applicant's organizational management structure insofar as it may bear on the applicant's compliance with the [NSCA] and the regulations made under it, including the internal allocation of functions, responsibilities and authority;	Section 2.1	Y	Y	Y
(l) a description of any proposed financial guarantee relating to the activity to be licensed;	Section 3.1	Y	Y	Y

Pursuant to Section 3 of the *General Nuclear Safety and Control Regulations* Licences – General Application Requirements	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(m) any other information required by the [NSCA] or the regulations made under it for the activity to be licensed and the nuclear substance, nuclear facility, prescribed equipment or prescribed information to be encompassed by the licence.	Throughout Application and Responses to CNSC staff requests for further information	Y	Y	Y

Pursuant to Section 3 of the *Class I Nuclear Facilities Regulations* Licence Applications – General REquirements	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(3) An application for a licence in respect of a Class I nuclear facility, other than a licence to abandon, shall contain the following information in addition to the information required by section 3 of the *General Nuclear Safety and Control Regulations*:				
(a) a description of the site of the activity to be licensed, including the location of any exclusion zone and any structures within that zone;	Section 1	Y	Y	Y
(b) plans showing the location, perimeter, areas, structures and systems of the nuclear facility;	Section 1.1	Y	Y	Y

Pursuant to Section 3 of the *Class I Nuclear Facilities Regulations* Licence Applications – General REquirements	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(c) evidence that the applicant is the owner of the site or has authority from the owner of the site to carry on the activity to be licensed;	Attachment 3	Y	Y	Y
(d) the proposed management system for the activity to be licensed, including measures to promote and support safety culture;	Sections 2.1 and 2.5	Y	Y	Y
(d.1) the proposed human performance program for the activity to be licensed, including measures to ensure workers' fitness for duty.	Section 2.2	Y	Y	Y
(e) the name, form, characteristics and quantity of any hazardous substances that may be on the site while the activity to be licensed is carried on;	Appendix D	Y	Y	Y
(f) the proposed worker health and safety policies and procedures;	Section 2.8	Y	Y	Y
(g) the proposed environmental protection policies and procedures;	Section 2.9	Y	Y	Y
(h) the proposed effluent and environmental monitoring programs;	Section 2.9	Y	Y	Y

Pursuant to Section 3 of the *Class I Nuclear Facilities Regulations* Licence Applications – General REquirements	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(i) if the application is in respect of a nuclear facility referred to in paragraph 3(b) of the *Nuclear Security Regulations*, the information and documents required by sections 4 and 27 of those Regulations;	Section 2.12	Y	Y	Y
(j) the proposed program to inform persons living in the vicinity of the site of the general nature and characteristics of the anticipated effects on the environment and the health and safety of persons that may result from the activity to be licensed; and	Section 1.7	Y	Y	Y
(k) the proposed plan for the decommissioning of the nuclear facility or of the site.	Section 2.11.5	Y	Y	Y

Pursuant to Section 6 of the *Class I Nuclear Facilities Regulations* Licence to Operate	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
An application for a licence to operate a Class I nuclear facility shall contain the following information in addition to the information required by section 3:				

Pursuant to Section 6 of the *Class I Nuclear Facilities Regulations* Licence to Operate	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(a) a description of the structures at the nuclear facility, including their design and their design operating conditions;	Sections 1.1 and 2.5	Y	Y	Y
(b) a description of the systems and equipment at the nuclear facility, including their design and their design operating conditions;	Section 2.5	Y	Y	Y
(c) a final safety analysis report demonstrating the adequacy of the design of the nuclear facility;	Section 2.4	Y	Y	Y
(d) the proposed measures, policies, methods and procedures for operating and maintaining the nuclear facility;	Sections 2.3 and 2.6	Y	Y	Y
(e) the proposed procedures for handling, storing, loading and transporting nuclear substances and hazardous substances;	Sections 2.3, 2.7, 2.11, and 2.14	Y	Y	Y
(f) the proposed measures to facilitate Canada's compliance with any applicable safeguards agreement;	Section 2.13	Y	Y	Y
(g) the proposed commissioning program for the systems and equipment that will be used at the nuclear facility;	Section 2.1 and 2.5	Y	Y	Y

Pursuant to Section 6 of the *Class I Nuclear Facilities Regulations* Licence to Operate	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(h) the effects on the environment and the health and safety of persons that may result from the operation and decommissioning of the nuclear facility, and the measures that will be taken to prevent or mitigate those effects;	Sections 2.7, 2.8, 2.8, and 2.11	Y	Y	Y
(i) the proposed location of points of release, the proposed maximum quantities and concentrations, and the anticipated volume and flow rate of releases of nuclear substances and hazardous substances into the environment, including their physical, chemical and radiological characteristics;	Section 2.9	Y	Y	Y
(j) the proposed measures to control releases of nuclear substances and hazardous substances into the environment;	Section 2.9	Y	Y	Y

Pursuant to Section 6 of the *Class I Nuclear Facilities Regulations* Licence to Operate	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(k) the proposed measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of national security, including measures to: (i) assist off-site authorities in planning and preparing to limit the effects of an accidental release, (ii) notify off-site authorities of an accidental release or the imminence of an accidental release, (iii) report information to off-site authorities during and after an accidental release, (iv) assist off-site authorities in dealing with the effects of an accidental release, and (v) test the implementation of the measures to prevent or mitigate the effects of an accidental release;	Sections 2.9, 2.10 and 2.14	Y	Y	Y

Pursuant to Section 6 of the *Class I Nuclear Facilities Regulations* Licence to Operate	Location in Application or Supporting Document(s) as Noted by OPG	Complete?	Sufficient?	Adequate?
(l) the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility, including measures to alert the licensee to such acts;	Section 2.12	Y	Y	Y
(m) the proposed responsibilities of and qualification requirements and training program for workers, including the procedures for the requalification of workers; and	Section 2.2	Y	Y	Y
(n) the results that have been achieved in implementing the program for recruiting, training and qualifying workers in respect of the operation and maintenance of the nuclear facility.	Sections 2.1 and 2.2	Y	Y	Y

A2: Technical Basis

The technical basis for the recommendations presented in this CMD includes regulatory documents and national standards specified in the applicable sections of the draft WWMF LCH (See Appendix C).

A3: Specific Areas for this Facility Type

The following table identifies the specific areas that comprise each SCA for the WWMF

SPECIFIC AREAS FOR THIS FACILITY TYPE		
Functional Area	**Safety and Control Area**	**Specific Areas**
Management	Management System	▪ Management System ▪ Organization ▪ Performance Assessment, Improvement and Management Review ▪ Operating Experience (OPEX), Problem Identification and Resolution (PI&R) ▪ Change Management ▪ Safety Culture ▪ Configuration Management ▪ Records Management ▪ Supply and Contractor Management ▪ Business Continuity
	Human Performance Management	▪ Human Performance Programs ▪ Personnel Training ▪ Work Organization and Job Design ▪ Fitness for Duty
	Operating Performance	▪ Conduct of Licensed Activity ▪ Procedures ▪ Reporting and Trending ▪ Outage Management Performance ▪ Safe Operating Envelope ▪ Severe Accident Management and Recovery ▪ Accident Management and Recovery
Facility and Equipment	Safety Analysis	▪ Deterministic Safety Analysis ▪ Hazard Analysis ▪ Probabilistic Safety Analysis ▪ Criticality Safety ▪ Severe Accident Analysis

SPECIFIC AREAS FOR THIS FACILITY TYPE		
Functional Area	**Safety and Control Area**	**Specific Areas**
		▪ Management of Safety Issues (including R&D Programs)
	Physical Design	▪ Design Governance ▪ Site Characterization ▪ Facility Design ▪ Structure Design ▪ System Design ▪ Components Design
	Fitness for Service	▪ Equipment Fitness for Service/Equipment Performance ▪ Maintenance ▪ Structural Integrity ▪ Aging Management ▪ Chemistry Control ▪ Periodic Inspection and Testing
Core Control Processes	Radiation Protection	▪ Application of ALARA ▪ Worker Dose Control ▪ Radiation Protection Program Performance ▪ Radiological Hazard Control
	Conventional Health and Safety	▪ Performance ▪ Practices ▪ Awareness
	Environmental Protection	▪ Effluent and Emissions Control (releases) ▪ Environmental Management System (EMS) ▪ Assessment and Monitoring ▪ Protection of People ▪ Environmental Risk Assessment
	Emergency Management and Fire Protection	▪ Conventional Emergency Preparedness and Response ▪ Nuclear Emergency Preparedness and Response

SPECIFIC AREAS FOR THIS FACILITY TYPE		
Functional Area	**Safety and Control Area**	**Specific Areas**
		▪ Fire Emergency Preparedness and Response
	Waste Management	▪ Waste Characterization ▪ Waste Minimization ▪ Waste Management Practices ▪ Decommissioning Plans
	Security	▪ Facilities and Equipment ▪ Response Arrangements
	Safeguards and Non-Proliferation	▪ Nuclear Material Accountancy and Control ▪ Access and Assistance to the IAEA ▪ Operational and Design Information ▪ Safeguards Equipment, Containment and Surveillance ▪ Import and Export
	Packaging and Transport	▪ Package design and maintenance ▪ Packaging and transport ▪ Registration for use

APPENDIX B:

Indigenous Nations, communities and organizations that have traditional and/or treaty territories and/or interests within proximity to the licensed facilities

Facility	Indigenous Nations, communities and/or organizations
Western Waste Management Facility	▪ Saugeen Ojibway Nation, comprised of Saugeen First Nation and Chippewas of Nawash Unceded First Nation ▪ Métis Nation of Ontario Region 7 – Georgian Bay Traditional Territory Consultation Committee ▪ Historic Saugeen Métis ▪ Chippewas of Kettle and Stony Point First Nation

APPENDIX C:
Proposed Licence Changes

Overview

The WWMF currently operates under a Waste Facility Operating Licence, WFOL-W4-314.01/2027. The proposed licence incorporates the standardized licence conditions applicable to WWMF as a waste management facility as developed by CNSC staff and aligns with the CNSC's updated standard licence format.

Licence Conditions

The following changes are proposed for the proposed WFOL licence. If accepted by the Commission, these changes would be reflected in an LCH update issued by CNSC staff.

PROPOSED LICENCE CHANGES	
Licence Condition	**Proposed Change**
Licence Condition G.5	New standardized licence condition added.
Licence condition 9.1	Removal of the following text: ", which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days." This change is being made as it was determined no EALs are required at the WWMF in accordance with CSA N288.8.
Licence Condition 15.1	Wording updated to align with similar licence conditions in other WFOLs.
Licence Condition 15.2	Tables 1, 2 and 3 from the current licence have been consolidated into a single table. This table lists the additional structures currently authorized for construction. CNSC staff recommend that approval of the commissioning reports be delegated to staff in accordance with section 5.4 of this CMD.

Changes to licence condition 15.2

The current WFOL authorizes the construction and operation of additional storage structures at the WWMF subject to the requirements to provide construction notification in accordance with Licence Condition 15.1 and a commissioning report that is acceptable to the Commission or a person authorized by the Commission in accordance with Licence Condition 15.2.

The current licence was issued in 2017 and provides separate approval processes for structures that were required to support projects and activities that were already authorized by the Commission at the time of the 2017 licence renewal, and for structures that were anticipated to be needed to support projects that had not yet been before the Commission.

During the previous licence renewal hearing in 2017, the Saugeen Ojibway Nation submitted CMD 17-3.12 which stated:

> *'…the Commission ought to place hold points on the licence issued to OPG, and include in the licence permissions only for those buildings that would be needed regardless of future licensing, regulatory, and community decisions."*

At the time of the 2017 licence renewal, the then future regulatory decisions that were expected to have impact on the operation of the WWMF included:

- the Bruce Power Major Component Replacement project,
- the OPG Deep Geological Repository project, that was cancelled in 2020,
- refurbishment of the Darlington Nuclear Generating Station and
- life extension of the Pickering Nuclear Generating Station.

In response to this uncertainty, Licence condition 15.2 of the current WFOL refers to 2 separate tables (that are referred to as Table 2 and Table 3). Table 3 of Appendix A of the current WFOL lists the planned structures based on projects approved as of 2017. Table 2 lists the planned construction to support anticipated projects as of 2017, assuming all approvals were received. For the structures listed in Table 2 of Appendix A of the current WFOL, the Commission retained the authority to accept a commissioning report submitted by OPG before operation may commence. With respect to the structures listed in Table 3, the Commission delegated the acceptance of a commissioning report to CNSC staff.

The uncertainty related to the projects awaiting future regulatory decisions as of 2017 has now been resolved. The structures listed in the proposed licence no longer depend on future decisions. Therefore, CNSC recommend that the 2 tables in the current WFOL be consolidated into a single table listing the total number of authorized structures, with the acceptance of commissioning reports delegated to the staff listed in section 5.4 of this CMD. The text of licence condition 15.2 has been revised accordingly in the proposed WFOL.

Licence Format

The format of the proposed licence is updated to align with the standardized format.

Licence Period

CNSC staff recommend that the renewed WFOL be valid for a 10-year licence period, from June 1, 2027, to May 31, 2037.

Current Licence

The current Waste Facility Operating Licence (WFOL-W4-314.01/2027) for the WWMF is attached on the following page.

Word Ref.: e-Doc 7604207
PDF Ref.: e-Doc 7604208
File/Dossier: 2.05

WASTE FACILITY OPERATING LICENCE

WESTERN WASTE MANAGEMENT FACILITY

I) LICENCE NUMBER: **WFOL-W4-314.01/2027**

II) LICENSEE: Pursuant to section 24 of the *Nuclear Safety and Control Act* this licence is issued to:

Ontario Power Generation Inc.
1908 Colonel Sam Drive,
Oshawa, Ontario
L1H 8P7, Canada

III) LICENCE PERIOD: This licence is valid from **June 1, 2017** to **May 31, 2027** unless suspended, amended, revoked, replaced, or transferred.

IV) LICENSED ACTIVITIES:

This licence authorizes the licensee to:

(i) operate the Western Waste Management Facility (hereinafter "the facility"), which includes the Western Low and Intermediate Level Waste Storage Facility and the Western Used Fuel Dry Storage Facility, located at the Bruce nuclear site, Municipality of Kincardine, Province of Ontario;

(ii) possess, transfer, use, process, package, manage, import, export, and store nuclear substances, except Category I, II and III nuclear material that are required for, associated with or arise from the activities described in (i);

(iii) possess, transfer, package, manage, and store Category II nuclear material that is required for, associated with or arise from the activities described in (i) that are part of the Western Used Fuel Dry Storage Facility;

(iv) transport Category II nuclear materials that are associated with the activities described in (i) on the site of the Bruce Nuclear Power Development;

(v) carry out the site preparation, construction, or construction modifications at the facility associated with the authorized additional structures, when on completion will result in a total of no more than those listed in Table 1 of Appendix A; and

(vi) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in (i), (ii), (iii), (iv) and (v).

V) EXPLANATORY NOTES:

(i) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated Regulations.

(ii) The Western Waste Management Facility licence conditions handbook (LCH) provides compliance verification criteria used to meet the conditions of this licence. The LCH also provides information on delegation of authority and document version control.

VI) CONDITIONS:

G GENERAL

G.1 Licensing Basis for Licensed Activities

The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis, defined as:

(i) the regulatory requirements set out in the applicable laws and regulations;

(ii) the conditions and safety and control measures described in the facility's or activity's licence and the documents directly referenced in that licence;

(iii) the safety and control measures described in the licence application and the documents needed to support that licence application;

Unless otherwise approved in writing by the Canadian Nuclear Safety Commission (hereinafter "the Commission").

G.2 Notification of Changes

The licensee shall give written notification of changes to the facility or its operation, including deviation from design, operating conditions, policies, programs and methods referred to in the licensing basis.

G.3 Financial Guarantee

The licensee shall maintain a financial guarantee for decommissioning that is acceptable to the Commission.

G.4 Public Information and Disclosure

The licensee shall implement and maintain a public information and disclosure program.

1 MANAGEMENT SYSTEM

1.1 Management System

The licensee shall implement and maintain a management system.

1.2 Management of Contractors

The licensee shall ensure that every contractor working at the facility complies with this licence.

2 HUMAN PERFORMANCE MANAGEMENT

2.1 Human Performance Program

The licensee shall implement and maintain a human performance program.

2.2 Training Program

The licensee shall implement and maintain a training program.

3 OPERATING PERFORMANCE

3.1 Operations Program

The licensee shall implement and maintain an operating program, which includes a set of operating limits.

3.2 Reporting Requirements

The licensee shall implement and maintain a program for reporting to the Commission or a person authorized by the Commission.

4 SAFETY ANALYSIS

4.1 Safety Analysis Program

The licensee shall implement and maintain a safety analysis program.

5 PHYSICAL DESIGN

5.1 Design Program

The licensee shall implement and maintain a design program.

5.2 Pressure Boundary

The licensee shall implement and maintain a pressure boundary program and have in place a formal agreement with an Authorized Inspection Agency.

6 FITNESS FOR SERVICE

6.1 Fitness for Service Program

The licensee shall implement and maintain a fitness for service program.

7 RADIATION PROTECTION

7.1 Radiation Protection

The licensee shall implement and maintain a radiation protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

8 CONVENTIONAL HEALTH AND SAFETY

8.1 Conventional Health and Safety Program

The licensee shall implement and maintain a conventional health and safety program.

9 ENVIRONMENTAL PROTECTION

9.1 Environmental Protection

The licensee shall implement and maintain an environmental protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

10 EMERGENCY MANAGEMENT AND FIRE PROTECTION

10.1 Emergency Preparedness Program

The licensee shall implement and maintain an emergency preparedness program.

10.2 Fire Protection Program

The licensee shall implement and maintain a fire protection program.

11 WASTE MANAGEMENT

11.1 Waste Management Program

The licensee shall implement and maintain a waste management program.

11.2 Decommissioning Plan

The licensee shall maintain a decommissioning plan.

12 SECURITY

12.1 Security Program

The licensee shall implement and maintain a security program.

12.2 Construction

The licensee shall not carry out the activities referred to in paragraph (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of the proposed security arrangements and measures for the new building, or any potential modifications to the protected area that may be associated with this new building, that is acceptable to the Commission or a person authorized by the Commission.

13 SAFEGUARDS AND NON-PROLIFERATION

13.1 Safeguards Program

The licensee shall implement and maintain a safeguards program.

14 PACKAGING AND TRANSPORT

14.1 Packaging and Transport Program

The licensee shall implement and maintain a packaging and transport program.

15 FACILITY-SPECIFIC

15.1 Construction Plans

The licensee shall submit an environmental management plan, a construction verification plan and the project design requirements prior to the commencement of construction activities described in paragraph (v) of Part IV of this licence.

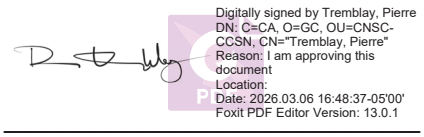
15.2 Commissioning Report

The licensee shall not carry out the activities referred to in paragraphs (ii) and (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of a commissioning report that is acceptable to the Commission for the structures listed in Table 2 of Appendix A, or a person authorized by the Commission for the structures listed in Table 3 of Appendix A.

15.3 Import and Export of Nuclear Substances

The licensee shall limit the activities of import and export of nuclear substances only to those found in Appendix B of this licence, occurring as contaminants in laundry, packaging, shielding or equipment.

SIGNED at OTTAWA, this 6th day of March 2026.



Pierre F. Tremblay, President
On behalf of the Canadian Nuclear Safety Commission

APPENDIX A

Table 1 – Structures authorized under paragraph (v) of Section IV

Structures	Total structures authorized under paragraph (v) of Section IV
Used Fuel Storage Buildings	4
Storage buildings for low- and intermediate- level waste	11
In-ground containers (IC-18)	270
In-ground containers for heat exchangers (IC-HX)	30
Large Object Processing Building	1
Waste Sorting Building	1

Table 2 – Structures that require acceptance of commissioning reports by the Commission under licence condition 15.2

Structures	Total
Used Fuel Storage Buildings	2
Storage buildings for low- and intermediate- level waste	5
In-ground containers (IC-18)	108
In-ground containers for heat exchangers (IC-HX)	30
Large Object Processing Building	1

Table 3 – Structures that require acceptance of commissioning reports by a person authorized by the Commission under licence condition 15.2

Structures	Total
Used Fuel Storage Buildings	2
Storage buildings for low- and intermediate- level waste	6
In-ground containers (IC-18)	162
Waste Sorting Building	1

APPENDIX B: Nuclear Substances and Quantity Limits for Import and Export

Nuclear Substance	Maximum Total Quantity
Americium 241	10 MBq
Antimony 122	10 GBq
Antimony 124	50 GBq
Antimony 125	20 GBq
Carbon 14	10 GBq
Cerium 141	1 GBq
Cerium 144	1 GBq
Cesium 134	1 GBq
Cesium 137	5 GBq
Chromium 51	50 GBq
Cobalt 57	10 MBq
Cobalt 58	100 MBq
Cobalt 60	50 GBq
Curium 242	1 MBq
Curium 244	100 kBq
Deuterium	350 mg
Europium 154	50 MBq
Europium 155	50 MBq
Gadolinium 153	100 MBq
Gadolinium 159	500 MBq
Hafnium 181	10 MBq
Hydrogen 3	10 GBq
Iodine 129	200 kBq
Iodine 131	2 MBq
Iodine 133	2 MBq
Iron 55	10 GBq
Iron 59	50 GBq
Lanthanum 140	1 MBq
Manganese 54	5 GBq
Manganese 56	5 GBq

Nuclear Substance	Maximum Total Quantity
Molybdenum 99	1 MBq
Neptunium 237	1 kBq
Neptunium 239	500 kBq
Nickel 59	200 MBq
Nickel 63	500 MBq
Niobium 94	10 MBq
Niobium 95	5 GBq
Plutonium 238	1 MBq
Plutonium 239	50 MBq
Plutonium 240	1 MBq
Plutonium 241	58 MBq
Promethium 147	50 MBq
Ruthenium 103	1 GBq
Ruthenium 106	1 GBq
Scandium 46	50 MBq
Silver 108m	100 kBq
Silver 110m	10 MBq
Strontium 89	5 MBq
Strontium 90	10 MBq
Tantalum 182	50 kBq
Tin 113	50 MBq
Tungsten 187	1 MBq
Uranium 234	1 kBq
Uranium 235	1 kBq
Uranium 238	10 kBq
Zinc 65	5 MBq
Zirconium 93	100 GBq
Zirconium 95	100 GBq

Proposed Licence

The proposed Waste Facility Operating Licence (WFOL-W4-314.00/2037) for the WWMF is attached on the following page.

Ontario Power Generation Inc.

WASTE FACILITY OPERATING LICENCE
WESTERN WASTE MANAGEMENT FACILITY

Ontario Power Generation Inc.

PERMIS D'EXPLOITATION DE L'INSTALLATION DE GESTION DES DECHETS WESTERN

I) LICENCE NUMBER WFOL-W4-314.00/2037

II) LICENSEE Pursuant to subsection 24(2) of the *Nuclear Safety and Control Act*, this licence is issued to:
Ontario Power Generation. Inc
1908 Colonel Sam Drive,
Oshawa, Ontario L1H 8P7, Canada

III) LICENCE PERIOD

This licence is valid from: June 1, 2027 to May 31, 2037 unless otherwise suspended in whole or in part, amended, revoked, or replaced.

IV) LICENSED ACTIVITIES

In accordance with section 26 of the *Nuclear Safety and Control Act*, this licence authorizes the licensee to:

(i) operate the Western Waste Management Facility (hereinafter "the facility"), which includes the Western Low and Intermediate Level Waste Storage Facility and the Western Used Fuel Dry Storage Facility, located at the Bruce nuclear site, Municipality of Kincardine, Province of Ontario;

(ii) possess, transfer, use, process, package, manage, import, export, and store nuclear substances, except Category I, II and III nuclear material that are required for, associated with or arise from the activities described in (i);

(iii) possess, transfer, package, manage, and store Category II nuclear material that is required for, associated with or arise from the activities described in (i) that are part of the Western Used Fuel Dry Storage Facility;

(iv) transport Category II nuclear materials that are associated with the activities described in (i) on the site of the Bruce Nuclear Power Development;

(v) carry out the site preparation, construction, or construction modifications at the facility associated with the authorized additional structures, when on completion will result in a total of no more than those listed in Table 1 of Appendix A; and

(vi) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in (i), (ii), (iii), (iv) and (v).

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V) CONDITIONS

G. GENERAL

G.1 The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis, defined as:

(i) the regulatory requirements set out in the applicable laws and regulations;

(ii) the conditions and safety and control measures described in the facility's or activity's licence and the documents directly referenced in that licence; and

(iii) the safety and control measures described in the licence application and the documents needed to support that licence application;

unless otherwise approved in writing by the Canadian Nuclear Safety Commission (hereinafter "the Commission").

G.2 The licensee shall give written notification of changes to the facility or its operation, including deviation from design, operating conditions, policies, programs and methods referred to in the licensing basis.

G.3 The licensee shall maintain a financial guarantee for decommissioning that is acceptable to the Commission.

G.4 The licensee shall implement and maintain a public information and disclosure program.

G.5 The licensee shall implement and maintain an Indigenous engagement program.

1 MANAGEMENT SYSTEM

1.1 The licensee shall implement and maintain a management system.

1.2 The licensee shall ensure that every contractor working at the facility complies with this licence.

2 HUMAN PERFORMANCE MANAGEMENT

2.1 The licensee shall implement and maintain a human performance program.

2.2 The licensee shall implement and maintain a training program.

3 OPERATING PERFORMANCE

3.1 The licensee shall implement and maintain an operating program, which includes a set of operating limits.

3.2 The licensee shall implement and maintain a program for reporting to the Commission or a person authorized by the Commission.

4 SAFETY ANALYSIS

4.1 The licensee shall implement and maintain a safety analysis program.

5 PHYSICAL DESIGN

5.1 The licensee shall implement and maintain a design program.

5.2 The licensee shall implement and maintain a pressure boundary program and have in place a formal agreement with an Authorized Inspection Agency.

6 FITNESS FOR SERVICE

6.1 The licensee shall implement and maintain a fitness for service program.

7 RADIATION PROTECTION

7.1 The licensee shall implement and maintain a radiation protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

8 CONVENTIONAL HEALTH AND SAFETY

8.1 The licensee shall implement and maintain a conventional health and safety program.

9 ENVIRONMENTAL PROTECTION

9.1 The licensee shall implement and maintain an environmental protection program.

10 EMERGENCY MANAGEMENT AND FIRE PROTECTION

10.1 The licensee shall implement and maintain an emergency preparedness program.

10.2 The licensee shall implement and maintain a fire protection program.

11 WASTE MANAGEMENT

11.1 The licensee shall implement and maintain a waste management program.

11.2 The licensee shall maintain a decommissioning plan.

12 SECURITY

12.1 The licensee shall implement and maintain a security program.

12.2 The licensee shall not carry out the activities referred to in paragraph (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of the proposed security arrangements and measures for the new building, or any potential modifications to the protected area that may be associated with this new building, that is acceptable to the Commission or a person authorized by the Commission.

13 SAFEGUARDS AND NON-PROLIFERATION

13.1 The licensee shall implement and maintain a safeguards program.

14 PACKAGING AND TRANSPORT

14.1 The licensee shall implement and maintain a packaging and transportation program.

15 FACILITY-SPECIFIC

15.1 The licensee shall not carry out the activities referred to in paragraph (v) of Part IV of this licence until the submission of an environmental management plan, a construction verification plan, the project design requirements and a preliminary safety analysis report and without prior written approval of the Commission or a person authorized by the Commission.

15.2 The licensee shall not carry out the activities referred to in paragraphs (ii) and (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of a commissioning report that is acceptable to the Commission or a person authorized by the Commission.

15.3 The licensee shall limit the activities of import and export of nuclear substances only to those found in Appendix B of this licence, occurring as contaminants in laundry, packaging, shielding or equipment.

VI) EXPLANATORY NOTES

i) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated Regulations.

ii) The Western Waste Management Facility licence conditions handbook (LCH) provides compliance verification criteria used to meet the conditions of this licence. The LCH also provides information on delegation of authority and document version control.

SIGNED at [city where signed] on [date signed]

Pierre F. Tremblay, President
Canadian Nuclear Safety Commission

APPENDIX A. Structures authorized under paragraph (v) of Section IV

Table 1 – Structures authorized under paragraph (v) of Section IV

Structures	Total structures authorized under paragraph (v) of Section IV
Used Fuel Storage Buildings	2
Storage buildings for low- and intermediate- level waste	10
In-ground containers (IC-18)	216
In-ground containers for heat exchangers (IC-HX)	30
Large Object Processing Building	1
Waste Sorting Building	1

APPENDIX B. Nuclear Substances and Quantity Limits for Import and Export

Nuclear Substance	Maximum Total Quantity
Americium 241	10 MBq
Antimony 122	10 GBq
Antimony 124	50 GBq
Antimony 125	20 GBq
Carbon 14	10 GBq
Cerium 141	1 GBq
Cerium 144	1 GBq
Cesium 134	1 GBq
Cesium 137	5 GBq
Chromium 51	50 GBq
Cobalt 57	10 MBq
Cobalt 58	100 MBq
Cobalt 60	50 GBq
Curium 242	1 MBq
Curium 244	100 kBq
Deuterium	350 mg
Europium 154	50 MBq
Europium 155	50 MBq
Gadolinium 153	100 MBq
Gadolinium 159	500 MBq
Hafnium 181	10 MBq
Hydrogen 3	10 GBq
Iodine 129	200 kBq
Iodine 131	2 MBq
Iodine 133	2 MBq
Iron 55	10 GBq
Iron 59	50 GBq
Lanthanum 140	1 MBq
Manganese 54	5 GBq
Manganese 56	5 GBq
Molybdenum 99	1 MBq

Nuclear Substance	Maximum Total Quantity
Neptunium 237	1 kBq
Neptunium 239	500 kBq
Nickel 59	200 MBq
Nickel 63	500 MBq
Niobium 94	10 MBq
Niobium 95	5 GBq
Plutonium 238	1 MBq
Plutonium 239	50 MBq
Plutonium 240	1 MBq
Plutonium 241	58 MBq
Promethium 147	50 MBq
Ruthenium 103	1 GBq
Ruthenium 106	1 GBq
Scandium 46	50 MBq
Silver 108m	100 kBq
Silver 110m	10 MBq
Strontium 89	5 MBq
Strontium 90	10 MBq
Tantalum 182	50 kBq
Tin 113	50 MBq
Tungsten 187	1 MBq
Uranium 234	1 kBq
Uranium 235	1 kBq
Uranium 238	10 kBq
Zinc 65	5 MBq
Zirconium 93	100 GBq
Zirconium 95	100 GBq

Draft Licence Conditions Handbook

The draft Licence Conditions Handbook (LCH-W4-314.00/2037) associated with the proposed WFOL is attached on the following pages.

Canada's Nuclear Regulator

QIRNJZWB17KO-1891975360-125(Word)
QIRNJZWB17KO-1891975360-143 (PDF)

LICENCE CONDITIONS HANDBOOK

LCH-W4-314.00/2037
Western Waste Management Facility
Waste Facility Operating Licence

WFOL-W4-314.00/2037

Revision 0

Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

Canada

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Licence Conditions Handbook
LCH-W4-314.00/2037
Western Waste Management Facility
Waste Facility Operating Licence
WFOL-W4-314.00/2037

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SIGNED at OTTAWA this xxth day of xx, 2027

_____

John Thelen, Director
Wastes and Decommissioning Division
Canadian Nuclear Safety Commission

Revision History:

Effective Date yyyy-mm-dd	Revision	SharePoint ID	Section(s) Changed	Description of Changes	DCR SharePoint ID
TBD	R00	QIRNJZWB17KO-1891975360-125	N/A	Original document	N/A

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INTRODUCTION

The general purpose of the Licence Conditions Handbook (LCH) is to identify and clarify the relevant parts of the licensing basis for each licence condition (LC). This will help ensure that the licensee maintains facility operation in accordance with the licensing basis for the facility and the intent of the licence. The LCH should be read in conjunction with the licence.

The LCH typically has three parts under each LC: the Preamble, Compliance Verification Criteria (CVC), and Guidance. The Preamble explains, as needed, the regulatory context, background, and/or history related to the LC. CVC are criteria used by Canadian Nuclear Safety Commission (CNSC) staff to confirm compliance with the LC. Guidance is non-mandatory information, including direction, on how to comply with the LC.

Current versions of the licensee documents listed in this LCH are recorded in Document ID 1SL1V97UGQRW-120533564-128, which is controlled by the Wastes and Decommissioning Division (WDD) of the CNSC and is available to the licensee upon request.

This LCH has the following appendices:

- APPENDIX A, which is a list of definitions and acronyms used in this LCH;
- APPENDIX B, which is a list of licensing basis publications referenced in this LCH;
- APPENDIX C, which is a list of licensee documents that require notification of change; and
- APPENDIX D, which is a list of guidance publications referenced in this LCH.

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GENERAL

Licence Condition G.1 Licensing Basis for Licensed Activities

The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis, defined as:

(i) the regulatory requirements set out in the applicable laws and regulations;

(ii) the conditions and safety and control measures described in the facility's or activity's licence and the documents directly referenced in that licence;

(iii) the safety and control measures described in the licence application and the documents needed to support that licence application;

unless otherwise approved in writing by the Canadian Nuclear Safety Commission (hereinafter "the Commission").

Preamble

The licensing basis is discussed in REGDOC 3.5.3, *Regulatory Fundamentals.*

The licensing basis sets the boundary conditions for acceptable performance at a regulated facility or activity, thus establishing the basis for the CNSC compliance program with respect to that regulated facility or activity. This LCH aligns specific parts of the licensing basis with each LC. For those LCs that require the licensee to implement and maintain a particular program, the licensing basis includes the licensee document(s) that describe the program. This could be a single document, or multiple documents, depending on the licensee's document structure.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
W-CORR-00531-02105	Submission of Renewal Application for Western Waste Management Facility Waste Facility Operating Licence	N/A

LC G.1 defines the licensing basis in three parts. Part i) of the licensing basis consists of the regulatory requirements set out in the applicable laws and regulations.

Besides the *Nuclear Safety and Control Act* (NSCA) and its associated Regulations, licensees are subject to other applicable laws and regulations including, but not limited to, the following:

- Canadian Environmental Assessment Act
- Canadian Environmental Protection Act
- Nuclear Liability and Compensation Act
- Transportation of Dangerous Goods Act

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- Radiation Emitting Devices Act
- Access to Information Act
- Canada/ International Atomic Energy Agency (IAEA) safeguards agreements
- National Building Code of Canada

The safety and control measures mentioned in the LC under Parts (ii) and (iii) of the licensing basis include important aspects of analysis, design, operation, etc. They may be found in high-level programmatic licensee documents but might also be found in lower-level, supporting documentation. They also include safety and control measures in licensing basis publications (e.g., CNSC REGDOC or Canadian Standards Association (CSA) Group standards) that are cited in the licence, the application, or in the licensee's supporting documentation. Licensing basis publications are listed in tables in this LCH under the most relevant LC. All "shall" or normative statements in licensing basis publications are considered CVC unless stated otherwise. If any "should" or informative statements in licensing basis publications are also considered CVC, this is also explained under the most relevant LC.

The licensee documents in question, as well as the relevant licensing basis publications, may cite other documents that also contain safety and control measures (i.e., there may be safety and control measures in "nested" references). There is no predetermined limit to the degree of nesting at which relevant safety and control measures may be found.

LC G.1 requires the licensee to conform to, and/or implement, all the safety and control measures. Note, however, that not all details in referenced documents are necessarily considered to be safety and control measures.

- Details that are not directly relevant to safety and control measures for facilities or activities authorized by the licence are excluded from the licensing basis.
- Details that are relevant to a different Safety and Control Area (SCA) (i.e., not the one associated with the main document), are only part of the licensing basis to the extent that they are consistent with the main requirements for both SCAs.

The licensing basis is established by the Commission at the time the licence is issued. LC G.1 requires the licensee to conduct the licensed activities in accordance with the licensing basis.

In the event of any perceived or real conflict or inconsistency between two elements of the licensing basis, the licensee shall consult CNSC staff to determine the approach to resolve the issue.

This LC is not intended to unduly inhibit the ongoing management and operation of the facility or the licensee's ability to adapt to changing circumstances and continuously improve, in accordance with its management system. Where the licensing basis refers to specific configurations, methods, solutions, designs, etc., the licensee is free to propose alternate approaches as long as they remain, overall, in accordance with the licensing basis and have a neutral or positive impact on health, safety, the environment, security, and safeguards. However, the licensee shall assess changes to confirm that operations remain in accordance with the licensing basis.

Changes to certain licensee documents may require written notification to the CNSC, even if they are in accordance with the licensing basis. Further information on this topic is provided under LC G.2.

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For unapproved operation that is not in accordance with the licensing basis, the licensee shall take action as soon as practicable to return to a state consistent with the licensing basis, taking into account the risk significance of the situation.

In the event that the Commission grants approval to operate in a manner that is not in accordance with the licensing basis, this would effectively establish a revised licensing basis for the facility. The appropriate changes would be reflected in the CVC of the relevant LC.

Description of WWMF Licensed Activities

The waste facility operating licence, WFOL-W4-314.00/2037 authorizes OPG to:

(i) operate the Western Waste Management Facility (hereinafter "the facility"), which includes the Western Low and Intermediate Level Waste Storage Facility and the Western Used Fuel Dry Storage Facility, located at the Bruce nuclear site, Municipality of Kincardine, Province of Ontario;

(ii) possess, transfer, use, process, package, manage, import, export, and store nuclear substances, except Category I, II and III nuclear material that are required for, associated with or arise from the activities described in (i);

(iii) possess, transfer, package, manage, and store Category II nuclear material that is required for, associated with or arise from the activities described in (i) that are part of the Western Used Fuel Dry Storage Facility;

(iv) transport Category II nuclear materials that are associated with the activities described in (i) on the site of the Bruce Nuclear Power Development;

(v) carry out the site preparation, construction, or construction modifications at the facility associated with the authorized additional structures, when on completion will result in a total of no more than those listed in Table 1 of Appendix A of WFOL-W4-314.01/2027; and

(vi) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in (i), (ii), (iii), (iv) and (v).

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Guidance

When the licensee becomes aware that a proposed change or activity might not be in accordance with the licensing basis, it should first seek direction from CNSC staff regarding the potential acceptability of this change or activity. The licensee should take into account that certain types of proposed changes might require significant lead times before CNSC staff can make recommendations and/or the Commission can properly consider them. Examples of these types of changes are discussed under various LCs in this LCH. Guidance for notifications to CNSC related to licensee changes are discussed under LC G.2.

Licence Condition G.2 Notification of Changes

The licensee shall give written notification of changes to the facility or its operation, including deviation from design, operating conditions, policies, programs and methods referred to in the licensing basis.

Preamble

CNSC staff track version history of licensee documents that require notification of change (Document ID 1SL1V97UGQRW-120533564-128).

The objective of the licensing basis, as defined in the LCH under LC G.1, is to set the boundary conditions for acceptable performance at the facility. The licensee is encouraged to make continuous improvements to their programs and documents throughout the licensing period as long as they remain within the licensing basis authorized by the Commission.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
OPG-PROG-0001	Information Management	N
OPG-PROC-0019	Records and Document Management	N

Written notification is a physical or electronic communication from a person authorized to act on behalf of the licensee to a CNSC delegated authority or a CNSC staff member acting on behalf of a CNSC delegated authority.

In general, the changes for which the licensee shall notify the CNSC are captured as changes to specific licensee documents. The LCH identifies them under the most relevant LC. However, the licensee documents identified in the LCH only represent the minimum subset of documents that require notification of change. For any change that is not captured as a change to a document identified in the LCH, if it negatively impacts designs, operating conditions, policies, programs, methods, or other elements that are integral to the licensing basis, the licensee shall provide written notification of the change. For example, if a licensee document in the CVC refers to another document, including a third-party document, without citing the revision number of that document, if that document changes and the licensee uses the revised version, the licensee shall determine if it is necessary to notify the CNSC of the change.

The documents needed to support the licence application may include documents produced by third parties (e.g., reports prepared by third party contractors). Changes to these documents require written notification to the CNSC only if the new version continues to form part of the licensing basis. That is, if the licensee implements a new version of a document prepared by a third party, it shall inform the CNSC of the change(s), per LC G.2. On the other hand, if a third party has updated a certain document, but the licensee has not adopted the new version as part of its safety and control measures, the licensee is not required to inform the CNSC that the third party has changed the document.

Licensee documents tabulated in the CVC of the LCH are subdivided into groups having different requirements for notification of change – ones that require prior written notification of changes and those that require written notification only. For the former type, the licensee shall submit the document to the CNSC prior to implementing the change. Typically, the requirement is to submit the proposed changes 30 days prior to planned implementation; however, the licensee shall allow sufficient time for the CNSC to review the change proportionate to its complexity and the importance of the safety and control measures being affected. For the latter type, the licensee need only submit the document at the time of implementing the change.

Changes to the licensing basis that are not clearly in a safe direction require further assessment of impact to determine if prior Commission approval is required in accordance with LC G.1. Additional considerations for changes to facility operation or operating limits, conditions or procedures are discussed under LC 3.1 and those for facility design or equipment are discussed under LC 5.1

If the licensee document, or some part of it, also requires CNSC acceptance of change, a footnote has been added to the table. Such a requirement may be established in the document itself, in another LC, or in a licensing basis publication.

Written notifications shall include a summary description of the change, the rationale for the change, expected duration (if not a permanent change), and a summary explanation of how the licensee has concluded that the change remains in accordance with the licensing basis (e.g., an evaluation of the impact on health, safety, security, the environment and Canada's international obligations). A copy of the revised written notification document shall accompany the notification. All written notifications shall be transmitted to CNSC per established communications protocols.

The above also applies to a notice of change that requires CNSC staff acceptance, due to some other requirement in the licensing basis.

Changes that are not clearly in the safe direction require further assessment of impact to determine if Commission approval is required in accordance with LC G.1.

The licensee shall notify the CNSC in writing when it plans to implement a new licensing basis publication, including the date by which implementation of the publication will be complete. The notice shall indicate the corresponding changes to licensee documents listed in the CVC of the LCH.

Guidance

A list of criteria that could help determine if a change would be in accordance with the licensing basis is provided in Appendix A of e-Doc 4055483, *Assessing licensee changes to documents or operations*. Such criteria would also be used if the change requires CNSC staff acceptance, due to some other requirement in the licensing basis.

For proposed changes that would not be in accordance with the licensing basis, the Guidance for LC G.1 applies.

Licence Condition G.3 Financial Guarantee

The licensee shall maintain a financial guarantee for decommissioning that is acceptable to the Commission.

Preamble

The *General Nuclear Safety and Control Regulations* require that a licence application contain a description of any proposed financial guarantee relating to the activity to be licensed.

The value of licensee's financial guarantee must be sufficient to cover the cost estimate for decommissioning the nuclear facility according to the facility's most up-to-date decommissioning plan that reflects the assumed decommissioning strategy and end state of the facility.

Ontario Power Generation Inc. (OPG) maintains a consolidated financial guarantee to cover the future decommissioning of the Darlington and the Pickering A & B Nuclear Generating Stations, the Bruce A & B Nuclear Generating Stations, and the Darlington, Pickering and Western Waste Management Facilities and the Radioactive Waste Operations Site-1 (RWOS-1), and the long-term management of used fuel and low- and intermediate-level radioactive waste. The current financial guarantee for OPG was accepted by the Commission on December 6, 2022. The OPG consolidated financial guarantee includes:

1. ONFA Funds established pursuant to the Ontario Nuclear Funds Agreement (ONFA) O. Reg. 53/05: PAYMENTS UNDER SECTION 78.1 OF THE ACT (ontario.ca) comprising the Decommissioning Segregated Fund (DSF) and the Used Fuel Segregated Funds (UFSF).
2. NFWA Trust Funds for the management of used fuel established pursuant to the *Nuclear Fuel Waste Act* (NFWA).

The CNSC access to the ONFA funds is provided through a legal agreement between the CNSC, OPG and the Province of Ontario (the "CNSC Financial Security and ONFA Access Agreement") effective January 1, 2023.

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Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Org	Doc #	Title	Prior Notice
Joint	N/A	CNSC Financial Security and ONFA Access Agreement between OPG, the Province of Ontario and the CNSC effective January 1, 2023	Y[1]

Note: [1]Requires CNSC acceptance of change.

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	G-206	Financial Guarantees for the Decommissioning of Licensed Activities	2000	Implemented
CNSC	REGDOC-3.3.1	Financial Guarantees for the Decommissioning of Nuclear Facilities and Termination of Licensed Activities	2021	See Transition

The financial guarantee for decommissioning the nuclear facility shall be reviewed and revised by the licensee every five years, or when the Commission requires, or following a revision of the preliminary decommissioning plan (PDP) and associated cost estimate that impacts the value of the financial guarantee.

The next regular update to the five-year financial guarantee is expected in 2027.

The licensee shall submit annually to the CNSC a written report confirming that the financial guarantee for decommissioning costs remains valid, in effect, and sufficient to meet the decommissioning needs. The licensee shall submit this report by the end of February of each year, or at any time as the Commission may request.

Transition

The licensee has implemented the requirements of REGDOC-3.3.1, *Financial Guarantees for the Decommissioning of Nuclear Facilities and Termination of Licensed Activities* into the governance documents. The licensee will revise the financial guarantee during the next scheduled revision cycle which is due to the CNSC in 2027.

Guidance

Guidance Publications

None provided.

DRAFT

Licence Condition G.4 Public Information and Disclosure

The licensee shall implement and maintain a public information and disclosure program.

Preamble

The *Class I Nuclear Facilities Regulations* require that an application for a licence contain the proposed program to inform persons living in the vicinity of the site of the general nature and characteristics of the anticipated effects on the environment and the health and safety of persons that may result from the activity to be licensed.

This LC requires the licensee to implement and maintain a public information and disclosure program to improve the public's level of understanding about WWMF's activities.

The primary goal of a public information and disclosure program is to ensure that information related to the health, safety and security of persons and the environment, and other issues associated with the lifecycle of the nuclear facilities are effectively communicated to the public and Indigenous Nations and communities.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-STD-AS-0013	Nuclear Public Information Disclosure	N

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-3.2.1,	Public Information and Disclosure	2018	Implemented

Where the public has indicated an interest to know, the Public Information and Disclosure Program (PIDP) shall include a commitment to and disclosure protocol for ongoing, timely communication of information related to the licensed facility during the course of the licensing period.

Guidance

Org	Document #	Title
CNSC	REGDOC-3.2.2	Indigenous Engagement, Version 1.2

DRAFT

Licence Condition G.5 Indigenous Engagement

The licensee shall implement and maintain an Indigenous engagement program.

Preamble

The WWMF is located in the Municipality of Kincardine, on the eastern shore of Lake Huron, within Saukiing Anishinaabekiing. This is the traditional territory of the Saugeen Ojibway Nation (SON), the shared treaty and traditional territory of the Saugeen First Nation and the Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing). The Western Waste Management Facility is also located on the traditional harvesting territories of the Métis Nation of Ontario (MNO) Region 7 and the Historic Saugeen Métis (HSM) peoples.

This licence condition requires the creation, submission and implementation of a program to ensure ongoing Indigenous engagement by OPG on the WWMF. As per section 6 of REGDOC-3.2.2, *Indigenous Engagement*, licensees may be required to continue to engage Indigenous Nations and communities after an Environmental Assessment or licensing decision by the Commission. Licensees may also be required to update the CNSC about their ongoing Indigenous engagement activities – for example, the status of the implementation and effectiveness of mitigation, accommodation measures and commitments to Indigenous Nations and communities.

CNSC staff identified Indigenous Nations and communities who have expressed interest or have asserted or established Aboriginal and/or treaty rights, as defined in section 35 of the *Constitution Act, 1982* (collectively, Indigenous rights) in the area where the WWMF is located (herein referred to as "identified Indigenous Nations or communities").

Indigenous Nations and communities with established Indigenous rights in relation to the WWMF include:

- Saugeen Ojibway Nation, which is comprised of Saugeen First Nation and the Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing)

Indigenous Nations and communities with asserted Indigenous rights in relation to the WWMF include:

- Métis Nation of Ontario
- Historic Saugeen Métis

Indigenous Nations and communities with an interest in the WWMF include:

- Chippewas of Kettle and Stony Point

Compliance Verification Criteria

In developing the WWMF Indigenous Engagement Program required by this licence condition, the licensee should engage with and seek feedback from the identified Indigenous Nations and communities.

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The engagement program shall identify specific engagement, activities, commitments and definitions. The development of the engagement program should be a collaborative process between the licensee and the identified Indigenous Nations and communities and tailored to Indigenous Nation and communities' rights, interests and preferences for engagement and communications.

The ongoing engagement in accordance with the engagement program shall be carried out with the identified Indigenous Nations and communities. If an Indigenous Nation and/or community is non-responsive, the licensee shall continue to share information and provide opportunities for engagement, unless the Indigenous Nation and/or community specifically declines the engagement opportunities and requests that OPG stop sharing information regarding the WWMF. The licensee shall report on these efforts as part of annual reporting on the engagement program.

To ensure ongoing engagement, the licensee's program shall provide for collaboration and engagement with the identified Indigenous Nations and communities on the following:

1. Make reasonable efforts to collaborate with Indigenous Nations and communities to identify and implement approaches to engagement and communication that takes into consideration the knowledge, needs, protocols, language, preferences and interests of each Indigenous Nation and community.
2. Provide knowledge sharing opportunities such as site visits, workshops and information sessions or alternate communication and engagement activities as expressed by Indigenous Nations and communities.
3. Collaborate with Indigenous Nations and communities in relation to monitoring and follow-up activities related to the WWMF. Monitoring and follow-up activities will include both operational activities and commitments made through the CNSC licensing process including, but not limited to, licence conditions related to environmental monitoring, emergency management, baseline data gathering and other follow-up activities that relate directly to concerns raised by Indigenous Nations and communities during the regulatory review process for the Project.
4. Respond to questions, concerns or comments from Indigenous Nations and communities regarding the WWMF and work collaboratively to reflect feedback and Indigenous Knowledge within the licensee's activities, as appropriate.

Reporting Requirements

This reporting shall describe:

- The name of the Indigenous Nation or community.
- The method(s), date(s), location(s), and topics of engagement activities with the Indigenous Nation or community.
- Engagement efforts undertaken within the year in relation to identified and interested Indigenous Nations and communities
- An update on the commitments (items 1 through 4 above) along with any relevant information and context regarding the status of, timelines, and process made on the initiatives and commitments.
- A summary of any issues, interests, or concerns raised, including those in relation to any potential impacts on identified or established Indigenous and/or Treaty rights.

- The measures taken, or that will be taken, to address or respond to the issues or concerns. Alternatively, an explanation as to why no further action is required to address or respond to issues or concerns shall be provided.
- A description of any changes to project activities and/or programs to address and incorporate the measures taken to respond to issues or concerns, or to incorporate knowledge and feedback from Indigenous Nations and communities.
- Discussion of relevant corporate policies and programs with respect to Indigenous initiatives.

Guidance

Org	Document #	Title
CNSC	REGDOC-3.2.2	Indigenous Engagement, Version 1.2

DRAFT

SCA– MANAGEMENT SYSTEM

Licence Condition 1.1 Management System

The licensee shall implement and maintain a management system.

Preamble

The *General Nuclear Safety and Control Regulations* require that a licence application contain the applicant's organizational management structure, including the internal allocation of functions, responsibilities and authority.

The *Class I Nuclear Facilities Regulations* require that a licence application contain information on the proposed quality assurance program for the activity to be licensed, including the measures to promote and support safety culture.

The management system must satisfy the requirements set out in the NSCA, regulations made pursuant to the NSCA, the licence and the measures necessary to ensure that safety is of paramount consideration in implementation of the management system. An adequately established and implemented management system provides CNSC staff confidence and evidence that the licensing basis remains valid.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
OPG-PROG-0009	Items and Services Management	N
N-STD-AS-0020	Nuclear Management Systems Organizations	N
N-PROC-AS-0077	Nuclear Safety and Security Culture Assessment	N
N-STD-AS-0023	Nuclear Safety Oversight	N
N-POL-0001	Nuclear Safety and Security Policy	N
N-CHAR-AS-0002	Nuclear Management System	Y
N-PROG-AS-0001	Nuclear Management System Administration	N
N-PROG-RA-0010	Independent Assessment	N
OPG-PROG-0039	Project Management	N

DRAFT

Licensing Basis Publications

Org	Document #	Title	Version	Effective Date
CSA	N286	Management system requirements for nuclear facilities	2012 (R2017)	Implemented

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.1.1	Management System
CSA Group	N286.0.1	Commentary on N286-12, Management system requirements for nuclear facilities

Licence Condition 1.2 Management of Contractors

The licensee shall ensure that every contractor working at the facility complies with this licence.

Preamble

This LC requires that the licensee retain responsibility for the protection of the health, safety, and security of the public and workers, and the protection of environment when contractors perform licensed activities.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
OPG-PROG-0038	Contractor Management	N

The management of contractors will be evaluated against the following elements and principles:

- the risks to contractors and risks to the organization from the use of contractors are evaluated to identify, assess, and eliminate or control hazards;
- contractors are adequately trained in up-to-date procedures and are qualified and competent (i.e., education, certification, designation, training, knowledge, skills, experience, abilities, and attitudes) to conduct work within the licensed facility; and,
- work carried out by the contractor is approved by competent members of the licensee's staff and monitored by qualified personnel.

As defined by the *General Nuclear Safety and Control Regulations*, workers include contractors and temporary employees who perform work that is referred in the licence. Although contractors may perform certain licensed activities in these circumstances, OPG retains the responsibility that the facility remains compliant with the licence. As such, OPG is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Guidance

None provided.

DRAFT

SCA– HUMAN PERFORMANCE MANAGEMENT

Licence Condition 2.1 Human Performance Program

The licensee shall implement and maintain a human performance program.

Preamble

The *Class I Nuclear Facilities Regulations* requires that a licence application contain the proposed human performance program for the activity to be licensed, including measures to ensure workers' fitness for duty.

Human performance relates to reducing the likelihood of human error in work activities. It refers to the outcome of human behaviour, functions and actions in a specified environment, reflecting the ability of workers and management to meet the system's defined performance under the conditions in which the system will be employed. Human factors are factors that influence human performance as it relates to the safety of a nuclear facility or activity over all design and operations phases. These factors may include the characteristics of a person, task, equipment, organization, environment, and training. The consideration of human factors in issues such as interface design, training, procedures, and organization and job design may affect the reliability of humans performing tasks under various conditions.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-PROG-AS-0002	Human Performance	N
N-PROC-OP-0047	Hours of Work Limits and Managing Worker Fatigue	Y

Licensing Basis Publications

Org	Document #	Title	Version	Effective Date
CNSC	REGDOC-2.2.4	Fitness for Duty: Managing Worker Fatigue	2017	Implemented
CNSC	REGDOC-2.2.4	Fitness for Duty, Volume II: Managing Alcohol and Drug Use, Version 3	2021	Implemented[1]
CNSC	REGDOC-2.1.2	Safety Culture	2018	Implemented

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Guidance

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.5.1	General Design Considerations: Human Factors
CNSC	REGDOC-2.2.5	Minimum Staff Complement
CNSC	REGDOC-2.2.1	Human Performance

Licence Condition 2.2 Training Program

The licensee shall implement and maintain a training program.

Preamble

The *General Nuclear Safety and Control Regulations* require that licensees ensure that workers are trained and qualified to carry on the licensed activity safely.

The *Class I Nuclear Facilities Regulations* require that licence applications include the proposed responsibilities of and qualification requirements and training program for workers, including the procedures for the requalification of workers; and the results that have been achieved in implementing the program for recruiting, training and qualifying workers in respect of the operation and maintenance of the nuclear facility.

The *Class I Nuclear Facilities Regulations* require every licensee to keep a record of the status of each worker's qualifications, requalification and training, including the results of all tests and examinations completed in accordance with the licence.

This LC requires the licensee to develop and implement training programs for workers. It also provides the requirements regarding the program and processes necessary to support responsibilities, qualifications and requalification training of persons at the nuclear facility.

As defined by the *General Nuclear Safety and Control Regulations*, a worker is a person who performs work that is referred to in a licence. This includes contractors and temporary employees. Training requirements apply equally to these types of workers as to the licensee's own employees. The GNSCR require that licensees ensure that there are a sufficient number of properly trained and qualified workers to safely conduct the licensed activities.

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Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-PROC-TR-0008	Systematic Approach to Training	N
N-PROG-TR-0005	Training	N

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-2.2.2	Personnel Training, Version 2	2016	Implemented

Guidance

None provided.

DRAFT

SCA– OPERATING PERFORMANCE

Licence Condition 3.1 Operating Performance

The licensee shall implement and maintain an operating program, which includes a set of operating limits.

Preamble

The *Class I Nuclear Facilities Regulations* requires that a licence application contain the proposed measures, policies, methods and procedures for operating and maintaining the nuclear facility. The *Nuclear Substances and Radiation Devices Regulations* has requirements for records to be kept and retained for nuclear substances.

An operating program includes an up-to-date set of operating limits for the facility and activities authorized under the licence, including: production limits and limits for the possession, use, management, transfer, storage of nuclear substances, and an inventory of nuclear substances possessed under the licensees' operating licence.

Compliance Verification Criteria Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
W-PROG-WM-0001	Nuclear Waste Management	Y
W-OPP-01911.1-00001	Operating Policies and Principles, Western Waste Management Facility and Radioactive Waste Operations Site-1	Y

This LC requires that OPG implement and maintain operating policies, programs, and procedures. These:

- define the operating rules consistent with the safety report and other licensing support documentation within which the facility will be operated, maintained, and modified, all of which should ensure nuclear safety;
- specify the authorities of facility staff to make decisions within the defined boundaries; and,
- identify and differentiate between actions where discretion may be applied and where jurisdictional authorization is required.

OPG shall ensure that procedures are current, periodically reviewed and updated, and complied with at all times.

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Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC- 2.11.1	Waste Management Volume 1: Management of Radioactive Waste	2021	Implemented
CSA Group	N292.0	General principles for the management of radioactive waste and irradiated fuel	2019	Implemented
CSA Group	N292.4	Storage of radioactive waste and irradiated fuel	2023	Implemented

Regulatory requirements and guidance for the operating performance of a waste management facility can be found in REGDOC 2.11.1 *Waste Management, Volume I: Management of Radioactive Waste*, CSA N292.4 *Storage of radioactive waste and irradiated fuel* and CSA N292.0 *General principles for the management of radioactive waste and irradiated fuel*.

Guidance

None provided.

DRAFT

Licence Condition 3.2 Reporting Requirements

The licensee shall implement and maintain a program for reporting to the Commission or a person authorized by the Commission.

Preamble

This LC requires the licensee to implement and maintain a process for reporting information to the CNSC. This includes compliance monitoring, operational performance, responses to unusual events, and notifications of various types.

The *NSCA* and its applicable regulations describe reporting to the Commission or a person authorized by the Commission. Reporting requirements are found in sections 29-32 of the *General Nuclear Safety and Control Regulations* and section 27 of the NSCA

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-PROG-RA-0002	Conduct of Regulatory Affairs	N
N-PROG-RA-0003	Performance Improvement	N
N-PROC-RA-0020	Preliminary Event Notification	N

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC 3.2.1	Public Information and Disclosure	2018	Implemented
CNSC	REGDOC 3.1.2	Reporting Requirements, Volume 1: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills, version 1.1	2022	Implemented

The licensee shall submit an annual compliance report by March 31 of each year, covering the operation for the 12-month period from January 1 to December 31 of the previous year, that meets the requirements of REGDOC-3.1.2, *Reporting Requirements, Volume 1: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills.*

Guidance

None provided.

SCA – SAFETY ANALYSIS

Licence Condition 4.1 Safety Analysis Program

The licensee shall implement and maintain a safety analysis program.

Preamble

The *General Nuclear Safety and Control Regulations* require that a licence application contains information that includes a description and the results of any test, analysis or calculation performed to substantiate the information included in the application.

The *Class I Nuclear Facilities Regulations* require that a licence application contains information that includes a final safety analysis report demonstrating the adequacy of the design of the nuclear facility.

The implementation and maintenance of a safety analysis program includes a process to identify and assess hazards and risks on an ongoing basis. This includes identifying and evaluating new or unforeseen risks that were not considered at the planning and design stages and updating previous risk assessments by replacing important assumptions with performance data. The results of this process will be used to set objectives and targets and to develop preventative and protective measures.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-PROG-MP-0014	Reactor Safety Program	N
W-SR-01320-00001	Western Waste Management Facility – Safety Report	Y

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CSA Group	N292.0	General principles for the management of radioactive waste and irradiated fuel	2019	Implemented
CSA Group	N292.4	Storage of radioactive waste and irradiated fuel	2023	Implemented
CSA Group	N292.3	Management of low- and intermediate-level radioactive waste	2014	Implemented
CSA Group	N286.7	Quality assurance of analytical, scientific, and design computer programs	2016	Implemented
CNSC	REGDOC-2.4.4	Safety Analysis for Class 1B Nuclear Facilities	2022	December 2027[1]

[1]OPG has committed to submitting an updated safety analysis report that meets the requirements of REGDOC-2.4.4, *Safety Analysis for Class 1B Nuclear Facilities*.

Licensees shall carry out safety analyses to confirm that facility design changes will not result in a reduction of safety compared to the licensing basis, as per LC G.1. Every five years, OPG shall review and revise, if necessary, the safety analysis report for the facility, to confirm that the document accurately captures the condition of the facility, and that it remains valid and continues to meet safety goals, safety objectives, and acceptance criteria. CNSC staff review the safety analysis report to verify that OPG employs appropriate assumptions, applies adequate scope, and demonstrates acceptable results. The safety analysis report must demonstrate that the radiological consequences of accident scenarios do not exceed public dose limits.

Guidance

None provided.

DRAFT

SCA – PHYSICAL DESIGN

Licence Condition 5.1 Design Program

The licensee shall implement and maintain a design program.

Preamble

The *Class I Nuclear Facilities Regulations* require that a licence application contain a description of the structures, systems and components, and relevant documentation of the facility design.

A design program ensures that the design of the facility is managed using a well-defined systematic approach. This licence condition requires that the licensee implement and maintain a design program to confirm that safety-related systems, structures and components (SSC) and any modifications to them continue to meet their design basis given new information arising over time and taking changes in the external environment into account. It also confirms that SSCs continue to be able to perform their safety functions.

This licence condition requires that the licensee implement and maintain a design control process to ensure that design outputs (both interim and final) are reviewed, verified and validated against the design inputs and performance requirements, and to ensure that the design inputs are selected such that safety, performance and reliability of the design item are achieved.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-STD-MP-0028	Conduct of Engineering	N
N-STD-MP-0027	Configuration Management	N
N-PROG-MP-0009	Design Management	N
N-PROG-MP-0001	Engineering Change Control	N

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CSA Group	N393	Fire protection for facilities that process, handle, or store nuclear substances	2022	Implemented
NRC	N/A	National Building Code of Canada	2020	Implemented
NRC	N/A	National Fire Code of Canada	2020	Implemented

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The licensee shall ensure that facility design and changes to facility design are accurately reflected in the safety analysis. Furthermore, the licensee shall ensure that facility status changes (design modifications) are controlled such that the facility is maintained and modified within the limits prescribed by the design basis and the licensing basis. Where the standards in those bases require specific reports, these shall be submitted to the CNSC.

The design of the nuclear facility and any modification shall comply with applicable codes, standards and regulations including adequate consideration for human factors.

The licensee shall design, build, modify, and otherwise carry out work related to the nuclear facility in compliance with CSA Group standard N393-22, *Fire protection for facilities that process, handle, or store nuclear substances*, the NRC *National Building Code of Canada* (2020), and the NRC *National Fire Code of Canada* (2020) for any new designs or construction.

The licensee shall submit the update or reaffirmation of the code compliance review as per the intervals outlined in CSA Group standard N393, *Fire Protection for Facilities That Process, Handle, or Store Nuclear Substances.*

Guidance

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.5.1	General Design Considerations: Human Factors
CSA Group	N291:19	Requirements for nuclear safety-related structures

With regard to modifications, the design basis for the plant should be documented and maintained to reflect design changes to ensure adequate configuration management. The design basis should be maintained to reflect new information, operating experience, safety analyses, and the resolution of safety issues or the correction of deficiencies. The impacts of the design changes should be fully assessed, addressed and accurately reflected in the safety analyses prior to implementation.

The design program should minimize the potential for human error and promote safe and reliable system performance through the consideration of human factors in the design of facilities, systems, and equipment.

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Licence Condition 5.2 Pressure Boundary

The licensee shall implement and maintain a pressure boundary program and have in place a formal agreement with an Authorized Inspection Agency.

Preamble

Pressure boundary is defined as a boundary of any pressure-retaining vessel, system or component of a nuclear or non-nuclear system, where the vessel, system or component is registered or eligible for registration.

A pressure boundary program is comprised of the many programs, processes and procedures and associated controls that are required to ensure compliance with all the requirements of CSA N285.0 *General requirements for pressure-retaining systems and components in CANDU nuclear power plants,* which defines the technical requirements for the design, procurement, fabrication, installation, modification, repair, replacement, testing, examination and inspection of pressure-retaining and containment systems, including their components and supports.

This LC also requires that an Authorized Inspection Agency (AIA) will be subcontracted directly by the licensee. An AIA is an organization recognized by the CNSC as authorized to register designs and procedures, perform inspections, and other functions and activities as defined by CSA Group standard N285.0, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants* and its applicable referenced publications (e.g., CSA Group standard B51, *Boiler, pressure vessel, and pressure piping code* and the National Board Inspection Code). The AIA is accredited by the American Society of Mechanical Engineers (ASME) as stipulated by NCA-5121 of the ASME Boiler & Pressure Vessel Code.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-LIST-00531-10003	Index to OPG Pressure Boundary Program Elements	N
N-MAN-01913.11-10000	Pressure Boundary Program Manual	N
N-CORR-00531-20012	Authorized Inspection Agency for Pressure Boundary Inspection and Registration Services [1]	Y
N-PROC-MP-0082	Design Registration	Y
N-PROG-MP-0004	Pressure Boundary	Y
N-PROC-MP-0040	System and Item Classification	Y

Note: [1]Termination of the agreement is considered a change that requires prior written notification to the CNSC.

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
ASME	B31.1 (2010)	Power Piping	2010	Implemented
CSA Group	B51	Boiler, pressure vessel, and pressure piping code	2009 and Update No. 1	Implemented
CSA Group	N285.0	General requirements for pressure-retaining systems and components in CANDU nuclear power plants	2023	Implemented
NFPA	NFPA-20	Standard for the Installation of Stationary Pumps for Fire Protection	2019	Implemented
NFPA	NFPA-24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances	2019	Implemented

For the purpose of the following, "registered", "accepted", and "approved" means either by the Commission or by a person authorized by the Commission, or by an AIA.

For the WWMF, OPG shall:

- Comply with CSA Group standard N285.0-23, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants.*
- Design, manufacture, fabricate, procure, install, modify, repair, test, examine, inspect, or otherwise perform work related to vessels, boilers, systems, piping, fittings, parts, components, and supports in accordance with the technical requirements in CSA Group standard N285.0-23, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants*. Where indicated by this standard, OPG shall have the following:
  - registered designs;
  - accepted overpressure protection reports;
  - approved code classifications, including applicable standards;
  - registered welding and brazing procedures;
  - accepted mechanical joint procedures;
  - qualified welders, welding operators, brazers, and examination personnel;
  - accepted quality assurance and quality control programs;
  - accepted plans and procedures; and
  - markings for vessels, boilers, systems, piping, fittings, parts, components and supports.

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- Operate vessels, boilers, systems, piping, fittings, parts, components and supports safely and keep them in a safe condition. OPG shall:
  - follow accepted work plans and procedures to test, maintain or alter overpressure protection devices;
  - comply with operating limits specified in certificates, orders, designs, overpressure protection reports, and applicable codes and standards; and
  - have any certified boiler or vessel that is in operation or use inspected and certified by an authorized inspector according to an accepted schedule.
- Keep records of regulatory approvals and other documents required under this section and the standards applicable to the work or equipment.
- Have a formal agreement with an AIA to perform activities as defined in CSA Group standard N285.0-23, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants* and provide the Commission with a copy of the agreement.
- Maintain a pressure boundary program document roadmap in compliance with Annex N of CSA Group standard N285.0-23, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants*.

Classification, Registration and Reconciliation Procedures

OPG procedures describing the classification, registration, and reconciliation processes and the associated controls to ensure compliance with CSA Group standard N285.0-23, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants* must form a part of the pressure boundary program.

OPG shall provide prior written notification to the Commission or to a person authorized by the Commission, of any changes to the procedures describing the classification, registration and reconciliation process.

Overpressure Protection Report

OPG shall provide written notification to the Commission, or a person authorized by the Commission, of new or revised overpressure protection reports, after the final registration of the piping system. The notification may be provided in the form of a letter.

Quality Assurance and Quality Control Programs

OPG's pressure boundary quality assurance program shall comply with CSA Group standard N285.0-23, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants*, except for Subclause 10.2.6. Repair and replacement activities are to comply with Subclause 10.3 of CSA Group standard N285.0-23.

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Class 6 or exempt-from-classification components that are required to be registered shall be subject to the quality requirements of CSA Group standard B51-09 (2009 and Update No. 1), *Boiler, pressure vessel, and pressure piping code*. OPG's pressure boundary quality control programs for these components shall be reviewed and approved by the AIA.

Classification and Registration of Fire Protection Systems

Water-based fire protection systems and associated fittings and components are to be classified as Code Class 6, designed to American Society of Mechanical Engineers (ASME) B31.1 (2010), *Power Piping*, and registered.

The following fire protection systems' fittings and components may be exempt from requiring Canadian Registration Numbers provided they meet the following exemption criteria:

- fittings and components that are cUL or ULC listed and suitable for the expected environmental conditions and maximum pressures; or
- pressurized cylinders and tubes such as extinguishers, inert gas and foam tanks, which bear Transport Canada approvals, and suitable for the expected environmental conditions and maximum pressures; or
- buried fire protection piping when in compliance with NFPA-24 (2010), *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*.

Testing of buried fire protection piping systems designed to the ASME piping code may be exempt from ASME pressure testing requirements if the pressure testing is performed to NFPA-24 (2010), *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*.

Authorized Inspection Agency

OPG shall ensure the AIA inspectors have access to all areas of the OPG facilities and records, and to the facilities and records of OPG's pressure boundary contractors and material organizations as necessary for the purposes of performing inspections and other activities required by CSA Group standard N285.0-23, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants*.

OPG shall provide the inspectors of the AIA with information, reasonable advance notice and time necessary to plan and perform inspections and other activities required by the standards.

Design registration services for pressure boundaries shall be provided by an AIA legally entitled under the Provincial Boilers and Pressure Vessels Acts and Regulations to register designs.

Where a variance or deviation from the standard exists, the licensee must first submit the proposed resolution to the AIA for evaluation, and then to the CNSC for consent. The licensee must demonstrate that meeting the code requirement is impracticable and the proposed resolution shall not be implemented without the prior written consent of CNSC staff.

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Delegation of Authority

The statement "or a person authorized by the Commission" reflects to whom the Commission has delegated certain authority. The delegation of authority by the Commission to act as a "person authorized by the Commission" is applied to the incumbents of the following positions:

- Director, Wastes and Decommissioning Division;
- Director General, Directorate of Nuclear Cycle and Facilities Regulations; and,
- Interim Vice-President, Advanced Reactor Technologies and Nuclear Facilities Regulation, Regulatory Operations Branch.

Guidance

Guidance Publications

Org	Doc #	Title
OPG	N-REF-01913.11-00001	Temporary Leak Maintenance by Leak Mitigation Process

DRAFT

SCA – FITNESS FOR SERVICE

Licence Condition 6.1 Fitness for Service Program

The licensee shall implement and maintain a fitness for service program.

Preamble

The *Class I Nuclear Facilities Regulations* require that a licence application contain information including the proposed measures, policies, methods and procedures for operating and maintaining the nuclear facility.

The SCA Fitness for Service covers activities that impact the physical condition of SSCs to ensure that they remain effective over time. Fitness for service includes programs that ensure equipment is available to perform its intended design function when called upon to do so.

This is accomplished by establishing an integrated set of programs and activities that ensure that safety performance requirements for critical SSCs are met on an ongoing basis. Aging management includes practices which address physical aging of SSCs as well as obsolescence issues as technology changes.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-STD-MP-0028	Conduct of Engineering	N
N-PROG-MP-0009	Design Management	N
N-PROG-MA-0026	Equipment Reliability	N
N-PROG-MP-0008	Integrated Aging Management	N
W-PROG-WM-0001	Nuclear Waste Management Program	Y
00104-PLAN-79171-00002	Ontario Power Generation Dry Storage Container – Base (Underside) Inspection Plan	Y
00104-PLAN-79171-00001	Ontario Power Generation Used Fuel Dry Storage Container Aging Management Plan	Y

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-2.6.3	Aging Management	2014	Implemented

DRAFT

For nuclear-related SSCs identified in accordance with OPG document N-STD-MP-0028, *Conduct of Engineering*, OPG shall establish inspection, testing and maintenance programs required to ensure continued safe operation of the facility.

Every year, the licensee shall include and submit to CNSC staff the inspection results and their evaluations, resulting from the in-service inspections and aging management of Dry Storage Containers (DSCs) in accordance with OPG document 00104-PLAN-79171-00001, Used Fuel Dry Storage Container Aging Management Plan and OPG document 00104-PLAN-79171-00002, Ontario Power Generation Dry Storage Container – Base (Underside) Inspection Plan, as part of the annual report.

Guidance

Guidance Publications

Org	Doc #	Title
CSA Group	N291:19 (R2024)	Requirements for safety-related structures
CNSC	REGDOC-2.6.2	Maintenance Programs for Nuclear Power Plants

The licensee should develop and implement life cycle management plans for nuclear safety-related pressure boundary systems and components and an aging management plan for safety-related structures.

The life cycle management plans for nuclear safety-related pressure boundary systems and components, and the aging management plan for safety-related structures should apply a systematic and integrated approach to establish, implement, and improve programs to manage aging and obsolescence of SSCs. The life cycle management plans and aging management plans should include structured, forward-looking inspection and maintenance schedules, requirements to monitor and trend aging effects and any preventative measures necessary to minimize and control aging degradation of the SSCs.

DRAFT

SCA –RADIATION PROTECTION

Licence Condition 7.1 Radiation Protection

The licensee shall implement and maintain a radiation protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

Preamble

The *Radiation Protection Regulations* require that the licensee implement a radiation protection program and also ascertain and record doses for each person who perform any duties in connection with any activity that is authorized by the NSCA or is present at a place where that activity is carried on. The program must ensure that contamination levels and radiation doses received by individuals are monitored, controlled and maintained As Low As Reasonably Achievable (ALARA).

The regulatory dose limits are explicitly provided in the *Radiation Protection Regulations*.

Action levels (ALs) are designed to alert licensees that a loss of control of some part of the associated radiation protection program may have occurred. If an AL referred to in a licence is reached, specific action is required, as defined in the *Radiation Protection Regulations* and the licence. ALs are not intended to be static and are to reflect operating conditions in the facility.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-STD-RA-0045	Occupational Radiation Protection Action Levels for Nuclear Waste Management Facilities	Y
N-PROG-RA-0013	Radiation Protection	Y
N-PROC-RA-0010	Facility Access and Working Rights (Radiological)	N
N-PROC-RA-0012	Dosimetry and Dose Reporting	N
N-PROC-RA-0019	Dose Limits and Exposure Control	N
N-PROC-RA-0024	Hazard Surveys, Postings, and Labelling	N
N-PROC-RA-0027	Radioactive Work Planning, Execution and Close Out	N
N-INS-09071-10009	Requirements for the Calibration and Maintenance of Radiation Protection Instruments	N
N-MAN-03416-10000	Radiation Dosimetry Program – General Requirements	N
N-MAN-03416.1-10000	Radiation Dosimetry Program – External Dosimetry	N

Doc #	Title	Prior Notice
N-MAN-03416.2-10000	Radiation Dosimetry Program – Internal Dosimetry	N

The licensee shall review and, if necessary, revise the ALs specified above at least once every five years in order to validate their effectiveness. The results of such reviews shall be provided to the CNSC staff for review and acceptance.

Guidance

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.7.1	Radiation Protection
CNSC	REGDOC-2.7.2	Dosimetry, Volume I: Ascertaining Occupational Dose

DRAFT

SCA –CONVENTIONAL HEALTH AND SAFETY

Licence Condition 8.1 Conventional Health and Safety

The licensee shall implement and maintain a conventional health and safety program.

Preamble

The *Class I Nuclear Facilities Regulations* require that a licence application contain information including the proposed worker health and safety policies and procedures.

As of April 1, 1998, nuclear facilities owned and operated by Ontario Hydro were exempted from application of Part I, Part II, and Part III of the *Canada Labour Code*. This was established as per the following Consolidated Regulations: *SOR/98-179*, *SOR/98-180*, and *SOR/98-181*. The WWMF is now regulated by the *Occupational Health and Safety Act of Ontario* and the *Labour Relations Act*. Should any inconsistencies arise between the provincial and federal legislations, the federal laws would prevail to the extent of the inconsistency.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
OPG-POL-0001	Employee Health and Safety Policy	N
OPG-PROG-0005	Environmental Health and Safety Managed Systems	N

The licensee has the prime responsibility for safety at all times. This responsibility cannot be delegated or contracted to another organization or entity. The licensee shall ensure that contractors and other organizations present onsite are informed of, and uphold their roles and responsibilities related to conventional health and safety.

Guidance

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.8.1	Conventional Health and Safety

DRAFT

SCA –ENVIRONMENTAL PROTECTION

Licence Condition 9.1 Environmental Protection

The licensee shall implement and maintain an environmental protection program.

Preamble

The *Class I Nuclear Facilities Regulations* require that a licence application contain the proposed environmental protection policies, procedures, effluent and environmental monitoring programs.

The *General Nuclear Safety and Control Regulations* require every licensee to take all reasonable precautions to protect the environment and to control the release of radioactive nuclear substances or hazardous substances within the site of the licensed activity and into the environment as a result of the licensed activity

The *Radiation Protection Regulations* prescribe the radiation dose limits for the general public of 1 mSv per calendar year.

The release of hazardous substances is regulated by the CNSC as well as both the Ontario Ministry of the Environment, Conservation and Parks (MECP) and Environment and Climate Change Canada (ECCC) through various acts and regulations.

Derived Release Limits (DRLs) are calculated or derived using environmental transfer modeling that describes transfer of radioactive materials through environmental pathways to humans. DRLs are required for the purpose of protecting members of the public from unreasonable risk resulting from releases of radionuclides into the environment from the normal operation of the licensed facility.

Licensees set Environmental Action Levels (EAL) in accordance with the CSA N288.8 that, if reached, may indicate a loss of control of the licensee's environmental protection program and triggers a requirement for specific action to be taken. EALs are set far below the actual DRLs. Alternatively, the licensee may adapt the performance-based approach described in CSA N288.8 to establish action levels on other environmental controls (for example, engineered or natural barriers, or flow control).

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
OPG-PROG-0005	Environmental Health and Safety Managed Systems	N
OPG-POL-0021	Environmental Policy	N
N-PROC-OP-0025	Management of Environmental Monitoring Programs	N

Doc #	Title	Prior Notice
N-STD-OP-0031	Monitoring of Nuclear and Hazardous Substances in Effluents	N
0125-REP-03482-00002	Derived Release Limits and Environmental Action Levels for the Western Waste Management Facility	Y
N-STD-OP-0046	Groundwater Protection and Monitoring Program	Y
W-REP-07701-00003	2026 Environmental Risk Assessment Update for the Nuclear Sustainability Services – Western Waste Management Facility	Y
01098-REP-07701-00012	Predictive Effects Assessment for the Western Waste Management Facility Expansion Project	Y
01098-REP-79139-00006	2024 Predictive Effects Assessment Addendum for The Western Waste Management Facility Expansion Project – Multi-Purpose Storage Building	Y

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-2.9.1	Environmental Protection: Environmental Principles, Assessments and Protection Measures, version 1.2	2020	Implemented
CSA Group	N288.0	Environment management of nuclear facilities: Common requirements of the CSA N288 series of Standards	2022	Implemented
CSA Group	N288.1	Guidelines for modelling radionuclide environmental transport, fate, and exposure associated with the normal operation of nuclear facilities	2020	Implemented
CSA Group	N288.3.4	Performance testing of nuclear air-cleaning systems at nuclear facilities	2013 (R2018)	Implemented
CSA Group	N288.4	Environmental monitoring program at class I nuclear facilities and uranium mines and mills	2010 (R2015)	Implemented
CSA Group	N288.5	Effluent and emissions monitoring programs at nuclear facilities	2022	Implemented
CSA Group	N288.6	Environmental risk assessments at nuclear facilities and uranium mines and mills	2022	Implemented
CSA Group	N288.7	Groundwater protection and monitoring programs for nuclear facilities and uranium mines and mills	2023	Implemented

DRAFT

Org	Doc #	Title	Version	Effective Date
CSA Group	N288.8	Establishing and Implementing Action Levels for Releases to the Environment from Nuclear Facilities	2017 (R2022)	See Transition
CNSC	REGDOC 2.9.2	Controlling Releases to the Environment	2024	See Transition

Effluent and Emissions Control (Releases)

The licensee shall ensure effluent monitoring for nuclear and hazardous substances is designed, implemented and managed to respect applicable laws and to incorporate best practices. The effluent monitoring program shall provide for control of airborne and waterborne effluents. Effluent monitoring is a risk-informed activity, which assures quantifying of the important releases of the nuclear and hazardous substances into the environment.

Nuclear Substances – Derived Release Limits (DRL)

The licensee shall control radiological releases to ALARA, within the DRLs, and take action to investigate cause(s) and correct the cause(s) of increased releases.

The licensee shall meet the requirements of the *Radiation Protection Regulations*.

The DRLs are considered part of the licensing basis. Changes to these limits are subject to LC G.1. The DRLs for this facility are summarized in the table below. In the event of a discrepancy between the table below and the licensee documentation upon which they are based, the licensee documentation shall be considered the authoritative source (assuming that the licensee has followed its own change control process).

Release Category	Radionuclide	DRL (Becquerel/year)
Air	Tritium (HTO)	2.5E+17
	Iodine (mixed fission products)	1.2E+12
	Carbon-14	1.1E+15
	Particulate	6.9E+11
	Gross Alpha	3.7E+11

These DRLs for radionuclides and radionuclide groups account for the most significant releases and are the focus of monitoring and reporting requirements.

DRAFT

Nuclear Substances - Environmental Action Levels (EAL)

No EALs were identified to be required in accordance with the CSA 288.8 at the WWMF.

Hazardous Substances

The licensee shall control hazardous substance releases according to the limits defined in accordance with the applicable environmental compliance approvals, provincial and other federal legislation and take action to investigate and correct the cause(s) of increased releases.

Environmental Management System (EMS)

The objective of the environmental protection policies, programs and procedures is to establish adequate provisions for protection of the environment. This shall be accomplished through an integrated set of documented activities of an environmental management system (EMS).

The licensee shall implement and maintain an environmental management program to assess environmental risks associated with its nuclear activities, and to ensure these activities are conducted in such a way that adverse environmental effects are prevented or mitigated.

The licensee shall ensure that all aspects of its environmental management program are effectively implemented in order to assure compliance with environmental regulatory requirements and expectations, including those set in the International Organization for Standardization 14001, *Environmental Management Systems*. The licensee's EMS is registered to the ISO-14001. Having the ISO-14001certification is not part of the CNSC requirement; however it shows that a third party recognized OPG Environmental Management System as being in accordance with the standard.

Assessment and Monitoring

An environmental monitoring program consists of a risk-informed set of integrated and documented activities to sample, measure, analyze, interpret, and report the following:

- the concentration of hazardous and/or nuclear substances in environmental media to assess one or both of
  - exposure of receptors to those substances; and
  - the potential effects on human health, safety, and the environment;
- the intensity of physical stressors and/or their potential effect on human health and the environment; and
- the physical, chemical, and biological parameters of the environment normally considered in design of the EMP.

Protection of people

This aspect relates to the assessment of predicted human health effects measured and potential quantities of hazardous substance in the environment (abiotic and biotic) of the WWMF. This aspect is linked to the Dose to the public SPA as well as the Environmental Risk Assessment SPA and addressed mainly under LC G.1 (Licensing Basis)

Environmental Risk Assessment

In accordance with CSA N288.4 and N288.5, the ERA establishes the basis for both the environmental monitoring program and the effluent monitoring program. The ERA shall be updated periodically with the results from the environmental and effluent monitoring programs in order to confirm the effectiveness of any additional mitigation measures needed.

Transition

The licensee shall implement the requirements of CSA N288.8-2017(R2020) by December 31, 2028.

The licensee shall implement the requirements of REGDOC 2.9.2, *Controlling Releases to the Environment*, by January 1, 2029.

Guidance Publications

Org	Doc #	Title
CSA	N288.2	Guidelines for Calculating the Radiological Consequences to the Public of a Release of Airborne Radioactive Material for Nuclear Reactor Accidents

It is recommended that the licensee provide to the CNSC a copy of the reports sent to the MECP and ECCC on hazardous releases.

DRAFT

SCA –EMERGENCY MANAGEMENT AND FIRE PROTECTION

Licence Condition 10.1 Emergency Preparedness Program

The licensee shall implement and maintain an emergency preparedness program.

Preamble

The Class I Nuclear Facilities Regulations require measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of national security, including measures to assist, notify, report to off-site authorities including the testing of the implementation of these measures.

This LC requires the licensee to establish an emergency preparedness program to prepare for, to respond to, and to recover from the effects of accidental radiological/nuclear and/or hazardous substance release. As part of the emergency preparedness program, the licensee shall prepare an onsite emergency plan and establish the necessary organizational structure for clear allocation of responsibilities, authorities, and arrangements for coordinating onsite activities and cooperating with external response organizations throughout all phases of an emergency.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-STD-RA-0036	Radioactive Materials Transportation Emergency Response Plan	N

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-2.10.1	Nuclear Emergency Preparedness and Response, Version 2	2016	Implemented

OPG's Employee Emergency Response procedure for the WWMF identifies emergency response requirements at the WWMF for fire, medical and radiation emergencies. In accordance with the contractual agreements between OPG and Bruce Power, Bruce Power provides Emergency Response Services to OPG for fire, medical, rescue and spill emergencies that arise at the WWMF.

Guidance

None provided.

DRAFT

Licence Condition 10.2 Fire Protection Program

The licensee shall implement and maintain a fire protection program.

Preamble

Licensees require a comprehensive fire protection program to ensure the licensed activities do not result in unreasonable risk to the health and safety of persons and to the environment due to fire and to ensure that the licensee is able to efficiently and effectively respond to emergency fire situations.

Fire protection provisions, including response, are required for the design, construction, commissioning, operation, maintenance, and decommissioning of nuclear facilities. Fire provisions cover structures, systems, and components that support the plant operation and extend within the exclusion area. External events, such as an aircraft crash or threats, are addressed by LC 12.1.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-PROG-RA-0012	Fire Protection	Y

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CSA Group	N393	Fire protection for facilities that process, handle, or store nuclear substances	2022	Implemented
NRC	N/A	National Building Code of Canada	2020	Implemented
NRC	N/A	National Fire Code of Canada	2020	Implemented

The licensee shall submit the results of the fire protection program audit as per the intervals outlined in CSA Group standard N393, Fire Protection for Facilities that Process, Handle, or Store Nuclear Substances.

The licensee shall submit the update or reaffirmation of the Fire Hazard Assessment and Code Compliance Review as per the intervals outlined in CSA Group standard N393, Fire Protection for Facilities That Process, Handle, or Store Nuclear Substances.

Guidance

None provided.

DRAFT

SCA – WASTE MANAGEMENT

Licence Condition 11.1 Waste Management Program

The licensee shall implement and maintain a waste management program.

Preamble

The *General Nuclear Safety and Control Regulations* require that a licence application contain information related to the management of radioactive waste or hazardous waste resulting from the licensed activities.

The *Class I Nuclear Facilities Regulations* require that a licence application contain the proposed procedures for handling, storing, loading and transporting nuclear substances and hazardous substances.

CNSC Regulatory Document REGDOC-2.11 *Framework for Radioactive Waste Management and Decommissioning in Canada,* defines radioactive waste as any material (liquid, gaseous or solid) that contains a radioactive "nuclear substance," as defined in section 2 of the NSCA, and which the owner has declared to be waste. In addition to containing nuclear substances, radioactive waste may also contain non-radioactive "hazardous substances," as defined in section 1 of the *General Nuclear Safety and Control Regulations*.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-PROC-RA-0017	Segregation and Handling of Radioactive Waste	N
OPG-STD-0156	Management of Waste and Other Environmentally Regulated Materials	N
W-PROG-WM-0001	Nuclear Waste Management Program	Y

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-2.11.1	Waste Management Volume 1: Management of Radioactive Waste	2021	Implemented
CSA Group	N292.0	General principles for the management of radioactive waste and irradiated fuel	2019	Implemented

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Org	Doc #	Title	Version	Effective Date
CSA Group	N292.4	Storage of radioactive waste and irradiated fuel	2023	Implemented
CSA Group	N292.3	Management of low- and intermediate-level radioactive waste	2014	Implemented
CSA Group	N292.8	Characterization of radioactive waste and irradiated fuel	2021	Implemented

Guidance

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.11	Framework for Radioactive Waste Management and Decommissioning in Canada, Version 2

Licence Condition 11.2 Decommissioning Plan

The licensee shall maintain a decommissioning plan.

Preamble

The *Class I Nuclear Facilities Regulations* require that a licence application contain information including the proposed plan for the decommissioning of the nuclear facility or of the site. This LC requires that the licensee maintain a decommissioning plan.

The decommissioning plan and associated cost estimate form the basis for establishing a financial guarantee for decommissioning to ensure that adequate funding will be available.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
W-PROG-WM-0003	Decommissioning Program	Y
0125-PLAN-00960-00001	Preliminary Decommissioning Plan - Western Waste Management Facility	Y

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Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CSA Group	N294-19	Decommissioning of facilities containing nuclear substances	2019	Implemented
CNSC	REGDOC 2.11.2	Decommissioning	2021	See Transition

The licensee shall revise the preliminary decommissioning plan (PDP) at a minimum every 5 years, or if there are any changes to the facility operations or design that affect the estimated cost of decommissioning. When the PDP is revised, the cost of decommissioning shall be reviewed.

The PDP was last revised and submitted to CNSC staff in 2022. OPG's next submission of the PDP for the WWMF is due to be submitted to CNSC in 2027

Transition

The licensee has implemented the requirements of REGDOC-2.11.2, *Decommissioning* into its governance documents. The licensee will revise the PDP during the next scheduled revision cycle which is due to the CNSC in 2027.

Guidance

None provided.

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SCA –SECURITY

Licence Condition 12.1 Security Program

The licensee shall implement and maintain a security program.

Preamble

The *General Nuclear Safety and Control Regulations* require that a licence application contain information including the proposed measures to control access to the site of the activity to be licensed and the nuclear substance, prescribed equipment or prescribed information.

The *Class I Nuclear Facilities Regulations* require that a licence application contain information including the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility, including measures to alert the licensee to such acts.

The *Nuclear Security Regulations* require that a licence application contain specific information related to nuclear security, stipulates the requirements for High-Security Sites, and contains specific requirements pertaining to the transportation of Category I, II or III nuclear material.

The *Nuclear Security Regulations* require that a licensee of a high security site:

- Maintain at all times a qualified onsite nuclear response force;
- Obtain the applicable certifications, before issuing an authorization to a nuclear security officer;
- Prevent unauthorized removal of nuclear material;
- Prevent and detect unauthorized entry into a protected area or inner area; and
- Prevent unauthorized entry of weapons and explosive substances into a protected area or inner area.

The *Nuclear Security Regulations* require every licensee to conduct, at least once every 12 months, a threat and risk assessment specific to a facility where it carries on licensed activities in order to determine the adequacy of its physical protection system; make modifications to its physical protection system, as necessary, to counter any credible threat identified as a result of the threat and risk assessment; keep a written record of each threat and risk assessment that it conducts and provide a copy of the written record, together with a statement of actions taken as a result of the threat and risk assessment, to the Commission upon request (within 60 days) after completion of the assessment.

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Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
01098-REP-08160-10001	Western Used Fuel Dry Storage Facility Security Report	Y
N-REP-08160.3-10001	Western Used Fuel Dry Storage Facility Submission of Waste Harmonized Threat, Vulnerability and Risk Assessment Report	N
N-PROG-RA-0011	Nuclear Security	N
N-PROC-RA-0135	Cyber Security	N

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-2.2.4	Fitness for Duty, Volume III: Nuclear Security Officer Medical, Physical, and Psychological Fitness	2018	Implemented
CNSC	REGDOC-2.12.1	High-Security Facilities, Volume II: Criteria for Nuclear Security Systems and Devices	2018	Implemented
CNSC	REGDOC-2.12.2	Site Access Security Clearance	2013	Implemented

The licensee shall ensure the identified vital areas within the nuclear facility are protected against design basis threats and any other credible threat identified in their threat and risk assessment documentation. The prime functions that must be maintained to prevent unacceptable radiological consequences are those of control, cool, and contain.

The licensee shall maintain the operation, design and analysis provisions credited in the above assessments as required to ensure adequate engineered safety barriers for the protection against malevolent acts. The provisions for the protection against malevolent acts shall be documented as part of a managed sub program or process within the management system. The licensee shall summarize changes in design, analysis or operation procedures that are credited for the protection against malevolent acts in the annual threat and risk assessment, and submit a copy to the Commission upon request.

The licensee shall implement measures for the purpose of preventing and detecting unauthorized entry into a protected area or inner area at a high-security site, including:

- vehicle barriers and vehicle access control points;
- perimeter intrusion detection systems and devices;
- closed-circuit video systems/devices for applications in a protected area or inner area;
- security monitoring rooms; and
- security monitoring room systems and devices.

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The licensee shall design, implement and maintain a cyber-security program to protect cyber assets that performs or impacts nuclear safety, nuclear security, emergency preparedness or safeguards functions from cyber attacks.

The licensee shall file an update of the security report with the CNSC a minimum of six months before the operating licence expires. If the site security program changes at any time, it must be brought to the attention of the Director of the Nuclear Security Division at the CNSC. The changes will then be assessed to determine if the report requires an immediate update or if the update can wait until the relicensing review.

Guidance

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.12.3	Security of Nuclear Substances: Sealed Sources and Category I, II, and III Nuclear Material, Version 2.1
CSA	N290.7	Cyber Security for Nuclear Facilities
IAEA	Nuclear Security Series No. 17-T Technical Guidance	Computer Security Techniques for Nuclear Facilities
IAEA	Nuclear Security Series No. 33 Technical Guidance	Computer Security of Instrumentation and Control Systems at Nuclear Facilities
IAEA	Nuclear Security Series No. 4 Technical Guidance	Engineering Safety Aspects of the Protection of Nuclear Power Plants Against Sabotage
IAEA	Nuclear Security Series No. 13 Recommendations	Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities

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Licence Condition 12.2 Construction

The licensee shall not carry out the activities referred to in paragraph (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of the proposed security arrangements and measures for the new building, or any potential modifications to the protected area that may be associated with this new building, that is acceptable to the Commission or a person authorized by the Commission.

Preamble

None provided.

Compliance Verification Criteria

This LC requires that OPG submit the proposed security arrangements and measures for any buildings, or any potential modifications to the protected area that may be associated with the new buildings prior to receiving CNSC authorization to operate these buildings.

The Commission, or a person authorized by the Commission, will confirm that acceptable security arrangements have been submitted prior to authorizing OPG to begin operations at the new storage buildings.

Delegation of Authority

The statement "or a person authorized by the Commission" reflects to whom the Commission has delegated certain authority. The delegation of authority by the Commission to act as a "person authorized by the Commission" is applied to the incumbents of the following positions:

- Director, Wastes and Decommissioning Division;
- Director General, Directorate of Nuclear Cycle and Facilities Regulations; and,
- Interim Vice-President, Advanced Reactor Technologies and Nuclear Facilities Regulation, Regulatory Operations Branch.

Guidance

None provided.

DRAFT

SCA – SAFEGUARDS AND NON-PROLIFERATION

Licence Condition 13.1 Safeguards Program

The licensee shall implement and maintain a safeguards program.

Preamble

The *General Nuclear Safety and Control Regulations* require the licensee to take all necessary measures to facilitate Canada's compliance with any applicable safeguards agreement and defines reporting requirements for safeguards events.

The *Class I Nuclear Facilities Regulations* require that a licence application contain information on the licensee's proposed measures to facilitate Canada's compliance with any applicable safeguards agreement.

Safeguards is a system of inspection and other verification activities undertaken by the IAEA in order to evaluate a Member State's compliance with its obligations pursuant to its safeguards agreements with the IAEA.

Canada has entered into a Safeguards Agreement and an Additional Protocol (hereafter referred to as "safeguards agreements") with the IAEA pursuant to its obligations under the *Treaty on the Non-Proliferation of Nuclear Weapons* (INFCIRC/140). The objective of the Canada-IAEA safeguards agreements is for the IAEA to provide assurance on an annual basis to Canada and to the international community that all declared nuclear materials are in peaceful, non-explosive uses and that there is no indication of undeclared nuclear materials or activities. This conclusion confirms that Canada is in compliance with its obligations under the following Canada-IAEA safeguards agreements:

- *Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*; and,
- *Protocol Additional to the Agreement between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*.

These are reproduced in INFCIRC/164 and INFCIRC/164/Add. 1.

The scope of the non-proliferation program carried out under this licence is limited to tracking and reporting of foreign obligations and origins of nuclear material. Additionally, the import and export of controlled nuclear substances, equipment, and information identified in the *Nuclear Non-proliferation Import and Export Control Regulations* require separate authorization from the CNSC, consistent with section 3(2) of the *General Nuclear Safety and Control Regulations*. The guidance to seek such an authorization is provided in REGDOC-2.13.2, *Import and Export*.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
N-PROG-RA-0015	Safeguards and Nuclear Material Accountancy	Y
N-STD-RA-0024	Safeguards and Nuclear Material Accountancy Implementation	Y
N-PROC-RA-0136	OPG Safeguards and Nuclear Material Accountancy Requirements	N

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CNSC	REGDOC-2.13.1	Safeguards and Nuclear Material Accountancy	2018	Implemented

The licensee shall not make changes to operation, equipment, or procedures that would affect the implementation of safeguards measures, except with the prior written approval of the Commission or a person authorized by the Commission.

With respect to the implementation of safeguards measures, changes made by the licensee to operation, equipment or procedures as the result of agreements between the licensee, the CNSC, and the IAEA are considered routine.

If a requested change would adversely impact Canada's compliance with its safeguards agreements, CNSC staff do not have the authority to give approval, as this would violate the obligations arising from the Canada-IAEA safeguards agreement.

To avoid a potential non-compliance with REGDOC-2.13.1, section 8.1.1, when the Nuclear Material Accountancy Reporting (NMAR) e-business system is not available, OPG is to contact the CNSC International Safeguards Division (safeguardsofficial-garantiesofficiel@cnsc-ccsn.gc.ca) to inform them of the issue and to seek guidance on how to fulfill reporting requirements. When OPG inventory change documents and physical-key measurement point inventory summaries are submitted using an alternative method, OPG will still be required to re-submit using the NMAR e-business system once the NMAR system becomes available.

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Delegation of Authority

The statement "or a person authorized by the Commission" in LC 13.1 reflects to whom the Commission has delegated certain authority. The delegation of authority by the Commission to act as a "person authorized by the Commission" is applied to the incumbents of the following positions:

- Director, International Safeguards Division;
- Director General, Directorate of Security and Safeguards; and
- Vice-President, Technical Support Branch.

Guidance

None provided.

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SCA – PACKAGING AND TRANSPORT

Licence Condition 14.1 Packaging and Transport Program

The licensee shall implement and maintain a packaging and transport program.

Preamble

The *Class I Nuclear Facilities Regulations* require that a licence application contain information on the proposed procedures for handling, storing, loading and transporting nuclear substances.

Every person who transports radioactive material, or requires it to be transported, shall act in accordance with the requirements of the *Transportation of Dangerous Goods Regulations* (TDGR) and the *Packaging and Transport of Nuclear Substances Regulations, 2015* (PTNSR 2015).

The *PTNSR* and the *TDGR* provide specific requirements for the design of transport packages, the packaging, marking and labeling of packages and the handling and transport of nuclear substances.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
W-PROG-WM-0002	Radioactive Material Transportation	N
N-STD-RA-0036	Radioactive Materials Transportation Emergency Response Plan	N
N-PROG-RA-0013	Radiation Protection	Y

The licensee shall implement and maintain a packaging and transport program that will ensure compliance with the requirements of the TDGR and the PTNSR, 2015.

Guidance

Guidance Publications

Org	Doc #	Title
CNSC	REGDOC-2.14.1	Volume 1, Information Incorporated by Reference in Canada's Packaging and Transport of Nuclear Substances Regulations, 2015, Version 2.

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FACILITY-SPECIFIC

Licence Condition 15.1 Construction Plans

> The licensee shall not carry out the activities referred to in paragraph (v) of Part IV of this licence until the submission of an environmental management plan, a construction verification plan, the project design requirements and a preliminary safety analysis report and without prior written approval of the Commission or a person authorized by the Commission.

Preamble

The environmental management plan, construction verification plan, project design requirements and preliminary safety analysis report assure that the environment is adequately protected from adverse impacts resulting from approved construction activities and that the proposed design will not deviate from the licensing basis and will meet CNSC expectations.

Compliance Verification Criteria

Licensing Basis Publications

Org	Doc #	Title	Version	Effective Date
CSA Group	N393	Fire protection for facilities that process, handle, or store nuclear substances	2022	Implemented
NRC	N/A	*National Building Code of Canada*	2020	Implemented
NRC	N/A	*National Fire Code of Canada*	2020	Implemented
CNSC	REGDOC- 2.9.1	Environmental Protection: Environmental Principles, Assessments and Protection Measures Version 1.2	2020	Implemented

Both an environmental management plan and a construction verification plan shall be in effect prior to the commencement of construction activities as authorized in paragraph (v) of Part IV of this licence.

The environmental management plan, construction verification plan and project design requirements will comply with the NRC *National Building Code of Canada (2020),* NRC *National Fire Code of Canada (2020)*, and CSA Group standard N393, *Fire protection for facilities that process, handle, or store nuclear substances* and REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures Version 1.2.*

Furthermore, the licensee must demonstrate that any design changes remain within the Commission approved licensing basis.

Upon review and acceptance of the environmental management plan, construction verification plan, project design requirements and preliminary safety analysis report, the Commission or a person authorized by the Commission, will provide formal written notification that OPG is authorized to begin construction activities referred to in paragraph (v) of Part IV of this licence, for the new structure.

Delegation of Authority

The statement "or a person authorized by the Commission" reflects to whom the Commission has delegated certain authority. The delegation of authority by the Commission to act as a "person authorized by the Commission" is applied to the incumbents of the following positions:

- Director, Wastes and Decommissioning Division;
- Director General, Directorate of Nuclear Cycle and Facilities Regulations; and,
- Interim Vice-President, Advanced Reactor Technologies and Nuclear Facilities Regulation, Regulatory Operations Branch.

Guidance

None provided.

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Licence Condition 15.2 Commissioning Report

> The licensee shall not carry out the activities referred to in paragraphs (ii) and (iii) of Part IV of this licence that relate to completed construction activities in paragraph (v) of Part IV of this licence until the submission of a commissioning report that is acceptable to the Commission or a person authorized by the Commission.

Preamble

This LC requires that OPG submit a commissioning report for any new buildings before they can be operated. This is to assure that the project design requirements and the licensing basis have been met.

Compliance Verification Criteria

The Commission, or a person authorized by the Commission, will confirm that an acceptable commissioning report has been submitted prior to authorizing OPG to begin operations at any new buildings. Upon review and acceptance of the commissioning report, the Commission or a person authorized by the Commission will provide formal notification that OPG is authorized to begin operations at the new building.

Delegation of Authority

The statement “or a person authorized by the Commission” reflects to whom the Commission has delegated certain authority. The delegation of authority by the Commission to act as a “person authorized by the Commission” is applied to the incumbents of the following positions:

- Director, Wastes and Decommissioning Division;
- Director General, Directorate of Nuclear Cycle and Facilities Regulations; and,
- Interim Vice-President, Advanced Reactor Technologies and Nuclear Facilities Regulation, Regulatory Operations Branch.

Guidance

None provided.

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Licence Condition 15.3 Import and Export of Nuclear Substances

The licensee shall limit the activities of import and export of nuclear substances only to those found in Appendix B of this licence, occurring as contaminants in laundry, packaging, shielding or equipment.

Preamble

OPG is authorized to import and export nuclear substances other than controlled nuclear substances as defined in the *Nuclear Non-Proliferation Import and Export Control Regulations*.

Compliance Verification Criteria

Licensee Documents that Require Notification of Change

Doc #	Title	Prior Notice
W-PROG-WM-0002	Radioactive Material Transportation	N
N-PROG-RA-0013	Radiation Protection	Y

The licensee is not authorized, subject to any restrictions or exemptions under the regulation, to import or export the items described in Parts A and B of the Schedule to the *Nuclear Non-Proliferation Import and Export Control Regulations*, such as:

(1) Special fissionable material, as described in paragraph A.1.1:

(i) Plutonium;

(ii) Uranium 233;

(iii) Uranium enriched in Uranium 233 or Uranium 235.

(2) Source material, as described in paragraph A.1.2:

(i) Uranium, containing the mixture of isotopes that occurs in nature;

(ii) Uranium, depleted in the isotope Uranium 235; and

(iii) Thorium.

(3) Deuterium and heavy water, as described in paragraph A.1.3.

(4) Tritium, as described in paragraph A.1.5.

(5) Alpha-emitting nuclear substances, as described in paragraph B.1.1.1, including but not limited to:

(i) Actinium 225, 227;

(ii) Californium 248, 250, 252, 253, 254;

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(iii) Curium 240, 241, 242, 243, 244;

(iv) Einsteinium 252, 253, 254, 255;

(v) Fermium 257;

(vi) Gadolinium 148;

(vii) Mendelevium 258, 260;

(viii) Neptunium 235;

(ix) Polonium 208, 209, 210;

(x) Radium 223; and

(6) Radium-226, as described in paragraph B.1.1.16.

Guidance

None provided.

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APPENDIX A: DEFINITIONS AND ACRONYMS

DEFINITIONS

Accept	Accept means to indicate compliance with requirements.
Acceptable	Acceptable means to meet the requirements of CNSC staff.
Action Level	A specific dose of radiation or other parameter that, if reached, may indicate a loss of control of part of a licensee's radiation protection program and triggers a requirement for specific action to be taken (*Radiation Protection Regulations*; Glossary of CNSC Terminology).
Approval	Approval means the granting of consent by a regulatory body. Typically used to represent any form of consent from the regulatory body that does not meet the definition of authorization (IAEA Glossary).
Authorization	Authorization means the granting by a regulatory body or other governmental body of written permission for an operator to perform specified activities (IAEA Glossary): ▪ Authorization could include, for example, licensing, certification, or registration. ▪ The term authorization is also sometimes used to describe the document granting such permission. ▪ Authorization is normally a more formal process than approval.
Boundary Conditions	The values of variables in a mathematical model that are assumed at the spatial bounds of the model (Glossary of CNSC Terminology).
Design Basis	The range of conditions and events taken explicitly into account in the design of a nuclear facility, according to established criteria, such that the facility can withstand this range without exceeding authorized limits. Note: Design extension conditions are not part of the design basis (Glossary of CNSC Terminology).
Graduated Use of Force	The application of approved response force options following the RCMP incident management/intervention model or approved equivalent provincial police model (Glossary of CNSC Terminology).

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Hazardous Substance	A substance, other than a nuclear substance, that is used or produced in the course of carrying on a licensed activity and that may pose a risk to the environment or the health and safety of persons (*Class II Nuclear Facilities and Prescribed Equipment Regulations*; *Uranium Mines and Mills Regulations*, Glossary of CNSC Terminology).
Licensing Basis	A set of requirements and documents for a regulated facility or activity comprising: ▪ the regulatory requirements set out in the applicable laws and regulations ▪ the conditions and safety and control measures described in the facility's or activity's licence and the documents directly referenced in that licence ▪ the safety and control measures described in the licence application and the documents needed to support that licence application (Glossary of CNSC Terminology).
Management System	The framework of processes, procedures and practices used to ensure that an organization can fulfill all tasks required to achieve its objectives safely and consistently. Note: The management system integrates all elements of an organization into one coherent system to enable all of the organization's objectives to be achieved. These elements include the structure, resources and processes. Personnel, equipment and organizational culture, as well as the documented policies and processes, are parts of the management system (Glossary of CNSC Terminology).
Notice of non compliance	A notice of non-compliance (NNC) is issued when a non-compliance with the compliance CVC is confirmed through objective evidence obtained from reliable sources and based on verifiable facts. A NNC requires the licensee to take the necessary action(s) to correct the identified non-compliance and respond with one of the following: ▪ confirmation that compliance has been restored ▪ a timeframe for restoring compliance ▪ a timeframe within which a corrective action plan will be submitted
Notification	The submission of information by the licensee to CNSC staff.

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Order	One of the regulatory tools the CNSC uses to compel someone to do something in the interests of health, safety, the environment, national security or compliance with Canada's international obligations. Failure to comply with an order can lead to further regulatory measures, including prosecution or licensing actions (Glossary of CNSC Terminology).
Person Authorized by the Commission	Person authorized by the Commission means the Project Officer overseeing the licensing and compliance activities for the WWMF, the Director WDD, the DG DNCFR, or Interim Vice-President, Advanced Reactor Technologies and Nuclear Facilities Regulation, Regulatory Operations Branch of the CNSC, except in LC 13.1.
Safe Direction	Safe direction means changes in facility safety levels which would not potentially result in: ▪ a reduction in any safety margin; ▪ a breakdown of barriers; ▪ an increase (in certain parameters) above accepted limits; ▪ an increase in risk; ▪ impairments of special safety systems; ▪ an increase in the risk of radioactive releases or spills of hazardous substances; ▪ injuries to workers or members of the public; ▪ introduction of a new hazard; or, ▪ a reduction of the facility's defence in depth provisions.
Shall	For the purpose of this handbook, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply, e.g., "The licensee shall implement and maintain a management system that complies with the requirements set out in CSA Group standard N286-12, *Management system requirements for nuclear facilities*."

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ACRONYMS

The following is the list of acronyms used in this document:

µCi	Microcurie
AIA	Authorized Inspection Agency
AL	Action Level
ALARA	As Low As Reasonably Achievable
ASME	American Society of Mechanical Engineers
Bq	Becquerel
CANDU	CANada Deuterium Uranium
CMD	Commission Member Document
CNEP	Consolidated Nuclear Emergency Plan
CNSC	Canadian Nuclear Safety Commission
CSA	Canadian Standards Association
cUL	Underwriters Laboratories Inc. (‘c’ meets Canadian requirements)
CVC	Compliance Verification Criteria
DG	Director General
DNCFR	Directorate of Nuclear Cycle and Facilities Regulation
DRL	Derived Release Limit
DSC	Dry Storage Container
DSF	Decommissioning Segregated Fund
EA	Environmental Assessment
ECCC	Environment and Climate Change Canada
FG	Financial Guarantee
IAEA	International Atomic Energy Agency
INFCIRC	INFormation CIRCular
LC	Licence Condition

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LCH	Licence Conditions Handbook
MECP	Ministry of the Environment, Conservation and Parks
MOU	Memorandum of Understanding
mSv	Millisievert
NFPA	National Fire Protection Association
NFWA	*Nuclear Fuel Waste Act*
NMAR	Nuclear Material Accountancy Reporting
NNC	Notice of Non-Compliance
NRC	National Research Council Canada
NSCA	*Nuclear Safety and Control Act*
ONFA	Ontario Nuclear Funds Agreement
OPEX	Operating Experience
OPG	Ontario Power Generation
PDP	Preliminary Decommissioning Plan
PIDP	Public Information and Disclosure Program
PTNSR	*Packaging and the Transport of Nuclear Substances Regulations*
RWOS-1	Radioactive Waste Operations Site 1
SCA	Safety and Control Area
SSC	Systems, Structures and Components
UFSF	Used Fuel Segregated Funds
TDGR	*Transport of Dangerous Goods Regulations*
WDD	Wastes and Decommissioning Division
WFOL	Waste Facility Operating Licence
WWMF	Western Waste Management Facility

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APPENDIX B: LIST OF LICENSING BASIS PUBLICATIONS

Doc #	Title	Version	LC
American Society of Mechanical Engineers Documents			
B31.1	Power Piping	2010	5.2
Canadian Nuclear Safety Commission Documents			
REGDOC-3.3.1	Financial Guarantees for the Decommissioning of Nuclear Facilities and Termination of Licensed Activities	2021	G.3*
REGDOC-3.2.1	Public Information and Disclosure	2018	G.4, 3.2
REGDOC-2.1.2	Safety Culture	2018	2.1
REGDOC-2.2.2	Personnel Training, Version 2	2016	2.2
REGDOC-2.2.4	Fitness for Duty: Managing Worker Fatigue	2017	2.1
REGDOC-2.2.4	Fitness for Duty, Volume II: Managing Alcohol and Drug Use, version 3	2021	2.1*
REGDOC-2.2.4	Fitness for Duty, Volume III: Nuclear Security Officer Medical, Physical, and Psychological Fitness	2018	12.1
REGDOC-2.4.4	Safety Analysis for Class 1B Nuclear Facilities	2022	4.1*
REGDOC-2.6.3	Aging Management	2014	6.1
REGDOC-2.9.1	Environmental Protection: Environmental Principles, Assessments and Protection Measures	2020	9.1. 15.1

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Doc #	Title	Version	LC
REGDOC-2.10.1	Nuclear Emergency Preparedness and Response, Version 2	2016	10.1
REGDOC-2.11.1	Waste Management Volume 1: Management of Radioactive Waste	2021	3.1 11.1
REGDOC-2.11.2	Decommissioning	2021	11.2*
REGDOC-2.12.1	High-Security Facilities, Volume II: Criteria for Nuclear Security Systems and Devices	2018	12.1
REGDOC-2.12.2	Site Access Security Clearance	2013	12.1
REGDOC-2.13.1	Safeguards and Nuclear Material Accountancy	2018	13.1
REGDOC-3.1.2	Reporting Requirements, Volume 1: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills, Version 1.1	2022	3.2
Canadian Standards Association Group Documents			
B51	Boiler, pressure vessel, and pressure piping code	2009 and Update No. 1	5.2
N285.0	General requirements for pressure-retaining systems and components in CANDU nuclear power plants	2023	5.2
N286	Management system requirements for nuclear facilities	2012	1.1
N286.7	Quality assurance of analytical, scientific, and design computer programs	2016	4.1
N288.0	Environment management of nuclear facilities: Common requirements of the CSA N288 series of Standards	2022	9.1

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Doc #	Title	Version	LC
N288.1	Guidelines for calculating derived release limits for radioactive material in airborne and liquid effluents for normal operation of nuclear facilities	2020	9.1
N288.3.4	Performance testing of nuclear air-cleaning systems at nuclear facilities	2013 (R2018)	9.1
N288.4	Environmental monitoring program at class I nuclear facilities and uranium mines and mills	2010 (R 2015)	9.1
N288.5	Effluent and emissions monitoring programs at nuclear facilities	2022	9.1
N288.6	Environmental risk assessments at nuclear facilities and uranium mines and mills	2022	9.1
N288.7	Groundwater protection and monitoring programs for nuclear facilities and uranium mines and mills	2023	9.1
N288.8	Establishing and Implementing Action Levels for Releases to the Environment from Nuclear Facilities	2017 (R2022)	9.1*
N292.0	General principles for the management of radioactive waste and irradiated fuel	2019	4.1 11.1
N292.4	Interim Dry Storage of Irradiated Fuel	2023	3.1 4.1 11.1
N292.3	Management of low- and intermediate-level radioactive waste	2014	4.1 11.1
N292.8	Characterization of radioactive waste and irradiated fuel	2021	11.1
N294	Decommissioning of facilities containing nuclear substances	2019	11.2
N393	Fire protection for facilities that process, handle, or store nuclear substances	2022	5.1 10.2 15.1

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Doc #	Title	Version	LC
National Fire Protection Association			
NFPA-20	Standard for the Installation of Stationary Pumps for Fire Protection	2019	5.2
NFPA-24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances	2019	5.2
National Research Council Canada Documents			
N/A	National Building Code of Canada	2020	5.1 10.2 15.1
N/A	National Fire Code of Canada	2020	5.1 10.2 15.1

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APPENDIX C: LIST OF LICENSEE DOCUMENTS THAT REQUIRE NOTIFICATION OF CHANGE

Doc #	Title	Prior Notice	LC
N/A	CNSC Financial Security and ONFA Access Agreement between OPG, the Province of Ontario and the CNSC effective January 1, 2023	Y	G.3
00104-PLAN-79171-00001	Used Fuel Dry Storage Container Aging Management Plan	Y	6.1
00104-PLAN-79171-00002	Ontario Power Generation Dry Storage Container – Base (Underside) Inspection Plan	Y	6.1
01098-REP-08160-10001	Western Used Fuel Dry Storage Facility Security Report	Y	12.1
0125-REP-03482-00002	Derived Release Limits and Environmental Action Levels for the Western Waste Management Facility	Y	9.1
0125-PLAN-00960-00001	Preliminary Decommissioning Plan Western Waste Management Facility	Y	11.2
N-CHAR-AS-0002	Nuclear Management System	Y	1.1
N-PROG-AS-0001	Nuclear Management System Administration	N	1.1
OPG-PROG-0039	Project Management	N	1.1
N-PROG-RA-0010	Independent Assessment	N	1.1
OPG-PROG-0038	Contractor Management	N	1.2
N-CORR-00531-20012	Authorized Inspection Agency Service Agreement	Y	5.2
N-INS-09071-10009	Requirements for the Calibration and Maintenance of Radiation Protection Instruments	N	7.1
N-LIST-00531-10003	Index to OPG Pressure Boundary Program Elements	N	5.2
N-MAN-01913.11-10000	Pressure Boundary Program Manual	N	5.2
N-MAN-03416-10000	Radiation Dosimetry Program – General Requirements	N	7.1

Doc #	Title	Prior Notice	LC
N-MAN-03416.1-10000	Radiation Dosimetry Program – External Dosimetry	N	7.1
N-MAN-03416.2-10000	Radiation Dosimetry Program – Internal Dosimetry	N	7.1
N-PROC-MP-0040	System and Item Classification	Y	5.2
N-PROC-MP-0082	Design Registration	Y	5.2
N-PROC-OP-0025	Management of Environmental Monitoring Program	N	9.1
N-PROC-OP-0047	Hours Of Work Limits And Managing Worker Fatigue	Y	2.1
N-PROC-RA-0012	Dosimetry and Dose Reporting	N	7.1
N-PROC-RA-0019	Dose Limits and Exposure Control	N	7.1
N-PROC-RA-0020	Preliminary Event Notification	N	3.2
N-PROC-RA-0024	Hazard Surveys, Postings, and Labelling	N	7.1
N-PROC-RA-0027	Radioactive Work Planning, Execution and Close Out	N	7.1
N-PROC-TR-0008	Systematic Approach to Training	N	2.2
N-PROG-AS-0001	Nuclear Management System Administration	N	1.1
N-PROG-AS-0002	Human Performance	N	2.1
N-PROG-MA-0026	Equipment Reliability	N	6.1
N-PROG-MP-0001	Engineering Change Control	N	5.1
N-PROG-MP-0004	Pressure Boundary	Y	5.2
N-PROG-MP-0008	Integrated Aging Management	N	6.1
N-PROG-MP-0009	Design Management	N	5.1 6.1
N-PROG-MP-0014	Reactor Safety Program	N	4.1
N-PROG-RA-0002	Conduct of Regulatory Affairs	N	3.2

Doc #	Title	Prior Notice	LC
N-PROG-RA-0003	Performance Improvement	N	3.2
N-PROG-RA-0011	Nuclear Security	N	12.1
N-PROC-RA-0135	Cyber Security	N	12.1
N-PROG-RA-0012	Fire Protection	Y	10.2
N-PROG-RA-0013	Radiation Protection	Y	7.1 11.1 14.1 15.3
N-PROG-RA-0015	Nuclear Safeguards	Y	13.1
N-PROG-TR-0005	Training	N	2.2
N-STD-RA-0045	Occupational Radiation Protection Action Levels for Nuclear Waste Management Facilities	Y	7.1
N-REP-08160.3-10001	Western Used Fuel Dry Storage Facility Submission of Waste Harmonized Threat, Vulnerability and Risk Assessment Report	N	12.1
N-STD-AS-0013	Nuclear Public Information Disclosure	N	G.4
N-STD-AS-0020	Nuclear Management Systems Organizations	N	1.1
N-STD-AS-0023	Nuclear Safety Oversight	N	1.1
N-STD-MP-0027	Configuration Management	N	5.1
N-STD-MP-0028	Conduct of Engineering	N	5.1 6.1
N-STD-OP-0031	Monitoring of Nuclear and Hazardous Substances in Effluent	N	9.1
N-STD-RA-0024	Nuclear Safeguards Implementation	Y	13.1
N-STD-RA-0036	Radioactive Materials Transportation Emergency Response Plan	N	10.1 14.1
OPG-POL-0001	Employee Health and Safety Policy	N	8.1
OPG-POL-0021	Environmental Policy	N	9.1

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Doc #	Title	Prior Notice	LC
OPG-PROC-0019	Records and Document Management	N	G.2
OPG-PROG-0001	Information Management	N	G.2
OPG-PROG-0005	Environment Health and Safety Managed Systems	N	8.1 9.1
OPG-PROG-0009	Items and Services Management	N	1.1
OPG-STD-0156	Management of Waste and Other Environmentally Regulated Materials	N	11.1
W-CORR-00531-01118	Application for Renewal of Western Waste Management Facility Operating Licence	N	G.1 3.1
W-CORR-00531-01282	Additional Information to Support the Application for Renewal of Western Waste Management Facility Operating Licence	N	G.1 3.1
W-PROG-WM-0001	Nuclear Waste Management	Y	3.1 6.1 11.1
W-PROG-WM-0002	Radioactive Material Transportation	N	14.1 15.3
W-PROG-WM-0003	Decommissioning Program	Y	11.2
W-SR-01320-00001	Western Waste Management Facility – Safety Report	Y	3.1 4.1
N-PROC-RA-0017	Segregation and Handling of Radioactive Waste	N	11.1
OPG-STD-0156	Management of Waste and Other Environmentally Regulated Materials	N	11.1
N-PROC-RA-0010	Facility Access and Working Rights (Radiological)	N	7.1

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APPENDIX D: LIST OF GUIDANCE PUBLICATIONS

Doc #	Title	Version	LC
Canadian Nuclear Safety Commission Documents			
REGDOC-2.1.1	Management Systems	2019	1.1
REGDOC-2.2.1	Human Factors	2019	2.1
REGDOC-2.2.2	Personnel Training	2016	2.2
REGDOC-2.4.4	Safety Analysis for Class 1B Nuclear Facilities	2022	15.1
REGDOC-2.2.5	Minimum Staff Complement	2019	2.1
REGDOC-2.5.1	General Design Considerations: Human Factors	2019	2.1 5.1
REGDOC-2.6.2	Maintenance Programs for Nuclear Power Plants	2017	6.1
REGDOC-2.7.1	Radiation Protection	2021	7.1
REGDOC-2.7.2	Dosimetry Volume I: Ascertaining Occupational Dose	2021	7.1
REGDOC-2.8.1	Conventional Health and Safety	2019	8.1
REGDOC-2.9.1	Environmental Protection: Environmental Principles, Assessments and Protection Measures, Version 1.2	2020	9.1
REGDOC-2.9.2	Controlling Releases to the Environment	2024	9.1*
REGDOC-2.11	Framework for Radioactive Waste Management and Decommissioning in Canada	2021	11.1
REGDOC-2.12.3	Security of Nuclear Substances: Sealed Sources and Category I, II, and III Nuclear Material, Version 2	2020	12.1
REGDOC-2.14.1	Volume 1, Information Incorporated by Reference in Canada's Packaging and Transport of Nuclear Substances Regulations, 2015, Version 2	2021	14.1
Canadian Standards Association Group Documents			
N286.0.1	Commentary on N286-12, Management system requirements for nuclear facilities	2021	1.1

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Doc #	Title	Version	LC
N288.1	Guidelines for calculating derived release limits for radioactive material in airborne and liquid effluents for normal operation of nuclear facilities	2020	9.1
N288.2	Guidelines for Calculating the Radiological Consequences to the Public of a Release of Airborne Radioactive Material for Nuclear Reactor Accidents	2019	9.1
N288.6	Environmental risk assessments at nuclear facilities and uranium mines and mills	2022	9.1
N290.7	Cyber security for nuclear facilities	2021	12.1
N290.12	Human factors in design for nuclear power plants	2014	5.1
N291	Requirements for safety-related structures for nuclear power plants	2019	5.1 6.1
International Atomic Energy Agency Documents			
Nuclear Security Series No. 4 Technical Guidance	Engineering Safety Aspects of the Protection of Nuclear Power Plants Against Sabotage	2007	12.1
Nuclear Security Series No. 13 Recommendations	Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities	2011	12.1
Nuclear Security Series No. 17 Technical Guidance	Computer Security at Nuclear Facilities	2021	12.1
Nuclear Security Series No. 33 Technical Guidance	Computer Security of Instrumentation and Control Systems at Nuclear Facilities	2018	12.1
SSG-15	Storage of Spent Nuclear Fuel	2020	6.1
Ontario Power Generation			
N-REF-01913.11-00001	Temporary Leak Maintenance by Leak Mitigation Process	2019	5.2

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APPENDIX D: Inspections

The following table includes the inspections conducted at the WWMF during the licence period.

Dates	Inspection Title	SCA(s) Covered
May 01, 2017 – May 02, 2017	OPG-WWMF-2017-01, *Baseline Type II Inspection Western Waste Management Facility*	▪ Fitness for Service, ▪ Radiation Protection, Conventional Health and Safety, ▪ Security, ▪ Human Performance Management, ▪ Emergency Management and Fire Protection
July 24, 2017 – July 25, 2017	OPG-WWMF-2017-02, *Baseline Type II Inspection Western Waste Management Facility*	▪ Management System, ▪ Conventional Health and Safety, ▪ Environmental Protection, ▪ Waste Management, ▪ Security, ▪ Radiation Protection, ▪ Emergency Management and Fire Protection
October 24, 2017 – October 25, 2017	OPG-WWMF-2017-03, *OPG's Western Waste Management Facility (WWMF)*	▪ Operating Performance, ▪ Fitness for Service, ▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Emergency Management and Fire Protection

Dates	Inspection Title	SCA(s) Covered
March 26, 2018 – March 28, 2018	OPG-WWMF-2018-01, *OPG's Western Waste Management Facility (WWMF)*	▪ Operating Performance, ▪ Radiation Protection, ▪ Emergency Management and Fire Protection, ▪ Waste Management, ▪ Environmental Protection, ▪ Security, ▪ Conventional Health and Safety
June 19, 2018	OPG-WWMF-2018-02, *Type II Inspection*	▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Human Performance Management, ▪ Operating Performance, ▪ Emergency Management and Fire Protection
September 20, 2018 – September 21, 2018	OPG-WWMF-2018-03, *General Compliance Inspection at the Western Waste Management Facility*	▪ Human Performance Management, ▪ Operating Performance, ▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Radiation Protection, ▪ Emergency Management and Fire Protection, ▪ Security, ▪ Waste Management, ▪ Packaging and Transport

Dates	Inspection Title	SCA(s) Covered
April 30, 2019 – May 2, 2019	OPG-WWMF-2019-01, *Type II Compliance Inspection*	▪ Packaging and Transportation
September 04, 2019 – September 05, 2019	OPG-WWMF-2019-02, *Type II Compliance Inspection - General*	▪ Management System, ▪ Human Performance Management, ▪ Operating Performance, ▪ Fitness for Service, ▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Emergency Management and Fire Protection, ▪ Waste Management, ▪ Security
September 26, 2019 – September 27, 2019	OPG-WWMF-2019-03, *Type II Environmental Protection Focused Compliance Inspection*	▪ Environmental Protection
December 14, 2020 – December 18, 2020	OPG-WWMF-2020-01, *Baseline General, Type II Compliance Inspections – General and Focused Management System*	▪ Human Performance Management, ▪ Operating Performance, ▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Environmental Protection, ▪ Emergency Management and Fire Protection, ▪ Waste Management, ▪ Security

Dates	Inspection Title	SCA(s) Covered
December 14, 2020 – December 18, 2020	OPG-WWMF-2020-02, *Baseline Management System, Type II Compliance Inspections – General and Focused Management System*	▪ Management System, ▪ Operating Performance
December 6, 2021 – December 7, 2021	OPG-WWMF-2021-01, *WWMF – Baseline - Security*	▪ Security
November 1 – November 4, 2021	OPG-WWMF-2021-02, *Type II Remote Inspection of WWMF's Safety Analysis Program*	▪ Safety Analysis
March 28, 2022 – March 31, 2022	OPG-WWMF-2022-01, *Type II Compliance Inspection – General – Western Waste Management Facility*	▪ Operating Performance, ▪ Environmental Protection, ▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Emergency Management and Fire Protection, ▪ Waste Management, ▪ Security
July 18, 2022 – July 19, 2022	OPG-WWMF-2022-02, *Type II Focused Compliance Inspection, Human Performance Management*	▪ Human Performance Management
July 20, 2022 – July 21, 2022	OPG-WWMF-2022-03, *Type II Focused Compliance Inspection, Radiation Protection*	▪ Radiation Protection
February 21, 2023 – February 23, 2023	OPG-WWMF-2023-01, *Type II Compliance Inspection – General – Western Waste Management Facility*	▪ Human Performance Management, ▪ Operating Performance,

Dates	Inspection Title	SCA(s) Covered
		▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Environmental Protection, ▪ Emergency Management and Fire Protection, ▪ Waste Management, Security
Cancelled	OPG-WWMF-2023-02	▪
March 29 – March 31, 2023	OPG-WWMF-2023-03, *Fire Protection Inspection*	▪ Emergency Management and Fire Protection
March 31, 2023 – May 3, 2023	OPG-WWMF-2023-04, *Public Information Disclosure Program*	▪ Management System ▪ Public information and disclosure
November 21, 2023 – November 23, 2023	OPG-WWMF-2023-05 – *Baseline General, Western Waste Management Facility General and Operating Performance Inspections*	▪ Conventional Health and Safety, ▪ Radiation Protection, ▪ Environmental Protection, ▪ Fitness for Service
November 21, 2023 – November 23, 2023	OPG-WWMF-2023-06 – *Baseline Operating Performance, Western Waste Management Facility General and Operating Performance Inspections*	▪ Operating Performance
December 6, 2023 – December 7, 2023	OPG-WWMF-2023-07, *WWMF – Baseline - Security*	▪ Security

Dates	Inspection Title	SCA(s) Covered
March 19, 2024 – March 22, 2024	OPG-WWMF-2024-01, *Baseline Management System Inspection at Western Waste Management Facility*	▪ Management System
May 8, 2024 – May 9, 2024	OPG-WWMF-2024-02, *Type II Environmental Protection Focused Inspection*	▪ Environmental Protection
August 7, 2024	OPG-WWMF-2024-03, *Reactive Radiation Protection Type II Inspection at the Western Waste Management Facility*	▪ Radiation Protection
November 5, 2024 – November 7, 2024	OPG-WWMF-2024-04 - *Baseline General, Type II Compliance Inspection Western Waste Management Facility General and Waste Management*	▪ Fitness for Service, Operating Performance, ▪ Environmental Protection, ▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Emergency Management and Fire Protection
November 5, 2024 – November 7, 2024	OPG-WWMF-2024-05 - *Baseline Waste Management, Type II Compliance Inspection Western Waste Management Facility General and Waste Management*	▪ Waste Management
May 6, 2025 – May 8, 2025	OPG-WWMF-2025-01, *Safety Analysis focused Baseline Inspection at Western Waste Management Facility, Pickering Waste*	▪ Safety Analysis, ▪ Management Systems

Dates	Inspection Title	SCA(s) Covered
	Management Facility, and Darlington Waste Management Facility	
July 9, 2025 – July10, 2025	OPG-WWMF-2025-02, *Emergency Management and Fire Protection*	▪ Management System, ▪ Emergency Management and Fire Protection
September 16, 2025 – September 17, 2025	OPG-WWMF-2025-03, *WWMF – Baseline – General Inspection*	▪ Management System, ▪ Human Performance Management, ▪ Operating Performance, ▪ Radiation Protection, ▪ Conventional Health and Safety, ▪ Environmental Protection, ▪ Emergency Management and Fire Protection, ▪ Waste Management
August 26, 2025	OPG-WWMF-2025-04, WWMF - Facility Specific - General Inspection	▪ Operating Performance, ▪ Conventional Health and Safety
November 26, 2025	OPG-WWMF-2025-05, WWMF - Facility Specific - Security	▪ Management System, Human Performance ▪ Management, Fitness for Service, Security
July 20, 2026 – July 22, 2026	OPG-WWMF-2026-01, *OPG-WWMF - Baseline - Packaging and Transport*	▪ Packaging and Transport
September 16, 2026 – September 17, 2026	OPG-WWMF-2026-02, *Baseline Human Performance Management*	▪ Human Performance Management

Dates	Inspection Title	SCA(s) Covered
Note: This inspection report has not been issued as of the publication date of this CMD.		
September 16, 2026 – September 17, 2026 Note: This inspection report has not been issued as of the publication date of this CMD.	OPG-WWMF-2026-03, *Baseline General*	▪ Operating Performance ▪ Radiation Protection ▪ Conventional Health and Safety ▪ Emergency Management & Fire Protection ▪ Waste Management
November 3, 2026 – November 6, 2026 Note: This inspection report has not been issued as of the publication date of this CMD.	OPG-WWMF-2026-04, *Management Systems Inspection of Ontario Power Generation Waste Management Facilities*	▪ Management System ▪ Human Performance Management