

Enclosure

OPG letter, M. Knutson to M. Broeders "Submission of the 2023 Darlington New Nuclear Project Annual Report"

CD# NK054-CORR-00531-10973

2023 Darlington New Nuclear Project Annual Report
NK054-REP-01210-00193
DA1-OPG-NN-NN-XX-TREP-0002

March 28, 2024

Summary of Regulatory Commitments, Regulatory Obligations and Regulatory Management Actions Made/Concurrence Requested

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Submission Title: **DNNP - Submission of the 2023 Darlington New Nuclear Project Annual Report**

Regulatory Commitments (REGC):

No.	Description	Date to be Completed
	None	

Regulatory Management Action (REGM):

No.	Description	Date to be Completed
	None	

Regulatory Obligation Action (REGO):

No.	Description	Date to be Completed
	None	

Concurrence Requested: None

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**2023 Darlington New Nuclear Project
Annual Report**

**NK054-REP-01210-00193 R000
DA1-OPG-NN-NN-TREP-XX-0002_S2_P01**

2024-03-28

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Revision Summary

Revision Number	Date	Comments
R000	2024-03-28	Initial issue.

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DARLINGTON LANDS ACKNOWLEDGEMENT

The lands and waters on which the Darlington New Nuclear Project (DNNP) is situated are the traditional and treaty territory of the Williams Treaties First Nations, which includes Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, Chippewas of Beausoleil First Nation, Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation, and the Mississaugas of Scugog Island First Nation.

The DNNP is within the territory of the Johnson-Butler Purchase/Gunshot Treaty (1787-88) and the Williams Treaties of 1923. These Treaty Rights were reaffirmed in 2018 in a settlement with Canada and the Province of Ontario.

To acknowledge the treaty and traditional territory, is to recognize the rights of the First Nations. It is to recognize the history of the land, predating the establishment of the earliest European colonies. It is also to acknowledge the significance for the Indigenous peoples who lived and continue to live upon it, to acknowledge the people whose practices and spiritualties are tied to the land and water and continue to develop in relation to the territory and its other inhabitants today.



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Executive Summary

This annual report fulfills Licence Condition 3.2 of the Power Reactor Site Preparation License (PRSL) 18.00/2031 for the reporting period from January 1, 2023, to December 31, 2023.

Ontario Power Generation Inc. (OPG) currently holds the PRSL 18.00/2031 to prepare the site for the future construction and operation of a new Nuclear Generating Station at the Darlington New Nuclear Project (DNNP) site. The DNNP site is located in the Municipality of Clarington, within the regional municipality of Durham, in the province of Ontario. The licence (Part IV(i)) includes the following site preparation licensing activities:

- a) Construction of access control measures;
- b) Clearing and grubbing of vegetation;
- c) Excavation and grading of the site;
- d) Installation of services and utilities;
- e) Construction of administrative and physical support facilities inside future protected area;
- f) Construction of environmental monitoring and mitigation systems; and
- g) Construction of flood protection and erosion control measures.

OPG has completed and submitted all the documentation for the deliverables required for both early site preparation (Phase 1) and main site preparation activities (Phase 2) as described in the OPG Commitments Report [R-1] and to fulfill the Compliance Verification Criteria in the Licence Conditions Handbook (LCH) for LC 15.3. OPG is committed to ensuring that site preparation activities are executed in a manner that protects the health and safety of persons and the environment. There were no reportable events under the Canadian Nuclear Safety Commission (CNSC) REGDOC-3.1.1, "Reporting Requirements for Nuclear Power Plants" in 2023.

The key activities that have been completed or have been advanced during this reporting period are:

- (1) Early site preparation activities including site grading, construction of laydown areas, access roadways and spoils pile areas, construction power and stormwater management systems were completed.
- (2) Various permits and approvals to support field activities on the DNNP site preparation have been acquired as discussed in Section 3.2 of this report.
- (3) OPG received the CNSC authorization to commence Phase 2 main site preparation activities on April 27, 2023 [R-21].
- (4) Conceptual design was completed.

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- (5) Revision 009 of the DNNP Commitments Report [R-1] was issued to update the status of the commitments and closure criteria, and to reflect the new PRSL number and its Licence Condition Handbook following their renewal.
- (6) The Environmental Impact Statement (EIS) Review for the deployment of the Small Modular Reactor (SMR) BWRX-300 and the comparison of the BWRX-300 design parameters with the Plant Parameter Envelope (PPE) were updated to reflect zero radiological liquid release during normal operations, results of additional studies on opportunities to retain habitat features on the DNNP site, and more representative estimates of solid waste activity and volume during normal operation. Their updated reports were submitted to the CNSC on July 5, 2023 [R-13] and July 28, 2023 [R-14] respectively.
- (7) Commitments related to activities beyond the current site preparation scope (e.g. construction) were progressed.
- (8) In July 2023 the government of Ontario announced it will work with OPG to commence planning and licensing for three additional SMRs. OPG has started site preparation planning for SMRs Units 2-4 along with permitting efforts.

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1.0 MANAGEMENT SYSTEMS SAFETY AND CONTROL AREA

1.1 Management System Implementation

This section provides a summary of the implementation of the management system including any changes to the organization and any improvements that have been made to the management system documents.

It provides a summary of any regulatory inspections of the management system or its implementation and the corrective actions that have been taken, and a summary of any safety culture evaluations that have been performed, and any actions that have arisen from such evaluations.

DNNP is utilizing the existing Ontario Power Generation (OPG) Nuclear Management System for the site preparation phase and will continue to use that system for the construction phase. Certain associated governing documents will be updated to include DNNP and ensure compliance with the CSA N286-12 clauses that are relevant to the construction activities.

DNNP is utilizing an Integrated Project Delivery (IPD) contract model that will maximize integration and collaboration with contract partners (Owner, Designer, Architect & Engineering Firm, and Constructor). Each partner is required to follow their quality assurance program and is required to meet the applicable requirements of CSA N286-12 to execute their licensed activities for DNNP. As the Owner party and licensee, OPG maintains overall ownership and authority of the DNNP.

The following OPG governance were revised in 2023 and CNSC written notifications were sent with the summary of changes.

Document #	Document Title	Issue Date
OPG-PROC-0132	RESPIRATORY PROTECTION	2023-01-05
N-STD-AS-0020	NUCLEAR MANAGEMENT SYSTEM ORGANIZATIONS	2023-06-23
OPG-PROG-0042	CYBER SECURITY	2023-02-15
N-PROC-RA-0135	CYBER SECURITY	2023-06-06
OPG-POL-0001	EMPLOYEE HEALTH AND SAFETY POLICY	2023-04-21
N-PROC-RA-0020	PRELIMINARY EVENT NOTIFICATION	2023-06-02
N-PROG-TR-0005	TRAINING	2023-11-22
OPG-PROG-0039	PROJECT MANAGEMENT	2023-12-22

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NK054-PLAN-07730-00014	ENVIRONMENTAL MONITORING AND ENVIRONMENTAL ASSESSMENT FOLLOW-UP PLAN FOR THE DARLINGTON NEW NUCLEAR PROJECT	2023-12-15
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OPG performed an Enterprise Projects Organization (EPO) nuclear safety and security culture assessment (NSSC) in November 2023 which included the DNNP organization. The assessment evaluated the organization’s NSSC against the Institute of Nuclear Power Operations’ (INPO) ten traits of a healthy Nuclear Safety Culture, and the security trait - Vigilance. The assessment consisted of a staff survey and on-site evaluation and found that the EPO has a healthy nuclear safety and security culture.

Overall, the assessment team heard:

- Employees recognize the special characteristics and unique hazards of nuclear technology and know they are required to pay special attention to nuclear safety.
- Our One Team culture continues to improve as silos are broken down and the team works towards common goals.
- Lessons learned and OPEX are shared cross-functionally between EPO groups as well as our vendor partners.

The assessment team also identified the following areas for improvement:

1. Use opportunities to provide mentoring and reinforce standards and expectations promptly and consistently as they relate to conventional safety non-compliances and risks associated with nuclear security.
2. Continue to reinforce the importance of nuclear safety as an overriding priority in our communications.
3. Ensure consistent leadership presence in the field to foster an environment where staff feel comfortable raising concerns.
4. Ensure nuclear safety remains top of mind and is not compromised by production priorities.

As OPG strives for project excellence, OPG will reflect on these findings and take meaningful actions to drive continuous improvement. The next EPO NSSC assessment is planned for 2026.

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CNSC Inspections

In October 2023, CNSC staff conducted a Type II Management System audit focusing on Engineering Design and Implementation. The findings, Notices of Non-compliance (NNC), are actions are as follows:

- NNC01: Traceability, lack of completeness, of some records from sub-contractors.
 - Actions completed: SCR N-2024-01359 raised. COE oversight checklist for construction and quality was implemented.
- NNC02: Records of rebar inspection, prior to concrete pour, were not found.
- NNC03: Process did not indicate there was a clear configuration management plan during early works for changes in the storm management systems.

All actions were completed by OPG and the CNSC closed all three NNCs on April 2, 2024 [R-24].

2.0 HUMAN PERFORMANCE MANAGEMENT

2.1 Personnel Qualifications and Competencies

This section provides a summary description of progress made to ensure workers are competent to do the work assigned to them founded on the competency criteria which are based on the work to be performed.

This section also provides a summary of the training programs, including improvements to the programs.

The DNNP Training Plan [R-3] outlines the development and delivery of training for Engineering, Procurement and Construction (EPC) contract staff during the Site Preparation Phase.

The DNNP Construction and Commissioning Training Plan [R-4] provides additional details on the training of OPG staff, simulator construction and the governance being utilized to develop and deliver that training. OPG continues to use qualified personnel to perform work activities to support maintaining the Licence and the revision of the licensing documents.

Main Control Room staffing, training development and certification strategies were discussed during DNNP-specific OPG/CNSC quarterly meetings that took place throughout 2023 and are continuing into 2024. DNNP Training governance framework is under development and will continue into 2024. This framework includes reviewing the requirements outlined in N-PROG-TR-0005 Training [R-19] and N-PROC-TR-0008

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Systematic Approach to Training [R-20] for the purpose of integrating them into specific DNNP revisions of these documents. Discipline specific Training and Qualification Descriptions (TQDs) are being developed for DNNP using core OPG training as it relates to DNNP proper, and those specified in the Global Training Program being produced by GEH.

3.0 OPERATING PERFORMANCE

3.1 Conduct of Site Preparation Activities

This section provides a summary description of project status, and any progress made on the site preparation licensed activities.

In accordance with the Compliance Verification Criteria in the Licence Conditions Handbook (LCH) for LC 15.3, OPG has completed and submitted all the documentation for the deliverables required prior to the commencement of early works (Phase 1) and main site preparation (Phase 2) described in the OPG Commitments Report [R-1] and listed in Appendix A of this report.

OPG completed early site preparation (Phase 1) activities in 2023 and received CNSC authorization to commence main site preparation (Phase 2) activities, as permitted under Part IV(i) of the PRSL, on April 27, 2023, [R-21].

During this reporting period, OPG has progressed the following work to support the site preparation activities:

- a) Established a one-unit small modular reactor BWR-300 site layout including infrastructure that could support up to four BWRX-300 units.
- b) Acquired various permits and approvals to support field activities on the DNNP site as indicated in section 3.2 below.
- c) Conducted ongoing pre-consultation meetings with the Municipality of Clarington, the Region of Durham and the Central Lake Ontario Conservation Authority (CLOCA) to facilitate the DNNP early work of the site preparation in accordance with the overall concept plan for site plan approval.
- d) Executed Early Works scope, which included site grading and establishment of construction infrastructure such as laydown and parking areas, access roadways and spoils pile areas, and site services (water, construction power, IT infrastructure).
- e) Implemented the EA Follow up monitoring program to support the main site preparation.

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- f) Started site preparation planning for SMR Units 2-4 in 2023, along with permitting efforts.
- g) Established a 4-unit site layout, including a soil containment structure which would support the site grading activities required to prepare the site for future units.
- h) Conducted geotechnical investigations to support design of the spoils pile.
- i) Geotechnical investigation (Phase 2) for Power Block (Onshore) and for CCW Intake / Discharge Tunnels (Offshore/Onshore) were completed.
- j) Geotechnical Investigation (Phase 3) for building foundation design, monitoring wells, pumping test and Site & Underground Investigation are in progress, to be completed in 2024.
- k) The Main Site Preparation has two phases: Phase 1 - Front End Engineering Design (FEED 40% of detailed design), was completed in Q2 of 2023 and Phase 2 - Site Establishment, which consists of the detailed design, procurement, construction planning, construction, commissioning and close out. The detailed design activities for Site Establishment are in progress and expected to be completed in Q2 of 2024.
- l) The scope, Project Management Plan and project schedule for Site Establishment activities have been developed.

3.2 Permits or Authorizations from Non-CNSC Regulatory Authorities

This section provides a listing of any permits or authorizations applied for, or obtained from regulatory authorities, other than the CNSC, for project activities.

The following permits and authorizations were acquired in 2023:

- a) Permits and authorizations issued from the Central Lake Ontario Conservation Association (CLOCA):
 - (i) A permit under O Reg 42/06 'Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses' for the development activities associated with expanded clearing and grubbing – C23-202-WH.
 - (ii) A permit under O Reg 42/06 'Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses' was obtained from CLOCA for the development activities associated with grading and Stormwater Management facility for Site Establishment area – C23-140-BH.

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- (iii) A permit under O Reg 42/06 'Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses' was obtained from CLOCA for the development activities associated with grading for Site Establishment area – C23-110-G.
 - (iv) A permit under O Reg 42/06 'Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses' was obtained from CLOCA for the development activities associated with vegetation clearing and grubbing for a temporary access road construction, stockpiling of fill and construction of a stormwater management pond – C23-041-G.
- b) Permits and Authorizations issued from the Ministry of Environment, Conservation and Parks:
- (i) A permit under the *Environmental Protection Act* for approval of the establishment of stormwater infrastructure works servicing the Darlington new Nuclear Project – 8287-CTQRMA.
 - (ii) A permit under the *Endangered Species Act, 2007* to authorize activities at the Project Location that would otherwise be prohibited by subsections 9(1) and 10(1) of the *Endangered Species Act* – CN-D-001-20.
- c) Permits and Authorizations issued under Fisheries and Oceans Canada
- a. Letter of Authorization for the installation of a stormwater outlet terminating on the shore of Lake Ontario – 23-HCAA-00912.
- d) Permits and Authorizations from the Ministry of Natural Resources and Forestry
- a. A permit under the Public Lands Act in relation to the stormwater outlet construction – AMOS-2023-PLA-00033-WP-001.
- e) Permits and Authorization issued under the Ontario Ministry of Transportation
- a. A permit issued under the *Public Transportation and Highway Improvement Act* to construct a temporary access road adjacent to Holt Road (east) so that earth and fill can be moved to the site to create a berm at 320 Holt Rd, Clarington - BL-2023-20T-00000119 V1.

OPG and the Municipality of Clarington currently have a site plan agreement, amended on March 28, 2022, that governs the developments at the Darlington site including the Darlington New Nuclear project (DNNP).

The site preparation activities, including the movement of spoils across site and the construction of a new internal roadway, are covered by the existing site plan agreement and do not require a site plan approval.

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3.3 Summary of Reportable Events and Actions Taken to Prevent Recurrence

This section provides a list of any reportable events in the period, including the status of any actions taken to prevent recurrence.

There were no reportable events per REGDOC-3.1.1, “Reporting Requirements for Nuclear Power Plants” during the 2023 calendar year.

3.4 Licence To Construct Application

This section provides a summary of the license to construct application submissions to the CNSC.

The DNNP LTC application, along with supporting packages were submitted to CNSC on October 31, 2022. In 2023, OPG has progressed the following work to support the DNNP LTC application:

1. Updated the Environmental Impact Statement (EIS) review for BWRX-300 technology and its supporting document to reflect zero radiological liquid release during normal operations, results of additional studies on opportunities to retain habitat features on the DNNP site, and more representative estimates of solid waste activity and volume during the normal operation. The EIS Review report [R-6] and the “Darlington New Nuclear Project Supporting Document for Comprehensive Review of EIS for BWRX-300” [R-7] were updated submitted to the CNSC on July 5, 2023 [R-13] and July 20, 2023, respectively.
2. Updated the comparison of the BWRX-300 design parameters with the DNNP Plant Parameter Envelope (PPE) to reflect zero radiological liquid release during normal operations and more representative estimates of solid waste activity and volume during the normal operation. The updated PPE [R-8] was submitted to the CNSC on July 28, 2023 [R-14].
3. The DNNP Commitments Report was updated to reflect the latest status of the commitments related to site preparation and construction activities and submitted to the CNSC [R-2].
4. Updated and submitted the “BWRX-300 Preliminary Safety Analysis Report” [R-9] for the DNNP on March 31, 2023, as part of the LTC Application Package #6a, NK054-CORR-00531-10774 [R-12].
5. Submitted supporting packages #5a [R-11] and 5b for the Core Control Processes and Operations Aspects Deliverable.
6. Submitted supporting packages #6a [R-12] and 6b for the Construction & Commissioning Program Deliverables, along with an amendment to #6b.

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7. BWRX-300 DNNP Strategy documents were submitted on June 7, 2023 for CNSC staff concurrence that the safety and design framework of BWRX-300 meet the applicable regulatory requirements.
8. On June 8, 2023, notification was provided to CNSC staff of a revision to the BWRX DNNP REGDOC-2.5.2 Alternative Approach Report, which was previously provided in 2022. A Supplemental to REGDOC-2.5.2 Alternative Approach: BWRX-300 Means of Shutdown was submitted on January 23, 2024.
9. On May 11, 2023, OPG submitted correspondence [R-15] on the applicability of the Licensing Topical Report NEDC-33926P which was provided by GEH concerning the BWRX-300 Steel-Plate Composite (SC) Containment Vessel (SCCV) and Reactor Building Structural Design in support of the Licence to Construct application review process.
10. On February 1, 2023, OPG provided a response [R-16] to CNSC Staff Review of DNNP Licence to Construct Regulatory Documents, Codes and Standards Report. A revised version of DNNP Licence to Construct Regulatory Documents, Codes and Standards Report was provided to CNSC on November 9, 2023 [R-17]. CNSC concurrence was obtained on December 19, 2023 [R-18].
11. The BWRX-300 Out of Core Criticality Safety Assessment was submitted to CNSC staff on December 22, 2023.
12. On December 14, 2023, the “Safety Analysis Independent Peer Review Identified Gaps Resolution Plan” was submitted to CNSC Staff.
13. OPG continues to communicate any changes to the LTC application and/or supporting documents that have a potential impact on the design and safety and control measures contained within the application, on a quarterly basis, per Section 4.5 of [R-23].

4.0 CONVENTIONAL HEALTH AND SAFETY

4.1 Occupational Health and Safety Performance

This section provides a summary description of the occupational health and safety performance of the project including any lost time injuries or fatalities, and actions that have been taken to prevent recurrence.

This section also provides a summary of any Ontario Ministry of Labour (MOL) investigations or orders.

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For this reporting period, there have been no reportable occupational health and safety events and no MOL investigations or orders related to the DNNP.

OPG confirms that in 2023, radiation doses to workers at the DNNP site from the Darlington Nuclear Generating Station and Darlington Waste Management Facility continue to be below the regulatory dose limit for persons who are not designated as Nuclear Energy Workers.

5.0 ENVIRONMENTAL PROTECTION

5.1 Environmental Excursions

This section provides a summary of any environmental excursions that have occurred on the site such as spills or hazardous materials handling events, efforts taken to remediate such events, and actions taken to prevent recurrence. In addition, this section summarizes results of regulatory assessments of compliance with legal or other requirements, communications, or complaints from interested parties, and the status of any corrective and preventive actions, if any.

Site preparation activities undertaken in 2023 did not result in any environmental excursions such as spills or hazardous materials handling events.

5.2 Environmental Monitoring and Environmental Assessment Follow-Up Results

This section provides a summary description and implementation status of the monitoring activities (if any) as described in the Environmental Monitoring and Environmental Assessment Follow-up Plan.

Detailed results are provided by reference to independent reports, which can be provided upon request.

OPG has a DNNP Environmental Monitoring and Environmental Assessment Follow-up (EMEAF) plan for the site preparation, construction, and operation phases of the project to verify the predictions of the environmental effects identified in the Environmental Assessment (EA) and determine the effectiveness of mitigation measures. The plan incorporates comments received from municipal, provincial, and federal governmental agencies, as well as from Indigenous Nations and communities and was updated in 2023 and submitted to CNSC [R-22]. The plan is associated with commitment D-P-12.1 and has been accepted by CNSC.

The EMEAF Program for site preparation began in 2023 with monitoring in the following five (5) areas:

1. Atmospheric Environment
2. Terrestrial Environment

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3. Geological and Hydrogeological Environment
4. Land Use, and
5. Traffic and Transportation.

The results of the EMEAF program for 2023 are being consolidated and will be provided to the CNSC in a separate EMEAF annual report in 2024. A summary of activities in 2023 related to each of the five areas is included below:

1. Atmospheric Environment
 - a. Air quality monitoring was completed during the 2023 calendar year and improvements to the program via adaptive management have been initiated, including field checklists in order to provide additional data points to be able to better verify and control sources of dust on site.
2. Terrestrial Environment
 - a. Field surveys were conducted, including Bank Swallow burrow census and monitoring of the Bank Swallow artificial nest pilot structure, ecological land classification, breeding bird surveys, breeding amphibian surveys, butterfly surveys, mammal surveys and wildlife road mortality surveys.
3. Geological and Hydrogeological monitoring
 - a. Groundwater well monitoring, including ground water levels, took place in 2023. The program was expanded to include additional wells later in 2023.
 - b. Soils sampling – A soils sampling plan was prepared and submitted to the CNSC in 2023. Soils sampling was performed in 2023 to delineate soil quality on site.
4. Land use
 - a. The land use activities within 10km of the existing Darlington Nuclear Generating Station report for 2023 is in progress to support the EA follow-up program for land use.
5. Recurring Traffic Management Working Group meetings were held with Clarington, Durham, and the Ministry of Transportation of Ontario as per the Traffic Management Plan.
 - a. OPG monitored daily site traffic numbers and engaged with OPG's partners who are responsible for site preparation and construction activities to develop and implement DNNP onsite traffic management procedures to accommodate the transportation demands associated with the DNNP.

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- b. Ministry of Transportation and Durham Region reviewed the number and severity of collisions at intersections and on links impacted by DNNP traffic study area.

The EMEAF plan will continue to be implemented in accordance with OPG's Environmental Management System. Adaptive management is and will continue to be inherent in the design and implementation of the EMEAF program.

6.0 EMERGENCY RESPONSE AND FIRE PROTECTION

6.1 Emergency Response and Fire Protection Provisions

This section provides a summary description and implementation status of the emergency response provisions for emergencies and for non-routine conditions.

This section provides a summary description and implementation status of the fire prevention and response provisions. This section also provides a summary of any fires or emergency events that have occurred, and actions taken to prevent recurrence.

Conventional (non-nuclear) fire prevention and response provisions are in place for this reporting period. There have been no fires or emergency events reportable for the DNNP during this reporting period.

OPG provided review and comments on contract partner's Site-Specific Safety Plan in 2023. There was no emergency drill in 2023. The next DNGS site drill will take place in Q4 of 2024 and will provide opportunity for testing the Site Specific Safety Plan.

7.0 WASTE MANAGEMENT

7.1 Hazardous Waste Management

This section provides a summary description of the quantity of hazardous waste produced, stored on site, and transported to a licensed waste management facility.

This section also provides a summary of any inspections performed by regulatory agencies respecting generation, storage, handling or transport of hazardous waste.

The DNNP early work involves site preparation; vegetation clearing, clearing lands and topsoil removal. These materials are stored on site and are managed in accordance with the Soil Management Plan [R-5].

During this reporting period there have been no DNNP activities undertaken that would generate radioactive materials or require management of radioactive wastes.

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8.0 SECURITY

8.1 Security Events

This section provides a summary of any security events that have been independently reported to the CNSC in accordance with requirements. Due to the sensitive nature of this information, limited content will be provided in this public report. If required, a security protected report will be provided to the CNSC.

No reportable security events occurred with the DNNP during the reporting period.

9.0 SITE SPECIFIC REQUIREMENTS

9.1 OPG Commitments Status for Power Reactor Site Preparation Licence

This section provides a high-level description of progress on deliverables as set out in the Darlington New Nuclear Project Commitments Report, for which OPG is required to take action.

All commitments that OPG made during the Environmental Assessment (EA) process, in addition to the Joint Review Panel (JRP) recommendations accepted by the Government of Canada and OPG, have been consolidated into commitments with specific measurable deliverables and documented in the DNNP Commitments Report, [R-1]. OPG has revised the DNNP Commitments Report once during this reporting period to update the status of the commitments and closure criteria. The revision R009 was issued and accepted by the CNSC.

During this reporting period OPG has fulfilled all commitments required to support both the early works and main site preparation activities. Appendix A provides the status of all DNNP commitments. Table A—1 shows the progress and status of site preparation deliverables, and Table A—2 shows the status of construction deliverables closed and progressed in the reporting period. Some of the commitments in Table A—1 which were originally planned to be completed prior to site preparation are now planned to occur after site preparation based on the updated closure criteria that CNSC staff has reviewed and concurred.

9.2 Financial Guarantee/Preliminary Decommissioning Plan

This section provides a summary description of any changes to the proposed financial guarantee relating to site preparation activities.

For the 2023 calendar year, OPG fulfilled the commitment to deliver OPG's 2024 Financial Guarantee Instrument for Darlington New Nuclear Project Site Preparation Licensing Conditions in the form of a letter of credit based on the Financial Guarantee and Preliminary Decommissioning Plan that were accepted in 2022.

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OPG submitted a proposed 2022-2024 Financial Guarantee for DNNP in accordance with Licence Condition (LC) G.5 of the PRSL 18.00/2031. The CNSC accepted the financial guarantee for the future decommissioning associated with the site preparation phase for DNNP.

9.3 Public Information

This section provides a summary description of OPG's program, and activities under the program, to inform persons living in the vicinity of the DNNP site about events and developments at the site related to the health, safety and security of persons and the environment, and any other issues associated with site preparation.

OPG has been engaging with the local community for more than 50 years since the construction of our existing nuclear facilities. Additionally, since 2006 OPG has undertaken a comprehensive outreach and communications program with stakeholders and the public on all phases of the Darlington New Nuclear Project. Our comprehensive outreach and communications program is designed to reach a broad audience of stakeholders and the public to ensure they are well informed about the DNNP and have opportunities to ask questions and to make objective decisions through readily accessible information, and open and ongoing dialogue.

The objectives of the DNNP public engagement program will be met through the following general communication and engagement process:

- Listen – seek informed views, perspectives, issues and areas of interest.
- Communicate – inform and share information.
- Engage – provide opportunities for information exchange and discussion.
- Respond – ensure comments or concerns are dispositioned.
- Document – processes, process outcomes, issues, areas of interest and responses.

In 2023, OPG continued to increase stakeholder and public outreach in support of the DNNP Project, focusing on:

- a) Informing stakeholders and the public about the next phases of licensing, including hearings on the applicability of the Environmental Impact Statement and Plant Parameter Envelope including opportunities for public engagement.
- b) Continuing to update and inform the public and stakeholders about the work associated with site preparation activities.
- c) Continued communication on the small modular reactor BWRX-300 technology including education opportunities and forums for discussion.

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- Outreach and communications throughout the year continued with the local community and residents, key stakeholder groups and local elected officials. As part of our robust ongoing public engagement activities, in 2023 OPG:
 - Held four public information sessions, with close to 800 registrants.
 - Invited 60 local government, agency and organization representatives to two project workshops.
 - Welcomed 3500 members of the community for our annual Community Power Expo.
 - Delivered energy literacy sessions to students across Durham Region.
 - Provided ongoing update presentations to local community groups including the Durham Nuclear Health Committee and the Darlington and Pickering Community Advisory Councils.
 - Distributed quarterly project update letters including summaries of our engagement and public feedback to interested parties.
 - Provided 250,000 homes and businesses with project-specific inserts through our regularly issued Neighbours Newsletter.
 - Engaged with more than 10,000 people at more than 30 Durham-Region wide community events and festivals and community project kiosks.

OPG continues to maintain an up-to-date project website, toll-free information line, email inbox and public information centres to ensure members of the public have access to project information. OPG has upheld the license conditions and commitments through this engagement.

9.3.1 Public Inquiries

Throughout 2023, public inquiries were received through various means including through the project email, phone calls, and in-person interactions during stakeholder tours, community events, public information sessions, and through exchanges with visitors to our public information centres.

Areas of interest included:

- SMR technology
- Safety and security
- Fuel availability and cycle
- Project schedule and cost
- Career opportunities
- Community programming

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- Climate change
- Licenses waste facilities and by-products
- General inquiries noting interest and requesting to learn more

9.3.2 Media

In 2023, more than 549 discreet media articles were tracked that either featured or mentioned the DNNP or small modular reactors. The overall nature of these news stories revealed a generally positive outlook on new nuclear technologies and SMRs from across the globe.

Themes included:

- 'Nuclear renaissance' continues, picking up steam
- Enthusiasm and pressure from nuclear industry and energy experts to support nuclear power, particularly SMR development
- Expansion of international interest in new nuclear, and expansion of existing nuclear programs – many looking at SMRs
 - Support for/excitement around Ontario's growing nuclear supply chain
- Increased industry collaboration/partnerships in the areas of design, supply chain, and regulatory affairs

9.3.3 Measuring Public Opinion

OPG continually assesses community support for our nuclear operations and projects in a variety of ways including research polling and anecdotal surveys and observations. OPG conducts both qualitative and quantitative research in its site community on a regular basis.

Another equally important measure for OPG determining levels of public support is through the many interactions OPG has with the community itself, including:

- Conversations with local residents while attending community events or presenting to community organizations.
- Monitoring local media (e.g., letters to the editor, articles about OPG operations and projects).
- Inquiries received via telephone and in-person visits at OPG's Information Centre.
- Inquiries from community members received by local elected officials.

As part of commitment D-P-17, OPG will complete a near-site area recreational user survey at the start of the construction phase and operation phase of the project (pending regulatory approvals).

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9.4 Indigenous Engagement

This section provides a summary description of OPG's program, and activities under the program, to engage with Indigenous Nations and Communities with rights or interests in the project.

OPG continued to engage with Indigenous Nations and communities who have rights or interests in the project throughout 2023.

The Williams Treaties First Nations (WTFN) are the treaty rights holders for the Darlington site. The project holds regular meetings with the WTFN and seeks opportunities to incorporate Indigenous Knowledge Systems (IKS) and feedback into project plans and designs, e.g., Endangered Species Act, Permit to Take Water and Condenser Cooling Water design. Other Indigenous communities with interests in the project include the Mohawks of the Bay of Quinte, Métis Nation of Ontario Region 8, Kawartha Nishnawbe, and the Huron Wendat. Meetings were held with Metis Nation of Ontario Region 8 and contact was made with the Mohawks of the Bay of Quinte, and the Huron Wendat agreed to review OPG's Marine Archaeology Report. Contacts for engagement were also made with the Kawartha Nishnawbe should they choose to engage.

The purpose of the engagements was to provide updates about the project, permit reviews where permit activities have potential to impact Aboriginal or treaty rights, and to explore ways to incorporate IKS into the project. In addition, environmental commitments, potential impacts to Aboriginal and treaty rights, as well as waste aspects of Small Modular Reactors were also discussed.

OPG has recognized the importance of growth in the Indigenous Relations and Partnership team to increase engagement and consultation and provide greater support to the Indigenous communities and organizations mentioned above. OPG has expanded the Indigenous Relations and Partnership team to 21 permanent, full-time employees, working across all areas of the business. DNNP now has three dedicated IRP team members working on the project, with oversight from a director.

At the end of 2023, OPG committed to financially supporting an Indigenous Knowledge Study on the DNNP lands. This work will assist the Nations in understanding the traditional uses of these lands and will help inform our work together as OPG moves through the project. The IKS could also lead to a cumulative effects study, a rights assessment and enhanced opportunities for engagement and knowledge-sharing on the project.

Commercial participation discussions are well underway with four WTFN communities. By the end of 2023, conversations regarding financial modeling and timelines had been set and regular meetings schedules were developed.

Topics of employment and procurement were also explored, which are elements of OPG's Reconciliation Action Plan. In 2023, OPG Supply Chain surpassed its goal of

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\$84 million with a spend of \$141 million, while the Indigenous Opportunities Network (ION) program placed 32 Indigenous candidates into roles within the energy sector—10 candidates were from WTFN and three from the Mohawks of the Bay of Quinte.

Further details on the indigenous engagement during this reporting period are documented in the “Darlington New Nuclear Project Indigenous Engagement Report March 2023 to November 2023 [R-10]” which OPG submitted to the CNSC as part of the License to Construct (LTC) application.

OPG continues to operate Capacity Agreements with the Mississaugas of Scugog Island, Curve Lake, and Hiawatha First Nations of the WTFN, which provides funding for their meaningful engagement in the project. At the time of writing, a fourth Capacity Agreement is under discussion with Alderville First Nation of the WTFN.

9.5 Project Schedule

This section provides an update to the project schedule.

In January 2023, the Integrated Project Delivery agreement was in place with GE Hitachi, Atkins Realis (formerly SNC Lavalin) and AECON. The Project Schedule progressed in areas of conceptual design, early works site preparation, licensing activities, procurement and execution readiness. In 2023, the conceptual design was completed as well as an updated estimate of the total project. The site preparation (early works) scope was completed, and the site was turned over to Aecon from ES Fox in Q1 2024.

The project is targeting to start construction of the first SMR in Q1 2025 pending LTC issuance. The commercial operation of the station is planned for 2029 as shown on Figure 1, Darlington New Nuclear Project Roadmap.

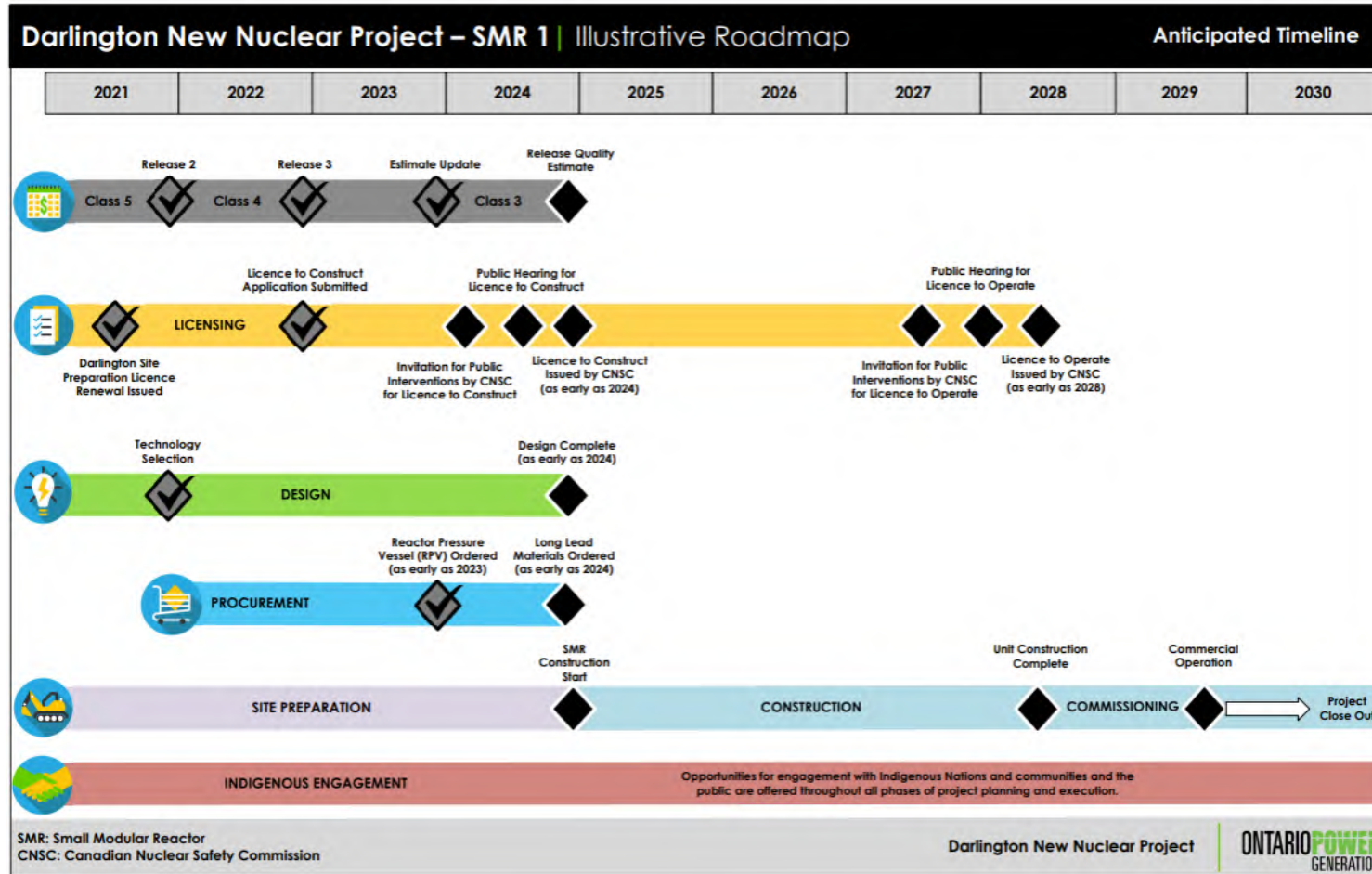
The major project milestones can also be seen in Figure 1 below.

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Figure 1. Darlington New Nuclear Project Roadmap



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9.6 Other Supporting Activities

This section provides a summary description of any supporting activities undertaken during the reporting period. Detailed results are provided by reference or included as an Appendix.

9.6.1 DNNP Land Maintenance and Management

OPG continues to maintain DNNP land areas through monitoring and control of their use.

OPG continues to maintain the waterfront trail license agreement with the Municipality of Clarington to allow public recreational use of lands north of the existing Canadian National Railway line and south of Energy Drive.

OPG has consulted with the Municipality of Clarington to advise that a portion of the waterfront trail between Holt Road and Maple Grove Road would be temporarily rerouted to support the transport and stockpile spoils related to the DNNP site preparation activities. The waterfront trail has been rerouted to Energy Drive on the municipal road allowance and will maintain this route during site preparation. OPG and the Municipality of Clarington have collaborated on appropriate signage and communications for trail users. In addition, a licencing amending agreement dated October 30, 2023 was executed to reflect the temporary closure and rerouting of the trail.

10.0 SUMMARY

OPG is committed to fulfill the licence requirements as specified in the PRSL and ensure the main site preparation activities are executed in a manner that protects the health and safety of persons and the environment. OPG continues progressing commitment deliverables for the construction phase and advancing the design and procurement process of BWRX-300 long lead components that will enable the construction of the first SMR BWRX-300 unit at the DNNP site.

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11.0 REFERENCES

- [R-1] Darlington New Nuclear Project Commitments Report, October 30, 2023, CD# NK054-REP-01210-00078 R009.
- [R-2] OPG Letter, M. Knutson to S. Eaton, "DNNP - Notification of Document Changes to NK054-CORR-00531-10708 Darlington New Nuclear Project Commitments Report", November 17, 2023, CD# NK054-CORR-00531-10868.
- [R-3] Darlington New Nuclear Project (DNNP) – Training Plan for Site Preparation, August 23, 2022, CD# NK054-PLAN-01210-00029 Sheet 0001 R003.
- [R-4] Darlington New Nuclear Project (DNNP) – Construction and Commissioning Training Plan, September 12, 2022, CD# NK054-PLAN-01210-00029 Sheet 0002 R000.
- [R-5] DNNP Soil Management Plan, December 2021, CD# NK054-PLAN-07730-00018-R000.
- [R-6] Darlington New Nuclear Project Environmental Impact Statement Review Report for Small Modular Reactor BWRX-300, June 28, 2023, CD# NK054-REP-07730-00055-R001.
- [R-7] Darlington New Nuclear Project Supporting Document for Comprehensive Review of EIS For BWRX-300, July 19, 2023, CD# NK054-REP-07730-00058-R001.
- [R-8] Use Of Plant Parameters Envelope to Encompass the Reactor Designs Being Considered for the Darlington Site, July 14, 2023, CD# N-REP-01200-10000-R006.
- [R-9] Ontario Power Generation Inc. Darlington New Nuclear Project: BWRX-300 Preliminary Safety Analysis Report, March 7, 2023, CD# NK054-SR-01210-00001-R001.
- [R-10] Darlington New Nuclear Project Indigenous Engagement Report for Period March 2023 to November 2023, CD# NK054-CORR-00531-10905.
- [R-11] OPG Letter, M. Knutson to D. Saumure, "DNNP – Submission of Package #5(a) Core Control Processes and Operations Aspects Deliverable in Support of the Licence to Construct Application for the CNSC Review", February 28, 2023, CD# NK054-CORR-00531-10751.
- [R-12] OPG Letter, M. Knutson to D. Saumure, "DNNP – Submission of Package #6a – Construction & Commissioning Program Deliverables - in Support of the Licence to Construct Application for the CNSC Review", March 31, 2023, CD# NK054-CORR-00531-10774.
- [R-13] OPG Letter, M. Knutson to S. Eaton, "DNNP – Submission of Updated DNNP Environmental Impact Statement (EIS) Review Document", July 5, 2023, CD# NK054-CORR-00531-10815.
- [R-14] OPG Letter, M. Knutson to S. Eaton, "DNNP – Submission of Updated DNNP Plant Parameter Envelope Document", July 28, 2023, CD# NK054-CORR-00531-10832.
- [R-15] OPG Letter, M. Knutson to S. Eaton, "DNNP – Applicability of LTR NEDC-33926P, Revision 0, BWRX-300 Steel-Plate Composite (SC) Containment Vessel (SCCV) and Reactor Building

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Structural Design in Support of the Licence to Construct Application", May 11, 2023, CD# NK054-CORR-00531-10809.

- [R-16] OPG Letter, M. Knutson to S. Eaton, "Response to CNSC Staff Review of DNNP Licence to Construct Regulatory Documents, Codes and Standards Report", February 1, 2023, CD# NK054-CORR-00531-10744.
- [R-17] OPG Letter, M. Knutson to S. Eaton, "DNNP –Submission of the DNNP Licence to Construct Regulatory Documents, Codes and Standards Report R002", November 9, 2023, CD# NK054-CORR-00531-10879.
- [R-18] CNSC Letter, M. Broeders to M. Knutson, "CNSC staff response to DNNP – Submission of the DNNP Licence to Construct Regulatory Documents, Codes and Standards Report R002", December 19, 2023, CD# NK054-CORR-00531-10974.
- [R-19] Training, November 9, 2023, CD# N-PROG-TR-0005-R020.
- [R-20] Systematic Approach to Training, June 23, 2022, CD# N-PROC-TR-0008-R024.
- [R-21] CNSC Letter, R. Jammal to M. Knutson, "Darlington New Nuclear Project (DNNP): Request for CNSC Consent to Authorize Commencement of Phase 2 Site Preparation Licensed Activities Specified in Part IV(i) of the PRSL 18.00/2031" April 27, 2023, e-Doc 7005833, CD# NK054-CORR-00531-10805.
- [R-22] OPG Letter, M. Knutson to M. Broeders, "DNNP – Notification of Document Changes to NK054-PLAN-07730-00014 Environmental Monitoring and Environmental Assessment Follow-up (EMEAF) Plan for Darlington New Nuclear Project", February 1, 2024, CD# NK054-CORR-00531-10920.
- [R-23] Ontario Power Generation - Canadian Nuclear Safety Commission Staff Protocol for the Darlington New Nuclear Project Licence To Construct Application, February 2023, <https://api.cnscccsn.gc.ca/dms/digital-medias/OPG-DNNP-LTC-Protocol-Web-EN-Feb2023.pdf/object?subscription-key=3ff0910c6c54489abc34bc5b7d773be0>.
- [R-24] OPG Letter, M. Broeders to M. Knutson, "DNNP Response to OPG Request To Close CNSC Action Item 2023-13-31229 Type II Inspection DNNP-LTPS-2023-18211 Engineering Design and Implementation", April 2, 2024, CD# NK054-CORR-00531-10994.

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Appendix A: Progress and Status of DNNP Regulatory Commitment Deliverables

Table A—1: Progress and Status of DNNP Site Preparation Phase Commitment Deliverables

Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-1	DNNP Management System and Implementing Documents			
D-P-1.1	NK054-PLAN-01210-00008, Darlington New Nuclear Project (DNNP) Program Management Plan	<ul style="list-style-type: none"> NK054-PLAN-01210-00008 	<ul style="list-style-type: none"> CNSC closure granted on April 22, 2022, CD# NK054-CORR-00531-10672 	Closed
D-P-1.2	N-PROC-MP-0078, Specification, Review, Acceptance and Use of Vendor Technical Documents	<ul style="list-style-type: none"> N-PROC-MP-0078 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.3	N-STD-MP-0009, Contractor/Owner Engineering Interface and Oversight	<ul style="list-style-type: none"> N-STD-MP-0009 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.4	N-PROC-RA-0048, Conducting Audits, and Performance Assessments	<ul style="list-style-type: none"> N-PROC-RA-0048 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.5	N-PROC-RA-0097, Self-assessments and Benchmarking	<ul style="list-style-type: none"> N-PROC-RA-0097 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-1.6	N-STD-RA-0008, Incident Investigation	<ul style="list-style-type: none"> N-STD-RA-0008 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.7	N-PROC-RA-0022, Processing Station Condition Records	<ul style="list-style-type: none"> N-PROC-RA-0022 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.8	OPG-STD-0148, Project Management	<ul style="list-style-type: none"> OPG-STD-0148 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.9	OPG-STD-0153, Contract Management	<ul style="list-style-type: none"> OPG-STD-0153 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.10	OPG-STD-0017, Organizational Authority Register	<ul style="list-style-type: none"> OPG-STD-0017 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.11	N-PROC-RA-0035, Operating Experience Process	<ul style="list-style-type: none"> N-PROC-RA-0035 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.12	N-PROC-MP-0078, Specification, Review, Acceptance and Use of Vendor Technical Documents	<ul style="list-style-type: none"> N-PROC-MP-0078 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.13	N-PROC-AS-0080, Nuclear Business Planning	<ul style="list-style-type: none"> N-PROC-AS-0080 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.14	OPG-MAN-00120-0021, Conduct Of Construction Management	<ul style="list-style-type: none"> OPG-MAN-00120-0021 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-1.15	N-STD-MP-0009, Contractor/Owner Engineering Interface and Oversight	<ul style="list-style-type: none"> N-STD-MP-0009 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.16	OPG-PROC-0019, Records and Document Management	<ul style="list-style-type: none"> OPG-PROC-0019 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.17	OPG-MAN-00120-0017, Project Communication and Stakeholder Management	<ul style="list-style-type: none"> OPG-MAN-00120-0017 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.18	OPG-MAN-00120-0016, Project Integrated Change Control	<ul style="list-style-type: none"> OPG-MAN-00120-0016 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.19	N-PROC-RA-0006, Regulatory Action Management	<ul style="list-style-type: none"> N-PROC-RA-0006 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.20	N-STD-AS-0002, Procedure Use and Adherence	<ul style="list-style-type: none"> N-STD-AS-0002 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.21	N-STD-AS-0020, Nuclear Management Systems Organizations	<ul style="list-style-type: none"> N-STD-AS-0020 	<ul style="list-style-type: none"> Same as D-P-1.1 	Closed
D-P-1.22	NK054-DRAW-01210-00007, OPG New Nuclear at Darlington Survey Drawing	<ul style="list-style-type: none"> NK054-DRAW-01210-00007 	<ul style="list-style-type: none"> CNSC closure of commitment granted on November 9, 2020, CD# NK054-CORR-00531-10556 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-1.23	NK054-REP-01210-00078, Darlington New Nuclear Project Commitments Report	<ul style="list-style-type: none"> NK054-REP-01210-00078 	<ul style="list-style-type: none"> CNSC closure of commitment granted on November 9, 2020, CD# NK054-CORR-00531-10556 	Closed

Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-2	Occupational Health and Safety Plan			
D-P-2.1	Occupational Health and Safety Plan	<ul style="list-style-type: none"> NK054-PLAN-01210-00034, DNNP Health and Safety Plan 	<ul style="list-style-type: none"> CNSC closure of commitment granted on June 23, 2022, CD# NK054-CORR-00531-10698 	Closed
D-P-3	Environmental Management and Protection Plans			
D-P-3.1	Environmental Management and Protection Plan	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> CNSC acceptance and closure of commitment granted on August 24, 2022, CD# NK054-CORR-00531-10718 	Closed
D-P-3.2	Nuisance Effects (Dust and Noise) Plan/Procedure	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> Same as D-P-3.1 OPG is required to confirm with CNSC that the applicable permits and site plan approval(s) are obtained in advance of conducting 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
			activities outlined in these commitments	
D-P-3.3	Spill Prevention and Response Plan/Procedure	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> Same as D-P-3.1 OPG is required to confirm with CNSC that the applicable permits and site plan approval(s) are obtained in advance of conducting activities outlined in these commitments 	Closed
D-P-3.4	Storm Water Management Plan/Procedure	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> Same as D-P-3.1 OPG is required to confirm with CNSC that the applicable permits and site plan approval(s) are obtained in advance of conducting activities outlined in these commitments 	Closed
D-P-3.5	Erosion and Sediment Control Plan/Procedure	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> Same as D-P-3.1 OPG is required to confirm with CNSC that the applicable permits and site plan approval(s) are obtained in advance of conducting activities outlined in these commitments 	Closed
D-P-3.6	Hazardous Waste Management Plan/Procedure	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental 	<ul style="list-style-type: none"> Same as D-P-3.1 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
		Management and Protection Plan for Site Preparation		
D-P-3.7	Terrestrial Environment Mitigation Measures and Plans	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> Same as D-P-3.1 OPG is required to confirm with CNSC that the applicable permits and site plan approval(s) are obtained in advance of conducting activities outlined in these commitments 	Closed
D-P-3.8	Bank Swallow Mitigation Measures and Plans		<ul style="list-style-type: none"> Not applicable for site preparation activities. This commitment is applicable prior to commencement of any licensed activity with potential adverse impact to the Bank Swallow [Per Darlington New Nuclear Project Commitments Report R009] In progress 	Open
D-P-3.9	In-land Aquatic Environment Mitigation Measures and Plans	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> Same as D-P-3.1 OPG is required to confirm with CNSC that the applicable permits and site plan approval(s) are obtained in advance of conducting activities outlined in these commitments 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-3.10	Smog Alert Action Plan	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> Same as D-P-3.1 	Closed
D-P-3.11	Plan to address Physical and Cultural Heritage Resources	<ul style="list-style-type: none"> NK054-PLAN-07730-00022, DNNP Environmental Management and Protection Plan for Site Preparation 	<ul style="list-style-type: none"> CNSC closure of commitment granted on July 15, 2022, CD# NK054-CORR-00531-10704 	Closed
D-P-4	Quality Management Plan			
D-P-4.1	Quality Management Plan	<ul style="list-style-type: none"> NK054-01210-00031, DNNP Quality Management Plan 	<ul style="list-style-type: none"> CNSC closure of commitment granted on June 17, 2022, CD# NK054-CORR-00531-10697 	Closed
D-P-5	Emergency Management and Fire Protection Plans			
D-P-5.1	DNNP Emergency Preparedness Plan	<ul style="list-style-type: none"> NK054-PLAN-01210-00002, DNNP Nuclear Emergency Preparedness Plan 	<ul style="list-style-type: none"> CNSC closure of commitment granted on August 18, 2021, CD# NK054-CORR-00531-10600 	Closed
D-P-5.2	Emergency Response and Evacuation Plan	<ul style="list-style-type: none"> NK054-PLAN-01210-00034, DNNP Health and Safety Plan 	<ul style="list-style-type: none"> CNSC closure of commitments granted on August 23, 2022, CD# NK054-CORR-00531-10719 	Closed
D-P-5.3	Fire Prevention and Response Plan	<ul style="list-style-type: none"> NK054-PLAN-01210-00034, DNNP Health and Safety Plan 	<ul style="list-style-type: none"> CNSC closure of commitments granted on June 23, 2022, CD# NK054-CORR-00531-10698 	Closed
D-P-6	Personnel Training Plan			

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-6.1	N-PROC-TR-0008 Systematic Approach to Training	<ul style="list-style-type: none"> N-PROC-TR-0008, Systematic Approach to Training 	<ul style="list-style-type: none"> CNSC closure of commitment granted on April 29, 2022, CD# NK054-CORR-00531-10676, 	Closed
D-P-6.2	Personnel Training Plan	<ul style="list-style-type: none"> NK054-PLAN-01210-00029, DNNP Training Plan 	<ul style="list-style-type: none"> CNSC closure of commitment granted on June 9, 2022, CD# NK054-CORR-00531-10695 	Closed
D-P-7	Site Security Plan			
D-P-7.1	Security Plan for Site Preparation	<ul style="list-style-type: none"> NK054-PLAN-61400-00001, DNNP Site Security Plan 	<ul style="list-style-type: none"> CNSC closure of commitment granted on January 6, 2022, CD# NK054-CORR-00531-10643 	Closed
D-P-7.2	Site Access and Security Protocol	<ul style="list-style-type: none"> NK054-PLAN-61400-00002, DNNP Contract Partner Site Access and Security Protocol 	<ul style="list-style-type: none"> CNSC closure of commitment granted on March 9, 2022, CD# NK054-CORR-00531-10657 	Closed

Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-8	Level 1 and Level 2 Project Management Schedule			
D-P-8.1	Level 1 and Level 2 Project Management Schedule		<ul style="list-style-type: none"> CNSC closure of commitment granted on July 15, 2022, CD# NK054-CORR-00531-10705 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-9	Site Geotechnical and Seismic Hazard Investigation Program			
D-P-9.1	Site Geotechnical and Seismic Hazard Investigation Program	<ul style="list-style-type: none"> NK054-PLAN-01210-00022, Site Geotechnical and Seismic Hazard Investigation Plan 	<ul style="list-style-type: none"> CNSC closure of commitment granted on September 13, 2021, CD# NK054-CORR-00531-10606 	Closed
D-P-9.2	Site geotechnical investigation report(s) detailing the findings and results from the site investigation program for excavation and stockpiling	<ul style="list-style-type: none"> NK054-REP-01210-00175 Sheet 00002 Rev 001, Darlington New Nuclear Project Phase 1 Geotechnical Investigation Report Volume 2 NK054-REP-07730-00053, Darlington New Nuclear Project Soil Characterization Report 	<ul style="list-style-type: none"> CNSC closure of commitment granted on August 29, 2023, CD# NK054-CORR-00531-10847 	Closed
D-P-9.3	Site geotechnical investigation report(s) detailing the findings and results from the site investigation for detailed design of foundations and structures	<ul style="list-style-type: none"> NK054-REP-01210-00175 sheet 00002, Darlington New Nuclear Project Phase 1 Geotechnical Investigation Report Volume 2 (Power Block) NK054-SR-01210-00001 R001, BWRX-300 Preliminary Safety Analysis Report NK054-REP-03500.8-00002-R001, Darlington New Nuclear Project - Seismically-Induced Soil Liquefaction Assessment. 	<ul style="list-style-type: none"> NK054-SR-01210-00001 R001 and NK054-REP-03500.8-00002-R001 were submitted to CNSC in 2023 within package 6a to support the LTC application NK054-CORR-00531-10774. Additional documentation has been submitted and closure of commitment requested on February 26, 2024, via NK054-CORR-00531-10899. 	Open

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-9.4	Site seismic hazard investigation report(s) detailing the findings and results from the site investigation	<ul style="list-style-type: none"> NK054-SR-01210-00001 R001, BWRX-300 Preliminary Safety Analysis Report NK054-REP-03500.8-00001 R000, Darlington New Nuclear Project - Site-Specific Probabilistic Seismic Hazard Assessment 	<ul style="list-style-type: none"> Documents supporting this commitment were submitted in 2023 within package 6a to support the LTC application NK054-CORR-00531-10774. An additional document was submitted, and closure of commitment requested on February 26, 2024, via NK054-CORR-00531-10899. 	Open
D-P-9.5	Technical Reports on Geotechnical Design Considerations		<ul style="list-style-type: none"> This commitment is required to be completed 60 days prior to commencement of construction In progress 	Open
D-P-10	Traffic Management Plan			
D-P-10.1	Traffic Management Plan	<ul style="list-style-type: none"> NK054-PLAN-08965.4-00001, DNNP Traffic Management Plan 	<ul style="list-style-type: none"> CNSC closure of commitment D-P-10 granted on April 19, 2022, CD# NK054-CORR-00531-10670 	Closed
D-P-11	Archaeological Excavation Reports			
D-P-11.1	Brady Site (AIGq-83) Stage 4 Preliminary Excavation Report	<ul style="list-style-type: none"> Brady Site (AIGq-83) Stage 4 Preliminary Excavation Report 	<ul style="list-style-type: none"> CNSC closure of commitment D-P-11 granted on October 22, 2021, CD# NK054-CORR-00531-10619 	Closed
D-P-11.2	Brady Site (AIGq-83) Stage 4 Final Report	<ul style="list-style-type: none"> Brady Site (AIGq-83) Stage 4 Final Report 	<ul style="list-style-type: none"> Same as D-P-11.1 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-11.3	Crumb Site (AIGq-86) Stage 4 Preliminary Excavation Report	<ul style="list-style-type: none"> Crumb Site (AIGq-86) Stage 4 Preliminary Excavation Report 	<ul style="list-style-type: none"> Same as D-P-11.1 	Closed
D-P-11.4	Crumb Site (AIGq-86) Stage 4 Final Report	<ul style="list-style-type: none"> Crumb Site (AIGq-86) Stage 4 Final Report 	<ul style="list-style-type: none"> Same as D-P-11.1 	Closed
D-P-11.5	Copies of the reports (D-P-11.1 to D-P-11.4) noted above and copies of MTCS letters of acceptance for the reports	<ul style="list-style-type: none"> See above 	<ul style="list-style-type: none"> Same as D-P-11.1 	Closed

Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-12	Environmental Monitoring and Environmental Assessment Follow-up			
D-P-12.1	Environmental Monitoring and Environmental Assessment Follow-up Plan	<ul style="list-style-type: none"> NK054-PLAN-07730-00014, Environmental Monitoring and Environmental Assessment Follow-up for the DNNP 	<ul style="list-style-type: none"> CNSC closure and acceptance of commitment was granted on April 27, 2022, CD# NK054-CORR-00531-10674 	Closed
D-P-12.1(a)	Environmental Impact Statement Review	<ul style="list-style-type: none"> NK054-REP-07730-00055-Rev 001, Darlington New Nuclear Project Environmental Impact Statement Review Report For Small Modular Reactor BWRX-300 	<ul style="list-style-type: none"> CNSC closure and acceptance requested on October 17, 2022, CD# NK054-CORR-00531-10720 Documents supporting this commitment were updated and submitted to CNSC in July 2023. 	Pending

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		<ul style="list-style-type: none"> N-REP-01200-10000-Rev 006, Use Of Plant Parameters Envelope To Encompass The Reactor Designs Being Considered For The Darlington Site, 	<ul style="list-style-type: none"> This commitment is part of the Construction Licence Application 	
D-P-12.2	Methodology Reports for Environmental Monitoring and EA Follow-up for Atmospheric Environment	<ul style="list-style-type: none"> NK054-PLAN-07730-00023 R000, DNNP, Air Quality Environmental Assessment Follow-Up Monitoring Plan/Methodology Report NK054-PLAN-07730-00024 R000, DNNP Acoustic Environmental Assessment Follow-Up Monitoring Plan/Methodology Report 	<ul style="list-style-type: none"> CNSC closure of commitment was granted on August 19, 2022, CD# NK054-CORR-00531-10717 	Closed
D-P-12.3	Methodology Reports for Environmental Monitoring and EA Follow-up for Surface Water Environment		<ul style="list-style-type: none"> This commitment will be completed prior to commencement of the licensed activities associated with shoreline protection and in-water works. There are no such planned activities during site preparation. In progress 	Open
D-P-12.4	Methodology Reports for Environmental Monitoring and EA Follow-up for Aquatic Environment		<ul style="list-style-type: none"> This commitment will be completed to prior to commencement of the licensed activities with potential adverse impact to the aquatic environment. There are no such 	Open

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
			planned activities during site preparation. <ul style="list-style-type: none"> In progress 	
D-P-12.5	Methodology Reports for Environmental Monitoring and EA Follow-up for Terrestrial Environment	<ul style="list-style-type: none"> NK054-PLAN-07730-00025 R000, DNNP Terrestrial Environment Environmental Assessment Follow-Up Monitoring Plan/Methodology Report 	<ul style="list-style-type: none"> Same as D-P-12.2 R001 of this document was drafted late December 2022 	Closed
D-P-12.6	Methodology Reports for Environmental Monitoring and EA Follow-up for Geological and Hydrogeological Environment	<ul style="list-style-type: none"> NK054-PLAN-07730-00026 R000, DNNP Geological and Hydrogeological Environment Environmental Assessment Follow-Up Monitoring Plan/Methodology Report 	<ul style="list-style-type: none"> Same as D-P-12.2 R001 of this document was issued mid-December 2022 	Closed
D-P-12.7	Methodology Reports for Environmental Monitoring and EA Follow-up for Land Use	<ul style="list-style-type: none"> NK054-PLAN-07730-00027 R000, DNNP Land Use Environmental Assessment Follow-Up Monitoring Plan/Methodology Report 	<ul style="list-style-type: none"> Same as D-P-12.2 	Closed
D-P-12.8	Methodology Reports for Environmental Monitoring and EA Follow-up for Traffic and Transportation	<ul style="list-style-type: none"> NK054-PLAN-08965.4-00001-R001, Darlington New Nuclear Project Traffic Management Plan 	<ul style="list-style-type: none"> Same as D-P-12.2 	Closed
D-P-12.9	Methodology Reports for Environmental Monitoring	<ul style="list-style-type: none"> DA1-OPG-NN-NN-TREP-EC-0004, DNNP – Health – 	<ul style="list-style-type: none"> Methodology Report was submitted to CNSC, and closure of 	Closed

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
	and EA Follow-up for Health – Non-Human Biota and Human Health	Human and Non-Human Biota – Environmental Assessment Follow-Up Monitoring Plan / Prior to Construction Methodology Report	commitment requested via NK054-CORR-00531-10930 in January 2024. <ul style="list-style-type: none"> CNSC closure of commitment was granted March 14, 2024, CD# NK054-CORR-00531-10965. 	

Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-13	Financial Guarantee and Preliminary Decommissioning Plan			
D-P-13.1	Preliminary Decommissioning Plan	<ul style="list-style-type: none"> NK054-PLAN-00960-00005, DNNP Site Preparation Preliminary Decommissioning Plan 	<ul style="list-style-type: none"> CNSC closure of commitment was granted April 14, 2022, CD# NK054-CORR-00531-10668 	Closed
D-P-13.2	Financial Guarantee		<ul style="list-style-type: none"> CNSC closure of commitment was granted April 14, 2022, CD# NK054-CORR-00531-10668 CNSC closure of commitment was granted on June 7, 2022, CD# NK054-CORR-00531-10694 	Closed
D-P-14	Fish Habitat Compensation Plan			
D-P-14.1	Fish Habitat Compensation Plan		<ul style="list-style-type: none"> This commitment will be completed prior to commencement of the licensed activities potentially 	Open

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			<p>affecting fish habitat. There are no such planned activities during site preparation.</p> <ul style="list-style-type: none"> OPG continued discussions with DFO and CNSC regarding <i>Fisheries Act</i> approvals to support future completion of this deliverable. In progress 	
D-P-15	Round Whitefish Action Plan			
D-P-15.1	Round Whitefish Action Plan	<ul style="list-style-type: none"> NK054-REP-07730-0942713, Round Whitefish Action Plan Update and Recommendation For Closure Of Darlington New Nuclear Project Deliverable D-P-15.1 	<ul style="list-style-type: none"> CNSC closure of commitment granted on May 11, 2022, CD# NK054-CORR-00531-10686 DFO review of the Round Whitefish Action Plan is covered under Commitment D-C-1.2 	Closed
D-P-16	Lake Infill Design			
D-P-16.1	Lake Infill Design		<ul style="list-style-type: none"> This commitment will be completed prior to commencement of lake infill activities 	Open
D-P-16.2	Evidence of OPG review and acceptance of Lake Infill Design		<ul style="list-style-type: none"> This commitment will be completed prior to commencement of lake infill activities. 	Open
D-P-17	Communications, Consultation and Stakeholder Relations Program			

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Acceptance and/or Closure Date	Status
D-P-17.1	Communications, Consultation and Stakeholder Relations Program	<ul style="list-style-type: none"> NK054-PLAN-01210-00028, DNNP Indigenous Engagement Plan NK054-PLAN-01210-00019, DNNP Stakeholder Engagement Plan 	<ul style="list-style-type: none"> CNSC closure of commitment granted on March 22, 2022, CD# NK054-CORR-00531-10661 	Closed
D-P-18	Proposed Layout of Structures in the Final Layout State (to the extent practicable)			
D-P-18.1	Proposed Layout of Structures in the Final Layout State (to the extent practicable)		<ul style="list-style-type: none"> CNSC closure of commitment granted on November 29, 2022, CD# NK054-CORR-00531-10750 	Closed

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Table A—2: Status of DNNP Construction Phase Commitment Deliverables Closed and Progressed in the Reporting Period

Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Closure Date (if Applicable)	Status
D-C-1	Condenser Cooling Water Design			
D-C-1.1	Condenser Cooling Water Option Assessment Report and OPG’s Final Decision on Best Available Technology Economically Achievable (BATEA)		<ul style="list-style-type: none"> NK054-CORR-00531-00253 CNSC closure of commitment D-C-1.1 granted on October 22, 2021, CD# NK054-CORR-00531-10619 	Closed
D-C-1.2	Condenser Cooling Water Design		<ul style="list-style-type: none"> This commitment is to be completed prior to commencement of CCW construction activities. OPG addressed CNSC comments and finalized the 2019 deep water fish community characterization study report to support Condenser Cooling Water design, CD# NK054-CORR-00531-10604. Additional documents will be prepared and will be sent to close this commitment prior to CCW in-water works. In progress 	Open
D-C-1.3	Evidence of OPG review and acceptance of EPC		<ul style="list-style-type: none"> This commitment is to be completed prior to the 	Open

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Closure Date (if Applicable)	Status
	Condenser Cooling Water Design		commencement of CCW in-water construction activities. <ul style="list-style-type: none"> In progress 	
D-C-3	Preliminary Safety Analysis and Design			
D-C-3.1	Preliminary Safety Analysis and Design	<ul style="list-style-type: none"> NK054-REP-02730-00001-R000, BWRX-300 DNNP Development Flood Hazard Assessment NK054-SR-01210-00001-R001, Darlington New Nuclear Project: BWRX-300 Preliminary Safety Analysis Report NK054-REP-01210-00190-00001-R000, ADDAM Dose Calculation Summary for Key Accidents For A Single Unit Darlington SMR-BWRX-300 	<ul style="list-style-type: none"> This commitment is to be completed as part of LTC Application Documents supporting the closure of this commitment were submitted to CNSC in 2023. Additional documents have been prepared and will be submitted to close this commitment. In progress 	Open
D-C-3.2	Evidence of OPG review and acceptance of Preliminary Safety Analysis and demonstration that reactor design fits within PPE values		<ul style="list-style-type: none"> To be completed as part of LTC Application Submitted as part of LTC application In progress 	Open
D-C-7	Contingency Plan for Flooding and Other Extreme Weather Hazards			

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Deliverable	Title	Submitted Deliverables to Fulfill Commitment	Regulator Closure Date (if Applicable)	Status
D-C-7.1	Contingency Plan for Flooding and Other Extreme Weather Hazards	<ul style="list-style-type: none"> NK054-PLAN-07007-00001, Darlington New Nuclear Project Strategy for Addressing Climate Change Impacts Darlington New Nuclear Project Phase 1 Climate Change Risk Assessment 	<ul style="list-style-type: none"> This commitment is to be completed prior to construction. The DNNP strategy for Addressing Climate Change Impacts and the DNNP phase 1 Climate Change Risk Assessment Summary Report were submitted in July 2023. The DNNP Phase 2 Climate Change Risk Assessment Summary Report will be submitted in 2024. In Progress 	Open
D-C-9	Radioactive Waste Management Plan			
D-C-9.1	Radioactive Waste Management Plan	<ul style="list-style-type: none"> NK054-PLAN-03460-00001, Darlington New Nuclear Project (DNNP) Solid Radioactive Waste Management Strategy 	<ul style="list-style-type: none"> To be completed as part of LTC Application Document supporting the closure of this commitment as Submitted as part of LTC application 5a, NK054-CORR-00531-10751 in February 2023. In Progress 	Open