

THIRD PROTOCOL ON THE OPERATION OF THE GENTILLY-2 NUCLEAR POWER REACTOR AND RADIOACTIVE WASTE FACILITY

DATE: 2011-06-24

VERSION: 1

HYDRO-QUÉBEC

**CANADIAN NUCLEAR
SAFETY COMMISSION**

Table of Contents

Summary of Changes	3
Extent of the protocol	3
1. Objective	4
2. Introduction	4
3. Approach to Licensing	4
4. Schedule	5
5. Roles and Responsibilities	5
5.1 CNSC governance structure.....	5
5.2 Hydro-Québec governance structure	6
6. Organizational Representatives	6
7. Statement of Work	7
7.1 Technical scope.....	8
7.2 Activities and deliverables.....	10
7.2.1 Document deliverables.....	10
7.2.2 Other deliverables	13
7.3. Conflict resolution process	13
8. Future revisions of the protocol	14
9. References	15
10. Glossary	15

Summary of Changes

Section	Change
i	Initial version/draft
ii	Draft containing comments by staff of the CNSC and Hydro-Québec
1	Initial version for approval

Extent of the protocol

This protocol is strictly administrative in nature. None of the statements in this protocol is to be construed or interpreted as affecting the jurisdiction or discretionary powers of the Canadian Nuclear Safety Commission (CNSC) in its assessments of licence applications made in accordance with the *Nuclear Safety and Control Act* (NSCA) [1]. It is not intended to constitute a deviation to the current operating licences of Gentilly-2 for its nuclear power reactor and radioactive waste facility.

1. Objective

The objective of this protocol is to provide a framework to enable personnel of Hydro-Québec and the CNSC to prepare the necessary documentation and carry out the work in support of the application to restart the Gentilly-2 nuclear generating station and return it to operation in 2012. This protocol expires on December 31, 2011. However, the CNSC's regulatory processes will continue as usual.

2. Introduction

The legal framework for licence renewal is derived from the *Nuclear Safety and Control Act* (NSCA) [1] and supporting Regulations.

Hydro-Québec personnel and CNSC staff will coordinate their efforts to fulfill the mandates and responsibilities of both organizations.

In engaging in this coordinated effort and working responsibly in the public interest, the CNSC maintains its independence as the Canadian nuclear regulator and Hydro-Québec continues to be solely responsible for the safe operation of the Gentilly-2 reactor.

It is understood that:

- safety will not be compromised in making licensing recommendations to the Commission; and
- the objective is produce a comprehensive body of information and recommendations to allow the Commission to render its decision regarding the application for the safe operation of the reactor until December 2012.

This protocol sets out the framework within which both organizations will work, and establishes a high-level estimate of the time line. This third protocol covers the period from May to December 2011, during which the licensee will prepare and carry out a scheduled shutdown to support the safe operation of the reactor until December 2012.

3. Approach to Licensing

To fully address accountability for safety, both the CNSC and Hydro-Québec recognize the importance of a well-planned and coordinated working arrangement.

Hydro-Québec has already filed the documents that constitute the basis for the refurbishment project. However, Hydro-Québec must also explain to the Commission how safety will be maintained even though the refurbishment project has been postponed. Many elements of the response are found in those documents and must be put into perspective.

4. Schedule

The schedule set out in the statement of work in this protocol considers the December 31, 2011 deadline and the lead time notices required by the *Canadian Nuclear Safety Commission Rules of Procedure* [2] during Day 2 of the hearing for the renewal of a combined licence.

It is recognized that the amount of work included in this schedule is considerable and that certain risks associated with its execution could cause delays. To ensure that the schedule is adhered to, all potential risks will be dealt with in a timely manner through resource adjustments or the time line of this protocol. These adjustments will be made according to the protocol revision process outlined below.

The licensee may propose compensatory solutions where the risks warrant it.

5. Roles and Responsibilities

5.1 CNSC governance structure

The CNSC has created a steering committee for the renewal of operating licence for the Gentilly-2 reactor to provide strategic-level direction and senior management oversight and support to the programs associated with the five-year licence renewal.

The steering committee is chaired by the Executive VP, Regulatory Operations Branch (ROB) and formed by all relevant executive directorates, including:

- Vice-President of the Technical Support Branch;
- Director General of the Directorate of Power Reactors
- Director General of the Directorate of Assessment and Analysis;
- Director General of the Directorate of Environmental and Radiation Protection and Assessment;
- Director of the Gentilly-2 Regulatory Program Division
- Project Manager (Secretary); and
- others, as needed.

The objective of the steering committee is to enable CNSC staff to fulfill its mandate of providing recommendations to the Commission regarding the potential operating licence renewal of Gentilly-2 in 2012. To fulfill this function, the committee must ensure that the Gentilly-2 licensing activities:

- are recognized as a priority;
- have adequate resources;
- respect deadlines;
- respect project management practices;

- contains appropriate audit plans;
- are consistent in its application and requirements; and
- respect approved processes and technical directions.

The steering committee is directly accountable to the CNSC President through the EVP, ROB.

5.2 Hydro-Québec governance structure

Hydro-Québec has established a management team made up of managers and senior managers to review and approve recommendations:

- General Manager, Nuclear Development and Production;
- Director, Nuclear Generation;
- Plant Manager, Gentilly-2;
- Chief, Technical Services;
- Chief, Integrated Work Management; and
- Others, as needed.

6. Organizational Representatives

The organization representatives for these activities are responsible for all matters concerning the work under this Protocol and bring the matter to their respective governance bodies, should problems arise during the work that may affect the schedule or the scope of the work.

For the purposes of this Protocol, CNSC staff shall be represented by:

1. Director, GRPD (position currently held by F. Rinfret) for matters related to governance.
 Telephone number: 613-996-2193
 Telephone number: 613-791-0267
 Fax number: 613-992-4572
 Email: francois.rinfret@cnscccsn.gc.ca
2. Gentilly-2 licence renewal Project Manager (position currently held by I. Gingras) for matters related to implementation.
 Telephone number: 613-995-2895
 Telephone number: 613-298-1868
 Fax number: 613-992-4572
 Email: isabelle.gingras@cnscccsn.gc.ca

For the purposes of this Protocol, Hydro-Québec shall be represented by:

1. Plant Manager–Gentilly-2 (position currently held by C. Gélinas) for matters related to governance.

Telephone number: 819-298-2943, ext. 7907
Telephone number: 819-692-2407
Email: Gelinas.Claude@hydro.qc.ca

2. Chief, Integrated Work Management – Gentilly-2 (position currently held by A. Faler) for matters related to implementation.

Telephone number: 819-298-2943, ext. 5166
Telephone number: 819-269-0239
FAX number: 819-298-5166
Email: Faler.Ann@hydro.qc.ca

Either Party hereto may, by written notice, change any of its appointees named above.

7. Statement of Work

This set of high-level tasks and milestones is derived from the process documented in RD-360 (draft 2010) [3] and from the content of CMD 10-H15.C, A1, B, F, G and H, as well as from the expectations of the CNSC expressed during the licence renewal hearing and included in the reasons for decision and in the operating licence. The Commission expressed the expectation that the licensee continue to respect its commitments and collaborate so that CNSC staff can close the open files. Open action items will be monitored as part of the Licence Conditions Handbook. The postponement of the 2012 refurbishment entails a production shutdown in 2011 and the specification of the analyses and inspections required to re-confirm the continued safety of the facility. The CNSC plans its coaching activities in the form of the regulatory plan and the licence conditions handbook.

This chapter includes the information required to develop a high-level plan by specifying the milestones and tasks to be achieved where these are already known.

7.1 Technical scope

This scope is divided into five phases:

	Area	Expectations - Responsible organization(s)
Phase 1:	CNSC expectations	<ul style="list-style-type: none"> Review of decision, review of reasons for decision, and review of CMDs 10-H15 and licence PERP 10.00/2016 - HQ and CNSC.
		<ul style="list-style-type: none"> Development and submission of an action plan – HQ. Follow-up of action plan activities – HQ and CNSC.
		<ul style="list-style-type: none"> Action item on what is expected of CNSC staff – CNSC.
Phase 2:	HQ commitments and CNSC expectations	<ul style="list-style-type: none"> Follow-up of the open action items in Table H15 (LCH or CMD 10-H15F, Appendix F) – HQ and CNSC. Update of Table H15 – CNSC.
		<ul style="list-style-type: none"> Review and follow-up of activities specified in the Integrated Safety Review (ISR) – CNSC.
		<ul style="list-style-type: none"> Follow up of LCH action items classified as safety issues – HQ and CNSC.
Phase 3:	Review of the Licence Conditions Handbook (LCH)	<ul style="list-style-type: none"> Review of the wording and the agreements described in the LCH (or CMD 10H-15F) – HQ and CNSC.
		<ul style="list-style-type: none"> Specification of the required amendments to the LCH (excluding the regulatory plan) – HQ and CNSC. Review of the LCH – CNSC. Preparation of the summary of revisions to the LCH for the Commission – CNSC.
Phase 4:	Follow-up on the CNSC regulatory plan and the HQ operating plan	<ul style="list-style-type: none"> Review of activities and regulatory commitments for the 2011 scheduled shutdown (ref. Regulatory Plan, CMD10-H15F, Appendix G or later versions) – HQ and CNSC. Integrated review of commitments prior to the restart after the 2011 scheduled shutdown, supporting power operability until the 2012 refurbishment – HQ and CNSC.

		<ul style="list-style-type: none"> • Integrated review of the operating plan (Rev. 1, January 2011) or subsequent version – HQ and CNSC.
Phase 5:	Possible release of the hold point in late 2011 and submission of the CMD for information	<ul style="list-style-type: none"> • Submission of the report detailing the plant's safety status before restarting it after the 2011 scheduled shutdown – HQ. • Application for the release of the 2011 hold point – HQ. • Consent to the release of the 2011 hold point – CNSC. • Preparation and approval of the information CMD – CNSC. <p>Commission's expectations - Phase 1 Document H15, Integrated Safety Review – Phase 2 LCH revisions – Phase 3 Regulatory plan and operating plan – Phase 4</p>

Project time lines are provided in Section 7.2.

7.2 Activities and deliverables

7.2.1 Document deliverables

Expectations	Target Date	Actioned Organization(s)
Phase 1: Commission's expectations		
Review of decision; Review of reasons for decision; Review of CMDs 10H to 15X; Review of licence PERP 10.00/2016.	June 1, 2011	HQ and CNSC
Development and submission of an action plan with timelines	June 30, 2011	HQ
Follow-up on HQ action plan in response to the Commission's expectations	Monthly	HQ and CNSC
Action item on what is expected of CNSC staff (as applicable)	June 30, 2011	CNSC
Draft of information CMD	November 30, 2011	CNSC
Phase 2: HQ commitments and CNSC expectations		
Follow-up on open action items in Table H15 (LCH or CMD 10H–15F, Appendix F)	Monthly	HQ and CNSC
Update of Table H15 for the file	June 30, 2011, and quarterly	CNSC
Incorporation of the list of information to be provided	Quarterly	HQ and CNSC
Review of and follow-up on the Integrated Safety Review (ISR) as part of the refurbishment project (See CNSC project charter)	November 30, 2011	CNSC
Review of the integrated implementation plan and global assessment report as part of the refurbishment project	November 30, 2011	

Expectations	Target Date	Actioned Organization(s)
Review of safety factor reports as part of the refurbishment project	May 31, 2011	CNSC
Commitment to update the system health reports of equipment essential to safety and update of the refurbishment project	July 31, 2011	HQ
Letter of consent for the integrated safety review as part of the refurbishment project	January 9, 2012	CNSC
Discussions and follow-up of LCH action items classified as security issues	November 30, 2011	HQ and CNSC
Response to the security inspection (ref. letters dated March 18, 2011, and November 19, 2010)	June 30, 2011	CNSC
Draft information CMD	November 30, 2011	CNSC
Phase 3: Review of the Licence Conditions Handbook (LCH)		
Review of the wording and of the agreements described in the LCH	June 10, 2011, and quarterly	HQ and CNSC
Internal review of the LCH	June 17, 2011	CNSC
Discussions on the required amendments to the LCH (excluding the regulatory plan (Phase 4))	June 30, 2011	HQ and CNSC
Review of the LCH	July 30, 2011	CNSC
Preparation of the summary of revisions to the LCH for the board members	November 30, 2011	CNSC
Draft of new section in information CMD	November 30, 2011	CNSC

Expectations	Target Date	Actioned Organization(s)
Phase 4: Follow-up on the CNSC's Regulatory Plan and on HQ's Operating Plan		
Review and clarification of activities and regulatory commitments for the 2011 scheduled shutdown (ref. regulatory plan in the LCH, CMD 10-H15F, Appendix G, or later versions)	June 30, 2011	HQ and CNSC
Components file: RFPs (submission of an aging management plan) SGs (review of SG disposal until 2012) HTS (submission of an aging management plan) Containment (submission of an aging management plan, including alkali-aggregate reactivity) Other concrete (submission of a work plan leading to a project plan for the aging management of structures)	May 31, 2011 July 31, 2011 December 31, 2011	HQ HQ HQ
Integrated review of commitments (analyses, inspection) until the reactor's restart following the 2011 scheduled shutdown. Integrated review of the commitments set out in HQ's operating plan (Rev. 1, January 2011, or later version)	July 30, 2011	HQ and CNSC
Demonstration of capacity to operate the plant safely until the refurbishment shutdown in 2012 (CNSC consent)	September 30, 2011 (or end of shutdown)	HQ
Draft information CMD	November 30, 2011	CNSC
Phase 5: Release of the hold point in late 2011 and submission of the CMD for information		
Submission of the report detailing the plant's safety status before the restart following the 2011 scheduled shutdown.	End of 2011 shutdown	HQ
Application for the release of the hold point.	End of 2011 shutdown	HQ

Expectations	Target Date	Actioned Organization(s)
Consent to the release of the 2011 hold point. Note: The CNSC hold point is at the end of the 2011 calendar year for most of the anticipated items: regulatory plan under review.	One week following submission, end of 2011 shutdown.	CNSC
CMD preparation and approval	January 9, 2012	CNSC

7.2.2 Other deliverables

Meetings

Working-level meetings

Monthly Hydro-Québec/CNSC review meetings will be held to review progress on the work and highlight any major issues or potential disputes. At least two of the following persons shall attend these review meetings:

- Director, CNSC GPLRPD
- CNSC Project Manager, or replacement
- Hydro-Québec Plant Manager
- Hydro-Québec Project Manager or replacement

Technical meetings

Meetings between CNSC and Hydro-Québec technical experts will take place as needed. The organization representatives or their designates will participate in technical meetings to ensure continuity in the Gentilly-2 licence renewal process.

Executive meetings

Telephone calls every two weeks and other meetings as needed.

7.3. Conflict resolution process

CNSC staff and Hydro-Québec staff have agreed to coordinate the work required to renew the operating licence for the Gentilly-2 reactor, in accordance with the NSCA. Disagreements may arise during the execution of the work. A review and dispute resolution mechanism will be used during the review to ensure fairness and timely completion.

Step 1: Identification of the issue and resolution at the staff level

1. Monthly Hydro-Québec/CNSC review meetings will be held to review progress and highlight any major issues or disputes.
2. Government policies on regulatory effectiveness, as well as established licensing requirements, will serve as the framework for decisions on issues to be resolved. This must, however, be agreed upon by both parties.
3. It is the intention of both parties to resolve issues that may arise at these monthly meetings.
4. If an issue cannot be resolved at this level, it will be documented (a brief factual summary of the issue and a paragraph representing the position of each organization) by the committee within two weeks of failure to resolve. This document is then forwarded to senior management (Step 2).

Step 2: Resolution at the senior management level

1. A copy of all documentation describing the issue will be provided to the Director General, Directorate of Nuclear Cycle and Facilities Regulation (CNSC), the Director General, Assessment and Analysis (CNSC) and the Director, Nuclear Generation Directorate (Hydro-Québec), who shall meet within 14 days following receipt of that documentation to resolve the issue.
The resolution process shall be documented.
2. Issues that cannot be resolved at this level will be referred to the Executive Vice-President (Step 3) within seven days, supported by the original and revised documentation from Step 1.

Step 3: Resolution at the executive level

A copy of the documentation describing the issue not resolved at Step 2 will be sent to the Executive Vice President, Regulatory Operations Branch (CNSC), and the General Manager, Nuclear Development and Generation (Hydro-Québec), who will meet within 14 days following receipt of that documentation to resolve the issue. The resolution process shall be documented.

8. Future revisions of the protocol

Future revisions of the protocol (**E-DOCS #3658143**) will be coordinated by representatives of the organizations, and must be approved by the organizations' governance structures.

9. References

- [1] *Nuclear Safety and Control Act* (NSCA), 1997, ch. 9.
- [2] *Canadian Nuclear Safety Commission Rules of Procedure*, SOR/2000-211.
- [3] *Life Extension of Nuclear Power Plants*, Regulatory Document RD-360, February 2008. (2010 version is being drafted)
- [4] Letter from Rinfret to Gélinas, “Operating plan and refurbishment,” August 10, 2010, E-docs 3592410.
- [5] Letter from Rinfret to Gélinas, “Follow-up: Quality Management [translation],” August 9, 2010, E-docs 3592032.

10. Glossary

CNSC	Canadian Nuclear Safety Commission
CMD	Commission Member Document (CNSC)
ROB	Regulatory Operations Branch (CNSC)
GPLRPD	Gentilly-2/Point Lepreau Regulatory Program Division (CNSC)
DR-24	Document describing the quality program for pressure-holding devices (Hydro-Québec for Gentilly-2)
HQ	Hydro-Québec
List H15	Joint CNSC-Hydro-Québec document describing open CMD-10-H15 action times to ensure their follow-up

Original signé par L. Pelletier

Date: _____

Louise Pelletier
General Manager, Nuclear Development and Generation
Hydro-Québec

Original signé par R. Jammal

Date: _____

Razmi Jammal
Executive Vice-President and Chief Regulatory Operations Officer
Canadian Nuclear Safety Commission