



CNL-CNSC Administrative Protocol for the Nuclear Power Demonstration Closure Project

November 2016



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Summary of changes

Section	Change

Administrative Protocol for the Nuclear Power Demonstration Closure Project

Preamble

Canadian Nuclear Laboratories (CNL) intends to fully decommission and close the Nuclear Power Demonstration (NPD) Waste Facility, located in Rolphton, Ontario. This facility is a former nuclear power demonstration station which produced electricity and was operated from 1962 to 1987, at which time it was shut down and placed in long-term safe storage with surveillance. CNL has recently announced its intention to fully decommission and close the NPD facility by proceeding with *in situ* disposal of the nuclear waste at the site, including the NPD prototype reactor¹ and its components, systems and structures. CNL's goal is to complete the NPD Closure Project² in spring 2020.

Canadian Nuclear Safety Commission (CNSC) staff have determined that, in accordance with the *Canadian Environmental Assessment Act, 2012* and the *Nuclear Safety and Control Act* and their associated regulations, an environmental assessment (EA) and a licence amendment to the current NPD waste facility decommissioning licence (WFDL) are required for the NPD Closure Project.

Both the EA and the licence amendment application will be subject to decisions made by the Commission.

To facilitate the preparation and review of documents required for these two decisions, the CNSC and CNL have mutually decided to formally document the various steps in this administrative protocol.

Important note

Nothing in this protocol fetters the powers, duties or discretion of CNSC designated officers, CNSC inspectors or the Commission respecting regulatory decisions or taking regulatory action. Also, this protocol does not change in any way any applicable laws or regulations, application requirements or hearing process as set by the *CNSC Rules of Procedure*³.

¹ This facility is a Class IA facility as defined in section 1 of the *Class I Nuclear Facilities Regulations*, SOR/2000-204.

² As defined in the CNL document, *Project Description: NPD Closure Project – NPD Decommissioning*, 64-509200-ENA-003, Revision 1, March 2016.

³ *Canadian Nuclear Safety Commission Rules of Procedure*, SOR/2000-211.

Purpose

The purpose of this protocol is to outline the administrative framework, milestones and service standards for the EA and licensing activities for the proposed NPD Closure Project, including CNL's submission of the technical information in support of a licence amendment for Commission approval of the *in situ* decommissioning of the NPD facility and the CNSC review of this technical information. This protocol aims to provide efficient project management for the regulatory review of information submitted by CNL in support of the NPD Closure Project.

The milestones included in this document have been established using a number of assumptions, some of which relate to the activities of project participants that are not signatories to this protocol. If events unfold differently from what has been assumed in this protocol, the milestones will be revised accordingly.

The remainder of this protocol is divided into three parts:

- Part I – Definition of the framework (parties, duration, communication/timing, issue resolution, reporting, external communications and future revisions)
- Part II – Requirements for the NPD Closure Project (EA, licence amendment, and details added as project progresses)
- Part III – Approval by signatories

Part I – Framework

1. Parties

The signatories to this protocol have the following roles and responsibilities:

- The Canadian Nuclear Safety Commission (CNSC) is the Responsible Authority under the *Canadian Environmental Assessment Act, 2012* for this project and is responsible for making a recommendation to the Commission for the environmental assessment (EA) under this Act.
- The CNSC has regulatory and statutory responsibilities under the *Nuclear Safety and Control Act* and its regulations. The CNSC is responsible for assessing the application from Canadian Nuclear Laboratories (CNL) for the Nuclear Power Demonstration (NPD) Closure Project and for making a recommendation to the Commission.
- CNL is the licensee for the NPD Waste Facility under the current CNSC licence. CNL is responsible for submitting adequate and complete information to support the application as per regulatory requirements.

Managers

For this protocol, the following managers represent each party:

- Strategic Advisor, Directorate of Nuclear Cycle and Facilities Regulation, CNSC (André Régimbald)
- NPD Operations Manager, CNL (Meggan Vickerd)

The CNSC and CNL will identify an alternate if primary manager is unavailable.

Executive Management Committee

The CNSC and CNL will form an Executive Management Committee, comprised of senior management representatives who will receive and review progress reports and resolve issues.

The members of the Executive Management Committee are as follows:

- Director General, Directorate of Nuclear Cycle and Facilities Regulation, CNSC (Haidy Tadros)
- Director General, Directorate of Environmental and Radiation Protection and Assessment, CNSC (Mike Rinker)
- Strategic Advisor, Regulatory Operations Branch, CNSC (Peter Elder)

- Vice President and General Manager of NPD Closure Project, CNL (Patrick Daly)
- Director of Radiation Protection and Environmental Protection, CNL (George Dolinar)
- Director NPD Engineering, CNL (Kristan Schruder)

The CNSC and CNL will identify an alternate if a primary Executive Management Committee member is unavailable.

2. Duration

This protocol will come into effect on the date of the last signature to this protocol. It will terminate on the latter date that the Commission announces its EA and licensing decisions on the NPD Closure Project.

3. Communication/Timing

As stated above, the CNSC has determined that Commission approval is required to authorize the NPD Closure Project. CNL therefore needs to conduct an EA and submit the licensing documentation. This includes but is not limited to the detailed decommissioning plan and safety case for the new proposed end-state for NPD (*in situ* decommissioning) for consideration by CNSC staff to make a recommendation to the Commission and for the Commission to make a decision.

To meet the agreed upon deliverables as scheduled in appendix A, CNL will need to submit complete, sufficient and high-quality information to CNSC staff as early as possible. This will allow adequate time for the CNSC staff review and satisfactory resolution of issues. In addition to this correspondence, the parties will meet as necessary to clarify intentions and facilitate mutual understanding, with the aim of achieving the targets.

Within three working days of receiving technical information submitted by CNL under this protocol, CNSC staff will first perform a cursory review (for conformity with the information requirements in respect of content sufficiency and completeness) to identify any obvious deficiencies and communicate any such problems to CNL.

CNSC staff will prepare and submit their Commission member document (CMD) to the CNSC Secretariat according to the timeline in appendix A, on the basis that CNL has been proactive in submitting the information outlined in this protocol and that CNSC staff have deemed this information complete and sufficient, such that by the time CNSC staff prepare their CMD:

- CNSC staff have had sufficient time to perform their review
- all technical issues have been resolved

Appendix A specifies timelines for CNSC staff to review CNL's submission and provide feedback to CNL.

4. Issue resolution

The parties to this protocol will use their best efforts to resolve any differences of opinion in the interpretation or application of this protocol in an effective and timely manner.

The following review and dispute resolution mechanism will be used during the review to assist timely completion.

Step 1: Issue identification

It is the intention of both parties to resolve issues relating to the submission of the technical information and the regulatory review through direct discussions and collaboration between the managers.

The managers will hold monthly meetings to review progress and highlight any potential major issues or disputes. Additional meetings may be called for urgent matters as required.

If an issue cannot be resolved at this level, the managers will document the situation (typically with a brief factual summary of the issue and a paragraph representing each organization's view), and forward it to the Executive Management Committee within three working days of the impasse.

Step 2: Meeting of Executive Management Committee

Where the managers cannot resolve an issue, the Executive Management Committee agrees to meet within three working days of notification of the dispute, with the intention of expeditiously resolving the impasse. Issue resolution is to be documented by the Committee.

If an issue cannot be resolved at this level, it will be referred to the protocol signatories within three working days of the Executive Management Committee's meeting, supported by the original or revised documentation from step 1.

Step 3: Meeting of signatories of this protocol

If an issue remains unresolved after step 2, it will be referred with documentation to the signatories of this protocol for resolution. A meeting will be called, typically within five working days, to resolve the issue and document its resolution.

5. Reporting

The managers will jointly produce a brief dashboard-style report on a monthly basis demonstrating progress, status of activities, and items of concern or at risk of incompleteness. The report shall be submitted to the Executive Management Committee within three working days of the end of each calendar month that this protocol remains in effect.

6. External communications

Throughout this protocol's duration, all parties agree to open, transparent communications, and that information destined for public release will be coordinated through the managers (or alternates, where designated), with support from each party's communications division. Furthermore, these communications will be done in coordination with, and in consideration of, each party's current communication guidelines.

7. Future revisions

Revisions of this protocol that are limited to adjustments to appendix A shall be coordinated and approved by the managers, and included in the monthly report to the Executive Management Committee. Significant material revisions of this protocol (beyond revisions to appendix A) shall be coordinated by the managers and approved by the signatories of this protocol. The most recent agreed upon change(s) to appendix A should be reflected in the revised version only when the protocol is amended and/or reissued.

Part II – Requirements for the NPD Closure Project

Canadian Nuclear Laboratories (CNL) is to submit information to the Canadian Nuclear Safety Commission (CNSC) before CNSC staff can prepare a recommendation to the Commission on the environmental assessment (EA) and the NPD Closure Project. This information will need to address the following areas:

1. Environmental assessment

CNL is required to prepare an environmental impact statement that meets the requirements of the [Generic Guidelines for the Preparation of an Environmental Impact Statement pursuant to the Canadian Environmental Assessment Act, 2012.](#)

2. Licence amendment

The current decommissioning licence for NPD solely authorizes activities related to the “storage with surveillance” phase of the decommissioning project. Therefore, CNL will require a licence amendment from the Commission to authorize the NPD *in situ* decommissioning end-state. Appendix A lists the licensing documentation that CNL is required to submit.

The regulatory review and associated licensing approvals for the institutional controls required for the long-term care and maintenance of the NPD *in situ* decommissioning end-state will be addressed at a later licensing stage, and will require a revision to this protocol.

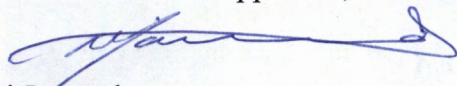
3. Details added as project progresses

For clarity, and as additional details related to this project and relevant to this protocol are developed and agreed to, the CNSC and CNL agree to document them in this section and make them part of the protocol. These details will be related to:

- Licensing approval for the long-term care and maintenance

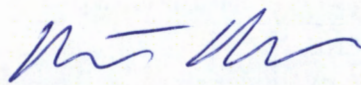
Part III – Approval by signatories

The protocol has been approved, on the dates indicated below.



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

Date: 2016/11/30



Kurt Kehler
Vice-President, Decommissioning and Waste Management
Canadian Nuclear Laboratories

Date: 2016 Nov 29

APPENDIX A

Table 1 outlines a detailed schedule of deliverables for environmental assessment (EA)-related activities.

Table 1: Deliverable schedule for activities related to the EA

Milestone	Deliverable/activity	Lead	Service standard (business days or where noted, in calendar days)	Submission date of deliverable
Initiation of EA	<ul style="list-style-type: none"> Submit project description Provide project timelines 	CNL	-	April 1, 2016
	Provide regulatory compliance matrix / Licensing basis document	CNL	-	June 30, 2016
	Establish the CNL-CNSC administrative protocol for NPD Closure Project	CNSC	-	November 2016
DRAFT Environmental Impact Statement (EIS)	EIS (Draft, full document)	CNL		September 30, 2017
	Constraint: Public comment period	CNSC	75 days (calendar days) (Sept 30 – Dec 15)	December 15, 2017
	Federal review of information requests (IRs)	CNSC	120 days (concurrent with public comment period)	March 23, 2018
	Disposition of IRs	CNL	15 days	April 17, 2018
	Federal review of CNL disposition (of both federal review and public comments)	CNSC	35 days	June 6, 2018
FINAL EIS	EIS (Final document)	CNL		July 12, 2018
	Federal review to confirm comments on draft EIS addressed	CNSC	35 days	August 31, 2018
Prepare EA Report	EA Report (included in licensing CMD)	CNSC	6 months	October 1, 2018
Comment Period	Public comment period on the licensing CMD that includes the EA Report	CNSC	60 days (calendar days)	October 2018
Hearing	Commission Hearing on the EA decision	CNSC	Target date: December 2018 (to be determined by CNSC Secretariat)	

Table 2 outlines the licensing basis documents to be submitted in support of the licence application to amend the current decommissioning licence to authorize the NPD Closure Project.

Table 2: Deliverable schedule for the licensing basis documents to support the licence application to amend the current decommissioning licence to authorize the NPD Closure Project

Application for licence amendment to the current decommissioning licence for the NPD Closure Project (Lead CNL)					
Specific area ⁴	CNL documentation title	CNL document reference number	New Y/N	Date of submission	Service standard for review by CNSC
Safety and control area – Management system					
Management system	Facilities Decommissioning Quality Assurance Plan	3600-514200-QAP-001	N	N/A, per existing licensing basis (LB) ⁵	Refer to Table 3
Organization	Management System	CW-514100-MAN-001	N		
Performance assessment, improvement & management review	Improvement Action (ImpAct) Corrective Action Process	CW-514300-PRO-392	N		
Operating experience (OPEX)	Operating experience overview	CW-508750-OV-125	N		
Change management	Change management	145-514200-PRO-003	N		
Safety culture	Nuclear safety	CW-514100-POL-001	N		
Configuration management	Engineering change control	145-508120-PRO-001	N		
Records management	Change management	145-514200-PRO-003	N		
Management of contractors	Contractor health and safety management	CW-510400-REQ-001	N		
Business continuity					
Safety and control area – Human performance management					
Human performance program	Human performance	145-514020-OV-001	N	N/A, per existing LB	Refer to Table 3
Personnel training	AECL Systematic Approach to Training (SAT)	CW-510000-MAN-001	N		
Personnel certification					
Initial certification examinations and requalification tests					
Work organization and job design	Facilities Decommissioning Quality Assurance Plan	3600-514200-QAP-001	N	N/A, per existing LB	Refer to Table 3
	<u>and</u> Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Fitness for duty					
Safety and control area – Operating performance					
Conduct of licensed activity	Detailed decommissioning plan <u>and</u> Nuclear Power Demonstration Waste Management Facility Storage with Surveillance Plan	To be determined, planned submission	Y	Sept. 2017	6 months
		64-508330-SWS-001	N	N/A, per existing LB	Refer to Table 3
Procedures	Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Reporting and trending	Operational reporting (as per LCH)	(as per LCH)	N	N/A Existing LB	Refer to Table 3

⁴ For the Specific Areas that are “strikethrough”, CNSC staff have determined that these are not relevant to the NPD closure project.

⁵ N/A, per existing licensing basis (LB) means that the identified documents currently form part of the licensing basis for the NPD facility, relevant to the specific area. CNSC staff will review their applicability and adequacy for the proposed activities as part of the licence amendment review process.

Application for licence amendment to the current decommissioning licence for the NPD Closure Project (Lead CNL)					
Specific area ⁴	CNL documentation title	CNL document reference number	New Y/N	Date of submission	Service standard for review by CNSC
Outage management performance					
Safe operating envelope					
Severe accident management and recovery					
Accident management and recovery					
Safety and control area – Safety analysis					
Deterministic safety analysis	Safety reports: (Decommissioning Safety Assessment and Post-Closure Safety Assessment)	To be determined, planned submission	Y	Sept. 2017	6 months
Hazard analysis					
Probabilistic safety analysis	Safety report: (Post-Closure Safety Assessment)	To be determined, planned submission	Y	Sept. 2017	6 months
Criticality Safety	Safety reports: (Decommissioning Safety Assessment and Post-Closure Safety Assessment)	To be determined, planned submission	Y	Sept. 2017	6 months
Severe accident analysis					
Management of safety issues (including R&D programs)	Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Safety and control area – Physical design					
Design governance	Engineering change control	145-508120-PRO-001	N	N/A, per existing LB	Refer to Table 3
Site characterization	Environmental impact statement	To be determined, planned submission	Y	Refer to Table 1	Refer to Table 1
	and Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Facility design	Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Structure design					
System design					
Component design					
Safety and control area – Fitness for service					
Equipment fitness for service / equipment performance	Nuclear Power Demonstration Waste Management Facility Storage with Surveillance Plan and Detailed decommissioning plan	64-508330-SWS-001	N	N/A, per existing LB	Refer to Table 3
Maintenance		To be determined, planned submission	Y	Sept. 2017	6 months
Structural integrity					
Aging management					
Chemistry control					
Period inspection and testing					
Safety and control area – Radiation protection					
Application of ALARA	Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Worker dose control					
Radiation protection program performance	AECL's Radiation Protection requirements	RC-2000-633-0	N	N/A, per existing LB	Refer to Table 3
Radiological hazard control	Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months

Application for licence amendment to the current decommissioning licence for the NPD Closure Project (Lead CNL)					
Specific area ⁴	CNL documentation title	CNL document reference number	New Y/N	Date of submission	Service standard for review by CNSC
Estimated dose to the public	Safety report: (Decommissioning Safety Assessment and Post-Closure Safety Assessment)	To be determined, planned submission	Y	Sept. 2017	6 months
Safety and control area – Conventional health and safety					
Performance	Occupational safety and health program manual	CW-510400-MAN-001	N	N/A, per existing LB	Refer to Table 3
Practices	and Occupational safety and health program requirements	CW-510400-REQ-217	N		
Awareness	and Employee health and safety	CW-514100-POL-002	N		
Safety and control area – Environmental protection					
Effluent and emissions control (releases)	Environmental impact statement	To be determined, planned submission	Y	Refer to Table 1	Refer to Table 1
Environmental management system (EMS)	Environmental Management System	CW-509200-OV-113	N	N/A, per existing LB	Refer to Table 3
Assessment and monitoring	Environmental impact statement	To be determined, planned submission	Y	Refer to Table 1	Refer to Table 1
Protection of the public	and Safety Reports: (Decommissioning Safety Assessment and Post-Closure Safety Assessment)	To be determined, planned submission	Y	Sept. 2017	6 months
Environmental risk assessment					
Safety and control area – Emergency management and fire protection					
Conventional emergency preparedness and response	Emergency preparedness	CW-508730-OV-143	N	N/A, per existing LB	Refer to Table 3
		CW-508730-REQ-219	N		
Nuclear emergency preparedness and response					
Fire emergency preparedness and response	Fire protection program requirements	145-508720-OV-001	N	N/A, per existing LB	Refer to Table 3
		145-508720-REQ-002	N		
	Offsite fire protection	145-508720-PRO-005	N		
	MoU with Laurentian Hills for the Provision of Fire Emergency Response Services	64-508720-021-000	N		
Safety and control area – Waste management					
Waste characterization	Waste management program overview	CW-508600-OV-129	N	N/A, per existing LB	Refer to Table 3
Waste minimization					
Waste management practices	and Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Decommissioning plans	Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Safety and control area – Security					
Facility and equipment	Physical security	145-508710-OV-001	N	N/A, per existing LB	Refer to Table 3
Response arrangements					

Application for licence amendment to the current decommissioning licence for the NPD Closure Project (Lead CNL)					
Specific area ⁴	CNL documentation title	CNL document reference number	New Y/N	Date of submission	Service standard for review by CNSC
Security practices	Physical security and	145-508710-OV-001	N	N/A, per existing LB	Refer to Table 3
	Detailed decommissioning plan	To be determined, planned submission	Y	Sept. 2017	6 months
Drills and exercises					
Safety and control area – Safeguards and non-proliferation					
Nuclear material accountancy and control					
Access and assistance to the IAEA	Overview of transportation of dangerous good program and	CW-508520-OV-138	N	N/A, per existing LB	Refer to Table 3
	Requirements for transportation of dangerous goods	CW-508520-REQ-203	N		
Operational and design information					
Safeguards equipment, containment and surveillance					
Import and export					
Safety and control area – Packaging and transport					
Package design and maintenance					
Packaging and transport	Overview of transportation of dangerous good program and	CW-508520-OV-138	N	N/A, per existing LB	Refer to Table 3
	Requirements for transportation of dangerous goods	CW-508520-REQ-203	N		
Registration for use					
Other matters of regulatory interest					
Environmental Assessment	Environmental impact statement	To be determined, planned submission	Y	Refer to Table 1	Refer to Table 1
Consultation – Aboriginal	Environmental impact statement	To be determined, planned submission	Y	Refer to Table 1	Refer to Table 1
Consultation – Other	Public information program and	CW-513430-REPT-001	N	N/A, per existing LB	Refer to Table 3
	Environmental impact statement	To be determined, planned submission	Y	Refer to Table 1	Refer to Table 1
Cost Recovery	(as per CNSC Cost Recovery Fees Regulation)	(SOR/2000-212)	N	N/A Existing LB	Refer to Table 3
Financial Guarantees	Financial guarantee for NPD, Douglas Point and Gentilly-1 Waste Facilities	3640-CNNO-15-0012-L	N	N/A Existing LB	Refer to Table 3
Improvement plans and significant future activities					
Licensee public information program	Public information program	CW-513430-REPT-001	N	N/A Existing LB	Refer to Table 3
Nuclear Liability Insurance					

Table 3 outlines the service standards associated with the technical assessment of the licensing basis documents submitted in support of the licence application to amend the current decommissioning licence to authorize the NPD Closure Project.

Table 3: Service standards for the technical assessment of the licensing basis documents submitted in support of the licence amendment required to authorize the NPD Closure Project

CNSC technical assessment of CNL licence amendment for the NPD Closure Project (Lead CNSC)				
Deliverable / Activity	Lead	Duration	Start date	Completion date
CNSC comments on existing documents	CNSC	5 months	January 30, 2017	June 30, 2017
CNL response to CNSC comments	CNL	2 months	July 3, 2017	Sept. 1, 2017
CNSC final assessment of existing documents	CNSC	2 months	Sept. 1, 2017	Oct. 27, 2017
Technical assessment of CNL submissions (new documents)	CNSC	6 months	September 2017	March 30, 2018
CNL response to CNSC comments	CNL	2 months	April 2, 2018	June 1, 2018
CNSC final assessment	CNSC	2 months	June 4, 2018	August 3, 2018
Public hearing process for the licensing decision will be determined by the Secretariat⁶ (currently based on a One-Part Hearing at the same time as the EA hearing) (Lead CNSC)				
Deliverable / Activity	Lead	Duration	Start date	Completion date
Drafting CMD for licensing decision	CNSC	6 months	April 2, 2018	October 1, 2018
Public comment period	CNSC	60 calendar days	October 2018	December 2018
Commission Hearing	CNSC	Target date: December 2018 (to be determined by CNSC Secretariat)		

⁶ If required, the timelines will be readjusted based on the final decision from the Secretariat for the hearing process.

