



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

Canada

# Commission Progress Update

Commission Meeting

August 22, 2018

CMD 18-M30.A

CNL Prototype Waste Facilities,  
Whiteshell Laboratories, and the  
Port Hope Area Initiative

CNSC Staff Presentation





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# Presentation Outline

- Scope of Progress Update
- Regulatory Oversight
- Progress Updates
  - Decommissioning Facilities
  - Remediation Activities
- Conclusions



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# Meeting Interventions

- Notice of Meeting posted to the CNSC's website on June 12, 2018
- CNSC staff CMD was made available for public comment on June 22, 2018, for a 30 day period
- Total of six written interventions
- Detailed dispositioning tables are attached at the end of this presentation

The screenshot shows the website for the Canadian Nuclear Safety Commission. The page title is "Public Commission Hearing Participation Request Form". The navigation menu includes "The Commission", "Uranium", "Reactors", "Nuclear substances", "Waste", "Acts and regulations", and "Resources". The main content area contains a "What's New" section with links to "Watch a public Commission proceeding online", "Calendar of Commission proceedings", "Public Commission hearings", "Public Commission meetings", "Commission members", "How to Participate", and "Participant Funding Program". The "How to Participate" section is expanded, showing a "Public Commission Hearing Participation Request Form" with instructions on how to complete it and contact the Secretariat for assistance. The text states: "If you need help completing this form or have any technical difficulties submitting this form, please contact the Canadian Nuclear Safety Commission Secretariat or email your submission to [cnscc.interventions.ccsn@canada.ca](mailto:cnscc.interventions.ccsn@canada.ca)." It also provides information on how to participate in a public Commission hearing and notes that submitting a request does not automatically grant intervener status.

CNSC webpage on how to participate in public  
Commission proceedings

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## Scope (1 of 2) CNL Decommissioning and Remediation Sites

- Progress update on licensed activities at the following Canadian Nuclear Laboratories (CNL) projects:
  - Shut down power reactors
  - Whiteshell Laboratories (WL)
  - The Port Hope Area Initiative (PHAI)
- CNL's proposed Near Surface Disposal Facility is not included in this Progress Update



### Legend

- Low-level radioactive waste
- Intermediate-level radioactive waste
- Spent fuel



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Scope (2 of 2)

# Licences Covered by this CMD

Licence Number	Facility/Site	Licence Expiry Date	
WFDL-W4-332.01/2034	Douglas Point	December 31, 2034	
	Gentilly-1		
	Nuclear Power Demonstration		
NRTEDL-W5-8.04/2018	Whiteshell Laboratories*	December 31, 2018	
WNSL-W1.2310.02/2022	PHAI	Port Hope Long-Term low-Level Radioactive Waste Management Project (Port Hope Project)	December 31, 2022
WNSL-W1-2311.01/2021		Port Granby Long-Term low-Level Radioactive Waste Management Project (Port Granby Project)	December 31, 2021
WNSL-W1-182.01/2021		Pine Street Extension Temporary Storage Site	December 31, 2021
WNSL-W1-344-1.8/ind.		Port Hope Radioactive Waste Management Facility	Indefinite

\*Whiteshell Laboratories was issued a one year licence on August 1, 2018 and is valid from January 1, 2019 until December 31, 2019



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# REGULATORY OVERSIGHT

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# CNSC Regulatory Oversight

- CNSC regulates through licensing, verification, enforcement and reporting activities
- Regulatory oversight activities include:
  - Inspections
  - Reviews of operational activities and documentation
  - Licensee reporting of performance data, including annual reports and unusual occurrences
  - Independent environmental monitoring by the CNSC



***Regulatory oversight is commensurate  
with the risk associated with the licensed activities***



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## Regulatory Oversight CNSC staff regulatory effort since previous progress updates to the Commission

Facility/Site	Number of onsite inspections	Person days for compliance	Person days for licensing activities
Douglas Point	4	573	707*
Gentilly-1	3		
Nuclear Power Demonstration	2		
Whiteshell Laboratories	6	575	527*
Port Hope Project	10	582	148
Port Granby Project	11	413	38
Port Hope Radioactive Waste Management Facility	2	31	5
Pine Street Extension Temporary Storage Site	2	43	3

\*Effort at NPD and WL due to work on evaluating CNL's proposed accelerated decommissioning approach



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## Regulatory Oversight Independent Environmental Monitoring Program (1 of 2)

- The objective of the Independent Environmental Monitoring Program (IEMP) is to verify there are no health impacts to the public and that the environment is not adversely affected by releases to the environment around CNSC-regulated facilities
- Independent sampling and analysis are a part of CNSC compliance verification activities
- Sampling results can be found on the CNSC website



CNSC staff take environmental samples in the Port Hope area as part of the IEMP (CNSC Staff Photo)



[Independent Environmental Monitoring Program website](#)



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## Regulatory Oversight Independent Environmental Monitoring Program (2 of 2)

Site	Sampling Date(s)
Gentilly-2 Nuclear Facility (including Gentilly-1)	October 2016
Bruce Nuclear Generating Station (including Douglas Point)	October 2016
Whiteshell Laboratories	July/August 2017
Welcome (Port Hope) and Port Granby Waste Management Facilities	May 2017 and August 2017

***IEMP results confirmed the public and environment are protected***



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## Public Information and Community Engagement

- CNSC staff engage with the public and Indigenous groups, examples include:
  - CNL's Citizen Liaison Group meetings in Port Hope and Port Granby
  - Open houses in the communities surrounding Whiteshell Laboratories and Nuclear Power Demonstration
- CNSC staff also review CNL's community engagement efforts against REGDOC-3.2.1 *Public Information and Disclosure*

***CNSC staff disseminate objective  
regulatory information to the public***



CNSC staff at an open house in the Whiteshell area in November 2017. (Photo courtesy CNSC staff)



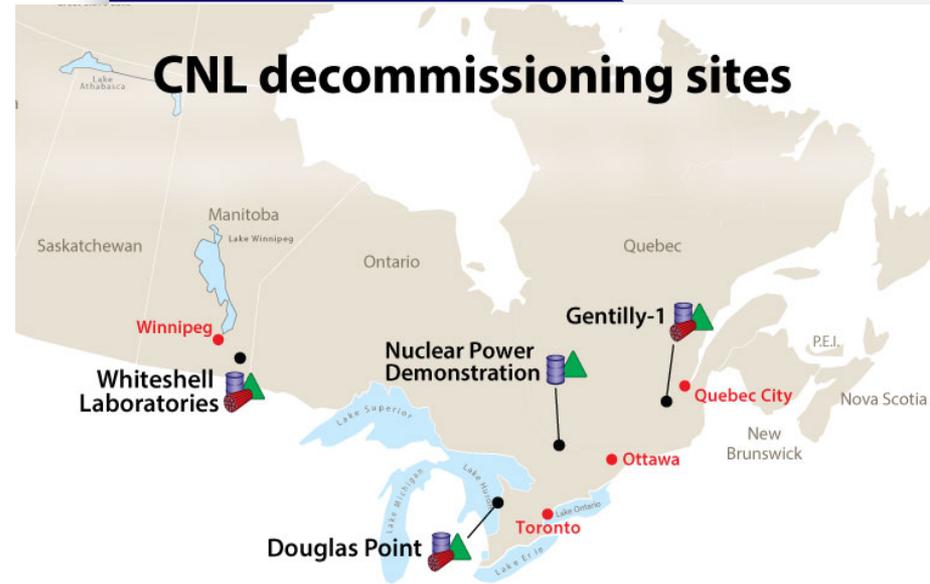
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## PROGRESS UPDATE DECOMMISSIONING PROJECTS

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## Decommissioning Projects Background

- Nuclear Power Demonstration (NPD), Douglas Point, and Gentilly-1
  - Three shut down power reactors located in Ontario and Québec, authorized for storage-with-surveillance under one licence
- Whiteshell Laboratories (WL)
  - Shut down nuclear research facility, including WR-1 reactor, near Pinawa, Manitoba
  - Decommissioning work under way as per Detailed Decommissioning Plans (DDPs)



### Legend

- Low-level radioactive waste
- Intermediate-level radioactive waste
- Spent fuel



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## Decommissioning Projects Background – Decommissioning Strategy

CNL is employing a deferred decommissioning strategy for the shut down power reactors and WR-1. The three phases of deferred decommissioning are:

- Phase 1 - bring the facility to a safe shut down state (completed)
- Phase 2 - storage-with-surveillance (current state)
- Phase 3 - decommissioning to achieve final end-state

***Decommissioning strategies are documented in decommissioning plans that form part of the licensing basis***



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## Decommissioning Projects Background – Phase 2 Storage-with-Surveillance (1 of 2)

Storage-with-surveillance includes activities to reduce hazards at the facility, such as:

- Reduction or removal of combustibles
- Removal and recycling of non-contaminated or slightly-contaminated equipment (e.g., turbines, pumps, heat exchangers)
- Reduction or isolation of asbestos
- Demolition of non-nuclear facilities
- Removal of radioactive waste to an offsite licensed storage facility
- Reduction or removal of hazardous wastes



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## Decommissioning Projects Background – Phase 2 Storage-with-Surveillance (2 of 2)

CNSC requires that CNL maintain each facility safely through up-to-date:

Programs including:

- Radiation protection
- Environmental protection
- Occupational health and safety
- Aging management

Physical systems such as:

- Electrical power and emergency lighting
- Heating/ventilation
- Security
- Fire protection

***Decommissioning plans must detail the programs and activities that will be maintained during storage-with-surveillance***



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# Decommissioning Projects Preliminary Decommissioning Timelines: Shut Down Power Reactors Douglas Point and Gentilly-1

## Douglas Point (operated 1968 - 1984)



- safe shut down (Phase 1)
- storage-with-surveillance (Phase 2)

## Gentilly-1 (operated 1972 – 1978)



- decommissioning to end-state (Phase 3)

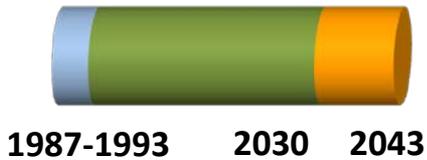


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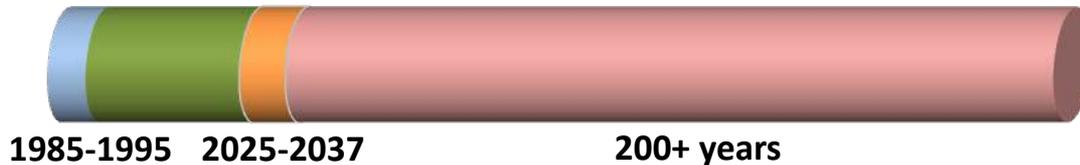
# Decommissioning Projects Preliminary Decommissioning Timelines: Shut Down Power Reactor NPD and Whiteshell Laboratories WR-1 Reactor

## Nuclear Power Demonstration (operated 1962 – 1987)



-  safe shut down (Phase 1)
-  storage-with-surveillance (Phase 2)
-  decommissioning to end-state (Phase 3)
-  institutional control

## Whiteshell Laboratories / WR-1 Reactor (operated 1965 – 1985)





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## Decommissioning Projects

# CNL's Proposed Revised Decommissioning Approach For NPD & WL

- In 2017, CNL submitted to the CNSC requests to:
  - accelerate the timelines for decommissioning of WR-1 to 2025 from 2037, and for NPD to 2021 from 2043
  - revise the decommissioning strategy for the WR-1 and NPD reactors to permit *in-situ* decommissioning, rather than full dismantlement
- CNL's proposals for accelerated decommissioning at NPD and WL are further discussed later in the presentation

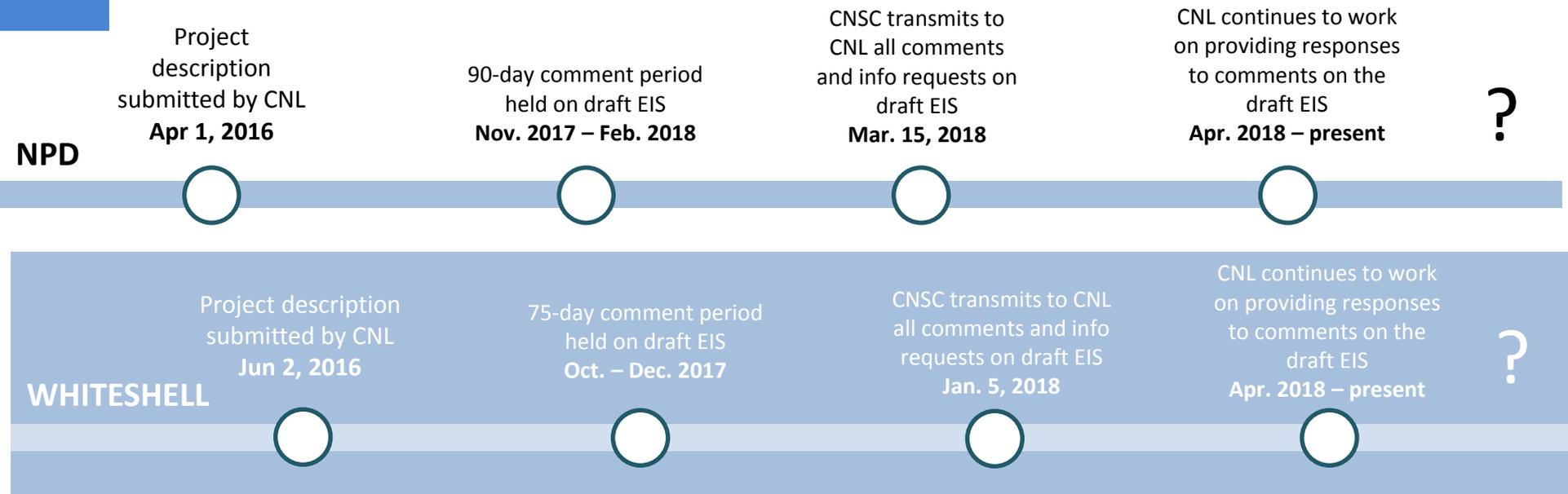
***Public Commission Hearings will be held prior to any decision on accelerated decommissioning***



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# Decommissioning Projects CNL's Proposed Revised Decommissioning Approach For NPD & WL



***Timelines dependent on quality and sufficiency of information***



Progress Update for CNL's Prototype Waste Facilities,  
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## PROGRESS UPDATE SHUT DOWN POWER REACTORS

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## Douglas Point Waste Facilities Background

- 200 MW CANDU Power Reactor
- Operations: 1968 – 1984
- In Phase 2 – storage-with-surveillance
- Reactor building intact
- Turbine and service buildings emptied of components and furnishings
- Used nuclear fuel transferred to the Concrete Canister Storage Facility located onsite



Douglas Point Waste Facility - located in the Bruce Nuclear Complex in Tiverton, Ontario



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## Douglas Point Waste Facilities Progress Since April 2016

CNL is carrying out the following storage-with-surveillance activities authorized under their CNSC licence and in accordance with decommissioning plans:

- Hazard reduction work:
  - Safe transfers of 134,000 litres of contaminated water to Chalk River Laboratories (CRL)
  - Characterization of ion exchange resins in preparation for recovery and packaging
  - Removal of Emergency Cooling Injection System tank
- Non-nuclear decommissioning:
  - Demolition of the guard house, machine shop, plate shop and tool crib, and disposition of all waste



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## Douglas Point Waste Facilities Next Steps

- CNL plans to:
  - Continue with hazard reduction activities, such as asbestos abatement
  - Reduce the footprint of the Douglas Point facility by demolishing some facilities, pending Commission approval
- Douglas Point reactor is expected to remain in storage-with-surveillance until 2060

***A Public Commission Hearing will be required if CNL plans to carry out decommissioning of nuclear structures***



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## Gentilly-1 Waste Facilities Background

- 250 MW Boiling Light Water Power Reactor
- Operations: 1972 – 1978
- In Phase 2 – storage-with-surveillance
- Area under CNL's licence:
  - reactor building
  - basement of the service building
  - two thirds of the turbine building
- Used nuclear fuel was transferred to the Spent Fuel Canister Area located in the turbine building



Gentilly -1 Waste Facility, highlighted in yellow on the larger Gentilly nuclear site in Bécancour, Québec



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## Gentilly-1 Waste Facility Progress Since April 2016

### Hazard reduction work:

- Safe retrieval and transfer of the Heat Transport Purification System resins from underground vaults
- Deployment of retrieval system for Moderator Purification System resins
- 45,000 kg of low-level waste safely transferred to a licensed waste processing facility; contract in place to retrieve and transfer additional 250,000 kg
- Asbestos abatement work in turbine building and reactor building



Resin Containers prepared for transfer to CRL from Gentilly-1 nuclear site in Bécancour, Québec (Photo CNSC staff)



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## Gentilly-1 Waste Facilities Next Steps

- Gentilly-1 is expected to remain in storage-with-surveillance until 2064
- CNL plans to continue with hazard reduction activities, such as:
  - asbestos abatement work
  - retrieval and disposition of low-level waste (LLW)

***A Public Commission Hearing will be required for CNL to carry out dismantling work***



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## Nuclear Power Demonstration Background

- 20 MW CANDU Power Reactor
- Reactor operated from 1962 to 1987
- In Phase 2 – storage-with-surveillance
- All used nuclear fuel has been safely transferred to CRL
- Main buildings, including office areas vacant
- Majority of major reactor components remain in place



Nuclear Power Demonstration Facility. (Photo courtesy CNL)

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## Nuclear Power Demonstration Progress Since April 2016

CNL is carrying out the following  
storage-with-surveillance activities:

- Removal of accessible asbestos from boiler room
- Characterization of building structure and facility systems
- General facility safety improvements

***These activities are being safely carried out in accordance with approved decommissioning plans***



The condenser room at the Nuclear Power Demonstration facility, a non-nuclear area. (Photo courtesy CNSC staff)

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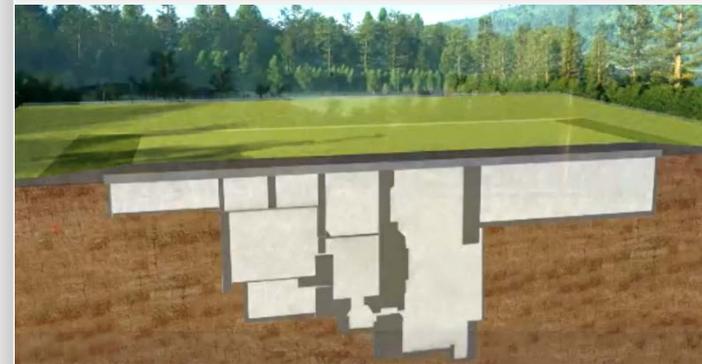
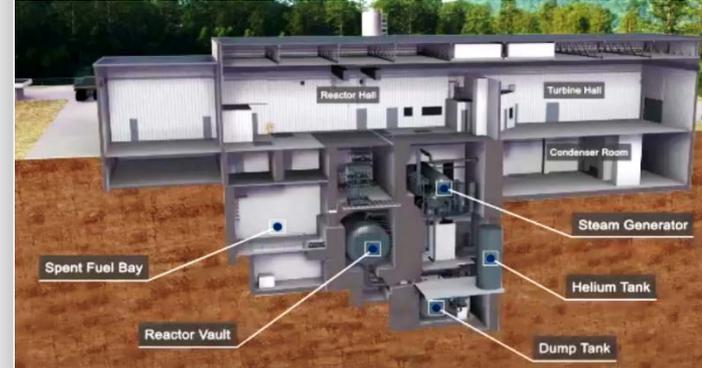


## Nuclear Power Demonstration Next Steps

In 2017, CNL proposed to revise its approved decommissioning approach to allow for *in-situ* decommissioning of NPD facility

- CNL's proposal requires both an amendment to the NPD licence, and an environmental assessment (EA) under CEAA 2012
- CNL has submitted a draft Environmental Impact Statement (EIS), as required under CEAA 2012
  - CNSC staff, other Federal and Provincial departments, Indigenous communities and the public have reviewed the draft EIS and provided feedback to CNL
- CNL has also submitted various licensing basis documents, which are under CNSC staff review

***The Commission will render a decision on the EA and the licence amendment following public hearings***



Current Nuclear Power Demonstration Facility (top) and CNL's proposed decommissioning approach (bottom). (Photo courtesy CNL)



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## PROGRESS UPDATE WHITESHELL LABORATORIES



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## Whiteshell Laboratories Background

- Site operated from early 1960s to 2003
- Conducted wide-ranging nuclear research activities
- Three current sites are comprised of:
  - 60 MWth WR-1 research reactor (1965-1985)
  - SLOWPOKE demonstration reactor (decommissioned in 2016)
  - Waste management area - safe storage of low level waste, intermediate level waste (ILW) and used nuclear fuel
  - Various research laboratories
- Portions of the site are currently being decommissioned, while the WR-1 reactor is in storage-with-surveillance



Whiteshell Laboratories Main Campus. (Photo courtesy CNL)



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## Whiteshell Laboratories Progress Since April 2016 (1 of 2)

CNL is carrying out the following storage-with-surveillance activities authorized under their CNSC licence and in accordance with decommissioning plans:

- Demolition of stages 4 and 7 of research Building B300
- Decommissioning/demolition of Decontamination Centre (Building B411)
- Disassembled LLW circuits at liquid waste treatment plant and preparation for building demolition (active liquid waste treatment centre Building B200)
- Final dismantlement of the SLOWPOKE Demonstration Reactor, with the exception of the stainless steel pool liner



Before and After Demolition of Research Building B300.  
(Photo courtesy CNL)



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## Whiteshell Laboratories Progress Since April 2016 (2 of 2)

- Removal of asbestos in accessible areas and characterization of reactor components in Building B100 (WR-1 reactor building)
- Preparation work for the extraction of waste from the ILW bunkers and standpipes
- Segregation and repackaging of WR-1 and other radioactive and conventional waste from the waste management area



Whiteshell Laboratories Waste Management Area.  
(Photo courtesy CNL)



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## Whiteshell Laboratories Next Steps (1 of 2)

In 2017, CNL proposed to revise its approved decommissioning approach to allow for *in-situ* decommissioning of WR-1.

- CNL's proposal requires both an amendment to the Whiteshell licence, and an environmental assessment (EA) under CEAA 2012
- CNL has submitted a draft Environmental Impact Statement (EIS), as required under CEAA 2012
  - CNSC staff, other Federal and Provincial departments, Indigenous communities and the public have reviewed the draft EIS and provided feedback to CNL
- CNL has also submitted various licensing basis documents, which are under CNSC staff review



Current WR-1 (top) and CNL's proposed decommissioning approach (bottom).  
(Photo courtesy CNL)



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## Whiteshell Laboratories Next Steps (2 of 2)

- On August 1, 2018, the Commission granted CNL a one-year licence for the Whiteshell site, valid from January 1 to December 31, 2019, with no changes to any authorizations
- CNL continues to address all comments on the EIS and licensing basis documents related to the proposed *in situ* decommissioning of WR-1, in preparation for re-submission to the CNSC
- EIS comments are publically available on the [CEAA website](#)

***The Commission will render a decision on the EA and the licence amendment following public hearings***



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## PROGRESS UPDATE REMEDIATION PROJECTS



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## Port Hope Area Initiative Background (1 of 3)

- The PHAI is a project to develop and implement a safe, local, long-term management solution for historic LLW in the municipalities of Port Hope and Clarington, Ontario
- It is comprised of two projects with separate CNSC licences, each to build a Long-Term Waste Management Facility (LTWMF):
  - The Port Granby Project
  - The Port Hope Project



### Legend

-  Low-level radioactive waste



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# Port Hope Area Initiative Background (2 of 3)

- The scope of the PHAI is defined by a legal agreement between Port Hope, Clarington and the Government of Canada
- The LLW subject to remediation under the PHAI originally came from historic refining and conversion of radium and uranium in Port Hope
- The Government of Canada has committed \$1.28 billion in funding for the PHAI
- The role of CNSC staff is to ensure that the public and the environment remain protected. To that end, a CNSC project officer is stationed in region performing regulatory oversight

AN AGREEMENT FOR THE CLEANUP  
AND THE LONG-TERM SAFE MANAGEMENT OF  
LOW-LEVEL RADIOACTIVE WASTE  
SITUATE IN THE TOWN OF PORT HOPE , THE TOWNSHIP OF HOPE  
and THE MUNICIPALITY OF CLARINGTON

AMONG

**THE CORPORATION OF THE TOWN OF PORT HOPE,**  
A Municipal corporation pursuant to the Ontario Municipal Act  
(hereinafter referred to as "the Town of Port Hope")

OF THE FIRST PART

**THE CORPORATION OF THE TOWNSHIP OF HOPE,**  
A Municipal corporation pursuant to the Ontario Municipal Act  
(hereinafter referred to as "the Township of Hope")

OF THE SECOND PART

**THE CORPORATION OF THE MUNICIPALITY OF CLARINGTON,**  
A Municipal corporation pursuant to the Ontario Municipal Act  
(hereinafter referred to as "Clarington")

OF THE THIRD PART

AND

**HER MAJESTY THE QUEEN IN RIGHT OF CANADA**  
as represented by the Minister of Natural Resources  
(hereinafter referred to as "Canada")

OF THE FOURTH PART

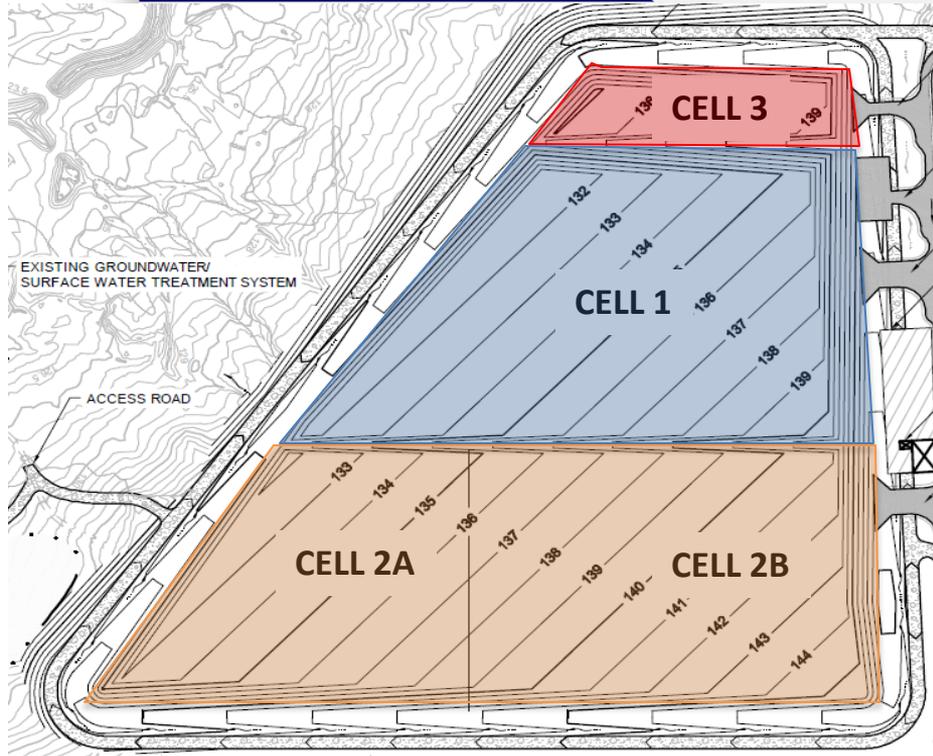
*\*As Amended December 2009*

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## Port Hope Area Initiative Background (3 of 3)

- Both the Port Hope and Port Granby LTWMFs consist of multiple cells for the storage of waste
- The waste in the cells is isolated from the environment by an engineered baseliner system, and once waste emplacement is complete, by an engineered cover system



A diagram of the Port Hope LTWMF, showing its three cells  
(Photo courtesy CNL)



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## PROGRESS UPDATE PORT GRANBY PROJECT



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# Port Granby Project Timeline

2001  
Legal Agreement signed

2009  
Environmental Assessment

2011  
CNSC licence issued

**Current**  
↓

2021  
Current licence expiry





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## Port Granby Project Progress Update

- Excavation and emplacement of waste in the new Port Granby LTWMF began in 2016, and is ongoing
- CNL estimates that excavation and emplacement of waste is currently 50% complete
- The volume of waste to be excavated has been greater than anticipated, in some areas by as much as 25%
- CNL has verified that some areas meet clean-up criteria



LLW excavation at the Port Granby WMF. (Photo courtesy CNL)



A remediated area at the Port Granby Waste Management Facility



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## Port Granby Project Water Management (1 of 4)

- The Port Granby Waste Water Treatment Plant (WWTP) treats groundwater and surface water from excavation areas, and leachate from within the LTWMF cells
- Operating since 2016
- Effluent is significantly cleaner than that which was produced by the old Port Granby Water Treatment Building
- CNL has recently established effluent release limits and action levels, which are acceptable to CNSC staff

***CNSC staff have verified waste water  
treatment plant performance***



Port Granby WWTP. (Photo courtesy CNL)

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## Port Granby Project Water Management (2 of 4)

### Unplanned releases to the environment:

- June 2017 overflow of untreated water from the East Gorge Reservoir; Event Initial Report submitted to Commission in August 2017 as CMD 17-M38
- January 2018 overflow of untreated water from the West Gorge Reservoir
- CNSC staff conclude that neither incident had an impact on the public or on the environment

### Insufficient storage/treatment capacity:

- In early 2018 all water storage features were near capacity as the WWTP was unable to keep up with springtime water inflows





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## Port Granby Project Water Management (3 of 4)

### CNSC staff's response:

- Inspections in June 2017 and February 2018 with significant scrutiny on water management
- In May 2018, request for analysis from CNL made under Section 12(2) of the *General Nuclear Safety and Control Regulations*

### CNL's response:

- Addition of significant water storage capacity via installation of multiple temporary tanks
- Measures to minimize flow of clean water into contaminated areas
- Procurement of a portable water treatment system to temporarily increase treatment capacity
- CNSC staff consider CNL's response to the 12(2) request satisfactory

***CNSC staff continue to closely monitor CNL's water management practices***



CNSC staff obtain water samples from the West Gorge Reservoir area. (Photo: CNSC staff)



Two of six temporary 6,000 m<sup>3</sup> tanks. (Photo courtesy CNL)

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## Port Granby Project Water Management (4 of 4)

These photos show the evolution of water storage features at the Port Granby LTWMF site

- The photo on the left shows the site as originally designed and built
  - The rectangular 11,500m<sup>3</sup> Equalization Pond is visible
- The photo on the right shows additional water storage features:
  - Six large, round 'lake tanks' of 6,000m<sup>3</sup> each
  - 130 smaller 'baker tanks' of 40m<sup>3</sup> each





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## Port Granby Project Hazardous Substances Occurrences (1 of 2)

- There have been three instances where workers have been exposed to low levels of hazardous substances
  1. An ammonia-bearing substance from a waste drum which ruptured during excavation
  2. Hydrogen sulphide gas generated in stagnant solids in the WWTP bioreactor
  3. Low levels of hydrogen fluoride while excavating a degraded gas cylinder
- In all cases, CNL reports no lasting impacts to workers or to the environment



Workers in personal protective equipment oversee the emptying of a hydro-vac truck at the Port Granby LTWMF (Photo courtesy CNL)



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## Port Granby Project Hazardous Substances Occurrences (2 of 2)

### CNL's response:

- Increased Personal Protective Equipment requirements for workers, and outfitted excavation equipment with air tanks
- Planned upgrades to air monitoring and ventilation in the WWTP

### CNSC staff response:

- Confirmed CNL's implementation of corrective actions via review of revised plans and procedures, and subsequent inspections with emphasis on PPE
- Restricted CNL operation of the bioreactor in the WWTP until remaining H<sub>2</sub>S corrective actions are complete

***CNSC staff continue to evaluate CNL's implementation of corrective actions***



A bulldozer at the Port Granby Waste Management Facility outfitted with yellow air tanks to supply the operator with safe breathing air. (Photo CNSC staff)

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## Port Granby Project Next Steps

- Ongoing excavation and emplacement of LLW; environmental monitoring including dust
- CNL application to amend the Port Granby Project licence to include release limits for the WWTP
- Water management, including WWTP operation
- Remediation verification at the Port Granby WMF
- CNL's preparations for the capping of the LTWMF

***CNSC staff will maintain oversight on  
the Port Granby Project***



A rendering of the Port Granby Project site once remediation is complete. (Photo courtesy CNL)



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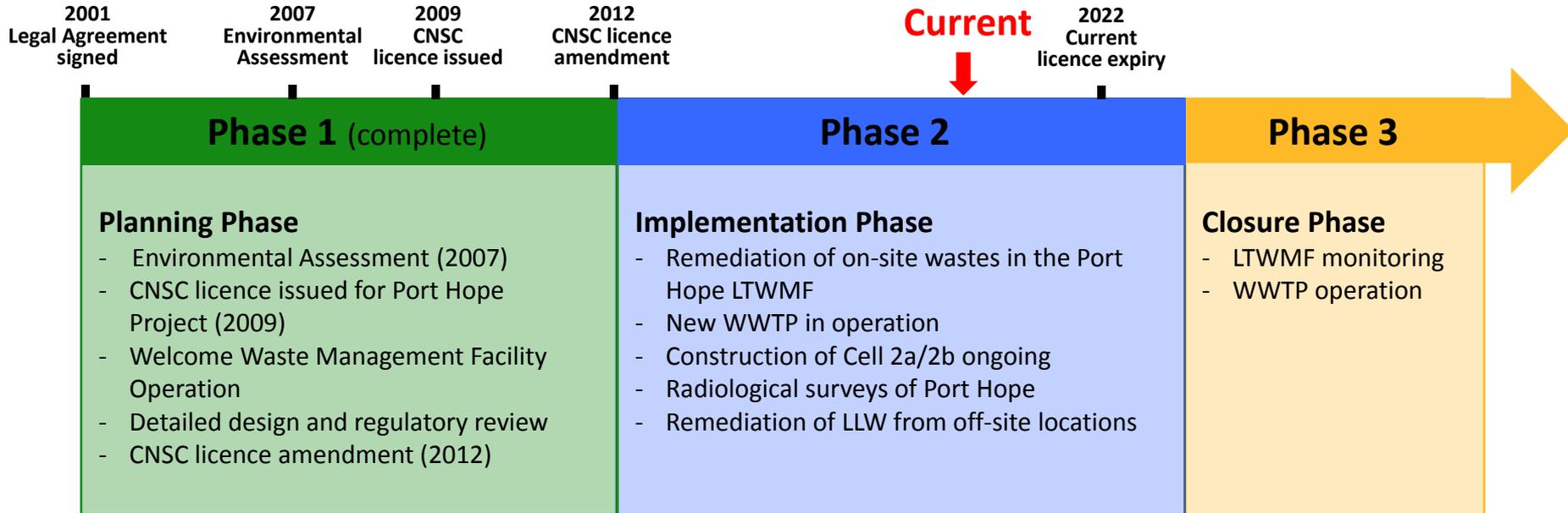
## PROGRESS UPDATE PORT HOPE PROJECT



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# Port Hope Project Timeline



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## Port Hope Project Progress Since November 2016

- Construction of the base liner for Cell 1 was completed in 2017
- Amendment of the licence to allow for alternate arsenic management strategy, as described in CMD 17-H101
- Excavation and emplacement of onsite wastes began on December 1, 2017
- Infrastructure to permit receipt of offsite wastes built in early 2018
- First emplacement of offsite waste occurred in June 2018



An annotated overview of the Port Hope LTWMF site.  
(photo courtesy CNL)



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## Port Hope Project Water Management (1 of 3)

- The Port Hope WWTP treats groundwater and surface water from the existing Welcome WMF site, and leachate from within the LTWMF cells
- Operational since January 2016
- Effluent is significantly cleaner than that produced by the old Water Treatment Building
- CNL has recently established effluent action levels, which are acceptable to CNSC staff
- CNL has recently submitted effluent release limits, which are under review by CNSC staff

***CNSC staff have verified waste water  
treatment plant performance***



The Port Hope WWTP. (Photo courtesy CNL)

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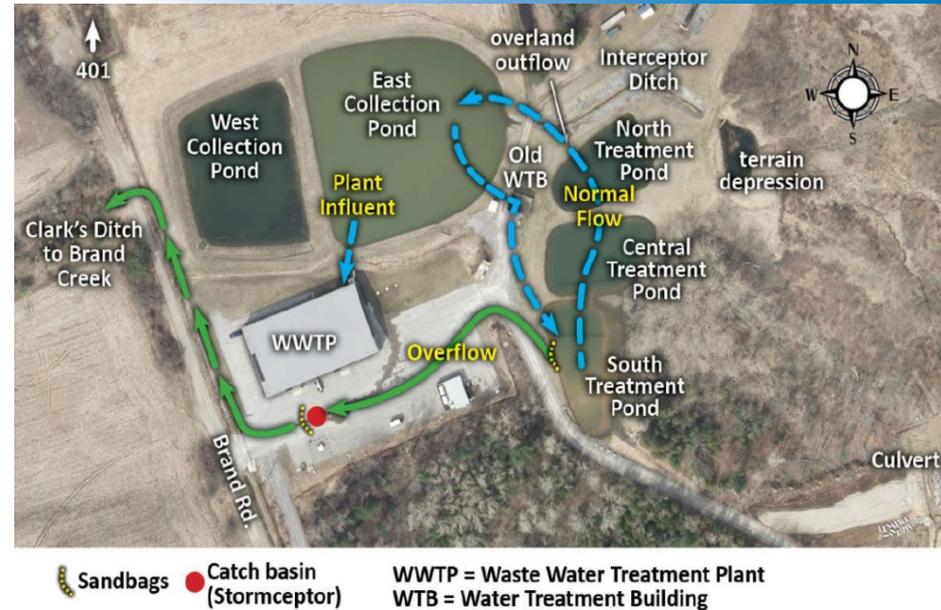
## Port Hope Project Water Management (2 of 3)

### Unplanned release to the environment:

- June 2017 overflow of untreated water from the South Treatment Pond; Event Initial Report submitted to Commission in August 2017 as CMD 17-M38
- There was no impact to the public or to the environment

### Limited storage and treatment capacity:

- In early 2018, all water storage features were near capacity as the WWTP was unable to keep up with springtime water inflows
- Not possible to install significant temporary water storage as was done at Port Granby due to space limitations of the site



Layout of water management features at the Port Hope LTWMF, and path of June 23, 2017 overflow. (Photo courtesy CNL)

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## Port Hope Project Water Management (3 of 3)

### CNSC staff's response:

- Inspection immediately after June 2017 overflow event, leading to issuance of an inspector's Order
- Inclusion of water management aspects in subsequent inspections

### CNL's response:

- In response to the Order, CNL updated contingency plans and procured additional water management supplies – CNSC staff consider the Order closed
- CNL operated the old Water Treatment Building for 39 days to reduce stored water volume
- CNL is expanding the volume of the Collection Ponds from 18,000 m<sup>3</sup> to 47,500 m<sup>3</sup> to prevent future release of untreated water



Footprint of the expanded Collection Pond at the Port Hope LTWMF.  
(Photo courtesy CNL)

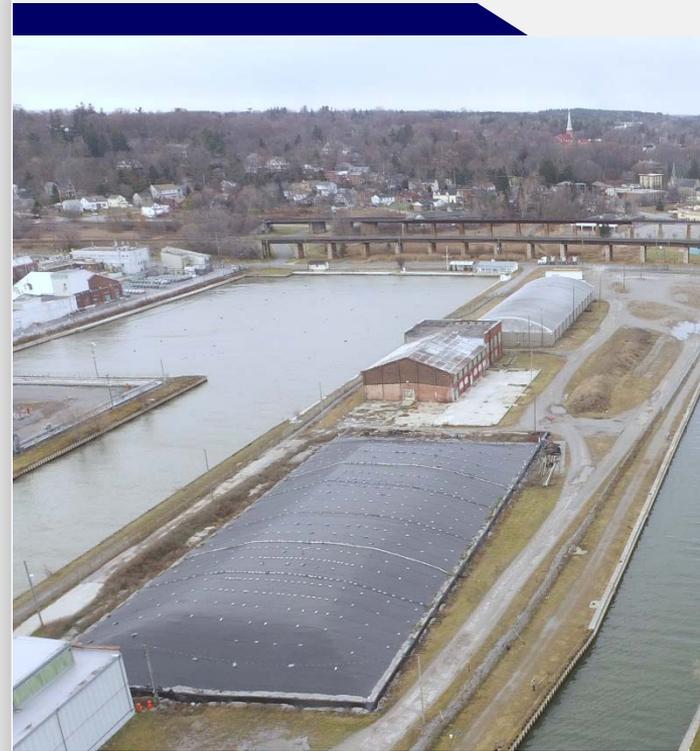


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## Port Hope Project Remediation at Major Sites (1 of 2)

- LLW is present at various known sites in Port Hope
- As part of the PHAI, and as required by the Legal Agreement, CNL will remediate these sites
- CNL is currently working with Cameco on remediating the Centre Pier area in the Port Hope Waterfront
- CNL expects remediation at these sites to be completed by 2023



LLW stored under a black tarp on the Centre Pier in Port Hope. (Photo courtesy CNL)



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## Port Hope Project Remediation at Major Sites (2 of 2)

Title	Description	Status
<b>Temporary Storage Sites</b>	The Centre Pier Temporary Storage Site (TSS), Pine Street Extension TSS, and Sewage Treatment Plant TSS.	Commenced in July of 2018
<b>Waterfront Area</b>	This includes the West Beach and former Waterworks site, the Alexander Street Ravine, the Centre Pier, Port Hope Harbour, the Mill Street South site, and the CN/CP Viaducts area.	Expected to begin at the former Waterworks site and the Port Hope Harbour in 2018
<b>Highland Drive Area</b>	This includes the Highland Drive landfill, roadbed, and south ravine; the Pine Street Extension Consolidation Site; and the Pine Street North Extension roadbed.	Expected to begin in 2019
<b>Industrial Sites</b>	This includes areas of the Centre Pier, Lions Recreation Centre Park, Former Coal Gasification Plant, Chemetron Lagoon, and Sewage Treatment Plant Storage Cell.	Expected to begin in 2019
<b>Central Area and Known Sites</b>	This includes the former St. Mary's School, Strachan Street Ravine Consolidation Site, Caroline Street Park, Abandoned Pipeline, and Peter Street Mound.	Portions expected to begin in late 2018



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## Port Hope Project Related CNL Licences

### Port Hope Radioactive Waste Management Facility

- Waste associated with previous local clean-ups

### Pine Street Extension Temporary Storage Site

- Waste associated with Port Hope Construction Monitoring Program
- Waste being stored at these sites will be transferred to the new Long-Term Waste Management Facility beginning in 2018



Part of the Port Hope Radioactive Waste Management Facility. (Photo Courtesy CNL)



Pine Street Extension Temporary Storage Site. (Photo Courtesy CNL)



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## Port Hope Project Remediation at Small-Scale Sites

- Small-scale sites include residences and businesses throughout the municipality of Port Hope
- CNL is currently performing property radiological surveys at small-scale sites within the Municipality of Port Hope (expected completion in 2020)
- To date, CNL has identified 875 small-scale sites which will require remediation. Remediation of 18 sites is expected in 2018
- CNL expects remediation at these sites to continue until 2023



CNL contractor performing radiological survey at a residential property . (Photo CNSC staff)



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## Port Hope Project Next Steps

- Ongoing excavation and emplacement of LLW
- Remediation verification, both at major sites and small-scale sites
- Continued water management, including WWTP operation
- Establishment of release limits for the WWTP
- Enhanced oversight provided by CNSC inspector temporarily posted to the Port Hope area



A rendering of the Port Hope Project site once remediation and mound closure is complete. (Photo Courtesy CNL)



Progress Update for CNL's Prototype Waste Facilities,  
Whiteshell Laboratories, and the Port Hope Area Initiative  
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# CONCLUSIONS



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# Regulatory Focus

## Decommissioning Projects

- Shut down power reactors
  - Hazard reduction activities
  - Dismantling of non-nuclear facilities
  - Licence amendment to separate the current licence into three separate licences
- Whiteshell Laboratories
  - Ongoing decommissioning of facilities
  - Review of licensing basis documentation for licence amendment request
- Continue to review EISs for CNL's proposed revised decommissioning plans for NPD and WR-1

## Remediation Projects

- Port Granby
  - Completion of emplacement of waste at the LTWMF
  - Verification of capping of Port Granby LTWMF
  - WWTP operation
- Port Hope
  - Remediation of Centre Pier and Harbour area
  - Remediation of Small-Scale Sites
  - WWTP operation



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## Conclusions

- CNSC staff concludes that CNL is carrying out licensed activities at these sites safely and in compliance with the requirements of the NSCA, CNSC Regulations and their licences
- CNSC staff will continue to maintain effective oversight of CNL's decommissioning and remediation activities
- CNSC will continue to regularly engage with the public and Indigenous groups



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area

Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>1. Public participation – public consultation regarding decommissioning reactors</p>	<p>The CNSC is committed to regular, structured and formalized engagement with the public Indigenous groups to discuss activities and issues related to the CNSC regulated facilities. Previous Status Updates on these decommissioning projects were provided in 2012 and 2016 at Commissioning proceedings.</p>	<p>Requirements, guidance and general information on public information and disclosure programs are found in : REGDOC 3.2.1 – <i>Public Information and Disclosure</i> REGDOC 3.2.2 – <i>Aboriginal Engagement</i></p>
<p>2. Public participation – closed hearings of 1-person panels</p>	<p>Decisions related to the type of Public Hearing are made by the Commission Secretariat. For the current practice of Hearings in writing based on written submissions (with interventions), the public is given the opportunity to comment in writing.</p>	<p>Information on Commission proceedings is found in: REGDOC 3.4.1 – <i>Guide of Applicants and Intervenor Writing CNSC Commission Member Documents</i></p>



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area



Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>3. Public participation – public discussion about decommissioning of shut-down nuclear reactors</p>	<p>Prior to moving out of storage with surveillance of the shut-down power reactors, Public Hearings will be held before the Commission renders decisions.</p>	<p>Commission approval is required for the active decommissioning of shut down reactors. For the proposed accelerated decommissioning approach for the NPD and WL reactors, an environmental assessment (EA) is underway, with Public interventions. For the Douglas Point and Gentilly-1 a Public Commission Hearing will be required prior to executing decommissioning works. Until Commission approval is granted, these reactors are expected to remain in storage with surveillance until 2060 and 2064, respectively.</p>
<p>4. Public participation – final end-state objectives</p>	<p>End-state objectives are documented in decommissioning plans that form part of the approved licensing basis. Commission approval is required before CNL implements these plans. A Public Hearing will be held in accordance with the <i>Canadian Nuclear Safety Commission Rules of Procedure</i> regulations.</p>	<p>An environmental assessment (EA) covers the entire lifecycle of a facility. The EA assesses the impacts of all the planned licensed activities and informs the licensing decision on whether the applicant or licensee will, in carrying on a licensed activity, make adequate provision for the protection of the environment and the health of persons.</p>



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area

Comment/ Recommendation	CNSC staff Disposition	Additional Details
5. Licensee Commitments - status of licensing commitments for the prototype reactors.	With the exception of some items related to decommissioning plans for G-1 and NPD, all commitments have been addressed to CNSC staff's satisfaction. CNSC staff are in discussion with CNL to ensure that remaining commitments are addressed by CNL fully.	CNSC staff have reviewed the decommissioning plans for these facilities. Staff have found the Douglas Point decommissioning plan acceptable, however, provided comments and requested CNL address the comments in revisions to the G-1 and NPD decommissioning plans.
6. Effluent Monitoring – from the NPD reactor	Licensees' Annual Compliance Report captures data regarding waste effluents and is posted publically. As per the CNSC approved effluent monitoring plan, NPD facility collects water from a sump system and around the facility. CNSC staff confirm that the NPD site does not have continuous effluent discharge. However, the NPD site does release effluent in small volumes several times a year (batch release). Surface water quality for radionuclides and hazardous contaminants in the receiving environment remains well below surface water quality guidelines.	Effluent radiological releases to the environment are less than <0.01 % of the DRLs. CNSC staff conclude that there is no unreasonable risk to the environment.



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area



Comment/ Recommendation	CNSC staff Disposition	Additional Details
7. Effluent Monitoring – from Douglas Point and Gentilly-1	Radioactive and hazardous liquids from the Douglas Point Waste Facility are not released to the environment. Radioactive and hazardous liquids are collected and stored in holding tanks within the facility, and transferred to waste service providers as per CNL’s program requirements. All liquids from Gentilly-1, are transferred to the Gentilly-2 effluent system to be managed by Hydro Quebec	CNSC staff conclude that the environment and workers are protected.
8. Effluent Monitoring – where can the public obtain monitoring data	CNL’s environmental performance is available on CNL’s website at <a href="http://www.cnl.ca/en/home/environmental-stewardship/performance-report/default.aspx">http://www.cnl.ca/en/home/environmental-stewardship/performance-report/default.aspx</a>	The CNSC implemented its IEMP to verify that the public and environment around CNSC-regulated facilities are not adversely affected by releases to the environment. These results are available on the CNSC website at <a href="http://nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/index-iemp.cfm">http://nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/index-iemp.cfm</a>



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area



Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>9. Decommissioning Plans – references for decommissioning plans</p>	<p>In 2016, CNL submitted decommissioning plans to the CNSC for Douglas Point, Gentilly-1 and NPD. The references for these plans are:</p> <ul style="list-style-type: none"> <li>• Douglas Point Waste Facility Preliminary Decommissioning Plan (22-00960-PDP-001 Revision 2) April 29, 2016</li> <li>• Gentilly-1 Waste Management Facility Preliminary Decommissioning Plan (61-508310-PDP-001 Revision 1) May 2, 2016</li> <li>• Nuclear Power Demonstration Waste Facility Preliminary Decommissioning Plan (64-508310-PDP-001 Revision 2) April 29, 2016</li> </ul>	<p>CNSC staff have reviewed the decommissioning plans for these facilities. Staff have found the Douglas Point decommissioning plan acceptable, however, provided comments and requested CNL address the comments in revisions to the G-1 and NPD decommissioning plans.</p>
<p>10. Decommissioning Plans</p>	<p>CNSC staff have reviewed the decommissioning plans for Douglas Point, G-1 and NPD. Staff have found:</p> <ul style="list-style-type: none"> <li>• Douglas Point Preliminary Decommissioning Plan acceptable.</li> <li>• G-1 PDP revision required. CNSC staff have provided comments and requested CNL address the comments in a revision</li> <li>• NPD PDP revision required. CNSC staff have provided comments and requested CNL address the comments in a revision</li> </ul>	



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area



Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>11. Decommissioning Plans – can the public have access</p>	<p>Portions of CNL’s PDPs for the prototype waste facilities are protected-sensitive; as a result CNSC can not provide these documents. However, portions of the PDP can be made available to the public in accordance with the requirements of CNSC Regulatory Document RD-99.3 <i>Public Information and Disclosure</i>.</p>	<p>Redacted copies of the PDPs may be obtained through the Access to Information Office of AECL. Details on how to make an access to information request is found on <a href="#">AECL’s website</a>.</p>
<p>12. Financial Guarantees – when did CNL provide the financial guarantee</p>	<p>A letter of commitment from the Minister of Natural Resources was submitted to the CNSC on July 31, 2015.</p>	<p>This letter of commitment was by the Minister of Natural Resources and Minister for the Federal Economic Development Initiative for Northern Ontario. The letter addresses the licences held by CNL for the CRL, the Whiteshell laboratories, the Port Hope project, the Port Granby project, and the following three prototype power reactors: Nuclear Power Demonstration, Douglas Point and Gentilly-1.</p>



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area



Comment/ Recommendation	CNSC staff Disposition	Additional Details
13. Financial Guarantees – should the financial guarantee be review by the Commission	A letter of commitment from the Minister of Natural Resources was submitted to the President of the CNSC on July 31, 2015.	
14. Financial Guarantees – has the financial guarantee been revised in the past five years	Yes, a letter of commitment from the Minister of Natural Resources was submitted to the CNSC on July 31, 2015.	
15. Financial Guarantees – source of funding for the financial guarantee	Atomic Energy of Canada Limited (AECL) is a Schedule III, Part I Crown corporation under the <i>Financial Administration Act</i> and an agent of Her Majesty in Right of Canada. As an agent of Her Majesty in Right of Canada, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada.	The restructuring of AECL saw the ownership of Canadian Nuclear Laboratories (CNL) transferred to a private-sector contractor; AECL retains ownership of the lands, assets and liabilities associated with CNL's licences.



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# Intervention (CMD 18-M30.2) Concerned Citizens of Renfrew County and Area



Comment/ Recommendation	CNSC staff Disposition	Additional Details
16. Financial Guarantees – commitment for the government	<p>Atomic Energy of Canada Limited (AECL) is a Schedule III, Part I Crown corporation under the <i>Financial Administration Act</i> and an agent of Her Majesty in Right of Canada. As an agent of Her Majesty in Right of Canada, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada.</p> <p>A letter of commitment from the Minister of Natural Recourses was submitted to the CNSC on July 31, 2015.</p>	The restructuring of AECL saw the ownership of Canadian Nuclear Laboratories (CNL) transferred to a private-sector contractor; AECL retains ownership of the lands, assets and liabilities associated with CNL's licences.
17. Financial Guarantees – dollar amounts of the financial guarantee	<p>According to ACEL's 2013 Basis of Cost Estimate: Prototype Reactors &amp; Former Heavy Waster Sites, the breakdown of cost estimates are as follows:</p> <ul style="list-style-type: none"> <li>• DP – \$350 million</li> <li>• G-1 – \$303 million</li> <li>• NPD – \$125 million</li> </ul>	



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# Intervention (CMD 18-M30.3)

## Dan Rudka

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Need for increased public engagement with CNL; 'one-way' communication from CNL to the public	CNSC staff have verified that CNL maintains an adequate public information program for the PHAI, as required by the licences for the Port Hope and Port Granby projects and CNSC Regulatory Document RD-99.3 <i>Public Information and Disclosure</i> . As part of this program, CNL holds public outreach activities and has formed various types of community outreach groups. CNSC staff have observed a selection of these activities and found them to be effective.	
Concerns regarding the effects in inhaling low-level radioactive waste; lack of respiratory protection for the public	CNL performs active dust monitoring at PHAI worksites to ensure that workers and the public are protected. CNL mitigates the generation of dust by applying dust suppressant to excavation areas and nearby roadways. These practices are applied to all types of excavation sites, including small-scale sites. CNSC staff do not consider that respiratory protection for the public is necessary.	



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# Intervention (CMD 18-M30.3)

## Dan Rudka

Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>Need for further health studies, including long-term studies after excavations are complete.</p>	<p>CNL has a comprehensive environmental monitoring program to ensure that the public and the environment are protected. All results indicate that the public and environment are protected. This is consistent with CNSC staff's results obtained under the Independent Environmental Monitoring Program.</p>	<p>CNSC staff have assessed many environmental and epidemiological studies conducted in the Port Hope area over the years, as well as studies conducted internationally. Based on the weight of evidence, no adverse health effects have or are expected to occur in Port Hope as a result of the operations of the nuclear industry in the community.</p> <p>CNSC staff, along with public health authorities, will occasionally conduct epidemiological studies in Port Hope to ensure workers and the community remain healthy. CNSC will consider further updates in our Research and Support Program plans, along with other research priorities.</p>



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# Intervention (CMD 18-M30.3) Dan Rudka



Comment/ Recommendation	CNSC staff Disposition	Additional Details
Location of Meeting should be in Port Hope	CNSC staff note that six sites from various regions of Canada are covered by this Progress Update.	The Port Granby Project licence will require renewal in 2021, and the Port Hope Project licence will require renewal in 2022. Both renewals will require Hearings which will provide opportunities for public engagement.
PHAI workers exposed to undue inhalation risk; trucks used to move LLW with excessive exterior dust	CNSC staff have verified through document review and on-site inspections that CNL has an effective dust management plan in place. This includes mitigation measures such as water trucks to spray excavation areas and roadways, and equipment to directly measure the quantity of dust in the air down-wind from excavations. Dust monitoring includes the measurement of uranium in air. Workers are monitored for all radiation hazards, including inhalation risks. Dose monitoring results indicate that workers are protected.	



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# Intervention (CMD 18-M30.4) Northwatch

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Term “prototype waste facilities” is misleading	These facilities are called ‘prototype’ because of their former role as prototype power reactors, rather than prototype designs for waste management facilities.	Shut down power reactors is used throughout the Commission Member Document and presentation to provide clarity.
The CMD uses terms such as “safe shut down” without definition or supporting documents.	Safe shutdown state is described in CSA N294.0 and REGDOC 3.5.1. Safe shut down includes the steps taken for approaching shutdown and the facility’s transition from permanent shutdown to a stable state (i.e. stabilization activities).	For stabilization of the facility, key activities are: defueling the reactor, draining and storing of the cooling water from the reactor main systems, draining water from secondary and auxiliary cooling systems, cleaning and decontaminating, maintaining cooling for the irradiated fuel bays (IFBs), transferring the spent fuel to dry storage, modifying the operating conditions /programs to align with the state of the facility, performing extensive radiological surveys and maintaining routine surveillance of the facility.



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# Intervention (CMD 18-M30.4) Northwatch

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Public input as part of planning the deferred decommissioning strategy for the shut-down prototype reactors	The deferred decommissioning strategy for the reactors was planned in the 1990s and met regulatory expectations. The CNSC is committed to regular, structured and formalized engagement with the public Indigenous groups to discuss activities and issues related to the CNSC regulated facilities. Prior to moving out of storage with surveillance phase, Public Hearings will be held before the Commission renders decisions.	Decommissioning strategies are not prescribed by the CNSC. Proponents must propose their preferred strategy as part of their PDP and must support it with a safety case. Any proposed decommissioning strategy will be assessed by the CNSC against regulatory requirements to ensure the protection of health and safety of the public and the environment.
For WR1, there was an opportunity for public input through an EA - the outcome and decisions of which are not being “changed” in terms of decommissioning approach	The WL site-wide decommissioning was subject to an EA in 2002. Decommissioning activities have followed those outlined by that EA. The current EA process, initiated for the decommissioning of the WR-1 reactor, is a proposed change in terms of decommissioning approaches, from full dismantlement to in-situ. Stakeholders and Indigenous groups are given several opportunities to provide comments and the final result of the EA will be decided upon following a Public Hearing, consistent with CNSC processes.	Comments and recommendations for WR1 decommissioning will be addressed by CNL during a planned future EA and licensing process anticipated in 2019.



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# Intervention (CMD 18-M30.4) Northwatch

Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>With respect to CNL's request for a licence extension, the EA process appears to have been stalled and the one year term can now be expected to expire with little to no progress being made, which raises issues about the CNL approach</p>	<p>CNL is using the additional time to in part address more than 400 comments on the EIS for the in situ decommissioning of the WR-1 from CNSC staff and other federal and provincial departments.</p>	<p>Information regarding any next steps for the WR-1 project will be made available through the Canadian Environmental Assessment Registry (CEAR).</p>



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# Intervention (CMD 18-M30.4) Northwatch

Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>No reference to policy, regulation guides or standards when describing decommissioning activities.</p> <p>Canadian regulatory framework is inadequate, containing both gaps and contradictions. The Commission should engage with Indigenous peoples, the public, licensees and staff to develop a process and timeline for the development of a comprehensive regulatory framework to provide guidance/standards for decommissioning projects.</p>	<p>The CNSC’s regulatory approach for decommissioning stems from the NSCA and is articulated in CNSC documents, such as G-219, Decommissioning Planning. In developing these documents, the CNSC draws upon recommendations of the IAEA and best practices from the international and national community. CNSC staff also participated in the development of the decommissioning CSA Group standard, N294-09, Decommissioning of facilities containing nuclear substances, and this standard complements the CNSC’s regulatory framework.</p> <p>To ensure continuous improvement, CNSC is modernizing the regulatory framework with respect to decommissioning. A discussion paper on Waste Management and Decommissioning was published on May 13, 2016 to seek Indigenous peoples, the public, licensees feedback, which is now being assessed. External consultation on our regulatory document on decommissioning is planned for March 2019. The Regulatory Framework plan is posted on the CNSC website for transparency.</p>	



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# Intervention (CMD 18-M30.4) Northwatch

Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>CMD should include full references. For example, the CMD referred to a letter dated October 23, 2015 in which CNL notified CNSC staff of its intent to change decommissioning approach for NPD and WL.; this letter is not on the public registry.</p>	<p>The CNSC’s process is initiated with the submission of a licence application or project description not a letter of intent, as staff require more information than what is typically provided in a letter of intent. Once a description has been received, CNSC staff make a determination on whether an EA is required. This process and the information requirements of staff to make a determination are outlined in REGDOC 2.9.1 <i>Environmental Principles, Assessments and Protection Measures</i>.</p>	<p>The Project Description for both NPD and WR-1 projects were posted for a 30 day comment period, from May 24 to June 24, 2016 and June 2 to July 4, 2016, respectively. These are available at:</p> <p><a href="https://www.cea-acee.gc.ca/050/evaluations/proj/80121?&amp;culture=en-CA">https://www.cea-acee.gc.ca/050/evaluations/proj/80121?&amp;culture=en-CA</a> (NPD)</p> <p><a href="https://www.cea-acee.gc.ca/050/evaluations/proj/80124?culture=en-CA">https://www.cea-acee.gc.ca/050/evaluations/proj/80124?culture=en-CA</a> (WR-1)</p>



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# Intervention (CMD 18-M30.4) Northwatch

Comment/ Recommendation	CNSC staff Disposition	Additional Details
<p>Lack of clarity and information on changing timelines for EAs underway for CNL projects (WR1, NPD, NSDF). Changing timelines and lack of dates for public input make it challenging for participation from the public.</p>	<p>CNSC provides regular updates regarding timelines for these projects on its website and the public Canadian Environmental Assessment Registry. CNSC staff also ensure through regular correspondence that the public and Indigenous groups stay informed about the process and have sufficient opportunity and time for review and participation. Furthermore, the CNSC offers a project-specific mailing list for interested parties to subscribe to and receive updates on the project of their interest. CNSC staff continue to sent updates in advance through this mailing list and respond to questions through an EA inbox. This approach is consistent to other EA processes including that of CEAA.</p>	<p>An update regarding the status of the EA process and an explanation on why CNL asked for a delay in the WR-1 project was posted on April 3, 2018 to the public CEAR. A similar announcement was posted to the CEAR on June 11, 2018 for the NPD.</p>



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# Intervention (CMD 18-M30.5) Port Hope Community Health Concerns Committee

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Progress Update format provides insufficient information on Port Hope Area Initiative – preference for Public Hearing	The purpose of CMD 18-M30 is to implement the Commission’s direction to staff for periodic updates on Port Hope Area Initiative activities as found in paragraph 156 of the Record of Proceedings available from the CNSC website at <a href="http://www.nuclearsafety.gc.ca/eng/the-commission/pdf/2012-10-24-SummaryDecision-AECL-PortHope-e-Final-Edocs4039249.pdf">http://www.nuclearsafety.gc.ca/eng/the-commission/pdf/2012-10-24-SummaryDecision-AECL-PortHope-e-Final-Edocs4039249.pdf</a>	
Estimates of the number of properties to be remediated are too low; the Port Hope LTWMF is too small to hold the volume of waste needed	CNL is performing an extensive series of radiological surveys on commercial and residential properties in Port Hope, so that the extent of low-level radioactive waste contamination can be determined. All properties found to have low-level radioactive waste will be remediated by CNL, regardless of how many there are. CNSC staff will ensure that the final volume of the Port Hope LTWMF is safe through review of CNL documentation and inspections.	



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# Intervention (CMD 18-M30.5) Port Hope Community Health Concerns Committee

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Members of the public are exposed to 'elevated levels of radiation' from roadways and road allowances	CNL's data indicate that exposure to radiation from roadways and road allowances are not at levels which would expose the public to significant additional risk. CNL has a program in place to remediate areas which show elevated radiation levels in a timely manner.	
Increased coordination with MPH regarding public works is recommended	CNSC staff have verified that CNL has in place an effective Construction Monitoring Program, which liaises with public and private construction activities in Port Hope.	
Comprehensive independent health monitoring of the Port Hope populace is recommended	CNL has a comprehensive environmental monitoring program to ensure that the public and the environment are protected. Data analysis of the results indicate that the public and environment are protected. This is consistent with CNSC staff's results obtained under the Independent Environmental Monitoring Program.	



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# Intervention (CMD 18-M30.5) Port Hope Community Health Concerns Committee

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Additional health studies, to update past results, are recommended	Based on environmental and epidemiological studies conducted in the Port Hope area no adverse health effects have or are expected to occur in Port Hope as a result of the operations of the nuclear industry in the community.	Health Canada and CNSC have updated the cancer incidence study in Port Hope (1992- 2007) and have plans to update the Eldorado study which includes Port Hope workers. CNSC staff acknowledges that it has been some time since the updates were carried out. CNSC will consider further updates in our Research and Support Program plans, along with other research priorities.
Addition of recycled and enriched uranium to the list of contaminants is recommended	Recycled uranium, that is, uranium which has been first irradiated in a reactor and then chemically separated for re-use, has never to the knowledge of CNSC staff been processed in Port Hope. There has been historic work with depleted, natural and enriched uranium in Port Hope, and thus uranium (regardless of enrichment) is listed in the clean-up criteria in the Port Hope Project licence.	



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# Intervention (CMD 18-M30.6)

## Faye More

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Eligibility for the Property Value Protection Program	The Property Value Protection program is a CNL program set up as per the Legal Agreement between the Government of Canada and the affected Municipalities. CNSC staff have no influence over its policies.	
Comprehensive independent health monitoring of the Port Hope populace is recommended	<p>CNSC staff do not recommend comprehensive independent health monitoring of the Port Hope community. The findings of many years of environmental and epidemiological studies conducted in Port Hope, as well as the international understanding of radiation sources and effects, provide no evidence to justify it.</p> <p>CNL has a comprehensive environmental monitoring program to ensure that the public and the environment are protected. All results indicate that the public and environment are protected. This is consistent with CNSC staff's results obtained under the Independent Environmental Monitoring Program.</p>	Based on environmental and epidemiological studies conducted in the Port Hope area no adverse health effects have or are expected to occur in Port Hope as a result of the operations of the nuclear industry in the community.



CMD 18-M30.A, August 22, 2018



# Intervention (CMD 18-M30.6) Faye More

Comment/ Recommendation	CNSC staff Disposition	Additional Details
Increased coordination with MPH regarding public works is recommended	CNSC staff have verified that CNL has in place a Construction Monitoring Program, which liaises with public and private construction activities in Port Hope.	
The Port Hope LTWMF is too small to hold the volume of waste needed, and the PHAI budget is too small to ensure a thorough clean up.	CNSC staff will ensure that any methods used by CNL to accommodate additional volume is safe and within the licensing basis.	
The Port Hope Project does not include enough of the old Ward 2 of Port Hope	The scope of the Port Hope Area Initiative is determined by the Legal Agreement between the Government of Canada and the affected Municipalities. CNSC staff have no jurisdiction over the project scope.	