



# CNSC Regulatory Oversight During Covid-19

**DNHC meeting**

November 20, 2020

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# REGULATORY AGILITY

## **Regulatory Oversight**

- Continued to verify that measures to protect health, safety, security and the environment are in place
- Oversaw the Unit 2 Darlington Refurbishment Activities and Return to Service
- Participated in Pickering Emergency Exercise in October 2020
- Ongoing communications with licensees of major nuclear facilities and activities to ensure that COVID Licensees' plans are being implemented
- Responded to requests for regulatory flexibility

# Inspections

## **CNSC Inspections**

- Inspections are only one type of regulatory oversight
- About 210 inspections at DNGS and PNGS in 2020
  - Progress according to plan
- Developed modified on-site inspection protocols
- Augmented our ability to conduct remote inspections
- Ensured additional PPE and logistics for inspections during COVID-19 were addressed
- Exchanged lessons learned and experiences with other regulators

# NUCLEAR POWER PLANT – INSPECTIONS DURING COVID-19

## Inspections

- Field Inspections
- Type II Inspections
- Desktop Inspections



# INSPECTIONS DURING COVID-19 PRINCIPLES

- Employee health and safety – our first and foremost priority
- Implement best practices (e.g., health and safety; and travel guidance)
- Gradual, risk-informed and measured approach to prioritizing inspections
- Use of innovative approaches
- Consistent application while taking into considerations specific situational awareness (e.g., facility, region, etc.)

Safety

Agility

Flexibility

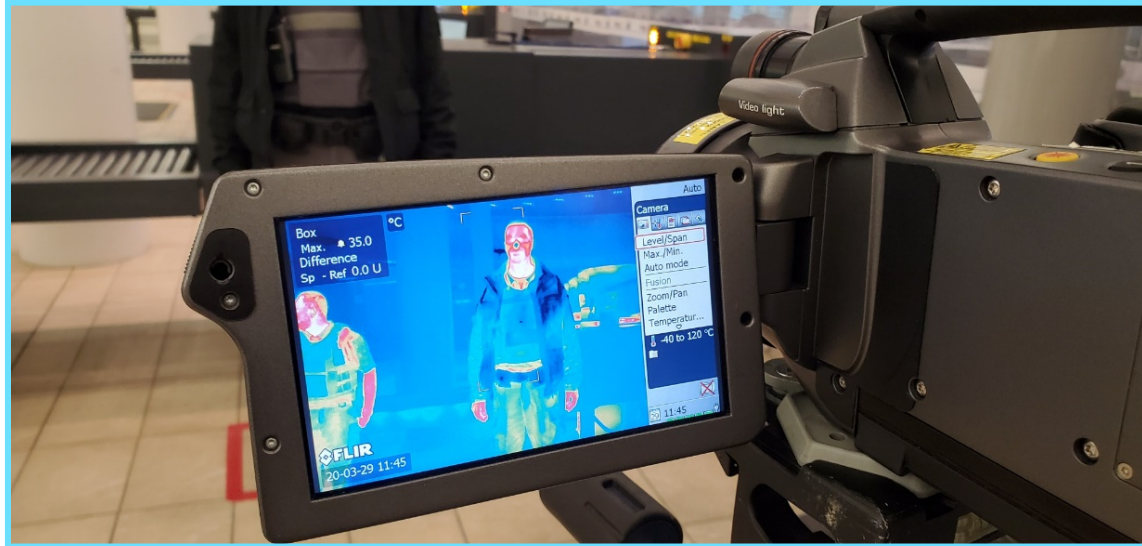
# NUCLEAR POWER PLANTS – Licensee Response to COVID-19

- All licensees activated their business continuity plans, which involved standing up their Emergency Management Centre/Crisis Management Communications Centre/Incident Command.
- On-site visitors were restricted to essential personnel only. CNSC staff were amongst those considered essential. Non-essential workers have since been allowed on site, following strict safety protocols.
- Major work was initially postponed such as Outages activities. These activities have since resumed following strict safety protocols.
- Where activities continued such as Unit 2 Refurbishment, OPG enhanced hygiene, screening protocols and physical distancing were implemented while reducing onsite workforce to essential workers only.

# NUCLEAR POWER PLANTS – CNSC Response to COVID-19

- Effective March 16, all CNSC staff in Ottawa and at regional and site offices were directed to work from home. Regulatory oversight continued by site staff via remote access.
- All non-essential travel for employees was cancelled.
- Return to work strategies are in place, which include reduced building capacity, social distancing, staggered break times, alternate locations for pre-job briefs, etc.
- Mandated use of Personal Protective Equipment dependent on location and ability to socially distance (masks, face shields, hand sanitizer).
- Addressed licensee requests for regulatory flexibility case-by-case

# NUCLEAR POWER PLANT - INSPECTIONS DURING COVID-19



## Implemented Measures

- New work process to modify inspection program in light of COVID-19
- Updated pre-job briefing requirements to include COVID-19 related health and safety precautions

## Safety Precautions at the Plant

- PPE (face masks and shields)
- Temperature screening
- Hand sanitizer and disinfectant wipes
- Directional traffic for walkways
- Remote work

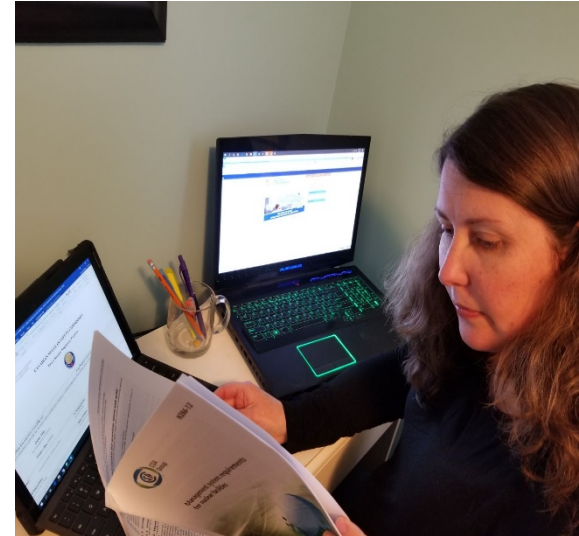




# NUCLEAR POWER PLANT – INSPECTIONS DURING COVID-19

## Remote Inspections

- Remote connection to the licensee's VPN, for monitoring of corrective actions, events, or plant status.
- Increased surveillance and monitoring by attending licensee virtual meetings.
- Remote inspections executed with Subject Matter Expert support from HQ.



# NUCLEAR POWER PLANT – Prioritizing and Modifying Inspection Plans

- Conducted an immediate review of approved FY 20/21 inspection plan, and identified which activities required modification or possible deferral to a later quarter in FY
- Virtual meetings were held to discuss each plan to gain alignment on its mode of execution/deferral/cancelation
- A consolidate work plan was developed, and agreed with supporting groups
- All decisions for activities deferred to FY 21/22 or their cancellation, were documented for auditability

# NUCLEAR POWER PLANT – Q-2 Progress Report

- On site activities ceased on March 13, and remote capability began (connection to the licensees VPN, virtual meetings, and ongoing remote surveillance and monitoring of licensee databases)
- On-site inspections resumed on May 5, 2020

***Limited impact on the overall plan***

## **FY 20/21**

Planned: 212 inspections FY 20/21

To date: ~50% completed/in progress (10% cancelled and 4% deferred)

***The CNSC is on track to completing their approved inspection plan for 20/21***

# LESSONS LEARNED

## **CNSC Corporate**

- Business Continuity Plan (BCP) was well exercised; however future scenarios should include when the network is down or remote access is limited. (This was resolved with the quick distribution of tablets with VPN connection).
- Communication was immediate and effective, however coordinating communications from different sources will be considered.
- BCP identified critical staff however there may be an opportunity to strengthen this area.

## **Power Reactor Regulatory Program**

- Some modifications to program documentation were needed, but did not hinder CNSC regulatory oversight activities from continuing

# Darlington NGS Highlights (1/2)

## Unit 2 Refurbishment:

During the Pandemic, CNSC staff oversaw the Unit 2 Darlington Refurbishment Activities and Return to Service.

- CNSC staff completed all activities scheduled for the duration of the Unit 2 Refurbishment, with one post refurbishment inspection to be completed in Q3/Q4.
  - Included 31 refurbishment focused Type II inspections and 35 Field inspections
- Ottawa HQ staff worked closely with Site staff and CNSC experts to conduct inspections, technical reviews and compliance monitoring activities.
  - CNSC staff modified the verification and inspection activities to be remote
  - Conducted desktop reviews and compliance assessments to ensure pre-requisites were met
  - Daily teleconferences with the licensee.

Overall, CNSC staff confirmed that the refurbishment and return to service activities were performed safely and in compliance with regulatory requirements.



# Darlington NGS Highlights (1/2)

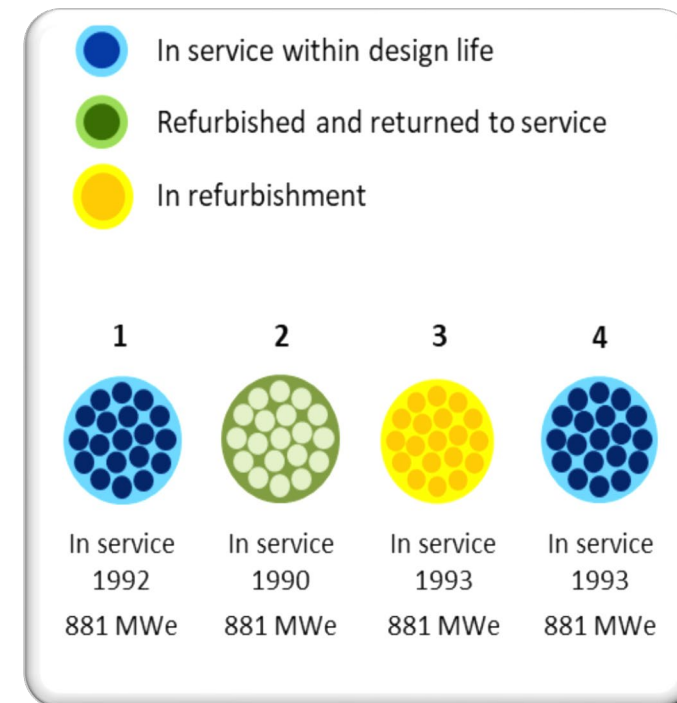
## Unit 2 Refurbishment continued:

The Executive Vice-President and Chief Regulatory Operations Officer on behalf of the Commission provided consent to remove the following hold points during the pandemic:

- Consent to load fuel was previously provided in Nov 2019
- Consent to remove GSS was given on April 5, 2020
- Consent to increase power above 1% was given on May 2, 2020
- Consent to increase power above 35% was given on May 13, 2020
- Unit 2's return to Commercial Operation was declared on June 4, 2020

## Unit 3 Refurbishment :

- Began on September 3, 2020
- Unit 2 lessons learned utilized
- With the tools in place and the experience gathered thus far, the CNSC has an adaptable and efficient team in place to ensure proper regulatory oversight of subsequent units at Darlington.



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# Pickering NGS Performance Highlights (1/3)

## **Integrated Implementation Plan**

- OPG submitted requests for closure for the majority of actions and the rest will follow before the year end
- Up to 5 actions may be delayed
- CNSC staff continue reviewing information and request additional information
- CNSC site inspectors perform on-site verifications

## **Probabilistic Safety Assessment (PSA)**

- CNSC finished review of PSA updates submitted in 2019 - compliant with regulatory requirements
- Results confirm low frequency of postulated events

# Pickering NGS Performance Highlights (2/3)

## *Fisheries Act* authorization related

- Elevated Fish impingement: 5,616 kg (2018) & 15,114.5 kg (2019)
  - Sec. 3.2.1.1 fulfilled: OPG proactively submitted Analysis of 2018 and 2019 Two-Year Impingement Threshold Exceedances technical report and engagement with DFO is on-going
  - OPG attributed large 2018 and 2019 impingement events to weather and associated environmental influences
  - 2018 & 2019 impingement exceedances will need to be accounted for in offsetting (FAA Sec. 4.3.1)
- OPG initiatives:
  - mitigation measure assessments
  - Early Warning System (EWS)
  - Fish Diversion System (FDS) Algae Mitigation Plan



## Pickering NGS Performance Highlights (2/3)

- At the end of 2019, the longest operating pressure tubes had approximately 250,000 Effective full-power hours (EFPH) of service (below the limit of 295,000 EFPH)
- Maintenance backlog continued trend to improve
- New CNSC requirements
  - REGDOC-2.1.2, *Safety Culture*
  - REGDOC-2.2.4, *Fitness for Duty: Managing Worker Fatigue*

# 2019 Annual Report

## **The annual report on NPP safety oversight to be presented in December 2020**

- Delays in the report preparation and publication caused by the pandemic and need to focus resources on other priorities
- No “Fully Satisfactory” ratings at SCA level in 2019 ROR due to work limitations caused by the pandemic
- Public consultation process is currently open. The report is available on CNSC web-site <http://www.nuclearsafety.gc.ca/eng/the-commission/meetings/cmd/index.cfm#meeting-20201208-20201210>

**NPP operations in 2019 met regulatory requirements**  
**There were no negative trends in safety performance**

# Conclusion

- Strengths in the modified Inspection practices due to the COVID-19 pandemic included:
  - Flexibility in planning and scheduling
  - New ways to connect remotely
  - COVID protocols are robust
- CNSC continues to maintain oversight and has modified its program to ensure remote methods of oversight are adequate
- Incorporating lessons learned from the pandemic to allow the CNSC to remain a flexible and agile regulator for the future



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