Canadian Nuclear Safety Commission
Responding to the Covid-19 Pandemic

The Canadian Nuclear Safety Commission (CNSC) is the federal nuclear regulator in Canada that regulates the three S's: Safety, Security and Safeguards. Its national legislation, the *Nuclear Safety and Control Act* (NSCA), places prime responsibility for safety on the operators of the facilities and activities. The mandate of the CNSC is to ensure that the use of nuclear energy and materials will not pose an unreasonable risk for the health and safety of Canadians (workers and the public), the environment and to implement Canada's international commitments on the peaceful use of nuclear energy; and to disseminate objective scientific, technical and regulatory information to the public. The regulatory philosophy of the CNSC combines both, performance-based and prescriptive regulatory approaches, founded on risk informed decision-making processes.

Summary – Activating Pandemic Planning and Shifting to New Ways of Working

In response to the worldwide, COVID_SARS_2 virus causing COVID-19 pandemic, the CNSC was monitoring its worldwide impact starting in late-February and early-March 2020. Then on Sunday March 15, 2020, the CNSC's executive team activated its pandemic business continuity plan (BCP), which had been updated in March 2020. The CNSC's immediate focus was: (1) health and safety of its employees; and (2) maintenance of regulatory oversight of Canada's nuclear facilities, especially related to critical infrastructure and services (e.g., nuclear power plants, hospitals and supply chain). While it immediately suspended all routine on-site inspections for all facilities and activities, it continued to monitor compliance remotely. The CNSC ended its BCP mode on April 6, 2020, and in May started to gradually resume on-site inspections with appropriate health and safety measures for its employees. During this time, the CNSC maintained an active state of readiness to respond to any radiological or nuclear emergency.

The response to the pandemic has required the CNSC to be, more than ever, flexible and agile. The CNSC reviewed its existing regulatory and operational processes embedded in its integrated management system (IMS). The review concluded that the existing regulatory framework and processes are adequate to address the COVID 19 pandemic.

The CNSC needed to find innovative ways to operate under a new normal with its staff working remotely. It is also requiring new approaches to communications and engagement, both internally with our employees and externally with the industry, civil society, Indigenous groups, academia and international partners.

Primary Recommendation for the IAEA Commission on Safety Standards

The CNSC fully supports and originated the recommendation to the IAEA Commission on Safety Standards (CSS) to undertake a review of the lessons learned from the on-going COVID-19 responses and to incorporate these lessons learned into the IAEA Safety Standard framework.

Key Areas of Focus for the CNSC

1. Requests from Licensees regarding "Regulatory Flexibility" in Special Circumstances:

The CNSC immediately recognized that it may be reasonable for licensees to be provided with regulatory flexibility / temporary relief from regulatory requirements. Areas of focus / requested relief include shift complement (primarily nuclear power plant related), personnel certification (primarily nuclear power plant related), reporting requirements and cost recovery implementation. Existing CNSC procedures documented in its internal management system have proven effective in responding to these requests for regulatory flexibility, as the CNSC is able to use existing decision-making processes and apply them to the pandemic reality.

In many cases, the requested adjustment / flexibility that licensees bring to the attention of the CNSC would not result in actual non-compliance with licence or other regulatory requirements, and, in such cases, CNSC staff are able to consider relevant factors and determine that providing flexibility will not compromise safety. In other cases, a licensee's inability to meet a requirement means that it would find itself in non-compliance with a licence condition or regulatory requirement. Only the CNSC's Commission has the authority to provide relief from a requirement that it has imposed by licence. The waiver of a requirement set out in the regulations requires an exemption by the Commission under authority that the Commission has under section 7 of the NSCA.

Regulatory flexibility that is within staff's control relates to the exercise of its enforcement authority. That is, where the CNSC has notice of a pending potential non-compliance for pandemic-related reasons, staff may, on the footing of "administrative forbearance", elect not to take enforcement action respecting the non-compliance. This is applicable for matters of lower safety significance and where a licensee has showed evidence to the CNSC of attempting to meet the requirement or working towards alternative means to meet the intention of the requirement.

Where licensees apply to the Commission for relief from regulatory requirements, the well-established existing processes for CNSC staff to make recommendations on the requests are being relied upon. This includes the staff recommendations on the appropriate safety considerations and mitigation measures that will ensure adequate safety is maintained if certain relief is provided.

2. Modernization of Inspections / Regulatory Oversight

The CNSC is committed to maintaining its regulatory oversight in innovative ways while making no compromise on safety. This time of crisis has required adjustments to how the CNSC maintains oversight to ensure the health and safety of the parties involved, but it is also offering opportunities to develop new and innovative methods to achieve our goals, including through remote inspections, which have proved very successful and cost effective.

In a post-COVID-19 reality, the CNSC intends to continue to use remote inspections as one of the tools in our tool box and to work with international partners to identify and share lessons learned to make inspections continuously more efficient and resilient.

3. Engagement of External Stakeholders

Transparency and strengthening public trust is a top priority for the CNSC. The CNSC is committed to continue providing opportunities for the public and indigenous communities to participate fully in CNSC proceedings and activities. Because this pandemic has severely limited face-to-face meetings, the CNSC is using several approaches to conduct our engagement and hearing processes differently:

Some of these approaches include:

- Virtual Proceedings of our Commission tribunal - first on-line proceeding projected for mid-June;
- New On-line Public Consultation Platforms – CNSC is deploying new virtual tools to help with consultations including a pilot of a new platform called “Bang the Table;”
- Indigenous Consultations and Engagement – Given Canada’s special obligations towards the Indigenous Peoples of Canada, the CNSC is developing new strategies to determine the best way forward in terms of keeping them engaged and involved.

The CNSC is also using its network of regulatory partners, both domestically and internationally, to review best practices in stakeholder engagement during the pandemic.

4. Safety Culture including Leadership and Mental Health

The promotion of a strong safety culture among licensees and regulatory bodies is now more important than ever before. The COVID-19 pandemic is having a major impact on the nuclear workforce around the world. The introduction of forced changes in work practices create challenges in decision making and maintaining organizational resilience. Mental health is now at the forefront and leaders need to recognize the abnormal situation and pace of change in normal practices can create large amounts of stress on workers. Leaders need to continually prioritize and value safety and security over all other competing interests during the pandemic and beyond. Strong leadership is essential in order to continue to maintain safe and secure nuclear facilities and activities during these unprecedented times.

The CNSC continues its focus on safety culture. A strong safety culture is important at all times, and even more so in a time of a health crisis. The current pandemic is a test case regarding the strength of organizational safety cultures, and the CNSC is paying close attention to it. Internally, its management team is holding special Covid executive meetings (initially daily, now three times a week) and is conducting all-staff town hall meetings approximately every three weeks.

Canada itself has a well-established nuclear industry with significant focus on safety culture. The CNSC continues to conduct its regulatory oversight with licensees to ensure that a strong safety culture continues to guide operations. Prior to the pandemic, the CNSC was already planning on hosting a NEA Country-Specific Safety Culture Assessment in the fall of 2020. Details remain to be confirmed, as the CNSC and NEA are currently assessing the best way to conduct it given the pandemic, but initial indications are that it will be proceeding in Fall 2020, even if it has to be done remotely/virtually.

5. Innovation

The pandemic has fast-tracked the adoption of new technologies around the globe. The world will not likely return to pre-COVID way of doing things. Successful organizations will need to be resilient, agile, and adapt quickly to the “new normal.” Enhanced global cooperation is essential to learn from others and share experiences. The successful adoption of new digital tools to support a new way of working is paramount. This includes developing remote access strategies to strengthen IT infrastructure to provide people with access to systems remotely and securely. There is a need to develop new and innovative ways for teams to collaborate digitally. Regulators need to be mindful as to not stifle the digital innovation agenda, while at the same time meeting its safety mandate.

The CNSC, along with all regulators worldwide, should focus on such areas as:

- Increased use of remote monitoring equipment (cameras) in conducting compliance verification/inspection activities;
- Increased use of data analytics to analyze available data in a more systematic fashion.; and

- Increase means of promoting regulatory flexibility via performance based / risk-informed requirements, rather than rigid rule-based approaches to regulation than may not anticipate different means of assuring safety.

The CNSC is also focusing on innovation in communications and engagement, as outlined above, to maintain and strengthen public trust.

6. International Collaboration

The CNSC also strongly believes in the importance of collaboration and learning from other regulators, which in turn contributes to strengthening global nuclear safety. Immediately in its response to the COVID-19 pandemic, it enhanced its communications with key bilateral nuclear regulators, especially the US Nuclear Regulatory Commission and the UK Office of Nuclear Regulation, and multilateral fora including the IAEA, NEA and the International Nuclear Regulators Association (INRA). The CNSC also formally called on these bodies, including the IAEA's Commission on Safety Standards and the next Review Meeting of the *Convention on Nuclear Safety*, to share lessons learned and to work in close coordination to ensure alignment and avoid duplication of efforts.

7. CNSC "Way Forward Framework"

The CNSC is now actively developing a "Way Forward Framework." This framework aims to update key planning frameworks (risk assessment and COVID dashboards) as well as preparing the CNSC for gradual return to the workplace. A couple of highlights from the framework include:

- COVID Dashboard - To provide management with a snapshot of key indicators and trends to help quickly determine whether actions are influencing performance; dashboard style display of important internal and external information which may provide a leading indication of the need to take actions; examples of indicators: well-being of employees, connectivity and fees collected;
- COVID-specific Updated Enterprise Risk Profile – To Enable management to plan for and identify resources needed to mitigate potential risks; an evergreen document that provides a focused look at risks specific to current COVID-19 situation; identifies mitigating actions and resources required as well as senior management decision on treatment (mitigate/accept/transfer).

The CNSC's "return to workplace" strategy is under active development and is taking into account best practices and evolving health guidance. Its principles include:

- The health and safety of CNSC employees remains first priority.
- Work from home is default position – employees who can work from home, will continue to do so.
- As a federal employer, our approach will be informed by the direction of the Public Health Agency of Canada (PHAC) and Health Canada and guided by the central agencies of the Office of the Chief Human Resources Officer and Treasury Board Secretariat.
- The CNSC will ensure that it takes into consideration best practices from industry and government.
- The CNSC will proceed with a gradual, phased and measured approach.
- Individual needs and circumstances will be taken into consideration.
- Employees who are sick or present any symptoms of illness must stay at home.
- The plan will provide for consistent application while considering unique considerations of each building, region and site.
- There will also be considerations to differentiate the return to the office setting vs. the resumption of inspections of our licensees' workplaces.
- The plan will be developed in consultation with the employees and their union.

- Engagement with managers and employees is essential, as is preparing the physical space.

Summary / Way Forward

To ensure that the CNSC emerges stronger and takes advantage of opportunities of learnings from the pandemic crisis, the CNSC is:

- Developing a strategy to implement new normal regulatory oversight in a thoughtful and considerate way to ensure safety of employees and fulfilment of nuclear safety mandate.
- Drawing lessons-learned from the pandemic response, including sharing experiences with national and international stakeholders.
- Identifying and promptly integrating new and effective licensee oversight procedures in CNSC operations, and review existing ones as appropriate.
- Developing innovative methods and processes for engaging safely and proactively with the public and conducting indigenous consultations.
- Holding Commission proceedings remotely while ensuring that processes remain fair, safe, transparent, and accessible.
- Building capacity and putting in place infrastructure, processes and culture that will improve efficiency and make the CNSC, as Canada's regulatory body, stronger in the long-term.

Key Conclusion

The CNSC fully supports the recommendation to the IAEA Commission on Safety Standards to undertake a review of the lessons learned from the on-going COVID-19 responses and to incorporate these lessons learned into the IAEA Safety Standard framework.

ANNEX

The following is a copy of the latest CNSC COVID-19 situation report. It is updated weekly. Yellow denotes highlights from the previously weekly update.

COVID-19 Situation Response Summary

Canadian Nuclear Safety Commission

(as of 05/29/2020)

Objective: This document describes the Canadian Nuclear Safety Commission's actions and management in response to the COVID-19 situation in order to maintain its continuous mandate of nuclear safety in Canada. It contains a summary of decisions and actions taken to-date as well as a forward looking section of potential future challenges and opportunities.

Canadian Nuclear Safety Commission
COVID-19 Situation and Response Summary

National background	
General	
Canadian authorities instructions regularly delivered	Yes.
Clear established and regularly updated provisions	Yes. • The CNSC activated its Emergency Management (EM) Business Continuity Plan (BPC) on Sunday March 15, 2019. • 125 CNSC employees were initially ascribed critical status to ensure business continuity. • All CNSC staff are currently working from home, when possible. • As of Monday April 6, 2020, the CNSC deactivated its BCP and resumed normal operations, in a different context.
CNSC	
Provisions for the CNSC	Decided by the Management Committee, CNSC's decision-making authority on strategic, regulatory, management and other issues, are aligned with the Canadian national instructions, including guidance from Public Safety Canada (PS), Treasury Board Secretariat (TBS) and Public Health Agency of Canada (PHAC).
Contingency plan	• CNSC's Directorates Emergency Management and Business Continuity Plan was first released in August 2014. It was updated in March 2020. • The CNSC Pandemic Plan, elaborated under the Emergency Management and Business Continuity Plan, was released in March 2020. The Pandemic Plan primarily addresses the human factor required to deliver critical services, and details measures and strategy to provide for the protection of the CNSC resources (employees, visitors, assets and information), as well as accounting for the continuous delivery of critical services and service dependencies, both internal and external. • The continued delivery of the critical services with a reduced workforce is based on the CNSC 2019-2020 Business Impact Analysis (BIA).
Staff of CNSC	• 869 employees (FY 2018-19). • 125 CNSC employees are ascribed critical status to ensure business continuity.
Missions of the CNSC	
Sustained missions	The CNSC Emergency Management Business Continuity Plan has 6 different modes:

	a. Life Safety: Addresses the health and safety of staff and assets b. Monitor/Response: Incident does not pose an immediate threat, but may require additional actions if the incident persists, worsens and/or affects the health and safety of staff and assets. c. Standby: Incident presents a potential threat to the CNSC's critical services and/or continuity of operations. d. Activation: Incident presents a prolonged threat to the CNSC's critical services and/or continuity of operations. e. Normal Operations: Maintain BCP critical services and/or continuity of operations for an extended period. f. Demobilization: The incident is resolved, work environment is restored and normal operations can resume.
Currently	As of April 6, 2020, the CNSC deactivated the BCP and resumed normal operations, in a different context.
Key activities	**Public information**: On-going **Control** : • Inspection (see hereafter) • Follow-up letters: Handled by teleworking • Significant nuclear events: Handled by teleworking • Individual authorisations: Handled by teleworking • Analysis of technical documents of TSO: Teleworking **Emergencies:** • Emergency cases (see hereafter) The CNSC has identified **two critical buckets of work** that must continue: • Essential regulatory operations work related to power reactor regulation, medical facilities and the vital supply chain. • All other work remains important and best efforts should be made to identify new and creative ways to deliver on this work that: o does not increase the load on CNSC's network; o draws on people in critical service areas; and o recognizes the limited access to our offices (note: access requires VP approval).
Reactor Inspections	
Capability	• The CNSC is committed to maintaining its regulatory oversight of the Nuclear Power Plants (NPP) licensees during this time. However, this has required some adjustments to the way oversight is conducted. Required inspections involving an on-site presence have resumed. In order to support physical distancing measures, the number of inspectors on site at the

	same time has been limited and all licensee procedures are being followed. • The documentation portion of on-site inspections is conducted through desktop inspections, accompanied by teleconferences/videoconferences with the licensee. The CNSC inspectors continue their surveillance and monitoring activities remotely through participation in licensee's daily meetings as well as monitoring the licensee's corrective action program. • The licensees also continue to submit scheduled and event reports to the CNSC as well as regular updates specifically related to COVID-19.
Required inspections	Those which are necessary in the current situation. New governance issued – "DPRR Modified Compliance Activities During the COVID-19 Pandemic."
Nuclear Power Plants	
Continuity plan	• The License Conditions Handbooks (LCHs) for the Nuclear Power Plants, which provide additional detail on how to meet license requirements, include a requirement for licensees to maintain a BCP to ensure that plans are in place to continue safe operation when affected by adverse physical conditions or following interruptions to normal operation. • The licensees must maintain contingency plans to provide for essential services through a sustained period with significant employee absenteeism (e.g., Influenza outbreak). • All of the Canadian licensees have implemented their BCPs.
Staffing	• The NPP licensees have taken measures to ensure that the minimum shift complement is not compromised by the COVID-19 outbreak, such as ensuring that all non-essential personnel work from home, the cancellation and banning of vacation requests, restricted access to the plant, especially the Main Control Room (MCR), closing several buildings on site to allow for cleaning crews to focus on more critical infrastructure, staggering shift changes to minimize the number of staff in the same area, switching rooms for shift turn-over meetings to allow for greater social distancing and using thermal imaging cameras to monitor staff on-site. • To date, licensees have not encountered any difficulty with maintaining the minimum shift complement.
Planned maintenance	• All NPP licensees have delayed major activities in order to minimize the number of personnel/contractors on site. • Outages continued to be planned for critical periodic inspections. • The CNSC does not prescribe when activities such as outages/refurbishment are to occur; the licensee undertakes these activities as business decisions. However, a major part of that decision is to ensure that they complete the relevant inspection and collect data to demonstrate continued fitness for service to the CNSC.

	• To date, all rescheduled activities have maintained adequate safety margins and were able to demonstrate the acceptable level of fitness for service. Depending upon the duration of the pandemic emergency, the Commission may be asked to exempt licensees from emergency drills as per the required timeline.
Other nuclear facilities	
Research Reactors	
Continuity Plans	All Research reactors have put in place business continuity plans and are currently in operation, with all non-critical staff working from home. • McMaster: Production of medical isotopes is considered an essential service and will continue as long as it is safe to do so. • École Polytechnique Montreal (EPM): The reactor is operating as usual and safely. Regular reactor maintenance is performed as per normal procedure and schedule. • Royal Military College (RMC): Slowpoke-2 Facility at RMC operates as usual with essential workers. Regular reactor maintenance is performed as per normal schedule. The facility stays monitored 24/7 by the Military Police at CFB Kingston and Commissionaires on-site. To reinforce social-distancing, a work schedule has been implemented to ensure only one analyst will be present in the lab during the day. • Saskatchewan Research Council (SRC): Decommissioning activities almost complete.
Staffing	• The licensees have not currently encountered any difficulties with maintaining the minimum shift complement. • Should resource levels be significantly impacted by the pandemic, the reactor(s) will be shutdown and placed in a safe state.
Planned Maintenance	• Maintenance is done as per procedures, and jobs are prioritized as required to allow for COVID-19 restrictions such as physical distancing.
Compliance verification	• With the exception of EPM, all research reactor licensees submitted their annual compliance reports (ACR) before the regulatory deadline of March 30, 2020 and are in compliance with their licences. EPM is expected to submit the ACR by the end of May. • CNSC staff continue to engage with licensees and perform compliance verification activities through desktop reviews and/or remote inspections as required, until such a time as it is safe to do on-site inspections.
Fuel Cycle Facilities (Including Uranium Processing and Fuel Fabrication Facilities)	
Continuity Plans	• All uranium processing and fuel fabrication facilities have put in place BCPs.

	• The additional health and safety measures implemented include limiting and screening visitors to facilities, avoiding in person meetings in favour of teleconferences, non-essential employees working from home, significantly increased cleaning of touch surfaces and instituting a social distancing policy to limit co-mingling through changes to shift structures, direction on self-isolation and reporting if any person was infected by the COVID-19 virus. • On April 13, 2020 the refinery facility and the conversion facility's UF6 plant were placed into a safe shutdown state for an estimated four week period. The refinery facility and conversion facility's UF6 plant safely resumed production the week of May 18, 2020. • The UO2 facility and the fuel fabrication facilities will continue operations to continue to supply fuel to Canada's NPPs.
Staffing	• All fuel cycle facilities have staff on-site and the Canadian Nuclear Safety Commission has maintained continued regulatory oversight through this period to ensure safe operations. • The uranium processing and fuel fabrication facilities have taken measures to ensure that the minimum shift complement, where applicable, is not compromised by the COVID-19 outbreak. • The licensees have not currently encountered any difficulties with maintaining the minimum shift complement and continuing facility operations.
Planned Maintenance	• The conversion facility's vision in motion project has been postponed during the COVID-19 outbreak. • Some maintenance activities at the refinery facility and the conversion facility may be moved forward during the refinery facility and UF_6 plant shutdown. • Routine maintenance at the uranium processing and fuel fabrication facilities is occurring while implementing COVID-19 restrictions such as physical distancing.
Compliance verification	• CNSC staff will continue to engage with licensees and perform compliance verification activities through desktop reviews and/or remote inspections as required, until such a time as it is safe to do on site inspections.
Radioactive materials and Medical Facilities	
Continuity Plans	• Licensees have implemented various continuity plans, depending on their industry and the level of restrictions in their operating location. • Many licensees are operating normally or with restricted services. • CNSC licensing and certification activities are back to normal operation.

	• As the processing of applications for transport licences was already entirely digital, COVID-19 has had little to no impact on the CNSC's ability to issue these licences.
Staffing	• Providing sufficient staff to ensure the safety and security of nuclear substances and radiation devices at all times is an Obligation of the Licensee and a requirement stated in paragraph 12(1)(a) of the General Nuclear Safety and Control regulations. This has not changed under the pandemic situation, although the CNSC acknowledges workplace access restrictions and business reductions may result in fewer staff at the licensee site of operations.
Planned maintenance	• Where normal operations remain in effect, licensees are expected to perform planned maintenance in accordance with their licence and any applicable guidance from manufacturers of equipment. • A number of licensees who offer maintenance services are operating with reduced capacity due to social distancing requirements and travel restrictions.
Compliance verification	• Licensees are still required to submit their annual compliance report, in accordance with their licence conditions. Allowance may be made for late submission of specific documents if site access restrictions prevent licensees from accessing their workplace. • Licensees' obligations with respect to reporting emergencies and unusual circumstances remain in effect. • On-site inspections are being deferred (for context, CNSC staff typically perform ~80 inspections/month). The workplans for compliance activities have been revised using a risk-informed approach, and have either deferred or re-scoped the work that needs to be conducted. • CNSC staff will continue to monitor compliance through desktop reviews until such time as it is safe to resume on-site inspections.
Other Activities	
Uranium Mines and Mills	• Reduced number of workers on site to the minimum required for safety. • Implemented additional spacing requirements in buildings and work areas. • Adding protective shielding around desks, where needed (i.e. reception, security, etc). • Reduced capacity on vehicles and conveyances, including aircraft. • Additional screening of staff before boarding a flight (inbound and outbound). • Increased spacing in cafeterias and removed self-serve options. • Increased cleaning.

	• Reduced use of northern Saskatchewan staff to minimize impact on small communities. • Cigar Lake and McClean Lake, the two operational sites, were slowly brought to safe shutdown state and are now being maintained with small staff (about 10% of normal complement). • McClean Lake will be advancing normal summer shutdown work to this time, minimizing any subsequent shutdowns.
Waste Management Facilities	• The licensees have taken measures to ensure continuity of operations during the COVID-19 outbreak, such as ensuring that all non-essential personnel work from home, restricted access to the facility, splitting staff into two distinct crews working separate two weeks on, two weeks off shifts. • Low level waste (LLW) transfers from the Darlington Nuclear Generating Station (DNGS), Pickering Nuclear Generating Station (PNGS), and Bruce Nuclear Generating Station (BNGS) to Western Waste Management Facility (WWMF) continue. • Transfer of fuel from BNGS to WWMF were not interrupted but rather slowed to 1-2 DSCs per week (as opposed to up to 3 per week). • Transfer of fuel from DNGS to the Darlington Waste Management Facility (DWMF) suspended March 16th but resumed April 20th at a rate of 1 DSC per week (as opposed to 2 normally). • Transfer of fuel from PNGS to Pickering Waste Management Facility (PWMF) suspended March 16th and remain suspended due to non-COVID related technical issues, anticipated to resume in June 2020at a reduced rate. • No transfer of fuel ongoing at Point Lepreau. • On-site inspections are being deferred until fall 2020. • CNSC staff are monitoring compliance through the reviews of ACR (annual compliance reports) and reviews of events.
Transport of Radioactive Materials	• As the processing of applications for transport licences was already entirely digital, COVID-19 has had little to no impact on the CNSC's ability to issue these licences. • On-site inspections are being deferred. • CNSC staff are monitoring compliance through the reviews of reported events during transport (carriers and licensees).
Commission Proceedings	

Public Hearings / Consultations	• Two Commission proceedings have been re-scheduled.
	  ○ The April Commission meeting is postponed to June 17–18, 2020 and will be held virtually.
	  ○ The June public hearing on an amendment to the Douglas Point Waste Facility decommissioning licence is being rescheduled to August 19–20, 2020.
	• The CNSC is examining new ways to conduct public hearings virtually, such as through remote video conference.

	• Special consideration and analysis is underway to ensure Indigenous groups in Canada can continue to participate fully. • Public comment period for new and draft regulatory documents have been extended. • Commission public hearings can also be done in writing. • The Commission has adopted digital signatures as a new practice for decisions/licenses.
Crisis management	
Emergency shift	• All emergency shifts are appropriately staffed, as per the BCP. • CNSC Roster for Nuclear Emergencies was modified to limit number of people required in the Emergency Management Centre. Most staff will be able to preform their emergency response duties remotely.
Calls to the emergency shift	• Work phones, or personal telephones if staff has not been provided with a work phone.
CNSC Daily running	
Staff	
Teleworking	• All CNSC staff are currently working from home and entry to the office building is strictly limited and monitored. • The CNSC has enabled its workforce to work remotely. This includes the procurement of tablets, the expansion of remote server capacity, as well as the leveraging of video conference software.
Specific cases	• All CNSC employees have been asked to avoid non-essential travel outside of Canada. Those returning from outside of Canada have been directed to self-isolate for 14 days. • The CNSC has recommended the adoption of a variety of self-care practices to its employees in order to promote mental wellness, including sticking to a normal routine, staying active, connecting with others, and leveraging talk-therapy services through the Employee Assistance Program. • Employees have been informed that they must disclose whether they have tested positive for COVID-19 to the CNSC as per Part II of the Canada Labour Code.
Material	
Personal computer	• Teleworking options are in place to allow critical resources supporting critical services to work from a remote location. • All manager and inspectors were already in possession of work tablets before the activation of the BCP and are able to work remotely. • All additional staff identified as essential were provided with work tablets shortly before all staff were asked to work from home. • Roll-out of work tablets to CNSC staff is ongoing and has now reached over 90% of the total workforce. Staff have also

	been provided with monitors, mouse and keyboard to facilitate working from home. • A large number of staff is also able to connect remotely to CNSC's network from their personal computers using WebVu (see 'others' section for additional information).
Phones	A large number of CNSC staff are already in possession of work phones (545 smartphones, 80 talk and text phones). Staff who have not been provided with work phones are contacted on their personal phones for all important messaging.

Others	• Remote access:
	  o The CNSC has two systems that allow remote work: GCSRA (accessed through CNSC-issued computers or tablets) and WebVu (web-based tool accessed from personal devices through a Citrix tool using two-factor authentication).
	  o Capacity of the systems depends heavily on usage, but assuming steady use, the system was initially able to support up to 300 concurrent users with no significant impacts on system performance. Capacity of the GCSRA system has since been increased by 500% to accommodate the significant increase in bandwidth.
	  o All staff, including those with CNSC-issued computers or tablets, were initially asked to minimize network access. This includes adopting remote work best practices (no internet usage, connecting only periodically and when necessary, etc.) and limiting any connection to CNSC networks to critical work. Following a stress test of the GCSRA system, these constraints were removed for any staff connecting through the VPN connection.
	• Emails: As usual through work emails. Staff who do not have remote access or work phones are contacted through their personal emails for important messaging, including all staff messages.
	• CNSC has set up external website with a hidden URL to allow employees to access information pertaining to CNSC's Interim Operating Model, including regular updates, resources and teleworking tools, without having to connect remotely.
	• Virtual town halls are being held regularly on Zoom with all CNSC employees to discuss concerns and ideas on the pandemic response. Health professionals were present at the first one to answer COVID-19 related questions and provide staff with advice to promote mental wellness.
	• Video conferences: use of multiple platforms, including Webex, Slack and Zoom (with restrictions in place to protect disclosure of non-protected information).
	• Audio conferences, including the Government of Canada Teleconferencing Service, Zoom, and WebEx.
	• Temporary use of platforms such as Slack, Trello and Google Docs is allowed during the transition period. Those tools

	cannot be used to handle sensitive information, and are to be used exclusively for unclassified information. Final documents are saved on CNSC's document management repository (eAccess).
Communication with stakeholders	
Paper mail	Not ensured
Others	CNSC Website Email Formal Correspondence Social Media
Meetings	Virtual when possible, otherwise interrupted
Challenges to the Regulator	
Current Efforts	• Handling licensee requests for regulatory flexibility and relief in meeting regulatory commitments while ensuring no reduction in level of adequacy of nuclear safety or security. • Ensuring all staff has reliable access to tools, information, and equipment to work effectively remotely, including capacity to accommodate different personal situations and ensuring the protection of information. Site inspectors have some remote access to licensee systems with expanded access underway. • Ensuring site inspectors have appropriate personal protective equipment should they be called upon to conduct activities at the licensee site. • Conducting/modifying scheduled compliance activities in order to maintain regulatory oversight, while respecting licensee restrictions on non-essential personnel, and promotion of physical distancing to mitigate spread of the virus. This will be done through a modified inspection process that allows for flexibility in timing of activities as well as remotely conducting any portions of the inspection that can be completed in that manner. Surveillance and monitoring activities can continue to be conducted as normal. • Analysing risks and mitigation options around implementation of cost recovery, especially as it pertains to small licensees who may be unable to pay cost recovery fees • Adjusting workforce management practices to widespread teleworking situations.
Future Looking	• Reviewing the BCP for quick lesson learned that could be applied during a second wave of the pandemic. • NPP operators are planning 6-12 months ahead on staffing and outages, looking at multiple scenarios. • Communicating with IAEA to (i) support their on-going and future safeguard mission and (ii) conduct gap analysis of IAEA Safety Standards framework to incorporate lessons learned by government, industry and regulators on Covid/pandemic response.

	• Ensuring that the CNSC emerges stronger and takes advantage of opportunities of learnings from the pandemic crisis through: o Developing exit strategy to implement new normal in a thoughtful and considerate way to ensure safety of employees and fulfilment of nuclear safety mandate. o Drawing lessons-learned from the pandemic response, including sharing experience with national and international stakeholders. o Identifying and promptly integrating new and effective licensee oversight procedures in CNSC operations, and review existing ones as appropriate. o Developing innovative methods and processes for engaging safely and proactively with the public and conducting indigenous consultations. o Holding Commission proceedings remotely while ensuring that processes remain fair, safe, transparent, and accessible. o Building capacity and putting in place infrastructure, processes and culture that will improve efficiency and make the organization stronger in the long-term.