Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

Introduction / Overview

Deep Geologic Repository Project for Low- and Intermediate-Level Waste Proposed by Ontario Power Generation Inc.

Joint Review Panel Hearing

September 16, 2013

PMD 13-P1.2A

CNSC Staff Presentation

e-Doc 4160709 (PPT)
e-Doc 4189899 (PDF)

CNSC Presentations During Public Hearing

Day #	Date	Session Title
Day 1	Sept 16	Opening Session
Day 4	Sept 19	Long-Term Performance and Safety Case
Day 7	Sept 23	Management of Low-and Intermediate-Level Radioactive Waste (L&ILW)
Day 11	Sept 27	Human Health
Day 12	Sept 30	Aquatic - Groundwater
Day 13	Oct 1	Aquatic - Surface Water, Habitat and Aquatic Biota
Day 15	Oct 3	Environmental Assessment (EA) Issues
Day 18	Oct 7	Aboriginal Interests
Day 19	Oct 8	Licensing, Permits and Authorizations

Presentation Outline

- Introduction to the Canadian Nuclear Safety Commission (CNSC)
- CNSC Licensing Process for Nuclear Facilities
- CNSC Staff Assessment
  - Licence Application
  - Environmental Impact Statement (EIS)
- Crown Consultation
- Overall Conclusions

Canadian Nuclear Safety Commission (CNSC)

- Canada's nuclear regulator, under the *Nuclear Safety and Control Act* (NSCA)
- Regulates all nuclear-related facilities and activities
- Regulatory mandate is to protect the health, safety, and security of persons and the environment; and to implement Canada's international commitments on the peaceful use of nuclear energy

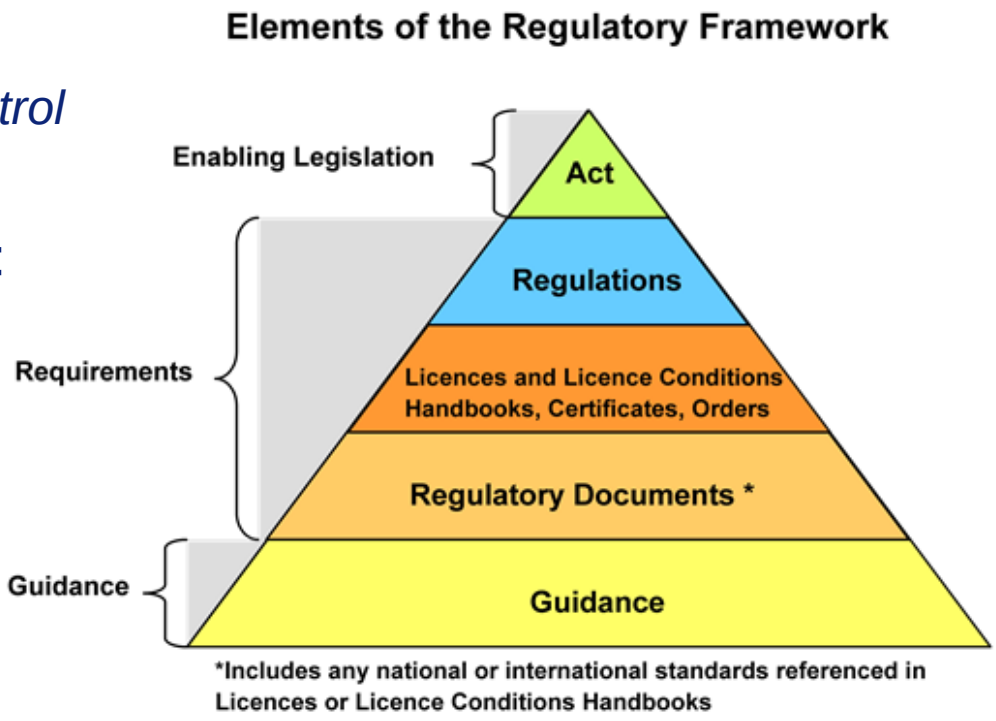
Canada's independent nuclear regulator with 67 years of experience

Canadian Nuclear Safety Commission (CNSC)

- Phased and lifecycle-based licensing process
- Licensee has main accountability and responsibility
- Comprehensive compliance enforcement regime
- Harmonized with other regulatory authorities

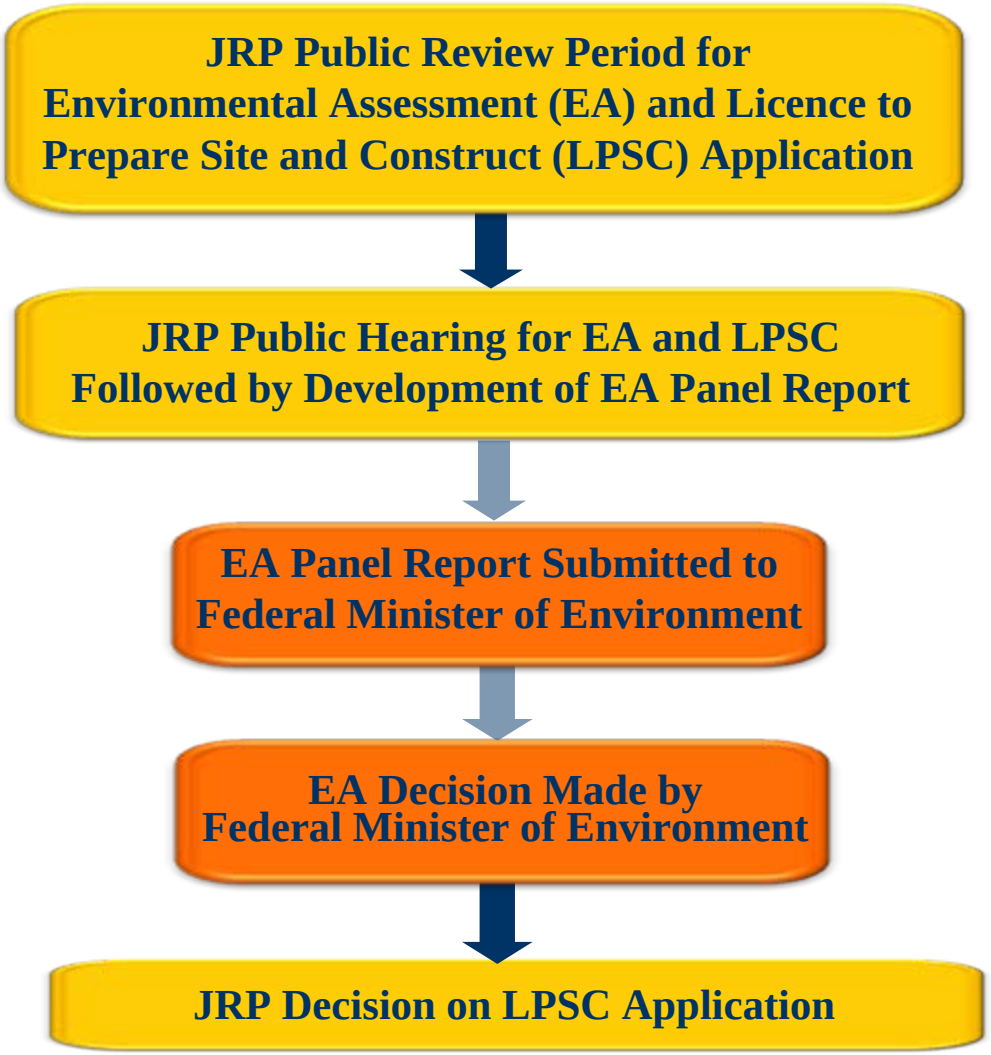
CNSC Licensing Requirements

- Legal basis for licensing:
  - *Nuclear Safety and Control Act* (NSCA)
- Application requirements:
  - NSCA
  - CNSC Regulations
  - Regulatory documents
  - Guidance documents



- CNSC licences:
  - 14 Safety and Control Areas (SCAs) grouped in functional areas: Management, Facility and Equipment, Core Control Processes

Joint Review Panel Process for OPG's DGR



CNSC Staff Role in JRP Process

- Review and assess OPG's Environmental Impact Statement (EIS) submissions against EIS Guidelines (Panel Member Documents 13-P1.3, 13-P1.3A)
- Review and assess OPG's Licence Application Submissions against NSCA and CNSC Regulations (PMD 13-P1.2)
- Propose Information Requests (126) to the JRP
- Assess sufficiency of responses to Information Requests
- Provide technical and scientific support to the JRP
- Act as Aboriginal Crown Consultation Coordinator
- Act as Federal Review Team Coordinator

CNSC Staff Assessment of Licence to Prepare Site and Construct (LPSC) Application

- The information conforms to the NSCA and CNSC Regulations for an LPSC application
- The site can support its intended use
- Information demonstrates the DGR can meet regulatory requirements in the long term for the safety of persons and the protection of the environment during all phases of the DGR Project
- The plans and programs necessary during licensing phases for safety and environmental protection are identified

CNSC Staff Assessment of LPSC Application

- Project Evaluation and Relevant Safety and Control Areas

Functional Areas	Safety and Control Areas (SCAs)
Management	Management System
	Human Performance Management
	Operating Performance
Facility and Equipment	Safety Analysis
	Physical Design
	Fitness for Service
Core Control Processes	Conventional Health and Safety
	Environmental Protection
	Emergency Management and Fire Protection
	Waste Management
	Security

Satisfactory information provided by OPG for all SCAs

Overall Conclusions of CNSC Staff Assessment of LPSC Application

- CNSC staff conclude that the licence application meets the requirements of paragraphs 24(4)(a) and (b) of the NSCA:
  - The applicant is qualified to carry out the activity authorized by the licence; and
  - The applicant will, in carrying out that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.
- 10-year licence period allows for sufficient completion of proposed site preparation and construction activities.
- Licence to Prepare Site and Construct (LPSC) does not allow for possession of nuclear substances

Proposed CNSC Licence and Licence Conditions Handbook

Proposed Licence

- Addresses recommendations in PMDs 13-P1.2 and 13-P1.3
  - e.g., requires implementation of OPG commitments and EA decision outcomes applicable to LPSC

Proposed Licence Conditions Handbook

- Addresses recommendations in PMDs 13-P1.2 and 13-P1.3
  - e.g., requires OPG to have all required implementing documents accepted by CNSC prior to the start of LPSC activities
- Provides compliance verification criteria for each licence condition, including references to OPG documentation and applicable technical and regulatory documents

CNSC Compliance Verification Program

- Developed independently to verify that OPG is conducting the LPSC activities in accordance with the NSCA, CNSC Regulations and licence conditions
- Includes:
  - on-site inspections
  - annual reporting to the Commission and public
  - tracking of all OPG commitments

Canadian Environmental Assessment Act (CEAA)

- An EA under CEAA is required for this proposed activity, it must be completed before taking a decision on the licence application.
- The CNSC is the only Responsible Authority for this project
  - Federal Authorities: Natural Resources Canada, Health Canada, Environment Canada, Fisheries and Oceans Canada
- The Province of Ontario does not require an EA to be completed for the DGR Project
- Scope of Environmental Assessment
  - Lifecycle of the whole project:
    - Construction
    - Operation
    - Decommissioning
    - Closure
  - Environmental effects

CNSC Staff Assessment of OPG's Environmental Impact Statement (EIS)

- CNSC staff assessment methodology:
  - Verifying that the EIS conforms to the requirements of the EIS Guidelines
  - Ensuring that appropriate and acceptable EA methodologies, data, models and bounding approaches were used
  - Comparing the submission with relevant standards and criteria
  - Performing independent research and calculations

Results of CNSC Staff Assessment of OPG's EIS

- CNSC staff propose 21 recommendations for the consideration of the JRP in the areas of:
  - Project lifecycle
  - Radioactive waste inventory
  - Geology
  - Hydrology and surface water
  - Atmospheric Environment
  - Effects of the Environment
  - Human Health
  - Socio-economic Environment
  - Long-term Safety of the DGR Project

Overall Conclusions of CNSC Staff Assessment of OPG's EIS

Based on CNSC staff's evaluation of OPG's submissions:

- The DGR Project is unlikely to cause significant adverse environmental effects to human health or the environment including Lake Huron, taking into account the proposed mitigation measures and the recommendations outlined in PMD 13-P1.3
- Information received to date does not indicate any known adverse impacts the DGR Project may have on any potential or established Aboriginal or treaty rights
- An EA follow-up monitoring program will be required
  - Confirmation of EA predictions
  - Evaluation of proposed mitigation measures
  - Federal Authorities will be involved through the EA Follow-up Program

Crown Consultation in the JRP Process

- The CNSC, as the Crown Consultation Coordinator, has engaged and consulted with Aboriginal groups since May 2006 for the DGR Project
  - Met with Aboriginal groups to explain process and opportunities to participate as well as listen to their concerns
  - Encouraged Aboriginal groups to identify the Project's possible impacts on potential or established Aboriginal or treaty rights, share their traditional knowledge, and participate in public hearings
  - Provided updates via letters, e-mails and phone calls at key points in the process
  - Reviewed submissions to assess potential impacts

Crown Consultation (cont'd)

- Saugeen Ojibway Nation
  - Consultation began in May 2006
  - Extensive consultation on the JRP Agreement and the EIS Guidelines
- Métis
  - Historic Saugeen Métis
  - Métis Nation of Ontario
- Manitoulin Island
  - United Chiefs and Councils of Mnidoo Minsing
  - Wikwemikong Unceded Indian Reserve
- Haudenosaunee Confederacy Chiefs
- Information received to date does not indicate any known adverse impacts the DGR Project may have on any potential or established Aboriginal or treaty rights
- Consultation will continue throughout all future regulatory processes

Conclusion

Environmental Assessment

- CNSC staff conclude that the proposed project is unlikely to cause significant adverse environmental effects, taking into account mitigation measures including the 21 EA recommendations outlined in PMD 13-P1.3

LPSC Application

- CNSC staff conclude the applicant is qualified and will make adequate provisions to protect persons and the environment as indicated in PMD 13-P1.2, and recommend the issuance of Waste Facility Construction Licence No. WFCL-W6-3900.00/2024

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