



**CMD 25-H6.1A**

Date: 2025-05-21

**Supplementary Information**

**Written Submission from  
Nordion (Canada) Inc.**

In the matter of

**Nordion (Canada) Inc.**

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Application to Renew Licence for the  
Nordion Facility

**Commission Public Hearing**

June 4, 2025

**Renseignements supplémentaires**

**Mémoire de  
Nordion (Canada) Inc.**

À l'égard de

**Nordion (Canada) Inc.**

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Demande pour le renouvellement de son  
permis pour l'installation de Nordion

**Audience publique de la Commission**

Le 4 juin, 2025

# Class 1B Nuclear Facility Licence Renewal Public Hearing

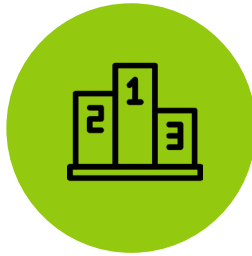
June 4, 2025



## Safeguarding Global Health with the Cobalt-60 We Supply



**Trusted, Long Term  
Customer & Supplier  
Relationships**



**World's Largest Provider of  
Cobalt-60 sealed sources**



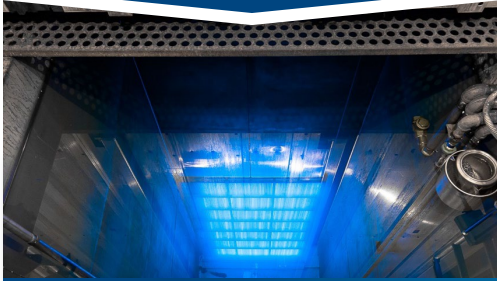
**End-to-End Solutions in a  
Highly Regulated Market**



**Best In Class Operational &  
Global Regulatory Expertise**

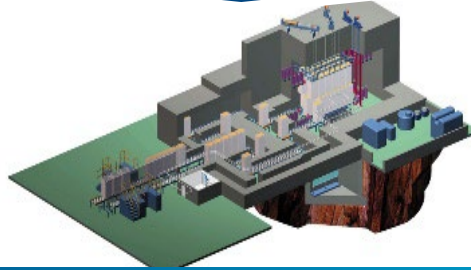
# Safeguarding Global Health<sup>®</sup> with Cobalt-60 Sources and Technologies

## C-188 Cobalt-60 Sources



**30%** of Single-use medical devices<sup>(1)</sup>  
sterilized globally using Cobalt-60

## Cobalt-60 Irradiation Systems



**30%** of the Cobalt-60 Irradiators<sup>(2)</sup>  
around the world have been  
designed & built by Nordion

## Medical-grade Cobalt-60



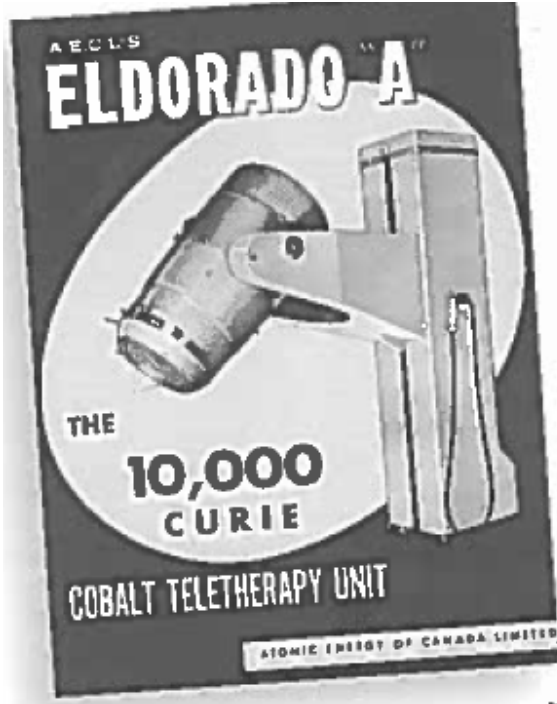
**80K+** cancer patients globally<sup>(1)</sup>  
are treated annually with Cobalt-60  
stereotactic radiosurgery (brain  
cancer & breast cancer)

(1) Various industry reports and internal analysis.

(2) International Atomic Energy Agency data and internal analysis.

# Global Healthcare Pioneers

World's first cobalt cancer treatment machine  
1951



World's first Gamma Processing Plant  
1964



# Nordion – 447 March Rd (Kanata)



# Nordion and BWXT Medical

|                     | Nordion  | BWXT Medical   |
|---------------------|--|--|
| Parent Company      | <ul style="list-style-type: none"> <li>Sotera Health Company</li> </ul>  | <ul style="list-style-type: none"> <li>BWX Technologies Inc.</li> </ul>  |
| Site                | <ul style="list-style-type: none"> <li>Owns the site and buildings at 447 March Rd.</li> </ul>   | <ul style="list-style-type: none"> <li>Leases part of the facility at 447 March Rd.</li> </ul>   |
| Products and Market | <ul style="list-style-type: none"> <li>Cobalt-60 Sealed Source manufacturing</li> <li>Sterilization and external beam therapy markets</li> </ul> | <ul style="list-style-type: none"> <li>Medical Isotopes: In111, Y90, Mo99, etc.*</li> <li>Diagnostic and therapeutic pharmaceuticals</li> </ul> <p><small>*<a href="https://www.bwxtmedical.com/products/">https://www.bwxtmedical.com/products/</a></small></p> |
| CNSC Licence        | <ul style="list-style-type: none"> <li>NSPFOL-11A.01/2025</li> </ul>   | <ul style="list-style-type: none"> <li>NSPFL-15.00/2031</li> </ul>   |
| Shared Services     | <ul style="list-style-type: none"> <li>Emergency response, Security, environmental monitoring</li> </ul>   |  |

**BWXT Medical is responsible for activities under its own licence**

# Cobalt-60 Supply Chain: Nordion's End-to-End Solution



## Manufacturer

Cobalt-59 slugs manufactured, and adjuster rods delivered to reactors



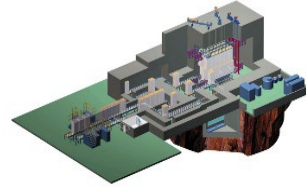
## Nuclear Reactors

Cobalt-59 becomes activated to Cobalt-60 over 18 months to 5 years



## Isotope Processors

Cobalt-60 processing into finished Sealed Sources



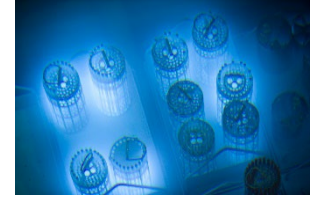
## Irradiation System

Installing new/upgrading Cobalt-60 irradiation systems



## Source Installation

Cobalt-60 shipped globally in specialized transport packages and installed at customer sites



## Source Return & Recycling

Recycling of Cobalt-60 source returned from customer

1

2

3

4

5

6

Every step is critical, and Nordion manages the entire supply chain with its critical know-how





# What Makes Nordion Unique

**1**

**Global Production Network**

**2**

**World Class Facilities & Experts**

**3**

**Logistical & Regulatory Expertise**

**4**

**Trusted Customer Relationships**

# Nordion Licence Renewal

- Nordion is requesting a 25-year renewal of NSPFOL-11A.01/2025 to continue to perform the activities covered under the current licence
- Nordion is not seeking any changes to the current licence as part of this renewal application
- 25-year renewal would:
  - Assure the supply stability of Cobalt 60 to the healthcare sector around the world
  - Allow for continued long-term facility & supply investments with confidence
  - Ensure the sealed source recycling program remains a viable option to the healthcare industry

# Key Safety and Control Areas (SCAs)

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- Safety Analysis
- Radiation Protection
- Conventional Health and Safety
- Environmental Protection
- Waste Management
- Packaging and Transport

# Safety Analysis

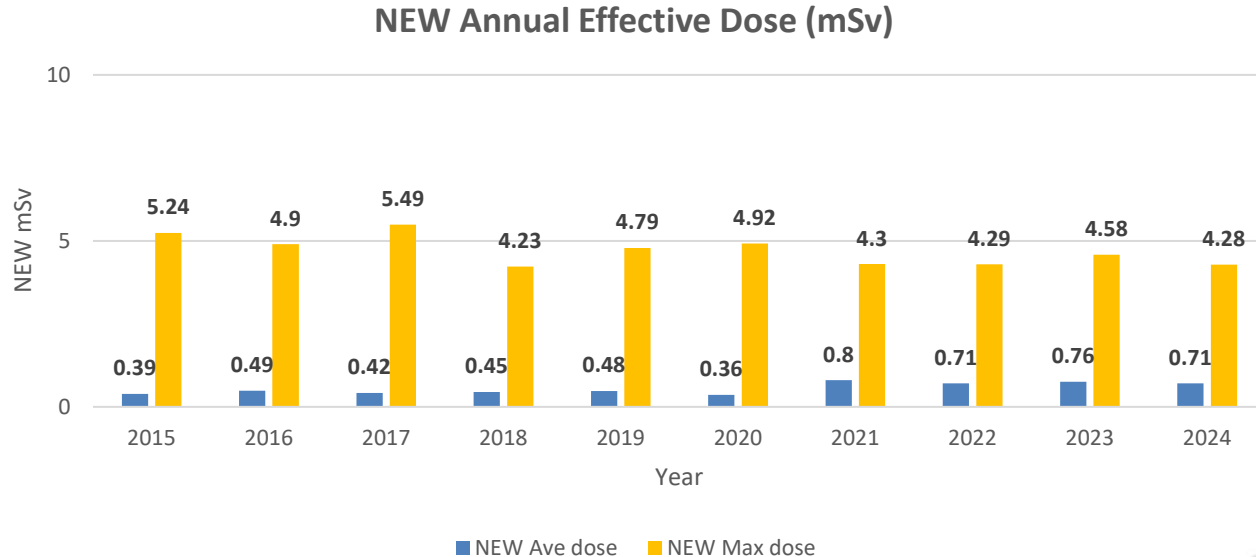
- 2 primary final safety analysis reports (FSARs):
  - Cobalt Operations Facility
  - Cobalt Pools
- Compliant to REGDOC-2.4.4, "Safety Analysis"
- Reviewed and updated at least every 5 years
- FSARs were last submitted and approved by CNSC staff in 2024

**FSARs show that Nordion's programs protect the community and environment in accident scenarios**



# Radiation Protection

- Nordion has implemented a robust radiation protection program compliant to REGDOC-2.7.1, “Radiation Protection”
- Employee doses are well managed and below the regulatory limits





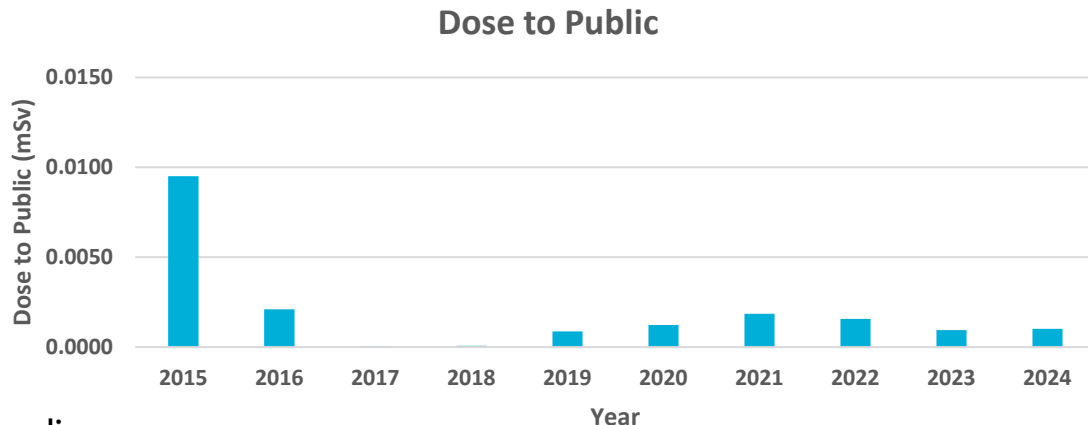
# Conventional Health and Safety

- Mature health and safety program:
  - Focus on safety culture through pre-job briefings, safety talks, work permits, manager walkthroughs.
  - Appropriate PPE and training
- In 2024, implemented an Athletic therapist/Early Injury intervention program to address ergonomic risk and concerns



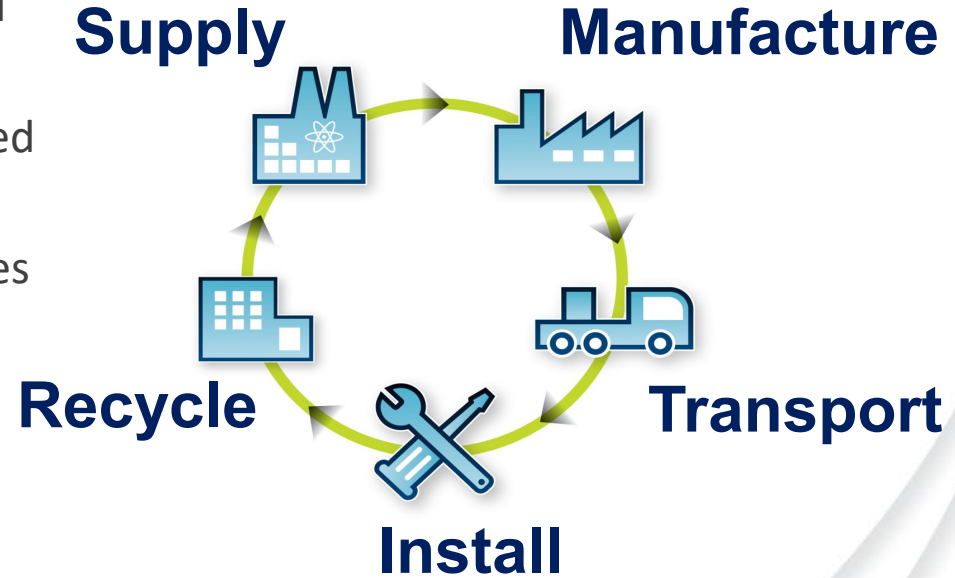
# Environmental Protection

- Nordion's program is ISO 14001 certified and meets the CSA N288 environmental standards:
  - Liquid and air effluent are sampled at point of release
  - Soil and groundwater monitored annually
- Nordion's results have been validated and confirmed by the CNSC IEMP sampling



# End to End Stewardship

- Nordion takes a holistic view around waste
- Waste minimized and sent to licensed waste facilities
- Not expecting any significant changes to waste streams
- A strong focus and investment in recycling efforts



# Decommissioning

- Nordion's decommissioning plan was approved by the Commission in February 2023 and is based on:
  - Removal of all contaminated material/equipment, sealed sources, and hazardous waste
  - No environmental remediation of the land is required (no contamination present)
  - Release of the facility and land to an unrestricted usage
  - Assume work undertaken by a third-party
  - Updated every 5 years
- Total cost is estimated to be \$35 M. Nordion has appropriate financial guarantees in place to ensure that these obligations are fulfilled

**Nordion plans to continue operating at this site for the long-term and has always been focused on meeting its commitments to safety and compliance**

# Packaging and Transport

## World Class Shipping & Logistics



**40** countries have received shipments of Cobalt-60 from Nordion<sup>(1)</sup>

## Specialized Transport Packages



**20x** larger fleet of transport packages than any competitor<sup>(1)</sup>

## Global Regulatory Compliance Capability



**Health and Safety Executive**



Government of Canada

Gouvernement du Canada

<sup>(1)</sup> Internal analysis.

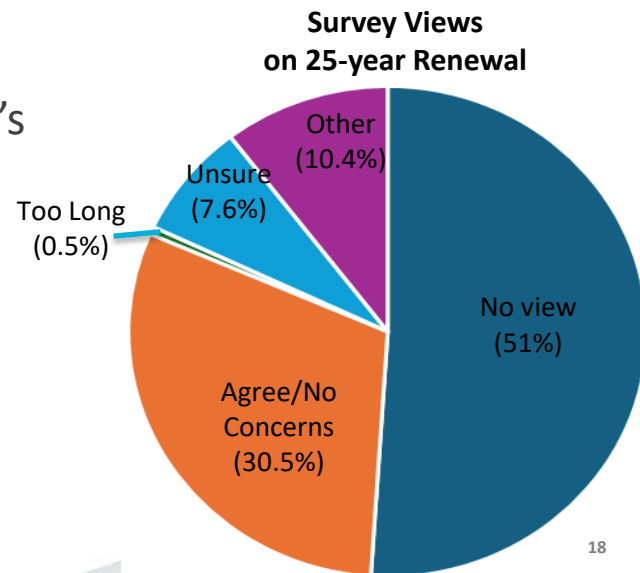


# Indigenous Engagement

- Nordion is committed to long-term engagement with Indigenous Nations and Communities
- Engagement is optimized when it is a dual commitment with aligned objectives
- Key Engagements to date:
  - Nordion senior leaders attended cultural awareness training with the AOPFN
  - Provided facilities tours to AOPFN
  - Provided formal notifications of licence renewal to AOPFN, Kebaowek First Nation (KFN), AOO, Kitigan Zibi, Metis Nation of Ontario
  - Several calls with AOO in 2024 and 2025
  - In-person presentation to AOPFN in their community in April 2025
  - Meeting with KFN in May 2025
  - Supporting Bruce Power's engagement efforts with SON

# Community Engagement

- Nordion is committed to transparency and good corporate citizenship with the community:
  - Community surveys and awareness events
  - Posting of events and data to website
  - Interactions with Municipal, Provincial, Federal & International Officials
  - Supporting Community Events & Local Charities
- Public outreach event and survey regarding Nordion's licence renewal was conducted in late 2024



# Conclusion

- Nordion has played a vital role in Safeguarding Global Health® ~ 8 Decades
- Robust and mature programs with proven effectiveness and a strong focus on compliance with regulatory requirements
- Operational Safety is our Priority to ensure that our staff, the public and the environment are protected
- A 25-year renewal will provide assurance and stability to global healthcare supply chains

