



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

# Record of Proceedings, Including Reasons for Decision

In the Matter of

**Applicant**      Atomic Energy of Canada Limited

**Subject**      Application to Replace the AECL Prototype  
Waste Management Facility Licences

**Hearing Date**      July 16, 2014

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Canada

## **RECORD OF PROCEEDINGS**

Applicant: Atomic Energy of Canada Limited

Address/Location: Chalk River Laboratories, Chalk River, Ontario, K0J 1J0

Purpose: Application to Replace the AECL Protoype Waste Management Facility Licences

Application received: March 28, 2014

Date of hearing: July 16, 2014

Location: Canadian Nuclear Safety Commission (CNSC)  
280 Slater St., Ottawa, Ontario

Members present: M. Binder, Chair

Secretary: M. Leblanc

Recording Secretary: M. Hornof

**Licence: Replaced**

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## 1.0 INTRODUCTION

1. Atomic Energy of Canada Limited (AECL) has submitted a request to the Canadian Nuclear Safety Commission<sup>1</sup> (CNSC), under subsection 24(2) of the *Nuclear Safety and Control Act*<sup>2</sup> (NSCA), to replace three Waste Facility Operating Licences (WFOLs) with a single Waste Facility Decommissioning Licence (WFDL). WFOLs are currently issued to:

- Douglas Point Waste Management Facility, in Tiverton, Ontario
- Gently-1 Waste Management Facility, in Bécancour, Québec
- Nuclear Power Demonstration Waste Management Facility, in Rolphton, Ontario

The current licences, AECB-WFOL-332-4.3, AECB-WFOL-331-4.3, and AECB-WFOL-342-2.6, were issued by the Atomic Energy Control Board (AECB) in the mid-1990s for an indefinite term.

2. AECL is the licensee for the three Prototype Waste Management Facilities. These facilities are associated with partially decommissioned prototype reactors that ceased operating in the 1980s. All three facilities have been functionally divided into nuclear and non-nuclear areas.
3. The proposed WFDL and corresponding Licence Conditions Handbook (LCH) aligns the three AECL Prototype Waste Management Facilities with the modern safety and control area (SCA) format for licensing and compliance.

### Issue

4. In considering the application, the Commission was required to decide, pursuant to subsection 24(4) of the NSCA:
  - a) if AECL is qualified to carry on the activity that the replaced licence would authorize; and
  - b) if in carrying on that activity, AECL would 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.

### Hearing

5. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to review the application. The Commission, in making its decision,

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<sup>1</sup> The *Canadian Nuclear Safety Commission* is referred to as the “CNSC” when referring to the organization and its staff in general, and as the “Commission” when referring to the tribunal component.

<sup>2</sup> Statutes of Canada (S.C.) 1997, chapter (c.) 9.

considered information presented for a hearing held on July 16, 2014 in Ottawa, Ontario. During the hearing, the Commission considered written submissions from AECL (CMD 14-H107.1) and CNSC staff (CMD 14-H107).

## 2.0 DECISION

6. Based on its consideration of the matter, as described in more detail in the following sections of this *Record of Proceedings*, the Commission concludes that AECL has met the conditions of subsection 24(4) of the NSCA. Therefore,

the Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, replaces the Waste Facility Operating Licences AECB-WFOL-332-4.3, AECB-WFOL-331-4.3, and AECB-WFOL-342-2.6, issued to Atomic Energy of Canada Limited for its Douglas Point, Gentilly-1 and Nuclear Power Demonstration Prototype Waste Management Facilities located respectively in Tiverton, Ontario, Bécancour, Québec, and Chalk River, Ontario. The replacement Waste Facility Decommissioning Licence, WFDL-W4-332.00/2034, is valid until December 31, 2034.

The Commission concurrently revokes the Waste Facility Operating Licences AECB-WFOL-332-4.3, AECB-WFOL-331-4.3, AECB-WFOL-342-2.6, issued to Atomic Energy of Canada Limited.

7. The Commission includes in the licence the conditions as recommended by CNSC staff in CMD 14-H107.

## 3.0 ISSUES AND COMMISSION FINDINGS

8. CNSC staff has assessed the licence replacement request and has determined that it is administrative in nature. The WFDL solely authorizes continued storage with surveillance activities. CNSC staff reported that, prior to entering active decommissioning, AECL would be required to submit detailed decommissioning plans. CNSC staff concluded that, given the administrative nature of the proposed licence replacement, there are no impacts to the environment.
9. CNSC staff reported that AECL has consistently paid their cost recovery fees in full during the current licence period and that there is no concern over payment of future fees.
10. AECL intends to continue with maintenance, monitoring and surveillance activities at the three facilities, which will remain in an interim storage-with-surveillance state, to provide long-term storage of radioactive waste and to ensure the security and safety of retained building structures and systems pending decommissioning.

11. AECL indicated that they are committed to updating their Public Information Program by September 2014 to include reporting for the Prototype Waste Management Facilities.

Assessment of Safety and Control Area Requirements

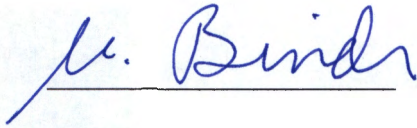
12. After reviewing applicable SCAs, CNSC staff concluded that the requirements related to all SCAs have been met and that AECL therefore meets the requirements for a replacement licence. Below are details associated with each SCA.
13. CNSC staff reported that AECL's company-wide Decommissioning Quality Assurance Program has already been established at AECL's Chalk River and Whiteshell sites, and is referenced in the proposed licence.
14. CNSC staff confirmed that the AECL Human Performance Program (HPP) and Systematic Approach to Training (SAT) manuals currently in place meet requirements and have been referenced in the LCH.
15. CNSC staff noted that all AECL facilities have implemented the Improvement Action (ImpAct) reporting process for internal reporting of issues. CNSC staff noted that it reviews the reportable events and associated corrective action plan when necessary. These events had no impact on the health and safety of the public, workers or the environment. AECL has also adequately addressed CNSC staff's concerns resulting from the baseline compliance inspections and review of annual compliance reports.
16. CNSC staff stated that Safety Analysis Reports are prepared periodically by AECL to ensure that changes in the facility conditions are accurately captured in the safety case.
17. CNSC staff reported that, in implementing Storage with Surveillance programs, AECL has adequately maintained the physical designs for the facilities to ensure that the equipment and processes accurately reflect the intended design conditions.
18. CNSC staff noted that AECL Storage with Surveillance programs include inspection, testing, maintenance and aging management programs for equipment in the waste facilities. These plans need to be periodically reviewed. In their written submission, AECL committed to submit revised Storage with Surveillance programs by March 2015.
19. CNSC staff also noted that AECL's corporate radiation protection program is included in the licensing basis for the facilities and supports a consistent application of the corporate programs at the respective facilities. AECL has committed to conduct a self-assessment of its radiation protection program by March 2015.
20. CNSC staff reported that AECL's Occupational Health and Safety Program Manual meets the Conventional Health and Safety licensing basis.
21. CNSC staff explained that environmental protection at the three Prototype Waste Management Facilities is governed by AECL's Environmental Monitoring Program.

CNSC staff further reported that, as prescribed within the LCH, the effluent monitoring program will be revised and brought into compliance with CSA N288.5 after a transition period.

22. CNSC staff reported that AECL has established an Emergency Preparedness Program and that AECL has committed to conduct a self-assessment of this program by February 2015, as described within the LCH. CNSC staff further reported that AECL has a Fire Protection Program and conducted a Fire Hazard Analysis at the three Prototype Waste Management Facilities in 2013. Several deficiencies were noted and AECL has implemented a plan to address the deficiencies by December 2015.
23. CNSC staff noted that the Waste Management SCA requirements are fulfilled by AECL's Waste Management Program Overview and the Facilities Decommissioning Quality Assurance Program. CNSC staff also noted that the next required update to its decommissioning plan is scheduled for December 2014. CNSC staff further reported that, AECL liabilities being ultimately liabilities of Her Majesty in Right of Canada, a distinct financial guarantee for decommissioning is not required.
24. CSNC staff reported that the proposed licence does not allow AECL to conduct decommissioning activities involving modifications to the protected area until the proposed security arrangements and measures have been accepted by the Commission or a person authorized by the Commission. CNSC staff also considers AECL's Physical Security Program to be acceptable.
25. CSNC staff stated that AECL's governing document *Nuclear Materials and Safeguards Management* meets requirements.
26. CSNC staff also stated that AECL's *Radioactive Materials Transportation Documentation Index and Definitions* and supporting documents meet the Packaging and Transport SCA.
27. CNSC staff reported that AECL's Public Information Program provides stakeholders with timely and meaningful information on activities at the Chalk River Laboratories. AECL is committed to updating this program by September 2014 to include reporting for the Prototype Waste Management Facilities and provide greater consistency in public disclosure criteria of routine radiological and non-radiological emissions, as well as non-routine items or events.

#### **4.0 CONCLUSION**

28. The Commission has considered the information and submissions from AECL and CNSC staff and is satisfied that the requested licence replacements are administrative in nature and will not adversely impact the safety of the Douglas Point, Gentilly-1, and Nuclear Power Demonstration Prototype Waste Management Facilities operations.

A handwritten signature in blue ink that reads "M. Binder". The signature is written in a cursive style and is positioned above a horizontal line.

Michael Binder  
President,  
Canadian Nuclear Safety Commission

JUL 1 6 2014

Date