



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Summary Record of Proceedings and Decision

In the Matter of

Applicant Atomic Energy of Canada Limited

Subject Request for the Approval of the Return to
Service of the National Research Universal
(NRU) Reactor

Public Hearing
Date July 5, 2010

SUMMARY RECORD OF PROCEEDINGS

Applicant: Atomic Energy of Canada Limited

Address/Location: 2251 Speakman Drive, Mississauga, Ontario L5K1B2

Purpose: Request for the Approval of the Return to Service of the National Research Universal (NRU) Reactor

Application received: June 10, 2010

Date of public hearing: July 5, 2010

Location: Canadian Nuclear Safety Commission (CNSC) Public Hearing Room, 280 Slater St., 14th. Floor, Ottawa, Ontario

Members present: M. Binder, Chair
A.R. Graham M. J. McDill
R. J. Barriault D.D. Tolgyesi

Secretary: M.A. Leblanc
Recording Secretary: M. Young
Senior Counsel: L. Thiele

Applicant Represented By	Document Number
<ul style="list-style-type: none"> • H. MacDiarmid, President and CEO; • W. Pilkington, Chief Nuclear Officer; • H. Drumhiller, Vice-President of Operations/NRU Repairs; • R. Lesco, Chief Nuclear Engineer and General Manager of Engineering; and • A. White, Chief Regulatory Officer and General Manager of Programs and Nuclear Oversight. 	CMD 10-H12.1 CMD 10-H12.1A CMD 10-H12.1B
CNSC staff	Document Number
<ul style="list-style-type: none"> • R. Jammal; • P. Elder; • M. Santini; 	<ul style="list-style-type: none"> • R. Awad; and • B. Carroll. CMD 10-H12
Intervenors	Document Number
Canadian Nuclear Workers' Council, represented by D. Shier, G. Peplinski and G. Tapp	CMD 10-H12.2
Darlene Buckingham	CMD 10-H12.3
Jennifer Tsun	CMD 10-H12.4
Bill MacCallum	CMD 10-H12.5
Others	
Emergency Management Ontario, represented by M. Morton, D. Nodwell and K. Blyer.	

Application: Accepted

Table of Contents

Introduction	1
Decision	2
Issues and Commission Findings	2

Introduction

1. Atomic Energy of Canada Limited (AECL) has made a request to the Canadian Nuclear Safety Commission¹ (CNSC) for approval of the return to service of the National Research Universal (NRU) reactor located at Chalk River Laboratories (CRL) in Chalk River, Ontario. The current CRL Nuclear Research and Test Establishment Operating Licence, NRTEOL-01.07/2011, is valid until October 31, 2011.
2. On May 15, 2009, during a forced shutdown of the NRU reactor, AECL detected a heavy water leak from the reactor vessel. In order to repair the leak located in the vessel wall, AECL defueled the reactor and drained the heavy water.
3. While the operating licence for CRL covers most aspects of the vessel repair, two unique aspects, the vessel repair with an acceptable fitness-for-service safety case and acceptance of the return-to-service strategy, require the Commission's approval.
4. To return the reactor vessel to service, AECL had to repair the parts of the vessel that had structurally significant wall thinning due to corrosion and AECL had to develop a strategy to mitigate the corrosion. CNSC staff confirmed that the repairs provide structural integrity to the reactor vessel and that the repairs were done within the applicable nuclear Codes and Standards. CNSC staff noted that the repairs passed the vessel leak test approval by the Technical Standards and Safety Authority, and the acceptance of the final Repair Report by CNSC staff is pending.

Issue

5. In considering the request, the Commission was required to decide whether to approve the return to service of the NRU reactor.

Public Hearing

6. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to review the request for approval. The Commission, in making its decision, considered information presented for a public hearing held on July 5, 2010 in Ottawa, Ontario. The Commission varied the *Canadian Nuclear Safety Commission Rules of Procedure*² so that AECL's request would be dealt with in a fair and expeditious manner. This variation significantly compressed the notification period and the time usually allocated for the submission of documents. During the public hearing, the Commission considered written submissions and heard oral presentations from CNSC staff (CMD 10-H12) and AECL (CMD 10-H12.1, CMD 10-H12.1A and CMD 10-H12.1B). The Commission also considered oral and written submissions from four intervenors (CMD 10-H12.2 to CMD 10-H12.5).

¹ 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.

² Statutory Orders and Regulations (S.O.R.)/2000-211.

Decision

7. Based on its consideration of the matter, the Commission concludes that AECL is qualified to return the NRU to service and to carry on the activity authorized by the current licence. The Commission is satisfied that AECL, in carrying on that activity, will 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. Therefore,

the Commission approves the return to service of Atomic Energy of Canada Limited's National Research Universal reactor, located in Chalk River, Ontario. The current licence, NRTEOL-01.07/2011, remains unchanged and is valid until October 31, 2011, unless suspended, amended, revoked or replaced.

8. With this decision, the Commission directs AECL to provide updates on the progress and effectiveness of the Organizational Corrective Action Plan every six months after the restart of the reactor, to be presented at a public proceeding of the Commission. The Commission requires annual in-service inspections of the vessel and the first inspection must be no later than nine months after the NRU restart.

Issues and Commission Findings

9. In making its licensing decision, the Commission considered a number of issues relating to AECL's qualification to carry out the proposed activities and the adequacy of the proposed measures for protecting the environment, the health and safety of persons, national security and international obligations to which Canada has agreed.
10. The Commission determined that there was no requirement for an Environmental Assessment pursuant to subsection 5(1) of the *Canadian Environmental Assessment Act*³ (CEAA). The Commission is satisfied that all applicable requirements of the CEAA have been fulfilled.
11. The detailed findings of the Commission will be provided in a *Record of Proceedings, including Reasons for Decision*, to be published at a later date.



JUL 07 2010

Michael Binder
President,
Canadian Nuclear Safety Commission

Date

³ Statutes of Canada (S.C.) 1992, chapter (c.) 37.