

# Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant McMaster University

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Subject Application to Renew the Class IA Non-Power  
Reactor Operating Licence

Hearing Date May 16, 2007

## RECORD OF PROCEEDINGS

Applicant: McMaster University.

Address/Location: 1280 Main Street West, Hamilton, Ontario, L8S 4K1

Purpose: Application by McMaster University to Renew the Class IA Non-Power Reactor Operating Licence

Application received: February 9, 2007

Date(s) of hearing: May 16, 2007

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

Members present: A.R. Graham, Chair  
C. Barnes  
A. Harvey

Secretary: M. Leblanc  
General Counsel: S. Maislin Dickson  
Recording Secretary: S. Dimitrijevic

<b>Applicant Represented By</b>		<b>Document Number</b>
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<b>Intervenors</b>		<b>Document Number</b>
See appendix A		

**Licence:** Renewed  
**Date of Decision:** May 16, 2007

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## **Introduction**

1. McMaster University (McMaster) has applied to the Canadian Nuclear Safety Commission<sup>1</sup> (CNSC) for the renewal of the operating licence for the operation of its non-power reactor (McMaster Nuclear Reactor, MNR) located at the university campus in Hamilton, Ontario. The current operating licence, NPROL-01.03/2007, expires on June 30, 2007. McMaster has requested a seven-year licence term.
2. The MNR is a pool-type research reactor that uses demineralised water as moderator and coolant. Fuel elements are of the Materials Test Reactor (MTR) type arranged in a standard 18-plate assembly. The MNR is currently licensed to operate at 5 megawatt (MW) power level.
3. The MNR is used for research in several areas including engineering and medical physics, as well as for commercial purposes. List of users of the MNR include students, academia, small business and international partners.

## Issues

4. In considering the application, the Commission was required to decide, pursuant to subsection 24(4) of the *Nuclear Safety and Control Act*<sup>2</sup> (NSCA):
  - a) if McMaster is qualified to carry on the activity that the licence would authorize; and
  - b) if, in carrying on that activity, McMaster 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.

## Public Hearing

5. The Commission, in making its decision, considered information presented for a public hearing held on May 16, 2007 in Ottawa, Ontario. The public hearing was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*<sup>3</sup>. During the public hearing, the Commission received written submissions and heard oral presentations from CNSC staff (CMD 07-H12, CMD 07-H12.A, CMD 07-H12.B, CMD 07-H12.C) and McMaster (CMD 07-H12.1, CMD 07-H12.1A). The Commission also considered submissions from 6 intervenors (see Appendix A for a detailed list of interventions).

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<sup>1</sup> In this *Record of Proceedings*, 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> S.C. 1997, c. 9.

<sup>3</sup> S.O.R./2000-211.

## 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 McMaster is qualified to carry on the activity that the licence will authorize. The Commission is also satisfied that McMaster, 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, pursuant to section 24 of the *Nuclear Safety and Control Act*, renews the Class IA Operating Licence issued to McMaster University for the operation of a non-power reactor located at the university campus in Hamilton, Ontario. The licence, No. NPROL-01.00/2014, is valid from July 1, 2007, until June 30, 2014.

7. The Commission includes in the licence the conditions recommended by CNSC staff, as listed in CMD 06-H12 and as set out in the draft licence attached to CMD 06-H12.B.
8. With this decision, the Commission requests that CNSC staff present a status report to the Commission on the performance of the facility during the first half of the licence term. The status report will be presented at a public proceeding at approximately the mid-point of the licence term.

## Issues and Commission Findings

9. In making its licensing decision, the Commission considered a number of issues relating to McMaster'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 findings of the Commission presented below are based on the Commission's consideration of all of the information and submissions available on the record for the hearing.

## **Radiation Protection**

11. As part of its assessment of the adequacy of provisions for protecting the health and safety of persons at the particle accelerator facilities, the Commission considered the past performance and future plans of McMaster in the area of radiation protection.
12. McMaster provided information on annual collective worker doses for three different categories of workers: the reactor operations group, the neutron radiography group and the iodine production personnel. McMaster stated that during the current licence period the radiation safety performance was good with low doses to workers, which were either steady or trending downward, and in all cases were well below the Administrative Control Level, the Action Level and the regulatory limit for annual effective dose.
13. CNSC staff reported to the Commission that McMaster has radiation protection and personal dosimetry programs in place. Thermo-luminescent dosimeters are used for monitoring the “whole body” and “skin” doses received by the personnel, and selected MNR workers are assigned extremity dosimeters to measure extremity doses. Thyroid screening is used to determine the internal dose received by workers exposed to I-125 airborne contamination. CNSC staff noted that McMaster reported workers’ doses to the CNSC in their annual compliance reports and that during the licence period workers’ doses were within regulatory limits and were kept at levels As Low As Reasonable Achievable (ALARA).
14. The Commission sought more information on what appeared to be increasing trends for the doses received by the MNR personnel. CNSC staff noted that the higher doses received during the current licence period could be attributed to certain specific activities. CNSC staff further noted that, in general, when the levels of the dose average are well below the regulatory limits, as has been the case for this facility, further ALARA analysis or further reduction in action levels is not required. McMaster explained that small fluctuations in doses received were expected over a certain length of time and that the increasing trends were short-term and related to specific production or maintenance activities.
15. CNSC staff noted that although some improvements were needed in the documentation of the radiation protection program, the overall rating of both the radiation protection program and its implementation has met the requirements.
16. Citizens for Renewable Energy and B. M.P. Beleskey, in their interventions, expressed their concern with potential radiation hazards related to a relatively old nuclear reactor using highly enriched uranium (HEU) fuel situated close to the populated area.

17. The Commission inquired about the status of conversion of the MNR from HEU fuel to low-enriched uranium (LEU) fuel. McMaster responded that the conversion has been completed. The Commission further inquired about the remainder of the HEU fuel and other irradiated material as a source of radiation hazard. McMaster responded that the radioactive material was kept in the storage pool, as it awaits transportation to the Chalk River Laboratories<sup>4</sup> for storage.
18. Further with respect to the protection of the public from radiation exposure, the Commission is satisfied that the reactor building is designed to contain the maximum credible nuclear incident that could occur and that being constructed as a gas-tight structure prevents leaks from the building and protects the public and the environment. The Commission further considered that, as noted by McMaster, all exhaust air is filtered before discharge and all supply and exhaust systems are automatically sealed in the event of elevated radiation levels in the exhaust stack. The Commission also considered that the conversion to LEU has occurred.
19. Based on the information provided, the Commission is of the opinion that McMaster is making, and will continue to make adequate provisions for the protection of persons at the facility and the general public from the effects of radiation.

### **Environmental Protection and Monitoring**

20. With respect to the protection of the environment, McMaster informed the Commission that iodine I-125 and argon Ar-41 releases were identified as potential hazard to the general public from the licensed activities. These gaseous emissions were routinely monitored. The results of measuring I-125 releases from the building have shown that its concentration is about four orders of magnitude below the derived release limit. The emission of Ar-41 from the reactor is about two-and-a-half orders of magnitude below the derived release limit. McMaster further stated that all liquids were filtered and reused, resulting in no liquid effluent discharge from the MNR.
21. CNSC staff confirmed that the MNR has adequate environmental monitoring programs and procedures and that the air emissions were controlled and monitored through sampling activities as described in the licensee's radiation safety program. CNSC staff informed the Commission that the environmental protection program and its implementation meet requirements.
22. CNSC staff recommended to the Commission that a licence condition be added to meet the new CNSC regulatory standard S-296 *Environmental Protection Policies, Programs and Procedures at Class I Nuclear Facilities and Uranium Mines and Mills*.

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<sup>4</sup> The Chalk River Laboratories facility is licensed by CNSC and operated by Atomic Energy Canada Limited and includes a radioactive waste management facility.

23. Citizens for Renewable Energy, in its intervention, expressed concern with the permeability of the containment structure and suggested that tritium should be added to the list of gaseous effluents and be monitored.
24. The Commission sought more information on the condition of the reactor as to aging management and the associated potential environmental hazards. CNSC staff informed the Commission that annual tests of the containment are carried out and that the inspection performed last year confirmed that there were no concerns with respect to the containment structure. McMaster explained that tritium is present in the reactor pool as a minor contaminant and its airborne concentration level in the reactor hull is many orders of magnitude below the occupational exposure level. McMaster added that the small amount of tritium in the building is not an environmental risk.
25. The Commission is of the opinion that McMaster is making, and will continue to make adequate provisions for the protection of environment.

## **Operational Performance**

### *Compliance Activities*

26. McMaster informed the Commission on the management of solid and liquid radioactive waste produced during operation of the reactor. Solid waste is collected and managed depending on the level of radioactivity, and liquid waste is collected in the active sumps.
27. McMaster noted that low level waste is packaged and transported to the waste facilities at Chalk River. Medium level solid waste is appropriately packaged and stored until a suitable decay has occurred after which the remaining active material is shipped to Chalk River. High level solid waste, consisting of spent reactor fuel and reactor core components, is stored in the pool and shipped to the United States under contract with the United States Department of Energy.
28. During the licence period, CNSC staff performed six compliance inspections. CNSC staff reported that there were no significant instances of non-compliance. Only minor weaknesses and needs for documentation revision were identified and addressed promptly by McMaster. CNSC staff stated that the licensee responded well to recommendations for improvement.
29. CNSC staff reported that the licensee had provided timely reports each year for its operation and performance. These reports were supplemented by separate reports regarding radiation protection, environmental releases and waste handling activities. In addition to annual reports, the licensee had been preparing monthly reports on periodic testing, such as evaluation of rod performance and containment leak tightness, as well as control rod release reports listing instances of unplanned rod releases.

30. The Commission inquired how long the waste is kept on site before being shipped to Chalk River. McMaster responded that some radioactive waste was stored in the pool, allowing for an appropriate decay period, then examined for safe handling and disposal according to the existing procedure and schedule which includes shipping to Chalk River.

#### *Incidents*

31. CNSC staff and McMaster reported on several minor incidents, which were without serious consequences, that have been noted during the current licence period.
32. One event involved the manual shutdown of the reactor after a piece of plastic wrapping was observed on the top of the reactor. The event was reported and an investigation was initiated. As a result of the investigation, five corrective actions were raised and have been completed.
33. Following the event, McMaster implemented measures to inspect all components in the pool to ensure that foreign objects do not enter the pool. McMaster also enhanced its foreign material exclusion program by adding more frequent surveillance around the pool, conducting a monthly documented inspection, and increasing lighting for the pool.
34. In December 2004, two workers in neutron radiography exceeded their quarterly administrative control limits for doses. The response to the incident included additional dosimetry assigned to the workers and more frequent monitoring, area surveys and a written procedure for radiography activity on the beam ports. Neither the annual regulatory limits nor the annual administrative control limits were exceeded in this incident. Training deficiencies were identified as a factor and were corrected.
35. In another occasion, an increase in airborne activity of iodine I-125 was detected. The incident review resulted in several upgrades to the processing method and to the gas handling station.
36. CNSC staff rated the overall operational performance of the MNR facility as meeting the requirements for both the program and its implementation.
37. Based on the above information and considerations, the Commission concludes that the operating performance at the MNR facility provides a positive indication of McMaster's ability to adequately carry out the proposed activities.

## **Performance Assurance**

The Commission examined performance assurance, including aspects of quality assurance program (QA) that defines an organization's management system for the safe operation of the facility and training, as a further indication of the adequacy of McMaster's qualifications and protection measures.

### *Quality Assurance*

38. CNSC staff reported that, during the licence period, the QA program met the requirements while its implementation was rated below the requirements mainly due to the delayed response to required program adjustments. However, CNSC staff stated that a progress in program implementation was evident during the second half of the licence period so that, overall, the QA program remains acceptable and does not pose an unreasonable risk to the personnel, public or the environment.
39. CNSC staff further reported that the licensee has submitted to CNSC staff its revised QA Policy Manual and second tier procedures. CNSC staff's review of the procedures found that they were written at a high level, but adequate. CNSC staff recommended to the licensee that the procedures be improved by writing them around existing work practices.
40. A CNSC staff inspection, carried out in October 2005, found that the MNR's QA program was reasonable, but that the licensee needed to address effective implementation of the program and institute a successful system for continuous improvement. The licensee was advised to make adjustments to the program as identified by the inspection findings which included revising the non-conformance procedure. CNSC staff has found the improved documentation satisfactory, although a delay has been noted in the licensee's complying with the CNSC staff's request.
41. The Commission sought an explanation with respect to the positive general rating for the quality management program and the below requirements rating for program implementation. CNSC staff explained that its rating criteria were primarily based on prevention of unreasonable risks. In the case of McMaster, CNSC staff noted a continuous progress and rated the McMaster's performance in quality assurance as being acceptable.

### *Training and Certification*

42. CNSC staff informed the Commission that McMaster has an adequate number of workers certified for reactor operator and supervisor positions. McMaster has in place a training program covering assistant reactor operators, radioisotope production technicians and radiation protection staff. The process of training certified workers at the MNR facility was evaluated in 2002 and is acceptable. CNSC staff concluded that both the program in training and certification and its implementation have met requirements.
43. CNSC recommended that McMaster move to a Systematic Approach to Training (SAT) by improving the level of detail in documented tasks required to be performed by reactor operators and reactor supervisor and to complete a task analysis to determine if there are any gaps in their current training programs. New licence conditions regarding training and certification were proposed in the draft licence.
44. The Commission inquired on McMaster's request to increase educational requirements while reducing experience requirements from one year experience to three months and sought CNSC staff's comment. CNSC staff responded that, taking into account the relative simplicity of the operational procedures of a non-power reactor, the educational level of an operator is more important than the experiential one, and that CNSC staff concurs with McMaster's assessment.
45. The Commission is satisfied with McMaster's commitment to improve its QA program and with the improving trends in the implementation of the program in this area.

### **Emergency Preparedness and Response**

46. McMaster informed the Commission on the MNR emergency classification and emergency preparedness plans described in the MNR Emergency Plan, EP 7000, and on procedures for response to emergencies where there is a possibility of significant radioactive releases as described in EP 7010.
47. CNSC staff reported to the Commission that McMaster has an emergency preparedness plan in place to cover both on-site and off-site emergencies and had developed a schedule for training, drills and a Type D Emergency Exercise involving all emergency response personnel.
48. Citizens for Renewable Energy, in its intervention, expressed concern with the outdated emergency preparedness plan which, according to their viewpoint, had not been updated after the September 11<sup>th</sup> 2001 New York terrorist event. The Commission sought clarification on the update of the emergency preparedness plan. McMaster responded that the document in question was the aforementioned EP 7000, which is an all-hazards plan for the reactor and has been updated.

49. CNSC staff stated that McMaster has submitted in a timely manner a revised *MNR Emergency Preparedness Plan, EP-7000, Rev. 3*. The document has a similar format to the previous version, but is now updated with the current organization names, procedure references, and organizational charts that have changed since the last revision.
50. CNSC staff noted that it had conducted a preliminary review of the emergency preparedness plan against CNSC Regulatory Guide G-225 *Emergency Planning at Class I Nuclear Facilities and Uranium Mines and Mills*. From this review, CNSC staff concluded that McMaster's emergency preparedness plan adequately addresses the main criteria in the guide, although some additional information and references have been requested. The overall program and its implementation were rated by CNSC staff as meeting requirements.
51. Based on the information provided, the Commission is of the opinion that emergency preparedness at the MNR facility is adequate for the proposed licence.

### **Fire Protection**

52. McMaster informed the Commission that the reactor building is operated and inspected in accordance with the Province of Ontario Fire Code. Testing, surveillance and maintenance are provided by the University's Physical Plant Department in accordance with the Code. McMaster added that the reactor obtains independent annual assessments of fire risks associated with the reactor building and implements recommendations according to the nature of the risk and available resources. McMaster further informed the Commission about good working relationship with the Hamilton Fire Department and their annual tours of the reactor.
53. CNSC staff reported on its review of the most recent third party annual report, pursuant to the existing licence requirements, and concluded that the licensee was operating in general compliance with the licence requirements for fire protection. However, the MNR staff had not provided timely responses when correcting the minor deficiencies identified in three third party inspections.
54. CNSC staff also reported on a fire inspection at the MNR facility performed in April 2007. Based on this inspection, and the desktop reviews, CNSC staff concluded that the level of protection against the risk of fire was not acceptable over the long term and corrective actions were warranted. The inspection findings were predominantly related to conventional life safety issues and insufficient fire detection coverage. The main finding was the presence of significant levels of combustible materials in the reactor building.
55. As requested by CNSC staff, the licensee took prompt actions in response to the inspection's findings by developing an action plan and immediately reducing the quantity of combustible materials on the site.

56. The Commission sought more information on the origin of combustible material in the reactor building. McMaster responded that the material was stored during the renovation of the facility in order to be checked for radioactivity before eventual disposal. McMaster confirmed its commitment to implementation of the programs in order to comply with requirements. CNSC staff confirmed that the material came from renovation activities and that the licensee had taken appropriate actions. CNSC staff added that the implementation of the new licence condition was expected to improve the overall situation in the fire protection area.
57. CNSC staff has recommended a revised wording of the licence condition covering fire protection for the proposed licence that would bring this facility licence in line with other similar new licences issued by the Commission. The main change to the licence condition was the requirements to comply with the *National Fire Protection Association, NFPA-801, 2003: Standard for Fire Protection for Facilities Handling Radioactive Materials*, with a one-year transition period for the licensee to comply with this latest edition of the standards.
58. Based on the above information, the Commission is satisfied that facility operations, with the fire protection measures in place and required by the licence condition, will not pose an unreasonable risk to the health and safety of persons or the environment.

### **Nuclear Criticality Safety**

59. With respect to nuclear criticality safety, McMaster has developed and submitted a Nuclear Criticality Safety Program (NCSP) which covers operations at the MNR facility with fissionable materials outside of the reactor core. CNSC staff reviewed McMaster's proposed program document and the latest version of this program was found acceptable.
60. CNSC staff recommended that the document entitled: *Nuclear Criticality Safety Program Document, revision 2, dated February 23, 2007* be referenced in the proposed licence. Being aware that implementation of this new program would take a period of time since it involves elaborate analyses and reviews, CNSC staff recommended that the Commission grant a transitional period of 18 months for implementation of the improved Nuclear Criticality Safety Program and that a new licence condition be added to the proposed licence.
61. The Commission agrees that a licence condition that references the nuclear criticality safety program, with a transitional period for its implementation, would be appropriate.

## **Security**

62. The Commission considered security issues related to the operation of the MNR during this public hearing as well as in a closed session.
63. CNSC staff informed the Commission about unfounded allegations disseminated by media reports with respect to the “theft of 180 pounds of nuclear materials” from McMaster. Also, there had been an allegation that the university had lost its licence due to security incidents. To clarify the facts, CNSC staff had provided a written confirmation that there has never been any nuclear material lost or stolen from the MNR nor that the licence has ever been suspended or withdrawn due to security breaches. CNSC staff reiterated this statement during the public hearing.
64. During the public hearing, Citizens for Renewable Energy, in its intervention, expressed concerns about increased risks of sabotage and terrorist actions.
65. M. Devolin, G. Jarjour, M. Neuman and J. Cheung, in their interventions, expressed concerns about increased risks of sabotage and terrorist actions based on the cultural or religious background of some MNR workers.
66. The Commission notes that, in making its decisions, it remains focused on safety and security issues. The Commission expresses the view that statements relating to racial and religious stereotyping are objectionable and do not reflect the views of the Commission. The Commission reiterates that security issues are matters that it considers important and relevant to the proceeding before it. However, allegations based solely on religion or race, without any supporting evidence in connection to issues, have not and will not be taken into account by the Commission in its consideration of any matter before it.
67. The Commission sought more information with respect to regular procedures on personnel background checks and inventory control. McMaster responded that all the personnel involved in the operation of the MNR or having access to the facility have passed background checks according to regulations. Furthermore, the inventory of all the material is checked on regular basis and inspected by CNSC staff, together with periodic checks by IAEA.
68. CNSC staff confirmed the importance of security issues at all nuclear facilities and stated that it monitors the physical security and robustness of the facilities, and also conducts intelligence gathering with other agencies.

69. With reference to the public tours of the MNR facility offered by McMaster, the Commission sought assurances that McMaster has sufficient staff presence and the appropriate measures in place to ensure site security. McMaster stated that tours are conducted under stringent security protocols. CNSC staff responded that it had assessed McMaster's security provisions in this respect and is satisfied with the provisions in place.
70. The Commission continued with its consideration of security matters regarding the McMaster facility and operations of the MNR in a closed session based on a separate confidential submission filed by the CNSC staff.
71. Based on the information provided, the Commission concludes that McMaster has made, and will continue to make, adequate provisions for ensuring the physical security of the facility.

### **Safeguards**

72. CNSC staff reported to the Commission that McMaster maintains a nuclear material inventory system to demonstrate compliance with the safeguards requirements.
73. CNSC staff noted that during the current licence period, five annual physical inventory verifications of all nuclear material were conducted. One short-notice Complementary Access inspection was carried out by the IAEA in September 2004. There were no issues resulting from this inspection and the licensee's procedures and preparations were acceptable in providing prompt access to the IAEA inspectors.
74. CNSC staff concluded that, during the licence period, McMaster has provided the CNSC and IAEA with all reports and information necessary for safeguards, as required by the licence conditions, and complied fully with IAEA and CNSC requests during the review period.
75. Based on the information received, the Commission is satisfied that McMaster has made, and will continue to make, adequate provisions in the areas of safeguards at its facility that are necessary for maintaining national security and measures necessary for implementing international agreements to which Canada has agreed.

### **Preliminary Decommissioning Plan and Financial Guarantee**

76. CNSC staff informed the Commission that McMaster had revised its Preliminary Decommissioning Plan (PDP) in August 2002 to meet CNSC requirements. The PDP had been accepted as adequate for establishing the financial guarantee, although it needed further improvement. McMaster submitted an update of the PDP in March 2006 and CNSC staff completed the review and identified areas where clarifications or further revision were needed.

77. CNSC staff informed the Commission that the cost of decommissioning of the facility had been estimated at \$11.1 million. McMaster had established a financial guarantee which had been approved in a licence amendment on June 30, 2005.
78. McMaster submitted to CNSC staff its first annual report covering the period between May 1, 2005 and April 30, 2006. It confirmed that the financial guarantee remained valid, in effect and was sufficient to meet the obligations defined in the access agreement. CNSC staff reviewed the report and found it acceptable.
79. Citizens for Renewable Energy, in its intervention, requested that the Commission add a licence condition that would require the establishment of the financial guarantee for decommissioning, in its full amount, by 2009.
80. The Commission inquired at what level was the financial guarantee currently funded and when would it be fully covered. McMaster responded that as of April 2007, the guarantee was funded over 60 percent. McMaster added that the decommissioning plan was expected to be fully funded during the next licence period.
81. Asked to comment on McMaster's statements, CNSC staff responded that it was monitoring the build-up of the funding through McMaster's annual reports. CNSC staff noted that the guarantee has been set up in such a way so that it already covers the safe state of closure and that there was a build-up within a University Decommissioning Trust Fund. In addition, CNSC staff stated that McMaster has committed to fully fund the decommissioning costs from other available funds, in the event of decommissioning the facility sooner than expected.
82. The Commission is of the opinion that the Preliminary Decommissioning Plan and financial guarantee for the MNR facility are adequate.

### **Public Information Program**

83. McMaster informed the Commission that the University's Department of Public Relations coordinates the release of information to the public. McMaster maintains a Web page and publishes pamphlets to distribute information about the facility to the public. General information about the MNR facility is also provided in response to electronic mail, phone calls, and written requests. McMaster offers guided public tours at no charge to the public.
84. CNSC staff confirmed that McMaster has an on-going public information program and stated that it finds the program acceptable.
85. In its intervention, Citizens for Renewable Energy noted that it was not able to obtain the Safety Analysis Report dated February 2002. The Commission sought more details about this matter and CNSC staff explained that the requested document contains protected information, which makes it unavailable to the public.

86. The Commission is satisfied that McMaster continues to inform the public on its activities and is satisfied that McMaster's public information program is adequate.

### **Cost Recovery**

87. As an educational institution, McMaster University is not subject to the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*, 2003, for the MNR facility.

### **Application of the *Canadian Environmental Assessment Act***

88. Before making a licensing decision, the Commission must be satisfied that all applicable requirements of the *Canadian Environmental Assessment Act* (CEAA) have been fulfilled. In this case, the renewal of a licence under paragraph 24(2) of the NSCA is not listed as a "trigger" under the *Law List Regulations*<sup>5</sup> of the CEAA and, therefore, a "trigger" does not exist in the case of the renewal of the operating licence for the MNR.
89. The Commission concludes that an environmental assessment of the proposed operations of the MNR facility, pursuant to the CEAA, is not required before the Commission may make a decision on the licence application.

### **Licence Length and Interim Reporting**

90. McMaster applied for a seven-year operating licence. McMaster based its request on its safety record and licence periods granted by the Commission to other nuclear facilities. CNSC staff supported the request and recommended that the Commission approve a seven-year licence term in this case.
91. In its intervention, Citizens for Renewable Energy asked the Commission to extend the licence for two years only based on its opinion that there was very little anticipation of improvement in the operation of the facility. The Commission notes that improvements have been made during the current licence period and, as indicated earlier in this *Record of Proceedings*, is satisfied with the further improvements in quality management planned for the proposed licence period.
92. Based on the information received, the Commission decides that a seven-year licence term would be appropriate in this case. The Commission also decides that the proposed mid-term performance report will be presented after the mid-point of the licence term.

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<sup>5</sup> S.O.R./94-636.

## **Conclusion**

93. The Commission has considered the information and submissions of McMaster, CNSC staff and intervenors as presented in the material available for reference on the record.
94. The Commission concludes that an environmental assessment under the CEAA is not required before the Commission may make its decision with respect to the application for the renewal of the licence.
95. The Commission is of the opinion that McMaster is qualified to carry on the activities that will be permitted under the licence. The Commission is also of the opinion that in carrying on those activities, McMaster 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.
96. The Commission therefore renews, pursuant to section 24 of the *Nuclear Safety and Control Act*, Class IA Non-Power Reactor Operating Licence No. NPROL-01-00/2014 to McMaster University for the operation of a non-power reactor (McMaster Nuclear Reactor) located at the university campus in Hamilton, Ontario.
97. The Commission includes in the licence the conditions recommended by CNSC staff as set out in the draft licence attached to CMD 07-H12.B.
98. The Commission requests that CNSC staff present to the Commission a mid-term report on the performance of the facility during the first half of the licence term. The status report will be presented at a public proceeding after the mid-point of the licence term.

Alan R. Graham  
Presiding Member  
Canadian Nuclear Safety Commission

Date of decision: May 16, 2007

Date of release of Reasons for Decision: June 28, 2007

## Appendix A – Intervenors

Intervenors	Document Number
Citizens for Renewable Energy represented by G. Wright	CMD 07-H12.2
Michael Devolin	CMD 07-H12.3
Georges Jarjour	CMD 07-H12.4
Brent M.P. Beleskey	CMD 07-H12.5
Mary Neuman	CMD 07-H12.6
Joyce Cheung	CMD 07-H12.7