



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant GE - Hitachi Nuclear Energy Canada Inc.

Subject Application to Renew the Licences for Toronto
and Peterborough Facilities

Public Hearing
Dates September 30 and December 9, 2010

RECORD OF PROCEEDINGS

Applicant: GE-Hitachi Nuclear Energy Canada Inc.

Address/Location: 1160 Monaghan Road, Peterborough, Ontario, K9J 7B5

Purpose: Application to renew licences for the Toronto and Peterborough facilities

Application received: June 1, 2010

Dates of public hearings: September 30 and December 9, 2010

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

Members present: M. Binder, Chair R. J. Barriault
A.R. Graham A. Harvey

Secretary: K. McGee
Recording Secretary: S. Dimitrijevic
General Counsel: L. Thiele

GEH-C Represented By		Document Number
<ul style="list-style-type: none">• P. Mason, President and CEO;• P. Desiri, Environmental Health and Safety Manager, and Nuclear Regulatory Officer		CMD 10-H17.1 CMD 10-H17.1A CMD 10-H17.1B CMD 10-H17.1C
CNSC staff		Document Number
<ul style="list-style-type: none">• P. Elder• B.R. Ravishankar	<ul style="list-style-type: none">• G. Crawford• P. Thompson	CMD 10-H17 CMD 10-H17.A CMD 10-H17.B
Intervenors		Document Number
See appendix A		

Licence: Renewed

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Introduction

1. GE-Hitachi Nuclear Energy Canada Inc. (GEH-C) has applied to the Canadian Nuclear Safety Commission¹ (CNSC) for the renewal of the operating licences for its facilities located in Toronto and Peterborough, Ontario. The current operating licences for both facilities, FFOL-3622.0/2010 and FFOL-3621.2/2010, expired on December 31, 2010. GEH-C has applied for the renewal of these licences for a period of ten years and their consolidation into one licence for both facilities.
2. GEH-C is a company that manufactures fuel bundles for CANDU reactors from uranium oxide powder. The Toronto facility produces natural uranium dioxide (UO₂) pellets from powder. The Peterborough facility uses the UO₂ pellets to assemble fuel bundles for nuclear power reactors. The Peterborough facility is also involved in nuclear services and design as well as in contaminated equipment repair. Both facilities are located close to residential neighbourhoods. The Toronto facility is assessed at the lower end of the medium risk facilities while the Peterborough facility is assessed as a low risk facility.
3. The current operating licences for both facilities are Class IB licences. The last licence amendment allowed the Peterborough facility to produce a limited amount of fuel bundles with low enriched uranium; however, due to lack of demand for such bundles, they have not been assembled in the Peterborough facility.
4. This *Record of Proceedings, including Reasons for Decision* provides the detailed findings of the Commission and reasons for its decision made in December 2010 and published on December 22, 2010 in the *Summary Record of Proceedings*.

Issues

5. In considering the application, the Commission was required to decide, pursuant to subsection 24(4) of the *Nuclear Safety and Control Act*² (NSCA):
 - a) if GE-Hitachi Nuclear Energy Canada Inc. is qualified to carry on the activity that the licence would authorize; and
 - b) if, in carrying on that activity, GE-Hitachi Nuclear Energy Canada Inc. 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.

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 Statutes of Canada, S.C. 1997, c. 9.

Public Hearing

6. 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, considered information presented for a public hearing held on September 30, 2010 and on December 9, 2010 in Ottawa, Ontario. The public hearing was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*³. During the public hearings, the Commission considered written submissions and heard oral presentations from CNSC staff (CMD 10-H17, CMD 10-H17.A and CMD 10-H17.B) and GEH-C (CMD 10-H17.1, CMD 10-H17.1A, CMD 10-H17.1B and CMD 10-H17.1C). The Commission also considered oral and written submissions from 48 intervenors (see Appendix A for a detailed list of interventions), as well as a petition of the parents of the children who attend Prince of Wales Elementary School in Peterborough.

Decision

7. 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 GEH-C is qualified to carry on the activity that the licence will authorize. The Commission is of the opinion that GEH-C, 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 operating licences issued to GE-Hitachi Nuclear Energy Canada Inc. for its facilities located in Toronto and Peterborough in Ontario. The operating licenses for these two facilities are combined into a single renewed licence. The renewed licence, FFOL-3620.00/2020, is valid until December 31, 2020, unless suspended, amended, revoked or replaced.

8. The Commission includes in the licence the conditions as recommended by CNSC staff and set out in the draft licence attached to CMD 10-H17, with the following modifications: the activities related to low enriched uranium, as approved in the January 2010 amendment to the Peterborough licence, as well as the right to possess low enriched uranium is to be removed from the licence, so that these activities would not be allowed under the renewed licence, FFOL-3620.00/2020. The proposed Licence Condition Handbook should be modified accordingly.

Issues and Commission Findings

9. In making its decision, the Commission considered a number of issues relating to

³ Statutory Orders and Regulations, S.O.R./2000-211.

GEH-C'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.

Management System

10. GEH-C representatives informed the Commission about the structure of General Electric Company (GE) and explained the position of GEH-C within the company. They stressed that the GEH-C operation benefits from GE's extensive system of Environmental Health and Safety compliance assurance tools, which include 21 health and safety and 6 environmental elements. They also informed the Commission on the GE Quality Assurance corporate program, which is used by GEH-C.
11. CNSC staff informed the Commission that GEH-C has a management system that covers both facilities and comprises documented procedures, a web-based document control system, a web-based compliance assurance system and planned staff and management meetings for managing the overall activities of the facilities. The management system includes the following specific areas:
 - GEH-C management systems;
 - Organizational structure, roles and responsibilities;
 - Internal communications;
 - Management of safety;
 - Quality assurance; and
 - Safety culture.
12. CNSC staff further informed the Commission that, in response to CNSC staff's requirement, GEH-C had produced a new quality assurance program document as part of the licence renewal applications. CNSC staff added that the control of the documentation associated with the Quality Assurance program is included in the Licence Conditions Handbook (LCH). CNSC staff considers this safety and control area to be satisfactory.
13. Based on its consideration of the presented information, the Commission concludes that GEH-C has appropriate organization and management structures in place to adequately carry out the activities under the proposed licence.

Human Performance Management

14. GEH-C representatives informed the Commission that the Global Star excellence program continues to be a primary tool for driving good health and safety performance. Global Star sites develop many Best Management Practices (BMP) tools and programs and share these with other sites as part of the Global Star audit program. They added that their employees participate in health and safety programs through membership in a safety committee, by contributing suggestions for improvement, or attending non-

mandatory safety meetings.

15. CNSC staff informed the Commission that they have evaluated GEH-C's training programs for staff and contractor training procedure, and found that all procedures are documented and implemented so that the workforce have the necessary knowledge and skills to safely carry out their duties.
16. The Commission sought more information on testing of workers' fitness for duty and inquired on the inspection of contractors' training program implementation. Representatives of GEH-C responded that they perform physical tests so that every worker is tested for its work description and corresponding duties. CNSC staff responded that while they did not perform inspections specifically for contractors' training due to satisfactory performances in other operational areas, they had continuously collected information on this area through inspections of other safety and control areas.
17. The Commission inquired about the program for recruitment of aboriginal peoples. GEH-C representatives responded that the Toronto and Peterborough facilities do not have a recruitment program for employees of aboriginal origin and that the number of such employees is small; however, they noted that their parent company has developed policy and programs for recruitment and training of aboriginals. The Commission suggested that GEH-C adopt a proactive approach to this matter.
18. Based on its consideration of the presented information, the Commission concludes that GEH-C has appropriate programs in place and that current efforts related to human performance management provide a positive indication of GEH-C's ability to adequately carry out the activities under the proposed licence.

Operating Performance

19. GEH-C representatives informed the Commission about operation of their facilities in Toronto and Peterborough and stated that there are no changes in their operational status, and that they were not requesting any changes to their licenced activities.
20. CNSC staff reported on their assessment of the overall operation of these facilities, effectiveness of the performance and safety culture. CNSC staff noted that GEH-C had been carrying out their licensed activities in accordance with their programs and procedures, and added that the operational controls for the environment and radiation protection were acceptable. CNSC staff also reported that there had been no reportable events during the licensing period.
21. CNSC staff informed the Commission that they had inspected each facility on average four times a year during this licensing period and that the level of operational performance throughout this period was acceptable.

22. CNSC staff noted that, for the proposed licence period, there were no planned changes regarding the operation of the Toronto and Peterborough facilities. CNSC staff further noted that, by the amendment of the licence for the Peterborough facility in January 2010, the use of enriched uranium has been approved at the Peterborough facility. CNSC staff added that no work with enriched uranium was expected in the near future and that any activity involving enriched uranium will be controlled using the criticality safety licence conditions included in the proposed licence.
23. More than 40 intervenors expressed concerns regarding the possibility that GEH-C begin to manufacture reactor fuel elements using low-enriched uranium (LEU) in densely populated residential areas and close to the public school.
24. The Commission sought more information regarding the use of enriched uranium and related planned activities. In their response, GEH-C representatives stressed that none of the facilities had been involved in enrichment of uranium. They noted that GEH-C had applied for the amendment to the licence to assemble low enriched uranium fuel as part of development program for the fuel for the advanced CANDU reactor, and added that they don't see a demand for that fuel in the foreseeable future. GEH-C committed to repeat a full public consultation before deciding to move forward with a possible assembly of LEU fuel bundles.
25. The Commission asked GEH-C if they have considered an option to relocate both plants to a location outside of residential areas. Representatives of GEH-C responded that they had not considered relocating the plants, which have been already located within industrial areas for the last 120 years.
26. CNSC staff informed the Commission that there is no requirement at present to have any nuclear liability insurance cover for this facility; however nuclear liability insurance will be required before allowing GEH-C to assemble bundles containing enriched uranium. CNSC staff specified that a licensee should have an acceptable nuclear criticality safety program in place before any enriched uranium can be brought into a facility, and that, if a licensee has more than 80% of a critical mass of U-235 at the facility, nuclear liability insurance will have to be in place.
27. Based on its consideration of the presented information, the Commission concludes that the operating performance at the facility provides a positive indication of GEH-C's ability to adequately carry out the activities under the licence, and protect the health and safety of persons and the environment.
28. The Commission notes the concerns expressed by the public on the eventual presence of enriched uranium at the Peterborough facility and GEH-C's statement that no work with enriched uranium is expected in the near future at this facility. The Commission therefore decides to remove from the proposed licence and related Licence Conditions Handbook the right to possess, and the activities related to, low enriched uranium as approved in the January 2010 amendment to the Peterborough licence.

Safety Analysis

29. GEH-C indicated that certain processes and activities are classified as high-risk and subject to additional quality assurance controls, including the requirement for a safety analysis of each process and activity.
30. CNSC staff informed the Commission that GEH-C has an adequate process in place to identify and evaluate potential high risk safety hazards associated with the operation of these facilities. CNSC staff added that safety analysis for this type of facility is relatively simple and does not rely on complex computer modelling. CNSC staff also noted that safety analysis is considered a low risk area, and that the facilities have not been modified to require further analysis during this licensing period.
31. On the basis of the information presented, the Commission concludes that the licensee's systematic evaluation of the potential hazards and the preparedness for reducing the effects of such hazards is adequate for the operation of the facilities and the activities under the proposed licence.

Physical Design

32. GEH-C representatives informed the Commission that there had been no major changes in either of their facilities.
33. CNSC staff reported to the Commission that GEH-C has systems, structures and components that are appropriate for the production of fuel pellets and the fabrication of uranium fuel bundles. CNSC staff added that the systems for controlling releases and radiation levels are in place and are regularly maintained.
34. On the basis of the information presented, the Commission concludes that the ability of systems, components and structures to maintain their design basis is adequate for the operation period included in the proposed licence.

Fitness for Service

35. GEH-C representatives informed the Commission that preventative maintenance had been completed as scheduled at both facilities and that expert third party contractors had completed all required periodic inspections and tests on fire safety systems.
36. CNSC staff reported on the maintenance of safety-related equipment in both facilities and said that GEH-C has documented maintenance requirements in its Environmental Protection program and Radiation Protection program. CNSC staff noted that GEH-C has continued to produce CANDU reactor fuel using the same processes with minor changes to its fuel bundle assembly process and with replacements of some of their

automated equipment. CNSC staff added that GEH-C continues to maintain these facilities to ensure that the systems, components and structures remain effective.

37. CNSC staff further reported that the results of their inspections, which include a review of the maintenance records for the implemented maintenance program, were satisfactory during this licence period.
38. The Commission is satisfied with GEH-C's programs for the inspection and life-cycle management of key safety systems. Based on the above information, the Commission concludes that the equipment as installed and maintained at the Toronto and Peterborough facilities is fit for service.

Radiation Protection

39. GEH-C representatives provided information on radiological exposure of employees to the low-level alpha, beta and gamma radiation emitted by the natural uranium being processed in the Toronto and Peterborough facilities. They added that the control of these exposures has been ensured through the site Radiation Protection (RP) Programs.
40. CNSC staff informed the Commission that GEH-C's performance in the safety and control area of Radiation Protection is satisfactory. The RP program and program implementation continue to meet regulatory requirements. The inspections conducted as routine compliance verification activities had indicated only minor deficiencies and had resulted in action items that had been all adequately addressed by GEH-C.
41. CNSC staff further informed the Commission that the radiation doses to the workers had been adequately controlled, and that no worker at GEH-C had received radiation doses in excess of the regulatory limits.
42. CNSC staff added that doses to the public had been estimated from the releases to the environment and had not been reported since the values had been too low to be accurately measured. For both facilities, the gamma dose rates had been measured quarterly at the fence line of the licensed facilities, and the obtained values had been within the range for the background radiation.
43. The Commission sought more information about personal dosimetry at GEH-C plants. GEH-C representatives responded that they use thermoluminescent dosimeters (TLDs) for continual recording of received whole-body, skin, and other types of doses. The data are collected monthly in Toronto and quarterly in Peterborough, and are summarized to obtain an annual dose.
44. The Commission asked if a criticality accident could occur, as mentioned by one intervenor. The representative of GEH-C responded that a criticality accident could not occur with natural uranium currently used in GEH-C facilities.

45. The Commission is of the opinion that, given the mitigation measures and radiation protection programs that are in place or will be in place to control hazards, GEH-C will provide adequate measures against radiation to protect the health and safety of persons and the environment.

Conventional Health and Safety

46. GEH-C representatives informed the Commission that injury rates in their facilities continue to trend downward and are a small fraction of rates found in comparable manufacturing industries. They noted that GEH-C had over 6,000,000 hours without a lost time accident.
47. CNSC staff informed the Commission that GEH-C has a well developed Health and Safety program and that the conventional health and safety performance has been good over the current licensing period, with one lost time accident at the Peterborough facility and two lost time accidents at the Toronto facility. CNSC staff reported an accident in the fall of 2010 where a lathe operator injured his hand at the Peterborough facility. The incident did not involve any nuclear material.
48. The Commission sought more detail about GEH-C occupational health program and asked about pre-employment examinations, return to work evaluations and modified work programs. GEH-C representatives responded that they have the mentioned programs in place and that all GEH-C programs are consistent with legal requirements.
49. Some intervenors expressed concerns regarding health effects caused by hazardous emissions and contamination of the environment by beryllium, polychlorinated biphenyl (PCB) and tritium. GEH-C representatives responded that the studies done, as well as the assessment of beryllium releases to the environment done in 2005 by the Ontario Ministry of the Environment, have shown that beryllium emissions were too small to measure in the soil and foliage around the facility. With respect to tritium, GEH-C representatives explained that tritium had been mentioned during public meetings as one of the products formed during operation of nuclear reactors; however, tritium is neither formed nor is it present in GEH-C facilities. With respect to PCB, asbestos and other chemicals, CNSC staff noted that these materials had been used in the past in other GE facilities at the same location but unrelated to the current Peterborough GEH-C facility. These other GE facilities are not operational any more.
50. The Commission understands the concerns regarding general health issues expressed by the public in their interventions. The Commission notes that, for the purpose of this licence renewal, it has focused, pursuant to its mandate, on the potential impact of the activities conducted in the GEH-C's CNSC licensed facilities, and not on other matters raised by intervenors pertaining to historical non-radiological contamination or legacy issues at other non-nuclear facilities in Peterborough.

51. The Commission is of the opinion that GEH-C will provide adequate protection to the health and safety of persons during the proposed activities at its Toronto and Peterborough facilities.

Environmental Protection

52. GEH-C stated that they maintain a comprehensive environmental protection program that complies with applicable regulatory requirements.
53. GEH-C representatives presented to the Commission their data on uranium releases to the environment and stressed that all releases represent only a fraction of the current release limits. They supported the initiative by CNSC staff to introduce lower, more appropriate release limits.
54. CNSC staff informed the Commission that their assessment of the GEH-C environmental performance has been based on monitoring programs related to the releases of uranium to the environment at both facilities. CNSC staff added that the sources of airborne uranium are the process exhausts, which are filtered prior to release into the environment. The facilities conduct continuous in-stack monitoring of the uranium emission and control the releases so that they are as low as reasonably achievable (ALARA). CNSC staff further reported that during the current licensing period, the stack sampling results did not exceed the action level and the uranium releases remained well below the derived release limit (DRL) for air emissions for either facility.
55. With respect to the average uranium concentration in liquid effluent, CNSC staff stated that during the licence period, no action level was exceeded and the releases were well below the calculated DRLs.
56. CNSC staff further reported that they had inspected the GEH-C facilities in February 2007, focusing on the operation of these facilities and associated source monitoring. This inspection resulted in one action notice and one recommendation, which were promptly addressed by GEH-C and were closed. CNSC staff added that no significant issues of non-compliance were identified during this inspection.
57. The Commission sought more information on release to the environment, DRLs and a recommendation by CNSC staff to drastically lower the release limits. CNSC staff explained that their recommendation was consistent with the CNSC licence reform process, and proposed that the new limit be only 5% of the current limit. They explained that such reduction is based on the calculated DRL equivalent to 50 μ Sv (microSieverts), and noted that the actual average releases from the GEH-C facilities amount to below 2% of the newly proposed limits.
58. The Commission is of the opinion that, given the mitigation measures and safety programs that are in place or will be in place to control hazards, GEH-C will provide

adequate protection to the environment.

Emergency Management and Fire Protection

Emergency Management

59. GEH-C reported that the Environmental Health and Safety (EHS) Manual contains the detailed emergency preparedness and response plans which address all credible scenarios including fire, spills and transportation incidents. GEH-C further noted that emergency response drills are conducted quarterly and that major exercises are conducted every two years. Resulting corrective actions are tracked to completion.
60. CNSC staff reported that GEH-C has an emergency preparedness procedure for each facility, which is described in the Environmental Health and Safety Manual. CNSC staff added that GEH-C also has an Emergency Response Assistance Plan for the transportation of dangerous goods that has been approved by Transport Canada.

Fire Protection

61. GEH-C reported that fire drills are conducted every quarter and that a major exercise is conducted at least annually.
62. CNSC staff reported on a Fire Protection Inspection done in 2009 at both facilities, when only minor non-compliances were observed, and the overall physical condition of these facilities had been rated as satisfactory. CNSC staff noted that annual third party reviews of inspection, testing and maintenance of fire protection features had been carried out as required by the facilities' operating licences.
63. CNSC staff informed the Commission that a Fire Hazard Analysis has recently been completed and was under review, and that the previously reviewed methodology used for the production of this analysis had met CNSC staff's expectations.
64. The Commission sought more information related to training of fire fighters and asked if GEH-C meets all current and updated national codes. GEH-C representatives responded that they train the fire fighters at least every two years. With respect to national codes, GEH-C stated that they have two aspects to their fire safety program that include a third party assessment: the annual review done by a third party, and a requirement to do a fire hazard analysis, the last of which had been completed in 2010. CNSC staff confirmed that they had inspected both facilities and had been satisfied with all aspects of GEH-C's fire protection program.
65. Based on the presented information, CNSC staff's assessment and conducted inspections, the Commission is of the opinion that GEH-C will provide adequate protection to the health and safety of persons, the environment and national security in cases of emergency and unplanned events.

Waste Management and Decommissioning

66. Representatives of GEH-C provided information on their programs that are in place to minimize waste generation in the Toronto and Peterborough facilities. They stated that, in Toronto, only about 0.006% of the processed uranium ends up in waste, while in Peterborough, there is virtually no process waste. GEH-C representatives added that all waste quantities are reported in annual reports to the CNSC.
67. CNSC staff confirmed that GEH-C has a Waste Management program for both facilities and noted that the company does not accumulate operational waste at either facility. CNSC staff added that the Toronto facility is used as the waste collection center prior to dispatch for recycling or disposal, while the Peterborough facility either dispatches some waste material directly to waste management facilities or sends it to the Toronto facility.
68. GEH-C noted that they submitted an updated decommissioning plan to the CNSC in May 2008, which references previously submitted information. GEH-C added that an updated plan is under development in preparation for the submission of a new financial guarantee.
69. CNSC staff confirmed that GEH-C has decommissioning plans (PDPs), which are reviewed by GEH-C every five years. As part of the next five-year review, GEH-C will revise the PDPs for each facility and produce a single stand alone decommissioning plan based on CNSC Regulatory Guide, *G-216: Decommissioning Planning for Licensed Activities*, before the end of 2011.
70. The Commission asked CNSC staff to comment on a statement made by an intervenor that, due to the changes made to the Environmental Assessment Coordinating Committee during the last budget bill, a decommissioning report was no longer required. CNSC staff responded that the requirements for decommissioning plans stem from the *Nuclear Safety and Control Act* and have no impact or no relation to the *Canadian Environmental Assessment Act*⁴ (CEAA). CNSC staff stated that they would continue to require that a licensee provide valid and satisfactory decommissioning plans and financial guarantees.
71. The Commission requires that the licensee has operational plans for decommissioning and long-term management of waste produced during the life-span of the facilities. Based on the obtained information, the Commission considers that the current waste management programs and practices and the preliminary decommissioning plans are acceptable for the purpose of the current application for licence renewal.

⁴ Statutes of Canada, S.C. 1992, c. 37

Security

72. The Commission was provided with separate, protected CMDs, which were considered in closed sessions.
73. The Commission concludes that GEH-C has made adequate provision for ensuring the physical security of the facilities, and is of the opinion that GEH-C will continue to make adequate security provision during the proposed licence period.

Safeguards and Non-Proliferation

74. The CNSC's regulatory mandate includes ensuring conformity with measures required to implement Canada's international obligations under the Treaty on the Non-Proliferation of Nuclear Weapons. Pursuant to the Treaty, Canada has entered into safeguards agreements with the International Atomic Energy Agency (IAEA). The objective of these agreements is for the IAEA to provide credible assurance on an annual basis to Canada and to the international community that all declared nuclear material is in peaceful, non-explosive uses and that there is no undeclared nuclear material or activities in this country.
75. GEH-C reported that its facilities maintain a comprehensive uranium inventory system to demonstrate compliance with safeguards requirements. GEH-C also noted that they implemented an integrated safeguards program during the current licence period.
76. CNSC staff informed the Commission that GEH-C had provided the CNSC with all reports and information necessary for safeguards and had fully complied with IAEA and CNSC requests. CNSC staff added that, during this licensing period, the IAEA had conducted several inspections per year, and that GEH-C had provided the IAEA with the necessary access and assistance to perform their activities.
77. CNSC staff noted that the proposed licence conditions will require that GEH-C meet the requirements of a new regulatory document *RD-336: Accounting and Reporting of Nuclear Material*, which was issued to ensure consistency in record-keeping and reporting of specific nuclear substances, in accordance with Canada's international obligations.
78. Based on the above information the Commission is satisfied that GEH-C has made and will continue to make adequate provisions in the areas of safeguards and non-proliferation that are necessary for maintaining national security and measures necessary for implementing international agreements to which Canada has agreed.

Packaging and Transport

79. GEH-C stated that an emergency response plan has been updated during the licence

period and filed with Transport Canada. CNSC staff confirmed that this transportation emergency response plan was approved by Transport Canada.

80. GEH-C noted that there were no reportable transportation incidents during the current licence period.
81. The Commission sought more information regarding safety issues related to transportation of fuel rods and bundles. In response, GEH-C representative noted that the rods and bundles are robust and leak tested, and the pellets are in the form of compact, hard ceramics. GEH-C representative also said that the shipment of fuel bundles is done in accordance with their approved procedures and all applicable regulations.
82. Based on the information provided, the Commission is satisfied that appropriate measures are in place at the GEH-C facilities regarding packaging and transport.

Application of the *Canadian Environmental Assessment Act*

83. Before making a licensing decision, the Commission must be satisfied that all applicable requirements of the *Canadian Environmental Assessment Act*⁵ (CEAA) have been fulfilled.
84. CNSC staff noted that the renewal of a licence, under subsection 24(2) of the NSCA, is not listed as a “trigger” under the *Law List Regulations*⁶. Since there are no other CEAA triggers for this project that involve the CNSC, CNSC staff stated that an environmental assessment pursuant to the CEAA is not required.
85. The Commission is satisfied that there is no requirement for an Environmental Assessment pursuant to subsection 5(1) of the CEAA. The Commission is satisfied that all applicable requirements of the CEAA have been fulfilled.

Cost Recovery

86. CNSC staff informed the Commission that GEH-C is in good standing with respect to the *Cost Recovery Fees Regulations*⁷ requirements for their facilities in Toronto and Peterborough.

Financial Guarantees

87. In order to ensure that adequate resources are available for a safe and secure future decommissioning of the Toronto and Peterborough sites, the Commission requires that an adequate financial guarantee for realization of the planned activities is put in place

⁵ Statutes of Canada, S.C. 1992, c. 37

⁶ S.O.R./94-636.

⁷ Statutory Orders and Regulations, SOR/2003-212

and maintained in a form acceptable to the Commission throughout the licence period.

88. GEH-C stated that decommissioning bonds were maintained throughout the current licensing period. CNSC staff confirmed that GEH-C has an irrevocable Letter of Credit with the RBC Royal Bank of \$33,079,600 for the Peterborough and the Toronto facilities. CNSC staff added that GEH-C was currently reviewing this financial instrument and might propose an alternative financial instrument to the Commission for approval.
89. The Commission sought more information regarding adequacy of the funds and consideration of alternative financial instruments. CNSC staff responded that the financial guarantee is adequate and will be updated in 2011. GEH-C representatives explained that they were looking for more favourable financial instruments to provide an adequate and acceptable financial guarantee.
90. Based on this information, the Commission considers that the preliminary decommissioning plans and related financial guarantee are acceptable for the purpose of the current application for licence renewal.

Public Information

91. GEH-C described their Public Information Program (PIP) and noted that they had revised it to include improvements and guidance stated in Regulatory Document G-217, *Licensee Public Information Programs*. CNSC staff concurred with GEH-C and noted that they had reviewed the revised PIP and they consider this document acceptable.
92. With respect to aboriginal consultation, CNSC staff reported that they have not been aware of any current issues associated with any First Nation groups or Métis groups associated with this licence renewal. CNSC staff added that, in recognition of the CNSC's duty to consult Aboriginal communities in Canada, a letter had been sent out to inform the aboriginal community of the licence renewal and to inform them on how to make interventions at the public hearings.
93. The Commission asked about the means GEH-C uses to inform the public about its activities. GEH-C representatives responded that they post relevant information on the company's web-site and that they send newsletters to the neighbourhoods within the one-half kilometre radius when some changes occur.
94. A large number of intervenors expressed their dissatisfaction and complained that they have not been adequately informed by GEH-C neither about the request for the licence renewal, nor on GEH-C's plans for the next ten years. In one intervention, the intervenor stated that public communication had been insufficient and pointed out that the aboriginal consultation on decommissioning and health issues had not been always addressed to all peoples who have Treaty rights.

95. In response to the questions regarding their activity related to public information, GEH-C representatives said that, in 2007, they held a well attended public meeting that had been advertized on the local radio and in the local press, and that GEH-C had arranged a tour of their Peterborough facility with some of the key leaders in the community, including the mayor, council members, the principal of the neighbouring Prince of Wales School and other community leaders. GEH-C representatives further noted that the company had sent a newsletter to 650 neighbours of the facility, notifying them of the meeting and current activities, and also put out a website providing information and soliciting input on matters of interest.
96. GEH-C representatives further added that, in 2008, GEH-C had handed 3 600 newsletters to the local residents and sent this information to the Aboriginal groups of the region, and received only 14 responses. GEH-C had replied to each of these responses. The representatives also said that GEH-C held meetings in 2008 with the Peterborough Emergency Preparedness Department, the fire department and the Ontario Ministry of Environment. They said that GEH-C also had met representatives from the education board and with both the parents and teachers of the Prince of Wales School.
97. The Commission recognizes the improvements that GEH-C has made in its Public Information Program; however, it expects that GEH-C fully implement all aspects of this program. The Commission directs CNSC staff to closely monitor the implementation of the program and inform the Commission on the progress of its implementation in their annual reports.
98. Based on the above information, the Commission acknowledges that the public and Aboriginal groups that were identified as having potential interest in the decision have been informed of the licence renewal and the intervention process, and that the engagement efforts made by the licensee and by the CNSC staff are adequate.

Conclusion

99. The Commission has considered the information and submissions of CNSC staff, the GEH-C and all participants as set out in the material available for reference on the record, as well as the oral and written submissions provided or made by the participants at the hearing.
100. The Commission concludes that an environmental assessment of the proposed continued operation of the two facilities, pursuant to the *Canadian Environmental Assessment Act* is not required.
101. The Commission is satisfied that GEH-C meets the requirements of subsection 24(4) of the *Nuclear Safety and Control Act*. That is, the Commission is of the opinion that GEH-C is qualified to carry on the activity that the proposed licence will authorize and

that GEH-C 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.

102. Therefore, the Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, decides to renew for the period of ten years the operating licence issued to GE-Hitachi Nuclear Energy Canada Inc. for its facilities located in Toronto and Peterborough in Ontario. The Commission decides to issue a single licence for both facilities. The renewed licence, FFOL-3620.00/2020, is valid until December 31, 2020.
103. The Commission includes in the licence the conditions as recommended by CNSC staff and set out in the draft licence attached to CMD 10-H17, with the following modifications: the activities related to low enriched uranium, as well as the right to possess low enriched uranium is to be removed from the proposed licence, so that these activities would not be allowed under the renewed licence, FFOL-3620.00/2020.
104. The Commission requires that the proposed Licence Condition Handbook be modified accordingly.
105. The Commission directs GEH-C to prepare a status report on the safety performance of its facilities following the midpoint of the 10-year licence term, and requests that CNSC staff prepare annual reports on the results of compliance activities and on the licensee's performance. The reports shall be presented at public proceedings of the Commission.



MAR 02 2011

Michael Binder
President,
Canadian Nuclear Safety Commission

Date

Appendix A – Intervenors

Intervenors		Document Number
Tyler Vandermolen		CMD 10-H17.2
Zach Ruiter		CMD 10-H17.3 CMD 10-H17.3A
Matthew Laing Gibbard		CMD 10-H17.4
Canadian Nuclear Workers' Council and the Communications, Energy & Paperworks Union, Local-599-O, represented by D. Shier		CMD 10-H17.5
Amanda Lickers		CMD 10-H17.6
Council of Canadians, Peterborough-Kawarthas Chapter, represented by R. Brady		CMD 10-H17.7
Leah Simms-Karp		CMD 10-H17.8
Carol Winter		CMD 10-H17.9
Victoria Wood		CMD 10-H17.10
Molly MacDonald		CMD 10-H17.11
Aaron Alexander-Campbell		CMD 10-H17.12
Hanah McFarlane		CMD 10-H17.13
Sheila Nabigon-Howlett		CMD 10-H17.14
Tegan Moss		CMD 10-H17.15
Jo Hayward-Haines		CMD 10-H17.16
Darlene Buckingham		CMD 10-H17.17
Evan Brockest		CMD 10-H17.18
Mike Facey		CMD 10-H17.19
Ian Cameron		CMD 10-H17.20
Patricia Morris		CMD 10-H17.21
Susan Dymont		CMD 10-H17.22
Paul Longhurst		CMD 10-H17.23
Shane Hartman		CMD 10-H17.24
Sally Goodwin		CMD 10-H17.25 CMD 10-H17.25A
Stuart Morris		CMD 10-H17.26
Liat Mandel		CMD 10-H17.27
Emily Mask		CMD 10-H17.28
Megan Dochuk		CMD 10-H17.29
Matthew Beal		CMD 10-H17.30
Jane Scott		CMD 10-H17.31 CMD 10-H17.31A
Carla Dempsey Matt Vidler Julie Cosgrove Megan Meyer Cathrine VanHoof Melanie Buddle Anna Tennent-Riddell Caroline Tennent Christina Warne Julian Tennent-Riddell	Kevin Siena Erica Martin Andrew Griffin Lara Griffin Peter Harris Pete Woolidge Stephanie Melles Carla Dempsey	CMD 10-H17.32 CMD 10-H17.32A
Daniel Adaszynski		CMD 10-H17.33