

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Ontario Power Generation Inc.

Subject Application for a temporary change to Darlington
Nuclear Generating Station Operating Policies
and Principles

Date May 1, 2006

RECORD OF PROCEEDINGS

Applicant: Ontario Power Generation Inc.

Address/Location: P.O. Box 4000, Bowmanville, ON L1C 3Z8

Purpose: Application for a temporary change to Darlington Nuclear
Generating Station Operating Policies and Principles

Application received: February 23, 2006

Date(s) of hearing: March 16, 2006

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

Member present: L.J. Keen, Chair

General Counsel: J. Lavoie
Secretary: M. Leblanc
Recording Secretary: P. Bourassa

Licence: Temporarily modified
Date of Decision: March 16, 2006

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1. Introduction

Ontario Power Generation Inc. (OPG) applied to the Canadian Nuclear Safety Commission (CNSC¹) for a temporary change to Darlington Nuclear Generating Station Operating Policies and Principles (OP&P).

For the upcoming planned Unit 3 spring 2006 Outage at the Darlington Nuclear Generating Station, OPG intends to perform channel inspections using the Universal Delivery Machine (UDM) System. The proposed temporary change to the OP&P wording is required to account for the current design of the UDM that prevents the pressurization of the heat transport system in the unlikely event that it cannot be removed from the channel.

Issues:

In considering the application, the Commission was required to decide, pursuant to subsection 24(4) of the *Nuclear Safety and Control Act*²:

- a) if OPG is qualified to carry on the activity that the licence would authorize; and
- b) if, in carrying on that activity, OPG 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:

Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to hear the application.

The Panel of the Commission (hereafter referred to as the Commission), in making its decision, considered information presented for a hearing held on March 16, 2006 in Ottawa, Ontario. During the hearing, the Commission received written submissions from CNSC staff (CMD 06-H106) and OPG (CMD 06-H106.1).

The hearing was conducted in accordance with Rule 3 of the *Canadian Nuclear Safety Commission Rules of Procedure*. In establishing the process, a standing panel on procedural matters determined that it was not necessary to hold a public hearing on the matter. In order to proceed with the hearing in an expeditious manner, the standing panel also decided to move the hearing date to March 16 from the original date of March 17, 2006.

¹ 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.

² S.C. 1997, c. 9

2. Decision

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 OPG is qualified to carry on the activity that the licence will authorize. The Commission is also satisfied that OPG, 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*, authorizes a temporary modification to the Darlington Nuclear Generating Station Operating Policies and Principles referenced in Ontario Power Generation Inc.'s Power Reactor Operating Licence PROL 13.11/2008.

The temporary modification is only applicable while specific maintenance activities are being carried out during the planned spring 2006 Unit 3 Outage at the Darlington Nuclear Generating Station.

The Commission authorizes the following text, as recommended by CNSC staff in CMD 06-H109, to modify Appendix B, Section 7.0 of the Darlington NGS Operating Policies and Principles:

“During a unit start-up, the ECIS must be available for service prior to the HTS temperature exceeding 90°C. The ECI system will remain in a blocked state while the UDM is being used on the reactor face and cannot be removed. Manual ECIS initiation shall remain available.”

3. Issues and Commission Findings

The Commission considered the safety system availability and outage management at Darlington NGS as an indication of OPG's qualifications to perform the planned outage with the temporary modification to the OP&P and, in doing so, provide adequate protection for the environment, and the health and safety of persons.

In order to carry out specific channel inspections using the UDM, OPG explained that a temporary modification to the OP&P was necessary to ensure that the Emergency Coolant Injection System (ECIS), acting as a backup heat sink, remained in blocked state. In the unlikely event that the primary heat sink would be lost, this modification would prevent the UDM relief valve, which has a low pressure setting, from opening and discharging coolant into the containment. OPG noted that if this event were to occur, natural circulation would be credited as the backup heat sink and would ensure the safe and timely completion of necessary outage maintenance activities.

CNSC staff agreed with OPG's supporting analysis and technical justifications that keeping the ECIS blocked at above 90 degrees Celsius does not jeopardize fuel cooling or pressure tube integrity for outage configurations where natural circulation has been credited as the back-up

heat sink. It was further noted that the manual ECIS initiation would remain available at all times.

CNSC staff noted that it had approved similar requests from OPG for the modification to the OP&P during three past outages on Unit 4 during spring 2003, Unit 1 during spring 2004 and Unit 2 during spring 2005. OPG further noted that the planned inspections during these past outages were safely completed.

Based on the information received and OPG's past outage performance at Darlington NGS, the Commission concludes that there is positive indication of OPG's ability to carry out the outage management activities using the UDM System. The Commission is also satisfied that OPG will make adequate provision for the protection of the environment and persons when carrying out the proposed activities.

4. Conclusion

The Commission has considered the information and submissions of the applicant and CNSC staff as presented in the material available for reference on the record.

The Commission is satisfied that OPG is qualified to carry on the activity that the proposed amended licence will authorize. The Commission is also satisfied that OPG has made and is expected to continue to make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and the measures required to implement national obligations agreed to by Canada. The Commission is also satisfied that the risk posed to the environment, to the health and safety of persons, and to national security, given the measures and programs to control the hazards that are in place or will be in place, are reasonable.

The Commission therefore authorizes a temporary modification to the Operating Policies and Principles of Ontario Power Generation's Darlington Nuclear Generating Station. This temporary modification is only applicable while specific maintenance activities are being carried out during the planned spring 2006 Unit 3 Outage at the Darlington Nuclear Generating Station located in Darlington, Ontario.

The Commission includes in the Operating Policies and Principles the modification as recommended by CNSC staff, as set out in CMD 06-H109.

Marc A. Leblanc
Secretary,
Canadian Nuclear Safety Commission

Date of decision: March 16, 2006

Date of release of Reasons for Decision: May 1, 2006