



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

# Summary of Proposed Follow-Up and Monitoring Program

Pickering NGS-A Return to Service  
Environmental Assessment



# **SUMMARY OF PROPOSED FOLLOW-UP AND MONITORING PROGRAM**

## **PICKERING NGS-A RETURN TO SERVICE ENVIRONMENTAL ASSESSMENT**

*The Canadian Nuclear Safety Commission (CNSC) is inviting public input on the design of the follow-up and monitoring program for the environmental assessment recently completed on the proposed return-to-service of the Pickering Nuclear Generating Station 'A'. Please provide your comments to the address below prior to May 25, 2001.*

### **1.01 INTRODUCTION**

On February 16, 2001, following a public hearing in October and December of 2000, the CNSC announced its decision on the environmental assessment of Ontario Power Generation's proposal to return the Pickering Nuclear Generating Station 'A' (NGS-A) to service. The environmental assessment was conducted in accordance with the *Canadian Environmental Assessment Act* (CEAA). The Commission decided that the proposed return to service of Pickering NGS-A is not likely to cause significant adverse environmental effects, taking the proposed mitigation measures into account. Having made that decision, the CNSC is now able to proceed with the consideration of Ontario Power Generation's licence application under the *Nuclear Safety and Control Act*. The CNSC will not allow the Pickering NGS-A to return to service until it is satisfied that the measures necessary to protect people and the environment are in place.

As part of its decision on the environmental assessment, the CNSC identified a follow-up and monitoring program that would be required if the Commission approves the return to service. The purpose of the follow-up and monitoring program is two-fold:

- to assist in determining if the environmental effects of the project are as predicted in the environmental assessment; and
- to confirm if the proposed impact mitigation measures are effective.

The Commission also committed to further developing the follow-up and monitoring program in consultation with the community and other stakeholders. The purpose of this document is to provide the public and other stakeholders additional information on the scope of the proposed follow-up and monitoring program, and to invite comments and suggestions on its final design. Directions on where to obtain more detailed information on the proposed program, and where to submit comments, are also provided.

If the licence application is approved and the project proceeds, the follow-up program will be a requirement of the license and the results of the follow-up program will be made available to the public.

**2.0 PROPOSED PHASES AND SCHEDULE FOR FOLLOW-UP AND MONITORING PROGRAM IMPLEMENTATION**

Two phases of follow-up studies and monitoring are proposed:

- Pre-Restart Phase; and
- Post-Restart Phase.

The studies and monitoring activities in the Pre-Restart Phase are intended to supplement or confirm the baseline information used to conduct the environmental assessment. The Pre-Restart Phase is intended to improve the basis for subsequent comparison with the results of the follow-up and monitoring activities that would be carried out in the proposed Post-Restart Phase. CNSC staff have approved some aspects of the Pre-Restart Phase being initiated now, to ensure important spring season baseline information is captured.

The Post-Restart Phase would be initiated if the facility is returned to service. The studies and monitoring activities will provide environmental information which, when compared to the Pre-Restart baseline information, will permit the identification of any actual effects attributable to facility operation. This will provide a basis for determining: the validity of the predictions made during the environmental assessment; the effectiveness of the mitigation measures being implemented; and whether any additional or new mitigation measures are required.

**3.0 PROPOSED SCOPE OF THE FOLLOW-UP AND MONITORING PROGRAM**

The follow-up and monitoring program will be designed to identify the specific effects of the project, and the effects of the project in combination with other projects and activities in the area (cumulative effects). The follow-up and monitoring program will focus on the effects identified in the environmental assessment, and allow for the detection of any unanticipated effects. The program will be designed to permit the evaluation of the effects over specific periods of time. This will allow for reporting at regular intervals and ensure that any necessary corrective actions are taken in a timely manner. The program will be integrated with the other components of the Pickering NGS site-wide environmental monitoring programs, thus ensuring that the results of all other relevant environmental studies will be taken into account. The follow-up program, like the environmental assessment on which it is based, will be designed with the flexibility to address the effects of both normal operations and those from any malfunction and accident events.

The following table outlines the major elements of the proposed follow-up program.

| ENVIRONMENTAL ASSESSMENT COMPONENT | EFFECTS TO BE MANAGED                        | PRE-RESTART | POST-RESTART |
|------------------------------------|--|-------------|--------------|
| Radiation & Radioactivity          | General Public<br>(Individual Doses)         | ✓           | ✓            |
| Atmospheric Environment            | Air Quality<br>(Steam and Feed Water System) | ✓           | ✓            |

|  |   |   |   |
|--|---|---|---|
| Hydrology & Water Quality              | Lake Water Quality<br>(Malfunctions and Accidents)                    | ✓ | ✓ |
|  | Lake Water Quality<br>(Operation of MWSS and RLWMS)                   | ✓ | ✓ |
|  | Near-Shore Flow Circulation<br>(Operation of CCW System)              | ✓ | ✓ |
|  | Water Temperature<br>(Operation of CCW and MWSS)                      | ✓ | ✓ |
|  | Sedimentation<br>(Operation of CCW System)                            | ✓ | ✓ |
|  | Surface Water Runoff Quality<br>(Site Drainage)                       | ✓ | ✓ |
| Aquatic Environment                    | Aquatic Habitat and Aquatic Biota<br>(Impingement)                    | ✓ | ✓ |
|  | Aquatic Habitat and Aquatic Biota<br>(Entrainment)                    | ✓ | ✓ |
|  | Aquatic Habitat and Aquatic Biota<br>(Temperature and Velocity)       | ✓ | ✓ |
|  | Aquatic Habitat and Aquatic Biota<br>(Fishing Pressure)               | ✓ | ✓ |
| Terrestrial Environment                | Wildlife Communities<br>(Land Transportation Activities)              |   | ✓ |
| Geology, Hydrogeology & Seismicity     | Groundwater Quality<br>(General)                                      | ✓ | ✓ |
|  | Groundwater Quality<br>(Malfunctions and Accidents – Tritium)         | ✓ | ✓ |
|  | Physical Environment (Seismic Events)                                 | ✓ | ✓ |
| Land Resources                         | Transportation and Network Elements<br>(Level of Service – Hwy 401)   |   | ✓ |
|  | Transportation and Network Elements<br>(Level of Service – Bayly St.) |   | ✓ |
| Socio-Economic Conditions              | Residents and Communities<br>(Satisfaction with Community)            |   | ✓ |
|  | Community Infrastructure<br>(Housing and Property Values)             | ✓ | ✓ |
| Emergency Response Plan & Preparedness | Dose to Humans & Non-Human Biota                                      |   | ✓ |

MWSS:           Miscellaneous Water Supply Systems  
 RLWMS:       Radioactive Liquid Waste Management System  
 CCW:           Condenser Cooling Water System

**4.0 OPPORTUNITY FOR REVIEW BY PUBLIC AND OTHER STAKEHOLDERS**

The CNSC is providing the public and other stakeholders with an opportunity to review and comment on the scope of the proposed follow-up and monitoring program. This opportunity is being provided to the general public and to the following key stakeholders and interested parties:

- All public groups or individuals who participated in the environmental assessment hearings conducted by the CNSC, as well as specific community groups such as the Community Advisory Council and the Pickering Naturalist Club;
- Local governments and related organisations, including the City of Pickering, the Town of Ajax, and the Durham Region Medical Officer of Health / Durham Nuclear Health Committee;
- Ontario Ministries, including the Ministry of the Environment, Ministry of Natural Resources, Ministry of Energy, Science and Technology, and Ministry of the Solicitor General; and
- Federal Authorities (FAs) that participated in earlier stages of the environmental assessment, including Environment Canada, Fisheries and Oceans Canada, Health Canada and Natural Resources Canada.

All interested parties are invited to provide comments to the CNSC prior to **May 25, 2001**.

**5.0 WHERE TO OBTAIN MORE DETAILED INFORMATION AND ADDRESS COMMENTS**

More detailed information on the proposed follow-up and monitoring program, including a description of the program framework and fact-sheets for each program element, are available at the following locations:

**PICKERING**

|   |  |               |
|---|--|---------------|
| Central Library                         | 1 The Esplanade<br>Pickering, Ontario<br>L1V 2R6     | 905-831-6265  |
| Claremont Branch                        | 4941 Old Brock Road<br>Claremont, Ontario<br>L1Y 1B1 | 905-649-3341  |
| Greenwood Branch                        | 3540 Westney Road<br>Greenwood, Ontario<br>L1S 4S7   | 905-683-8844  |
| Petticoat Creek Library                 | 470 Kingston Road, Pickering,<br>Ontario             | 905- 420-2254 |
| Whitevale Branch                        | 475 Whitevale Road<br>Whitevale, Ontario<br>L1X 2R5  | 905-294-0967  |
| Pickering Nuclear<br>Information Centre | Pickering, Ontario<br>L1V 2R5                        | 905-837-7272  |

**AJAX**

|                       |   |              |
|-----------------------|---|--------------|
| McLean Public Library | 95 McGill Drive<br>Ajax, Ontario<br>L1T 3K7 | 905-428-8489 |
|-----------------------|---|--------------|

|                               |  |              |
|-------------------------------|--|--------------|
| Village Branch Public Library | 58 Church Street<br>Ajax, Ontario<br>L1T 2W6 | 905-683-1140 |
|-------------------------------|--|--------------|

|                            |   |              |
|----------------------------|---|--------------|
| Main Branch Public Library | 65 Harwood Ave.<br>Ajax, Ontario<br>L1S 2H8 | 905-683-4000 |
|----------------------------|---|--------------|

**SCARBOROUGH**

|                    |  |              |
|--------------------|--|--------------|
| Port Union Library | 5450 Lawrence Ave. East<br>Scarborough, Ontario<br>M1C 3B2 | 416-396-8885 |
|--------------------|--|--------------|

|                            |   |              |
|----------------------------|---|--------------|
| Morningside Public Library | 255 Morningside Ave.<br>Scarborough, Ontario<br>M1E 3E6 | 416-396-8881 |
|----------------------------|---|--------------|

|                        |   |              |
|------------------------|---|--------------|
| Highland Creek Library | 3550 Ellesmere Rd.<br>Scarborough, Ontario<br>M1C 3Z2 | 416-396-8876 |
|------------------------|---|--------------|

For further information and copies of the framework document and fact sheets you may contact:

Mr. Chris Taylor,  
Program Specialist  
Canadian Nuclear Safety Commission  
P.O. Box 1046, Station B  
280 Slater Street  
Ottawa, Ontario, K1P 5S9  
Tel: (613) 947-3209  
Fax: (613) 995-5086  
Email: [ceaainfo@cnsccsn.gc.ca](mailto:ceaainfo@cnsccsn.gc.ca)

Please also submit your comments on the scope of the proposed follow-up and monitoring program to the above CNSC contact.