



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

## Record of Decision

In the Matter of

Applicant Ontario Power Generation Inc.

Subject Applications to amend Ontario Power  
Generation Inc.'s Darlington and Pickering  
Nuclear Power Reactor Operating Licences

Date of  
Decision October 26, 2017

## **RECORD OF DECISION**

Applicant: Ontario Power Generation Inc.

Address/Location: 700 University Avenue  
Toronto, ON M5G 1X6

Purpose: Applications to amend Ontario Power Generation Inc.'s  
Darlington and Pickering Nuclear Power Reactor  
Operating Licences

Applications received: March 17, 2017 and April 10, 2017

Date of decision: October 26, 2017

Location: Canadian Nuclear Safety Commission (CNSC)  
280 Slater St., Ottawa, Ontario

Panel of Commission: M. Binder, President

**Licences: Amended**

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## 1.0 INTRODUCTION

1. Ontario Power Generation Inc. (OPG) has applied to the Canadian Nuclear Safety Commission<sup>1</sup> (CNSC) under subsection 24(2) of the *Nuclear Safety and Control Act*<sup>2</sup> (NSCA) for amendments to its Nuclear Power Reactor Operating Licences (PROL) for the Darlington Nuclear Generating Station (NGS) and the Pickering NGS.
2. The Darlington NGS is located in the Municipality of Clarington, Ontario and its current licence, PROL 13.00/2025, expires on November 30, 2025. The Pickering NGS is located in Pickering, Ontario and its current licence, PROL 48.03/2018, expires on August 31, 2018.
3. OPG's current licences for the Darlington and the Pickering NGS authorize their operation as well as the activities required to support their operation. These activities include the possession, transfer, use, packaging, management and storage of nuclear substances. OPG is currently authorized to import and export nuclear substances except "controlled nuclear substances" as defined in the *Nuclear Non-Proliferation Import and Export Control Regulations* (NNIECR)<sup>3</sup> under CNSC Nuclear Substance and Radiation Device Licence (NSRDL) 12861-15-19.1.<sup>4</sup>
4. In its applications, OPG requested that Part IV of each PROL be amended to include the activities currently authorized by the NSRDL. The NSRDL authorizes OPG to import and export nuclear substances that consist primarily of contaminated laundry. The NSRDL also authorizes the import and export of packaging, shielding or equipment contaminated with low levels of nuclear substances, similar to that of the laundry.
5. OPG also applied for a second amendment to the Pickering NGS PROL which would authorize OPG under Part IV of the PROL to possess, transfer, package, manage, store and export nuclear substances from the Western Waste Management Facility (WWMF). This activity, currently authorized in the NSRDL, would allow the Pickering NGS to continue accepting contaminated laundry from the WWMF and to combine it with the Pickering NGS laundry prior to its export to the United States for laundering.
6. The requested amendments would eliminate the need for NSRDL 12861-15-19.1, which is valid until January 31, 2019 unless otherwise suspended, amended, revoked or replaced. Should the applications be granted by the Commission, OPG has requested the revocation of this NSRDL.

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<sup>1</sup> 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> Statutes of Canada (S.C.) 1997, chapter (c.) 9.

<sup>3</sup> Statutory Orders and Regulations (SOR)/2000-210.

<sup>4</sup> CMD 17-H109, issued prior to the renewal of the Western Waste Management Facility Waste Facility Operation Licence (WFOL), referenced NSRDL 12861-15-19.0. However, in its June 2017 licence renewal decision, the Commission consolidated the licensed activities in the NSRDL into the WWMF WFOL. Thus, the WWMF location was removed from NSRDL 12861-15-19.0 and OPG was issued an amended NSRDL, 12861-15-19.1.

Issue

7. In considering the applications, the Commission was required to decide:
- a) what environmental assessment review process to apply in relation to these applications;
  - b) whether OPG is qualified to carry on the activities that the amended licences would authorize; and
  - c) whether in carrying on those activities, 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

8. Pursuant to section 22 of the NSCA, I established myself to preside a Panel of one Commission Member to hear the applications. The Commission, in conducting a public hearing based on written materials, considered written submissions from OPG (CMD 17-H109.1 and CMD 17-H109.1A) and CNSC staff (CMD 17-H109 and CMD 17-H109.A). The Commission also considered written submissions from 2,586 intervenors (see Appendix A for a list of interventions).
9. The Commission wishes to note that, due to the interconnected nature of the applications submitted by OPG in these matters and pursuant to subsection 20(3) of the NSCA requiring it to deal with all proceedings before it as “...*informally and expeditiously as the circumstances and considerations of fairness permit,*” the Commission has decided to hear these matters in the same proceeding.

**2.0 DECISION**

10. Based on its consideration of the matters, as described in more detail in the following sections of this *Record of Decision*, the Commission concludes that OPG satisfies the conditions of subsection 24(4) of the NSCA. Therefore,

The Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, amends the Nuclear Power Reactor Operating Licence PROL 13.00/2025 issued to Ontario Power Generation Inc. for its Darlington Nuclear Generating Station located in the Municipality of Clarington, Ontario. The amended licence, PROL 13.01/2025, is valid until November 30, 2025.

The Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, amends the Nuclear Power Reactor Operating Licence PROL 48.03/2018 issued to Ontario Power Generation Inc. for its Pickering Nuclear Generating Station located in the City of Pickering, Ontario. The amended licence, PROL 48.04/2018, is valid until August 31, 2018.

The Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, revokes the Nuclear Substance and Radiation Device Licence 12861-15-19.1 issued to Ontario Power Generation Inc.

11. The Commission amends Part IV of the Darlington NGS PROL to include a new licensed activity that shall read:

*“(iii) import and export nuclear substances, except controlled nuclear substances, that are required for, associated with, or arise from the activities described in (i);”*

The Commission notes that, with the addition of this licensed activity (iii) to the Darlington PROL, current licensed activities (iii) and (iv) shall be renumbered licensed activities (iv) and (v) in the amended PROL.

12. The Commission amends Part IV of the Pickering NGS PROL to include new licensed activities that shall read:

*“(iii) Import and export nuclear substances, except controlled nuclear substances, that are required for, associated with, or arise from the activities described in [i].”*

and

*“(ix) Possess, transfer, package, manage, store and export nuclear substances from the Western Waste Management Facility.”*

The Commission notes that, with the addition of the licensed activity (iii) to the Pickering PROL, current licensed activities (iii) to (vii) shall be renumbered licensed activities (iv) to (viii) in the amended PROL.

13. The Commission amends the Darlington NGS PROL to include licence condition 15.5 and the Pickering NGS PROL to include licence condition 16.4, both of which shall read

*“The licensee shall limit the activities of import and export of nuclear substances to those occurring as contaminants in laundry, packaging, shielding or equipment.”*

### 3.0 ISSUES AND COMMISSION FINDINGS

#### 3.1 Application of the *Canadian Environmental Assessment Act, 2012*

14. In coming to its decision, the Commission was first required to determine whether environmental assessment under the *Canadian Environmental Assessment Act, 2012*<sup>5</sup> (CEAA 2012), was required.
15. In its applications, OPG submitted requests to consolidate the licensed activities authorized under NSRDL 12861-15-19.1 into the Darlington and Pickering PROLs through licence amendments. The Commission notes that the activities that would be covered under the proposed licence amendments are not a designated project under CEAA 2012.
16. The Commission notes that OPG would not be carrying out any new licensed activities under these licence amendments. CNSC staff submitted to the Commission that OPG's applications requested the consolidation of currently licensed activities from OPG's NSRDL to OPG's PROLs for the Darlington and Pickering NGS. CNSC staff reported that, for this reason, an environmental assessment determination carried out in regard to OPG's applications found that an environmental assessment would not be required.
17. Based on the information examined by the Commission in this matter, the Commission is satisfied that these licence amendment applications do not propose any new activities and that an environmental assessment under CEAA 2012 or under the NSCA was not required in this matter. Further, the Commission is satisfied that OPG has made, and will continue to make, adequate provision for the protection of the environment in relation to the licensed activities throughout the licence periods.

#### 3.2 Matters for Consideration

18. In its applications, OPG requested amendments to Part IV) ii) of both the Darlington and Pickering NGS PROLs to include the import and export activities that are currently authorized for both NGS under the NSRDL. OPG submitted to the Commission that these licensed activities involved the import and export of nuclear substances occurring primarily as contaminants in laundry, packaging, shielding and equipment from the Pickering and Darlington NGS, as well as from the WWMF. OPG explained that the contaminated materials were shipped to the United States to be laundered and that they were then returned to OPG for re-use. CNSC staff proposed to the Commission that the amended Part IV) ii) of the Darlington and Pickering NGS PROLs read

*“possess, transfer, use, package, manage, **import, export**, and store the nuclear substances that are required for, associated with, or arise from the activities described in (i);”*

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<sup>5</sup> Statutes of Canada (S.C.) 2012, chapter (c.) 19.

19. OPG also submitted a request to add a licence licensed activity to Part IV of the Pickering NGS PROL to allow the Pickering NGS to

*“possess, transfer, package, manage, store and export nuclear substances from the Western Waste Management Facility.”*

OPG informed the Commission that, in accordance with the NSRDL, the above-mentioned contaminated materials were currently transferred from the WWMF and combined with those at the Pickering NGS prior to export for laundering in the United States.

20. CNSC staff confirmed the information provided by OPG and submitted that the proposed licence amendments would not change the scope of the import and export activities currently being carried out by OPG under the NSRDL. CNSC staff also confirmed that the transfer of contaminated materials from the WWMF to the Pickering NGS for consolidation with Pickering materials prior to their export for laundering was licensed under the current NSRDL.
21. OPG submitted to the Commission that the nuclear substances considered in these licence amendment applications were not controlled nuclear substances as defined in Part A of the Schedule to the NNIECR and that, for this reason, a separate licence for OPG’s import and export of these materials was not required. CNSC staff confirmed this information, noting that the import and export of materials considered in this matter could be carried out under either an NSRDL or under a PROL.
22. CNSC staff reported to the Commission that the current NSRDL issued to OPG included a list of allowable nuclear substances and their quantity limits, as well as specific import and export restrictions, pursuant to the NNIECR. CNSC staff further submitted that OPG’s Licence Conditions Handbooks (LCH) for the Darlington and Pickering NGS would be amended to include these allowable nuclear substances and their quantity limits for import and export.
23. The Commission considered the facility-specific licence condition 15.5 for the Darlington NGS and licence condition 16.4 for the Pickering NGS that was proposed by CNSC staff:

*“The licensee shall limit the activities of import and export of nuclear substances occurring as contaminants in laundry, packaging, shielding or equipment.”*

CNSC staff proposed this additional licence condition to ensure clarity and transparency in regard to the form of the nuclear substances that would be allowed in the import and export activities being considered in this hearing. CNSC staff also submitted that compliance verification criteria for this licence condition would be added to the Darlington and Pickering NGS LCHs should the Commission amend OPG’s PROLs to authorize the requested activities.

24. The Commission notes that the majority of interventions from individuals received for this matter expressed the concern that OPG's import and export of nuclear substances represented new licensed activities. In fact, however, the CNSC has authorized OPG to carry out the same licensed activities under NSRDLs for over six years and the licence amendment applications did not propose any new activities. The Commission is satisfied that this licensing action is merely consolidation, not changed activities.
25. Several intervenors, including a letter writing campaign, the Bruce Peninsula Environment Group, Canadian Environmental Law Association (CELA), the Great Lakes Environmental Alliance, Northwatch, the Ohio Sierra Club, the Nuclear Information and Resource Service, the Multicultural Alliance for a Safe Environment and individuals, raised concerns about the presence of tritium and potentially other nuclear substances that were not adequately accounted for in the contaminated materials being shipped for laundering and cleaning to the United States. OPG submitted detailed information about how it confirmed contamination levels, and the types, of contaminants in the materials being shipped for cleaning. OPG also explained that the quantity of tritium found in the materials considered in this hearing did not classify the tritium as a controlled nuclear substance under the NNIECR and further explained that the current NSRDL provided for a maximum total quantity of 10 GBq of tritium per shipment. CNSC staff confirmed this information and OPG's compliance with the quantity limits for tritium and other nuclear substances in the contaminated materials. Based on the information provided, the Commission is satisfied that OPG is adequately characterizing the nuclear substances found in the materials considered for this hearing.
26. The Commission notes that many interventions, including a letter writing campaign of 2,570 submissions, expressed concern about whether the safe transport of the materials contaminated with nuclear substances was adequately considered by OPG. In its submission, OPG reported to the Commission that the transport activities considered in this matter were captured under OPG's program W-PROG-WM-002, "*Radioactive Materials Transportation*," and that the program met licensing requirements. CNSC staff confirmed this information noting that, as provided for by subsection 6(1) of the *Packaging and Transport of Nuclear Substances Regulations, 2015* (PTNSR, 2015),<sup>6</sup> OPG did not have to apply to the CNSC for a separate licence to transport the contaminated materials. CNSC staff further explained that the Darlington and Pickering NGS PROLs specified that OPG had to maintain a transport and packaging program which met the requirements of the PTNSR, 2015 and the *Transportation of Dangerous Goods Act*.<sup>7</sup> CNSC staff also reported to the Commission that CNSC inspections had shown that OPG's transportation program met all regulatory requirements in regard to packaging and transport of the contaminated materials and that CNSC staff would continue to conduct compliance activities and oversight in this regard throughout the current licence period. The Commission is satisfied with the information provided in this regard.
27. The Commission considered interventions from the Bruce Peninsula Environment Group, Northwatch, a letter writing campaign and individuals expressing concerns that

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<sup>6</sup> SOR/2015-145.

<sup>7</sup> S.C. 1992, c. 34.

the proposed licence amendments would allow OPG to export nuclear waste to the United States. OPG submitted to the Commission that the contaminated materials were exported to the United States for the purposes of laundering and cleaning, with all radiological wastes returning back to Canada. The Commission is satisfied on this point.

28. Several intervenors expressed concerns regarding the operations of the laundering company, UniTech, to which OPG shipped the contaminated laundry and materials in the United States. OPG provided the Commission with detailed information about its contractual agreement with UniTech and explained that UniTech owned and operated the laundry facilities in accordance with all applicable United States Federal, State and Municipal regulations, as well as in accordance with OPG internal procedures. OPG further reported that UniTech's processes had been satisfactorily audited and that OPG would continue to perform periodic audits to verify UniTech's compliance and quality processes. Noting that it is not the role of the Commission to regulate activities that are carried out in the United States, the Commission has no reason to question the robust oversight of its American regulatory counterparts.

### **3.3 Validity of the Nuclear Substances and Radiation Devices Licence**

29. The Commission considered the written submission from the CELA that suggested that the NSRDL issued to OPG for the import and export of nuclear substances was not the appropriate CNSC licensing instrument for that activity. CNSC staff provided the Commission with information about the NSRDL and explained that the NSRDL issued to OPG for these licensed activities was a "use-type 918, Temporary possession – no use" licence, as defined in REGDOC-1.6.1, *Licence Application Guide: Nuclear Substances and Radiation Devices*.<sup>8</sup> CNSC staff also submitted information about why this type of licence was appropriate for the licensing of OPG's import and export activities and under consideration in this matter. CNSC staff further explained that the use-type of a licence did not specify the licensed activities that the licence authorized; rather, it was the licensed activities as defined in the licence that provided for the activities that the licensee was authorized to carry out. CNSC staff noted that the import and export activities considered in this matter could be authorized under either an NSRDL or a PROL because they were not controlled nuclear substances under the NNIECR.
30. The Commission agrees with CNSC staff's assessment of this matter. The Commission notes that, in its June 2017 licence renewal decision for the OPG WWMF, the Commission approved the consolidation of licensed activities from OPG's NSRDL 12861-15-19 into the WWMF's renewed Waste Facility Operating Licence.<sup>9</sup> During its consideration of that matter, the Commission was of the view that an NSRDL was a valid and appropriate instrument under which OPG could carry out the import and export of the nuclear substances being considered in that hearing. The Commission

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<sup>8</sup> CNSC Regulatory Document, REGDOC-1.6.1, *Licence Application Guide: Nuclear Substances and Radiation Devices*, Version 2, April 2017.

<sup>9</sup> CNSC Record of Decision – Ontario Power Generation Inc., "Application to Renew the Waste Facility Operating Licence for the Western Waste Management Facility", April 2017.

remains of that view, that an NSRDL can be an appropriate licensing instrument for these activities.

### **3.4 Aboriginal Consultation**

31. The Commission recognizes that the duty to consult arises when the Crown contemplates actions that may adversely affect potential or established Aboriginal treaty rights.
32. The Commission notes interventions from the Bruce Peninsula Environment Group, Northwatch, CELA and individuals that were of the view that OPG's licence amendment applications consisted of changes in licensed activities and that this would trigger the duty to consult. In response, CNSC staff explained to the Commission that the requested amendments would transfer activities currently authorized under the NSRDL into the Darlington and Pickering NGS PROLs, resulting in no change to the scope of the licensed activities.
33. Based on the information provided for this hearing, the Commission is satisfied that these licensing requests seek no new authorization, and that no new licensed activities have been proposed. The Commission is satisfied that its licensing decision therefore has no potential for impacting any rights of Indigenous groups.

### **4.0 CONCLUSION**

34. The Commission has considered the information and submissions from OPG and CNSC staff, as well as from intervenors.
35. The Commission is satisfied that these licence amendment applications do not propose any new activities and that an environmental assessment under the NSCA was not required in this matter. Further, the Commission notes that the NSCA and its regulations provide for the protection of the environment and the health and safety of persons, and is satisfied that the OPG will continue to make adequate provision in this regard.
36. The Commission is satisfied that OPG is qualified to carry out these proposed activities. Therefore, pursuant to section 24 of the NSCA, the Commission amends the Darlington and Pickering NGS PROLs to authorize OPG to carry out the activities that, to date, have been licensed under NSRDL 12861-15-19.1, with no change in substance.
37. The Commission notes that OPG requested and that CNSC staff provided the Commission with recommendations for the amendment to Part IV of the Darlington NGS PROL 13.00/2025 and to the Pickering NGS PROL 48.03/2018 in CMDs 17-H109 and 17-H109.1. Based on its consideration of the information provided for this hearing, the Commission wishes to clarify by way of this decision and the requested licence amendments that the import and export activities authorized under the amended Darlington and Pickering NGS PROLs do not apply to controlled nuclear substances that are referred to in Part A of the Schedule to the NNIECR and that the import and export of any controlled nuclear substance would require a separate CNSC licence.

Therefore, based on its conclusions and the above information, the Commission amends Part IV of the Darlington NGS PROL 13.00/2025 to include a new licensed activity (iii) that shall read

*“(iii) import and export nuclear substances, except controlled nuclear substances, that are required for, associated with, or arise from the activities described in (i);”*

and the Pickering NGS PROL 48.03/2018 to include a new licensed activity (iii) that shall read

*“(iii) Import and export nuclear substances, except controlled nuclear substances, that are required for, associated with, or arise from the activities described in [i].”*

38. The Commission notes that, with the addition of licensed activity (iii) to the Darlington NGS PROL, current licensed activities (iii) and (iv) shall be renumbered licensed activities (iv) and (v) in the amended PROL.
39. The Commission also notes that, with the addition of licensed activity (iii) to the Pickering NGS PROL, current licensed activities (iii) to (vii) shall be renumbered licensed activities (iv) to (viii) in the amended PROL.
40. Based on its conclusions and the above information, the Commission also amends Part IV of the Pickering NGS PROL 48.03/2018 to include the following new licensed activity (ix) that shall read

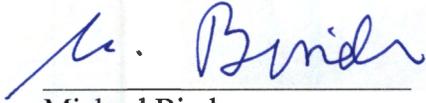
*“(ix) Possess, transfer, package, manage, store and export nuclear substances from the Western Waste Management Facility.”*

41. The Commission agrees with CNSC’s staff’s recommendation to add facility-specific licence conditions to the Darlington and Pickering NGS PROLs to ensure that clarity and transparency in regard to the form of the nuclear substances that would be allowed in OPG’s import and export activities proposed to be covered by the PROLs. Based on the Commission’s conclusions in this matter, the Commission also amends the Darlington NGS PROL to include licence condition 15.5 and the Pickering NGS PROL to include licence condition 16.4 which shall read

*“The licensee shall limit the activities of import and export of nuclear substances to those occurring as contaminants in laundry, packaging, shielding or equipment.”*

With this decision, the Commission expects CNSC staff to amend the Darlington and Pickering NGS LCHs to include compliance verification criteria for this licence condition.

42. Considering the Commission licence amendment decision in this matter, the Commission is of the view that NSRDL 12861-15-19.1 is no longer required and therefore revokes NSRDL 12861-15-19.1. This revocation is to be effected simultaneously with the addition of these changes to the two PROs.



Michael Binder  
President  
Canadian Nuclear Safety Commission

OCT 26 2017

Date

## Appendix A

<b>Intervenors</b>	<b>Document Number</b>
Letter writing campaign from 2570 intervenors	17-H109.2
Bruce Peninsula Environment Group	17-H109.3
Canadian Environmental Law Association	17-H109.4
Durham Nuclear Awareness	17-H109.5
Great Lakes Environmental Alliance	17-H109.6
Northwatch	17-H109.7
Ohio Sierra Club	17-H109.8
Nuclear Information and Resource Service (NIRS)	17-H109.9
Multicultural Alliance for a Safe Environment	17-H109.11
Anne Brander	17-H109.12
LuAnne Kozma	17-H109.13
Sheila Goldner	17-H109.14
David Foster	17-H109.15
Russell Hodin	17-H109.16
Joe Jacobs	17-H109.17
Michael J. Keegan	17-H109.18
Kathleen Rude	17-H109.19