



Directorate of Power Reactor Regulation

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Subject: Darlington NGS: Request for CNSC Acceptance of Updated Integrated Implementation Plan (IIP) Revision 001

Dear Mr. Reiner and Mr. Duncan:

Canadian Nuclear Safety Commission (CNSC) staff have reviewed Ontario Power Generation (OPG)'s submission [1] of the updated Darlington Nuclear Generating Station (NGS) Integrated Implementation Plan (IIP) for the Refurbishment and Continued Operation of the Darlington Nuclear Generating Station. CNSC staff note that OPG made this submission of a revised IIP to incorporate agreed upon changes resulting from CNSC staff's review [2], new actions arising from the Component Condition Assessment (CCA) Recovery Project [3], and the review of updates to the Integrated Safety Review codes and standards and significant operating experience [4].

CNSC staff find that OPG's revised IIP represents a significant improvement over the original submission and that it now meets the intent of CNSC regulatory document RD-360 (Feb 2008). CNSC staff also find that the revised IIP has incorporated the new information identified by OPG as mentioned above and addresses the requested changes from the CNSC staff assessment [2] of the first OPG IIP submission.

CNSC staff accepts OPG's IIP Revision 001 with implementation of several required specific changes documented in the attachment to this letter. These changes must be included in a revised IIP which should be submitted in 2015 before the CMD deadline for Part I of the relicensing hearing, but no later than June 30, 2015. This will ensure that the IIP is as current as possible with regards to work which forms part of the IIP commitment since CNSC staff are aware that work is progressing on the original and revised IIP items. Some items may be completed or completed-in-part by the time of the hearing and OPG should take credit for this work. The IIP is a commitment to the Commission to complete remaining work stemming from the findings of the Environmental Assessment and the Integrated Safety Review.

Completed work may be removed from the final version of the IIP which will be submitted to the Commission as has been done for revision 001. This will facilitate future tracking of IIP commitments.

CNSC staff believe that the required changes to the IIP as detailed in the attachment to this letter will not increase the scope of work required for refurbishment of Darlington NGS, but may require some effort to further clarify the objective of the work that is to be conducted and the expected outcomes.

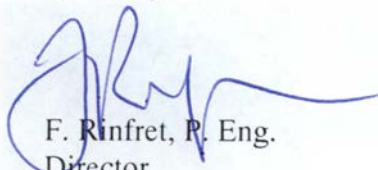
OPG has stated that the original IIP items which have been removed from the IIP scope and placed in the Asset Preservation List (Attachment 1 to Reference 1) will be managed through its Integrated Aging Management Program. CNSC staff agree with the reclassification of these items, but believe that some of them warrant additional regulatory tracking. As such, CNSC staff will be raising Action Items to track specific CCA related actions to completion; these include all items identified as poor condition as well as some items identified as satisfactory such as the Shutdown System Process System, the Emergency Filtered Air Discharge System and the Reactor Regulating System. These actions will be detailed and raised in a separate letter.

The code gaps included in the Asset Preservation List will be further reviewed with OPG under the CNSC's compliance program. All other items on this list may be subject to regulatory inspection as deemed appropriate by CNSC staff.

CNSC staff will be reviewing the list of completed items in Appendix B of the IIP (NK38-REP-03680-10185 Rev 001) for closure. CNSC staff will advise OPG of its progress and may request additional information as required to ensure closure.

Should you have any questions with regards to this letter, please contact Daniel Desjardins, CNSC Project Manager for Darlington Refurbishment at 613 947-2770 or via email at daniel.desjardins@cnscccsn.gc.ca.

Sincerely,



F. Rinfret, P. Eng.
Director

Darlington Regulatory Program Division

c.c.: D. Desjardins, R. Richardson, S. Cook, F. Rinfret, Darlington Site Office, A. Blahoianu, J. Jin, Y. Akl, G. Lamarre, M. Couture, A. Viktorov, V. Tavasoli, R. Rulko, G. Frappier, P. Lahaie, J. Sigetich, A. Bouchard, C. Françoise, K. Heppell-Masys, A. McAllister, K. Francis, S. Hamlat, C. Purvis, M. Rickard, M. Beaudette, K. Owen-Whitred, L. Sigouin, D. Howard, R. Awad, D. Newland, R. Jammal, T. Jamieson

References:

1. OPG Letter, D. Reiner and B. Duncan to F. Rinfret. "Darlington NGS – Request for CNSC Acceptance of Updated Integrated Implementation Plan (IIP)", October 31, 2014, NK38-CORR-00531-16866, e-Doc [4574390](#).
2. CNSC Letter, F. Rinfret to D. Reiner, "Request for CNSC Acceptance of the Darlington NGS Global Assessment Report (GAR) and Integrated Implementation Plan (IIP)", April 17, 2014, e-Doc [4383381](#), NK38-CORR-00531-16792.
3. OPG Letter, D. Reiner to F. Rinfret. "Darlington NGS 'A' CNSC Staff Assessment of Integrated Safety Review - Response to Concerns on Component Condition Assessments – Update". February 21, 2014, NK38-CORR-00531-16701, e-Doc [4377872](#).
4. OPG Letter, D. Reiner to F. Rinfret, "Darlington NGS Integrated Safety Review Emerging Issues Report". February 19, 2014, NK38-CORR-00531-16688, e-Doc [4379797](#).

Attachment 1 – Specific Required Changes to IIP Rev 001

The following details the specific changes that OPG must make to the IIP Rev 001 before resubmitting it for final CNSC staff acceptance prior to Part I for the relicensing hearing for Darlington in 2015. Final CNSC staff acceptance depends on these specific changes or additional requested justifications being made.

Section 2.0 – Delete the line “IIP scope and associated action plans are accurate as of September 30, 2014”. This implies the document is already out of date; a year out of date by the time of Part 2 of the hearing. The IIP is assumed accurate as of the date of submission, any required changes or updates from what is finally submitted to the Commission for approval as part of the licensing basis will be handled via the change control process.

Table 3 – CCAs (Open Activities)

- IIP-CC 010, 020, 035, 045, 049, and 051 – Condition identified as poor, completion dates range from 2019 to 2028; CNSC staff note that although these dates may meet the general criteria of Reference [2], given the stated condition of these components, additional information needs to be provided in the activity description to substantiate the completion dates, the safety risks associated with these dates and the mitigation actions that may need to be taken should these components fail before scheduled work is undertaken.
- IIP-CC 038 – Action not clear, implies potential that not all units will be inspected, conditions for extending or not extending work to other units needs to be specified.
- IIP-CC 041, 042 – Representative sample needs to be quantified in terms of what constitutes a representative sample and explanation or reference to decision making governance should be provided.

Table 4 – Code Gaps

- General - Code gaps that are also code of record gaps need to be identified as such, reference should be made to station commitment to correct and date shown for IIP should be clarified as latest completion date or IIP date aligned to station commitment.
- General – all references to FAI numbers must be removed given that they are closed.
- IIP-OI 002 – Since deficiencies in systems have been identified, and this appears to be a code of record gap, the safety risks associated with these IIP dates (up to 2028) and the mitigation actions that may need to be taken need to be identified.
- IIP-OI 003 - This appears to be a code of record gap, additional information needs to be provided in the activity description to substantiate the completion dates (up to 2028), the safety risks associated with these dates and the mitigation actions that may need to be taken.

Table 4 – Code Gaps (con` t)

- IIP-OI 014 – Action Plan stated is not clear, purpose of reference to previous audit dates not clear, need to clarify intent, objective of action and how it will resolve the issue.
- IIP-OI 019 – Issue description implies larger problem, per action plan only two specific problems, this appears to be a code of record issue, need to confirm extent of problem, the safety risks associated with these IIP dates (up to 2025) and the mitigation actions that may need to be taken need to be identified.
- IIP-OI 035 – Reference to RD-310 needs to be deleted and changed to REGDOC 2.4.1 noting OPG’s transition plan previously provided, tracking reference number AI2010OPG-05 needs update.
- IIP-OI 036 - The reference to FAIs needs to be removed since these FAIs have been closed. An appropriate tracking reference needs to be provided.
- IIP-OI 037 – States “Address equipment and instrument survivability under Severe Accident conditions”. CNSC staff checked the relevant OPG report on FAI 1.8.1 (attached) and it states that there are no specific enhancements required for Darlington. This inconsistency must be addressed. An appropriate tracking reference needs to be provided.
- IIP-OI 043 – Reference to RD-310 needs to be removed and replaced with REGDOC 2.4.1, tracking reference number AI2010OPG-05 needs update.
- IIP-OI 047 – Extent of condition needs to be described, how many locations are involved, appears to be code of record issue.
- IIP-OI 050 – Action Plan does not resolve issue, need to identify specific actions to resolve issue and dates by when they will be completed, the safety risks associated with the IIP date and the mitigation actions that may need to be taken need to be identified.
- IIP-OI 053 – Action plan on Alkali Aggregate Reactivity (point #3) needs to be clarified given previous assurances made to the Commission by OPG that the problem does not appear to exist.
- IIP-OI 056 – Action plan states assess options, no commitment to implant corrective actions, Action Plan does not resolve issue, need to identify specific actions to resolve issue and dates by when they will be completed, the safety risks associated with the IIP date and the mitigation actions that may need to be taken need to be identified.
- IIP-OI 058 – The safety risks associated with the IIP date and the mitigation actions that may need to be taken need to be identified.
- IIP-OI 059 & IIP-OI 021- Similar action plan and related issues, however the dates provided for the code refresh are different (2015 vs 2016), the safety risks associated with the IIP dates (up to 2028) and the mitigation actions that may need to be taken need to be identified.

Table 4 – Code Gaps (con` t)

- IIP-OI 060 - Additional information needs to be provided in the activity description to substantiate the completion date (2023), the safety risks associated with these dates and the mitigation actions that may need to be taken.
- IIP-OI 064 and 66 – The reference to FAIs needs to be removed since these FAIs have been closed. An appropriate tracking reference needs to be provided. Related action plan does not identify specific actions to resolve issue.
- IIP-OI 065 - This appears to be a code of record gap, the safety risks associated with the IIP date and the mitigation actions that may need to be taken need to be specified.
- IIP-OI 070 – Action Plan references FAI 1.8.1 which has been closed. OPG report N-REP-09013-10009 R000 states that there are no specific enhancements required for Darlington. This inconsistency must be addressed. An appropriate tracking reference needs to be provided.