

DURHAM NUCLEAR HEALTH COMMITTEE (DNHC) MINUTES

Location

University of Ontario Institute of Technology (UOIT)
2000 Simcoe Street North, City of Oshawa
Meeting Room 1058 in the Energy Research Building

Date

September 14, 2018

Time

1:00 PM

Host

UOIT

Members

Dr. Robert Kyle, Durham Region Health Department (DRHD) (Chair)
Ms. Lisa Fortuna, DRHD
Mr. Raphael McCalla, Ontario Power Generation (OPG)
Mr. Phil Dunn, Ministry of the Environment, Conservation and Parks
Dr. Tony Waker, University of Ontario Institute of Technology (UOIT) (Presenter)
Dr. John Hicks, Public Member
Ms. Janice Dusek, Public Member
Mr. Marc Landry, Public Member
Dr. Barry Neil, Public Member
Dr. Lubna Nazneen, Public Member
Dr. David Gorman, Public Member

Presenters/Observers

Mr. Brian Devitt (Secretary)
Ms. Analiese St. Aubin, OPG (Presenter)
Ms. Tiasi Ghosh, OPG (Presenter)
Ms. Paulina Herrera, OPG (Presenter)
Mr. Ali Esmaeily, OPG
Ms. Amy Burke, Municipality of Clarington
Ms. Lynn Jacklin, Durham Nuclear Awareness (DNA)
Ms. Lydia Skirko, Whitby Resident
Ms. Jane Snyder, Whitby Resident
Ms. Susan Ebata, Whitby Resident
Mr. Alan Shaddick, Whitby Resident
Mr. Matt Cochrane, Oshawa Resident
Mr. A.J. Kehoe, Durham Region Resident

Regrets

Mr. Hardev Bains, Public Member

Ms. Veena Lalman, Public Member
Ms. Mary-Anne Pietrusiak, DRHD

Robert Kyle opened the meeting, welcomed everyone and thanked Dr. Tony Waker for hosting the meeting at UOIT.

1. Approval of Agenda

The Revised Agenda was adopted as written.

2. Approval of Minutes

The Minutes of June 15, 2018 were adopted as written.

3. Correspondence

3.1 Robert Kyle's office received Minutes of the Pickering Nuclear Generating Station (NGS) Community Advisory Council meeting held on May 15, 2018.

3.2 Robert Kyle's office received an updated Revised Agenda from the Canadian Nuclear Safety Commission (CNSC) concerning Part 2 of the Public Hearing to **consider** the application by OPG to renew its nuclear power reactor licence for the Pickering NGS for a period of 10 years dated June 15, 2018.

3.3 Robert Kyle's office received the Darlington Refurbishment Project Newsletter, *Ready to Rebuild Darlington Nuclear's Unit 2 Reactor*, dated June 15, 2018.

3.4 Robert Kyle's office received the CNSC's announcement dated June 19, 2018 that Rumina Velshi has been appointed to replace Michael Binder as President and CEO of the CNSC effective August 23, 2018.

3.5 Robert Kyle's office received the CNSC's 2017 Independent Environmental Monitoring Program results for the Darlington Nuclear Generating Station (**NGS**) dated June 20, 2018 and the results were very similar to the OPG's 2017 Environmental Monitoring Program results presented by Margo Curtis at the June 15th DNHC meeting.

3.6 Robert Kyle's office received OPG's *Neighbours Newsletter for Pickering and Darlington NGSs* **dated** Summer 2018.

3.7 Robert Kyle's office received the CNSC announcement of its decision to grant a 10-year licence renewal for the Pickering NGS valid from September 1, 2018 to August 31, **2028** dated August 9, 2018. The station will operate until

the end of 2024 followed by safe storage activities, such as removal of fuel and water, between 2025 and 2028.

4. Presentations

4.1 Progress Report concerning OPG's Application for the Renewal of the Nuclear Power Reactor Licence for the Pickering NGS

Paulina Herrera, Manager, Regulatory Affairs, Pickering Nuclear, provided an update on the renewal of the CNSC Nuclear Power Reactor Operating Licence for the Pickering NGS for a 10-year licence term. The highlights of Paulina's presentation were:

- In August 2017, OPG submitted its licence renewal application to the CNSC.
- OPG requested a 10-year licence term from September 1, 2018 to August 31, 2028 to include:
 - Operation of the station until the end of 2024
 - Safe storage activities at the station from 2025 to 2028

Paulina explained the CNSC licensing process that included:

- Part 1 Hearing was held in Ottawa on April 4, 2018 where OPG presented its request for relicensing of the Pickering NGS and answered questions from CNSC Commissioners.
- Part 2 Hearing was held in the City of Pickering at the Pickering Recreation Complex from June 25 to 29, 2018 where approximately 150 intervenors expressed their concerns and comments.
- CNSC stated in its Summary Record of Decision dated August 7, 2018 that OPG was qualified to carry out the licensed activities and will make adequate provisions for the protection of the environment, the health and safety of persons, national security and international obligations to which Canada has agreed.
- Announcement by CNSC on August 8, 2018 concerning its decision to grant a 10-year licence for the Pickering NGS and the licence will be valid from September 1, 2018 to August 31, 2028. The licence will allow the station to operate until 2024 followed by safe storage activities such as removal of fuel and water between 2025 and 2028.
- The 10-year licence renewal requires a mid-term update on the licensed activities at the Pickering NGS in 2023 and it will take place during a Commission meeting held in the City of Pickering with the date and location to be determined.

During Paulina's presentation, she referred to the CNSC Summary Record of Decision released on August 7, 2018 concerning the 10-year licence renewal for Pickering NGS. She also mentioned that the Detailed Record of Decision has not yet been released by the CNSC and this document will have more details on its decision.

Paulina explained that during the CNSC Hearings, the Periodic Safety Review and the Integrated Implementation Plan, were very significant documents used by OPG to support its request for the licence renewal and to identify enhancements that will be made at the Pickering NGS. Paulina referred to these enhancements during her presentation and provided an example relating to the installation of additional piping to connect the Pickering Units 1-4 and 5-8 firewater. She explained that this enhancement provides additional ways to cool the fuel in the extremely unlikely event of an accident. It was mentioned that another presentation would be offered for an in-depth discussion on these enhancements.

Dr. Robert Kyle requested a presentation be made by OPG at the November 16th DNHC meeting to explain the safety enhancements that will be made to help ensure the safe operation of the Pickering NGS during the 10-year licence. Analiese St. Aubin offered to follow-up on his request and confirm a presenter with Brian Devitt, Secretary to the DNHC.

Paulina Herrera or her associates will provide the DNHC with updates concerning continued operation of the Pickering NGS until 2024.

For more information, Paulina can be contacted at paulina.herrera@opg.com or 905-839-1151.

4.2 Progress report by OPG concerning the Results of the 2017 Groundwater Monitoring Program (GWMP) at Pickering and Darlington NGSs

Tiasi Ghosh, Environmental Advisor, OPG, provided a detailed presentation of the results of the 2017 GWMP at Pickering and Darlington NGSs.

Tiasi explained the Key Objectives of the 2017 GWMP were:

- To verify groundwater flow direction.
- To monitor changes to on-site groundwater quality to identify new issues in a timely manner and assess past contamination issues.
- To monitor site boundary groundwater quality at the site boundary to confirm there is no adverse off-site impacts.

Tiasi provided the highlights of the 2017 GWMP results at the Pickering NGS that included:

- Samples were collected from 132 groundwater wells or monitoring locations to analyse groundwater samples to characterize groundwater conditions in the following key areas:
 - Emergency Power Generator
 - Former Water Treatment Plant Settling Basin
 - Irradiated Fuel Bay
 - Reactor Building
 - Upgrading Plant Pickering

- The predominant groundwater flow pattern remained unchanged from the original interpretations.
- Legacy groundwater quality results continued to improve.
- In 2017, a new groundwater issue at the Units 5/6 area was investigated, resolved and monitoring will continue.
- Monitoring the site boundary groundwater quality showed no indications of adverse off-site migration of tritium from the Pickering NGS.

Tiasi provided the highlights of the 2017 GWMP results at the Darlington NGS that included:

- Samples were collected from 81 groundwater wells or monitoring locations to analyse groundwater samples to characterize groundwater conditions.
- There was a slight localized change in groundwater flow elevations within the protected areas as compared to previous years but as of 2017, water levels had recovered following the cessation of large-scale dewatering activities for the construction associated with the refurbishment project.
- Monitoring the site boundary groundwater quality indicated that there was no adverse off-site migration of tritium from the Darlington NGS.

Tiasi's summary of the 2017 GWMP included:

- At Pickering, the predominant groundwater flow pattern remains unchanged from the original interpretations.
- At Darlington, the groundwater levels within the protected area have recovered following cessation of large-scale dewatering activities for construction associated with refurbishment.
- At Pickering and Darlington, legacy groundwater quality results continued to show improvement and monitoring will continue.
- At Pickering, the 2017 emerging groundwater issue at Unit5/6 area has been investigated, resolved and monitoring will continue.
- At Pickering and Darlington, there was no indication of adverse, off-site migration of tritium from the NGSs.
- The 2017 GWMP results for Pickering and Darlington NGSs were submitted to the CNSC for its review.

During the questions and comments that followed Tiasi's presentation, a suggestion was made by Dr. David Gorman for OPG to use graphs to show trends over several years that will more clearly demonstrate that legacy groundwater quality results are improving. Raphael McCalla said he liked this suggestion and would use graphs to report monitoring trends results when reporting the GWMP to the DNHC next year.

Tiasi Ghosh or her associates will continue to update the DNHC with the annual GWMP results for the Pickering and Darlington NGSs.

For more information on the GWMP, Tiasi can be contacted at tiasi.ghosh@opg.com or 416-231-4111 extension 4230.

4.3 Progress Report by UOIT concerning its Faculty of Energy Systems and Nuclear Science

Dr. Tony Waker, Professor, UOIT, provided a progress report on the educational and research activities in the Faculty of Energy Systems and Nuclear Science at UOIT. The highlights of Tony's presentation were:

- The 2018-19 Undergraduate Programs and student enrolments are:
 - Bachelor of Nuclear Engineering - 73 students
 - Bachelor of Engineering in Energy Systems Engineering – 0
 - Bachelor of Applied Science in Nuclear Power – 0
 - Bachelor of Science in Health Physics & Radiation Science – 8
 - Bachelor of Nuclear Power Bridge Program – 0
 - Bachelor of Technology (BTech) in Sustainable Energy Systems (programs were approved for academic years 2019-2020)
- Graduate Programs and student enrolments are:
 - Graduate Diploma in Nuclear Technology (G.Dip) - 89 students
 - Master of Engineering (MEng) – 20
 - Master of Science (MASc) – 23
 - Doctor of Philosophy (PhD) – 21
 - At the June 2018 convocation, graduate degrees presented were: 54 G.Dip, 6 MEng, 1 MASc, and 1 PhD.

Tony explained that UOIT also offers an extensive Internship Program to help introduce young scientists and engineers to the nuclear industry and workplaces. The program partners with many companies including: OPG, CNSC, Bruce Power, SNC Lavalin, AMEC, AECON, RCM Technologies, Energy Solutions and International Safety Research. In 2018, 8 Co-op and 18 Intern students were involved in the program at UOIT.

Tony provided some very interesting technical information on the research projects that he and his associates were working on with their students in the well-equipped nuclear laboratories at UOIT.

Dr. Tony Waker or his associates will update the DNHC next year on the progress of the Faculty of Energy Systems and Nuclear Science at UOIT. More information can be accessed at nuclear.uoit.ca or by contacting Tony at anthony.waker@uoit.ca.

5. Communications

5.1 Community Issues at Pickering Nuclear

Analiese St. Aubin, Manager, Corporate Relations and Communications, Pickering Nuclear, OPG, provided an update on Community Issues at Pickering Nuclear and the highlights were:

- Pickering Units 1, 4, 5, 6 and 7 are operating at or close to full power.
- Pickering Unit 8 is in a planned maintenance outage.

- Pickering successfully hosted its annual *Tuesdays on the Trail Program* in July and August that was attended by several hundred families who enjoyed free educational and environmental programs in conjunction with OPG's many community partners.
- The Fall edition of the *Neighbours* newsletter will be distributed in October 2018.

Analiese St. Aubin, Manager, Corporate Relations and Communications, Pickering Nuclear, OPG, can be reached at (905) 839-1151 extension 7919 or by email at analiese.staubin@opg.com for more information.

5.2 Community Issues at Darlington Nuclear

Analiese St. Aubin, Manager, Corporate Relations and Communications, Pickering Nuclear, OPG, provided an update on the Community Issues at Darlington Nuclear and the highlights were:

- Darlington Units 1, 3 and 4 are operating at close to full power.
- Darlington Unit 2 is undergoing refurbishment.
- Darlington successfully hosted its annual *Tuesdays on the Trail Program* in July and August that was attended by several hundred families who enjoyed free educational and environmental programs in conjunction with OPG's many community partners.
- September 29, 2018, Darlington will host its annual *Family Safety Day Clarington* in partnership with the Clarington Emergency and Fire Services, Municipality of Clarington, Durham Regional Police Service and Kelsey's Restaurant, Bowmanville. They will provide information and hands-on activities for people of all ages to familiarize themselves with safety measures, emergency procedures and meet emergency personnel. In 2017, more than 4,000 people attended.
- October 27, 2018, Darlington will host its annual Darlington Refurbishment Project Open House that will provide the community with more information about OPG's mega-project. Also included is a reality tour of the inside of a nuclear facility and an informative bus tour around the Darlington NGS.
- The Fall edition of the *Neighbours* newsletter will be distributed in October 2018.

Jennifer Knox, Director, Corporate Relations and Communications, Darlington Nuclear, OPG, can be reached at (905) 697-7443 or by email at jennifer.knox@opg.com for more information.

6. Other Business

6.1 Topics Inventory Update

Robert Kyle indicated the Topics Inventory will be revised to include the presentations made today.

6.2 Future Topics for the DNHC to Consider

Robert Kyle indicated the theme of the next DNHC meeting scheduled for November 16, 2018 will be *Reports by the CNSC and the Port Granby Project* that may include:

- Progress report by CNSC concerning the 2017 Safety and Performance Reports for the Darlington and Pickering Nuclear Power Plants.
- Progress report by the Canadian Nuclear Laboratories/Port Hope Area Initiatives concerning the Port Granby Project.
- Report by OPG concerning its Periodic Safety Review and Integrated Implementation Plan referred to during the relicensing Hearings of the Pickering NGS and the safety enhancements that are being planned.

6.3 Scheduled DNHC Meetings in 2019

- January 11 hosted by DRHD in Meeting Room LL-C
- April 5 hosted by OPG at Darlington Energy Complex, Board Room
- June 14 hosted by DRHD in Meeting Room LL-C
- September 13 hosted by UOIT in Meeting Room TBA
- November 15 hosted by DRHD in Meeting Room TBA

6.4 Minor Wording Changes to the Terms of Reference

Robert Kyle mentioned several minor changes were made to the Terms of Reference dated August 31, 2018 under Composition to increase the Alternate Public Members from two to three and to reflect the recent provincial name changes for the Ontario Ministry of the Environment, Conservation and Parks and Ontario Ministry of Energy, Northern Development and Mines.

7. Next Meeting

Location

Durham Regional Headquarters
905 Rossland Road East
Town of Whitby, Ontario, Meeting Room LL-C

Date

November 16, 2018

Time

12:00 PM Lunch served, 1:00 PM Meeting begins

Host

DRHD

8. Adjournment 3:30 PM