

DURHAM NUCLEAR HEALTH COMMITTEE (DNHC) MINUTES

Location

Durham Regional Headquarters
605 Rossland Road East, Whitby
Meeting Room LL-C

Date

June 15, 2018

Time

1:00 PM

Host

Durham Region Health Department (DRHD)

Members

Dr. Robert Kyle, DRHD (Chair)
Ms. Mary-Anne Pietrusiak, DRHD
Mr. Raphael McCalla, Ontario Power Generation (OPG)
Mr. Loc Nguyen, OPG
Mr. Phil Dunn, Ontario Ministry of the Environment and Climate Change (MOECC)
Dr. Tony Waker, University of Ontario Institute of Technology
Dr. John Hicks, Public Member
Ms. Janice Dusek, Public Member
Mr. Marc Landry, Public Member
Dr. Barry Neil, Public Member
Mr. Hardev Bain, Public Member
Dr. David Gorman, Public Member

Presenters/Observers

Mr. Brian Devitt (Secretary)
Ms. Analiese St. Aubin, OPG (Presenter)
Ms. Margo Curtis, OPG (Presenter)
Mr. Gary Rose, OPG (Presenter)
Mr. Scott Berry, OPG (Presenter)
Ms. Amy Burke, Municipality of Clarington
Ms. Janet McNeill, Durham Nuclear Awareness (DNA)
Ms. Renee Cotton, DNA
Mr. A.J. Kehoe, Durham Region Resident

Regrets

Dr. Lubna Nazneen, Public Member
Ms. Veena Lalman, Public Member

Robert Kyle opened the meeting and welcomed everyone.

1. Approval of Agenda

The Revised Agenda was adopted as written.

2. Approval of Minutes

The Minutes of April 20, 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 March 20 and April 17, 2018.

3.2 Robert Kyle's office received an announcement from the Canadian Nuclear Safety Commission (CNSC) concerning changes to the location to the location and dates for 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. The dates of the Hearing are June 25 to 29, 2018 and the location is the Pickering Recreation Complex at 1867 Valley Farm Road, Pickering.

4. Presentations

4.1 Progress Report by OPG concerning the Darlington Refurbishment Project

Gary Rose, Deputy Site Vice President, Nuclear Refurbishment Execution, OPG, provided a progress report concerning the Darlington Refurbishment Project.

Gary explained that the Unit 2 reactor refurbishment is approximately 20 months into the planned 40 months schedule for the Project and is now entering the 4th of 5 phases. The disassembly of Unit 2 was recently completed and the reassembly phases have begun. Gary estimated that approximately, 60% of the work planned for the refurbishment of Unit 2 has been completed.

Gary explained that the Darlington Refurbishment Project Performance is based on four criteria that include:

- Conventional Safety and there have been no lost time injuries.
- Quality of workmanship and there have been no event resets.
- Critical Path Schedule is approximately 2 months ahead of schedule.
- Cost of the refurbishment is presently under budget.

Gary reported that phases 1, 2 and 3 of the Project have been completed and the significant work activities included:

- Defueling the reactor.
- Opening the airlocks.
- Drained and dried the primary heat transport and moderator.
- Preserved the steam generators.
- Removed the feeder pipes.
- Severed the pressure tubes.
- Removed end fittings, pressure and calandria tubes.
- Conducted final vessel inspection and tube bore cleaning.

Gary reported that the phases 4 and 5 significant work activities will include:

- Installing reactor components such as calandria and pressure tubes, end fittings, feeder tubes and returning to service of 58 systems.
- Restarting the reactor will include loading the fuel, removing equipment, low power test and connecting to the grid.

In summary, Gary provided a very positive report that the Darlington Refurbishment Project is on schedule, under budget with no lost time injuries and the quality of work is excellent.

Gary Rose or his associates will provide the DNHC with regular updates concerning the Darlington Refurbishment Project. More information is available by accessing the OPG website at Darlington_refurb@opg.com.

4.2 Progress report by OPG concerning the Results of the 2017 Environmental Monitoring Program (EMP)

Margo Curtis, Environmental Advisor, OPG, provided a detailed presentation of the of OPG's 2017 EMP results.

Margo explained the Key Objectives of EMP are intended to:

- Demonstrate, independent of effluent monitoring, the effectiveness of containment and effluent control.
- Demonstrate compliance with limits on the concentration/intensity of contaminants/physical stressors in the environment.
- Provide data to assess the level of risk on human health and the environment and/or to confirm predictions made by environmental risk assessments.

Margo reported that the results of 10 Non-Radiological Emissions to air and water for both Darlington and Pickering were in compliance for 2016 and met all MOECC limits.

Margo reported that the results of the 9 Radiological Site Emissions to air and water for both Darlington and Pickering were below 1% of the Derived Release Limits (DRLs).

The highlights of the 2017 EMP results were:

- 979 laboratory analyses were performed for the 2017 dose calculation.
- Monitoring results in the environment reflect station emissions trends.
- Tritium in drinking water was measured at local water supply plants (WSPs) and the tritium concentrations remained at a small fraction of the Ontario Drinking Water Quality Standard of 7,000 Bq/L and well below OPG's voluntary commitment of 100 Bq/L.
- In 2017, the actual tritium concentrations at 3 Durham Region WSPs near Darlington and Pickering NGSs were:
 - Oshawa – 10.8 Bq/L
 - Bowmanville – 6.8 Bq/L
 - Ajax – 7.0 Bq/L

Margo reported that in 2017 OPG conducted other monitoring studies that included:

- Confirmed that the air kerma rate due to the waste storage facilities cannot be detected at distances greater than 400 metres from the facilities. Skyshine dose from the source is not significant for potential critical groups outside the 1km boundary.
- Confirmed that there is no warming trend due to the discharge of warm water through the condenser cooling water system at Darlington and Pickering NGSs that would approach the threshold of 6.0°C. The intention is that that an adaptive management program would be implemented if the 6.0 °C threshold were to be exceeded as the discharge of warm water has the potential to impact the spawning success and larva development of some fish species.
- Confirmed the impingement and entrainment at Pickering NGS met monthly expectation except in November 2016 when an estimated 24,000 kg of Alewife were impinged because the impingement net had been removed for the winter season.

Margo indicated the main contributors to the 2017 public dose were carbon-14, tritium and noble gases for Darlington NGS and tritium and noble gases for Pickering NGS. The key monitored results included:

- The 2017 public dose for Darlington NGS was 0.7 µSv, ~0.1% of the annual Canadian Nuclear Safety Commission (CNSC) legal limit.
- The 2017 public dose for Pickering NGS was 1.8 µSv, ~0.2% of the CNSC legal limit.
- Both Darlington and Pickering NGSs radiological emissions were all below 1% of their DRLs.
- The estimated annual background radiation for both Darlington and Pickering NGSs is approximately 1,400 µSv.

In summary, Margo provided the following highlights that included:

- The 2017 dose calculations and EMP report was reviewed and verified by an independent third party and was submitted to the CNSC on April 20, 2018.
- Darlington and Pickering NGSs radiological emissions were all below the 1% of the their DRLs.
- Annual public doses resulting from Darlington and Pickering were 0.1% and 0.2% of the CNSC annual regulatory limit respectively.
- The 2017 EMP report will be available on opg.com on June 19, 2018.

Margo Curtis or her associates will update the DNHC next year with the 2018 EMP report results.

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, 5, 6 and 7 are operating at or close to full power.
- Pickering Units 4 and 8 are in a planned maintenance outage.
- The CNSC's Part 2 Public Hearing for the renewal of the Pickering NGS nuclear power reactor licence for 10 years is scheduled for June 25 to 29, 2018 and will be held at the Pickering Recreation Complex.
- Pickering has completed another successful *Bring Back the Salmon Program* in late May by releasing approximately 100 fish at the Greenwood Conservation Area. The hatchery has contributed approximately 1,000 salmon fry over the past few years and Pickering partners with local school students with this community initiative.
- Pickering will be hosting the annual *Tuesdays on the Trail Program* in July and August for families by providing free educational and environmental programs in cooperation with their community partners.

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 and 4 are operating at close to full power.
- Darlington Unit 2 is undergoing refurbishment.
- Darlington Unit 4 is in a planned maintenance outage.
- Darlington hosted indigenous representatives on June 1st for the unveiling of a display at the Darlington Energy Complex Information Centre as well as 3

Indigenous sculptures located around the Coots Pond at the Darlington Energy Complex.

- Darlington will be hosting the annual *Tuesdays on the Trail Program* in July and August for families by providing free educational and environmental programs in cooperation with their community partners.

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.

5.3 Corporate Community Issues for OPG

Analiese St. Aubin, Manager, Corporate Relations and Communications, Pickering Nuclear, OPG, provided an update on corporate community issues and the highlights were:

- OPG completed its Spring Council presentations to the City of Pickering on March 12, Regional Municipality of Durham on April 11, Town of Ajax on April 23 and the Town of Whitby and Municipality of Clarington on May 7, 2018.
- OPG hosted tours in May of the Pickering and Darlington NGSs by provincial NDP candidates with support from the Canadian Nuclear Workers Council. Both the provincial PC and Liberal candidates took part in station tours earlier in the year.
- The Summer edition of the *Neighbours Newsletter* will be delivered to homes in mid-June to coincide with Pickering and Darlington's *Tuesdays on the Trail Program*.

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 September 14, 2018 will be *Progress Reports by OPG* that may include:

- Progress report by OPG concerning the relicensing of the Pickering NGS.
- Progress report by OPG concerning the 2017 Results of the Groundwater monitoring Program at Pickering and Darlington NGSs.
- Progress report by UOIT concerning their Faculty of Energy Systems and Nuclear Science.

7. Next Meeting

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

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

Host

UOIT

8. Adjournment 3:10 PM