

DURHAM NUCLEAR HEALTH COMMITTEE (DNHC) MINUTES

Location

Darlington Nuclear Energy Complex
1855 Energy Drive, Courtice

Meeting Room

Information Centre Conference Room

Date

April 5, 2019

Time

1:00 PM

Host

Darlington Nuclear

Members

Dr. Robert Kyle, Durham Region Health Department (DRHD) (Chair)
Ms. Mary-Anne Pietrusiak, DRHD
Ms. Laura Freeland, DRHD
Dr. Tony Waker, Ontario Tech University
Mr. Raphael McCalla, Ontario Power Generation (OPG)
Mr. Loc Nguyen, OPG
Mr. Phil Dunn, Ministry of the Environment, Conservation and Parks
Dr. John Hicks, Public Member
Ms. Susan Ebata, Public Member
Ms. Jane Snyder, Public Member
Mr. Marc Landry, Public Member
Dr. Barry Neil, Public Member
Dr. Lubna Nazneen, Alternate Public Member

Presenters/Observers

Mr. Brian Devitt (Secretary)
Ms. Jo-Ann Facella, Nuclear Waste Management Organization (Presenter)
(NWMO)
Mr. Derek Wilson, NWMO (Presenter)
Ms. Lisa Frizzell, NWMO
Ms. Cheryl Johnston, OPG (Presenter)
Mr. Scott Berry, OPG (Presenter)
Mr. Kapil Aggarwal, OPG (Presenter)
Ms. Jennifer Knox, OPG
Ms. Donna Pawlowski, OPG
Ms. Jessica Jones, OPG

Ms. Christine Drimmie, Office of the Regional Chair and CAO
Ms. Amy Burke, Municipality of Clarington
Ms. Lynn Jacklin, Durham Nuclear Awareness
Ms. Melissa Ivey, Haliburton, Kawartha, Pine Ridge District Health Unit
Mr. A.J. Kehoe, Durham Region Resident

Regrets

Ms. Janice Dusek, Public Member
Ms. Veena Lalman, Public Member
Dr. David Gorman, Public Member
Mr. Hardev Bains, Public Member
Mr. Matthew Cochrane, Alternate Public Member
Alan Shaddick, Alternate Public Member
Ms. Lisa Fortuna, DRHD

Robert Kyle opened the meeting and welcomed everyone.

Robert Kyle thanked Cheryl Johnston and Darlington Nuclear staff for arranging the very interesting tour today of the Darlington Waste Management Facility (DWMF) for 9 DNHC Members from 9:00 am to 12:00 pm.

Cheryl Johnston mentioned that Darlington Nuclear has arranged a similar tour of the DWMF for DNHC Observers and others who regularly attend DNHC meetings. The tour is scheduled for May 27, 2019 from 9:00 am to 12:00 pm. She mentioned that those who are interested to join the tour will need to notify Brian Devitt directly and Darlington staff will follow-up with its security clearance requirements for the tour.

1. Approval of Agenda

The Revised Agenda was adopted.

2. Approval of Minutes

The Minutes of January 11, 2019 were adopted as written.

3. Correspondence

3.1 Robert Kyle's office received approved Minutes of the Pickering Nuclear Generating Station (NGS) Community Advisory Council meetings held on January 15, 2019.

3.2 Robert Kyle's office received an update of the report from Dr. Frank Greening, Intervenor at the November 8, 2018 Canadian Nuclear Safety Commission (CNSC) public meeting held in Ottawa, concerning the exposure of Darlington NGS refurbishment workers to an airborne alpha hazard in

February 2018 and Dr. Greening's update of his report was dated January 18, 2019.

3.3 Robert Kyle's office received OPG's Darlington Refurbishment Newsletter, Happening Now, concerning the progress of Unit 2 at the two-year mark of the Project reporting it is on schedule for restart by February 2020 dated January 24, 2019.

3.4 Robert Kyle's office received the OPG notification, dated February 14, 2019, that Jeffrey Lyash, President and CEO of OPG, is leaving OPG effective March 31 and will be replaced on April 1, 2019 by Ken Hartwick who has held the position of CFO and Senior VP at OPG since 2016.

3.5 Robert Kyle's office received OPG's Fourth Quarter 2018 Darlington Refurbishment Project Newsletter concerning major milestones on the horizon for the Project dated March 26, 2019.

4. Presentations

4.1 Progress report by the NWMO concerning Implementing Canada's Plan for Used Nuclear Fuel

Jo-Ann Facella, Director, Community Well-being Assessment and Dialogue, and Derek Wilson, Chief Engineer and VP, Contract Management, NWMO, provided an update on the long-term management of used nuclear fuel in Canada.

Derek mentioned NWMO was formed in 2002 as required by the *Nuclear Fuel Waste Act*. NWMO's mandate includes:

- To collaboratively develop and implement the long-term management of Canada's spent fuel.
- To ensure the Project only proceeds with the interested host community, First Nation and Métis communities and surrounding municipalities all working in partnership.

Derek provided comments and estimated timelines for the Project that included:

- The Site Selection narrowing process should lead to a selected site in 2023.
- The Regulatory Approval process will include:
 - The Centre of Expertise in 2024
 - Detailed Site Characterization Starts in 2024
 - Environmental Assessment and Licence Application in 2028
 - The Construction Licence for the Project to be granted in 2032
- The Design and Construction process will include:
 - Design and Construction starts in 2033
 - Operation of the Project begins in 2043

- Assessments are underway in 5 Ontario communities/siting areas as part of the Site Selection Process that includes:
 - Ignace/Wabigoon area
 - Manitouwadge area
 - Hornepayne area
 - Huron-Kinloss
 - South Bruce

Derek mentioned that the Key Priorities in the Site Selection Process include:

- Advancing partnerships with discussions and learning engagement activities.
- Advancing field work that includes:
 - Borehole drilling is ongoing in the Ignace/Wabigoon area
 - Planning for boreholes in Hornepayne and Manitouwadge areas
 - Planning for boreholes in Southern Ontario
- Advancing the technical program includes working towards serial production of used fuel containers and buffer systems.
- Developing a transportation framework includes advancing engagement and technical assessments.
- NWMO has developed a reconciliation statement and is committed to contribute to reconciliation in all work by co-creating a shared future built on rights, equity and well-being.

Derek provided detailed engineering information and design concepts NWMO is developing that include:

- Handling and storing of fuel bundles for underground placement rooms with engineered barrier systems.
- Developing new concepts for containers to store fuel bundles in preparation for storage.
- Conducting trials of up to 20 containers for full-scale emplacement in realistic geometry.
- NWMO has participated in various international meetings focused on safe handling and long-term storage of used nuclear fuel using DGRs.

Jo-Ann provided information on NWMO's on-going transportation engagement that includes preparing a planning framework, publishing reports and advancing technical assessments of transportation means and modes for moving the nuclear fuel bundles to the DGR when constructed.

Jo-Ann and Derek or their associates will update the DNHC next year on the progress NWMO is making in its Site Selection Process for used nuclear fuel in Canada. More information about NWMO is available at its website, nwmo.ca.

4.2 Progress Report by OPG concerning its Nuclear Waste Management Program at Pickering and Darlington NGSs and the proposed Deep Geological Repository (DGR)

Kapil Aggarwal, Director, Eastern Waste Operations and DGR Nuclear Waste Management (NWM) Division, OPG, provided a report concerning OPG's nuclear waste management division's responsibilities.

Kapil provided an OPG overview that included:

- OPG is owned by the Province of Ontario.
 - Supplies approximately 50% of Ontario's electricity
 - 9,300 employees
 - 66 hydro electric stations
 - 2 biomass stations
 - 2 natural gas stations
- Nuclear Generating Stations include:
 - Pickering
 - Darlington
 - Bruce that is leased to Bruce Power

Kapil mentioned the 3 pillars of the NWM Division that included:

- Stewardship – We look after waste responsibly.
- Lasting Solutions – We seek a permanent solution for disposal.
- Peace of Mind – We try to provide peace of mind for the public.

Kapil referred to the 3 Waste Management Facilities (WMF) operated by OPG:

- Western WMF that stores low and intermediate-level waste (L&ILW) from all NGSs including Bruce Power's used fuel.
- Darlington WMF that stores used fuel and some Darlington refurbishment waste.
- Pickering WMF that stores used fuel and some Pickering refurbishment waste.

Kapil provided detailed information on the Pickering WMF that included:

- In 2018, the CNSC renewed the Pickering WMF operating licence for 10 years until 2028.
- The licence includes construction of Storage Building 4 to store Dry Storage Containers (DSCs) that will be completed by August 2020 and Storage Buildings 5 and 6 will be built in future years when needed.
- In 2019, the planned target for the Pickering WMF is for 40 DSCs of used fuel.
- To date, there are 932 DSCs stored at the Pickering WMF.
- For 25 years, Pickering WMF staff have worked without a lost-time accident.

Kapil provided detailed information on the Darlington WMF that included:

- The 10-year CNSC licence continues until 2023.
- The licence includes construction of Storage Building 3 that will be completed by 2023 and Storage Buildings 4 and 5 in future years when needed.
- In 2019, the planned target for the Darlington WMF is for 57 DSCs.
- To date, there are 584 DSCs stored at the Darlington WMF.
- Darlington Refurbishment Waste from Unit 2 is also safely stored on site.
- Since 2007, Darlington WMF staff have worked without a lost-time accident.

Kapil explained that the NWM Division has an ongoing focus on reducing its environmental footprint by minimizing waste volumes. This is accomplished by sorting waste to determine what can be recycled or reused. Approximately half of the low-level waste is incinerated at the Western WMF with approximately 90% reduction in volume. Innovative ways to reduce volume of large metal objects such as heat exchangers and steam turbines is accomplished by:

- Segmentation or chopping larger objects into smaller segments.
- Ablation or removing the outer shell of the objects.
- Melting the metal objects to reduce the size.

Kapil explained that research is being conducted into new decommissioning technologies with various universities and new waste management tools are being used such as:

- Operators and designers collaborate within a 3D virtual environment of the waste facility with a virtual reality headset.
- Staff are using wireless tablets to save time and input reports from the field without using of paper reports.
- Exploring new robotic welding technologies for DSC lid-to-base welds.
- Using laser Mapping Container Verification to verify the integrity of welds for continuous IAEA inspections.
- OPG has participated in various international meetings focused on spent fuel, radioactive management and transportation of refurbishment waste in support of Darlington and Bruce with its major component replacement.

Kapil mentioned the proposed OPG DGR for L&ILW at the Bruce Power site. Since all L&ILW waste storage is interim only, the DGR will provide the permanent disposal of L&ILW. The DGR is proposed to be built at the Bruce Nuclear site in Kincardine where the rock structure is very stable, impermeable and ideal for the proposed DGR.

Kapil reviewed the approval process status of the proposed DGR that included:

- 2011-14, the Joint Review Panel (JRP) reviewed the proposed DGR and environmental assessment.
- 2015, the JRP issued its findings that reported:
 - The DGR will protect the public, lake and environment

- The DGR project should proceed “now rather than later”.
- 2016-17, the Government of Canada requested additional information, including the impact on the Saugeen Ojibway Nation (SON).
- 2018-19, OPG engaged in a respectful dialogue with SON and they committed to gain a community decision by the year end 2019.
- 2020-22, OPG expects to receive environmental assessment approval and a site preparation and construction licence approval from the CNSC.

Kapil or his associates will provide the DNHC with regular updates concerning OPG’s NWM program at Pickering and Darlington NGSs and the DGR. More information is available by accessing the OPG website at www.opg.com.

4.3 Progress Report by OPG concerning the Darlington Refurbishment Project

Scott Berry, Senior Manager, Corporate Relations and Communications, Darlington Nuclear Refurbishment Project, OPG, provided a progress report on the Project using many interesting visual aids.

Scott reviewed several progress indicators and highlights for the Project that included:

- The Project remains on time and on budget.
- Unit 2 is on target for completion as planned for early 2020.
- Unit 2 is approximately 80% complete.
- Unit 2 bulk work is approximately 85% complete.
- The turbine work is nearing completion.
- Currently installing fuel channels assemblies and feeder pipes.

Scott provided a detailed explanation of the 5 Execution Phases and Schedules for Unit 2 that includes:

- Lead-in Phase: defuel and dewater reactor, install barriers to isolate Unit 2 from the station.
- Removal Phase A: open airlocks and install shielding, install work platforms, remove feeder tubes and sever pressure tubes and bellows.
- Removal B: remove end fittings, pressure tubes and calandria tubes.
- Installation Phase: inspect and install calandria tubes, fuel channels (pressure tubes, bellows and end fittings) and install feeder tubes.
- Lead-Out Phase: load fuel and remove equipment, heat-up and conduct low power testing, conduct high power tests and connection to the grid including 9 restart control hold points with CNSC oversight.

Scott provided a progress report on Unit 3 that will be the next unit for refurbishment at Darlington NGS.

- OPG received Board funding approval in March 2019 for Unit 3.
- Unit 3 will take approximately 40 months for refurbishment.

- The Execution Schedule for Unit 3 will use the many lessons learned from Unit 2 to save time and costs.
- OPG is on track for Unit 3 refurbishment to begin in early 2020.

Scott or his associates will continue to provide the DNHC with progress reports on the Darlington Refurbishment Project. More information on the Project is available at opg.com.

5. Communications

5.1 Community Issues at Pickering Nuclear

Cheryl Johnston, Manager, Corporate Relations and Communications, Darlington Nuclear, provided an update on Community Issues at Pickering and the highlights were:

- Pickering Units 1, 4, 5, 6 and 8 are operating at or close to full power.
- Pickering Unit 7 is in a planned maintenance outage.
- Pickering hosted their annual March Break Madness program from March 11-15 and approximately 2,000 community members attended and participated in the free educational and family-friendly programs offered.
- Pickering hosted a station tour for the Town of Ajax Mayor and Council on March 26.

Analièse 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

Cheryl Johnston, Manager, Corporate Relations and Communications, Darlington Nuclear, provided an update on the Community Issues at Darlington and the highlights were:

- Darlington Units 1 and 3 are operating at close to full power.
- Darlington Unit 4 is in a planned maintenance outage and Unit 2 is undergoing refurbishment.
- Darlington hosted a station tour in mid-February for MPPs Cuzzetto, Kramp and Piccini.
- Darlington hosted the National Safety Review Board (NSRB) from March 4-8 to examine key areas of operations and the NSRB noted the strong cross-functional teamwork and sense of pride in the work being done at Darlington.
- Darlington hosted their annual March Break Madness program from March 11-15 and approximately 2,000 community members attended and participated in the educational and family-friendly programs offered.

Cheryl Johnston can be reached at 905-623-6670 extension 7038853 or by email at cheryl.johnston@opg.com for more information.

5.3 Corporate Community Issues at OPG

Cheryl Johnston provided an update on corporate leadership issues and the highlights were:

- On March 4, OPG welcomed its new Nuclear President, Dominique Minière, who comes with 40 years experience in the nuclear industry in France where he was the Chief Operating Officer and Vice President of Finance.
- On April 1, Ken Hartwick became the new President and CEO of OPG replacing Jeffrey Lyash. Ken previously held the position of Chief Financial Officer and Senior Vice President with OPG since 2016.

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 June 14 will be *Environmental Monitoring at Pickering and Darlington NGSs* that may include:

- Progress report by OPG concerning the results of the 2018 Environmental Monitoring Report at Pickering and Darlington NGSs.
- Progress report by OPG concerning the results of the 2018 Groundwater Monitoring Program at Pickering NGS.

6.3 DNHC Meeting change from November 15 to November 22, 2019

Robert Kyle mentioned the DNHC meeting that was scheduled for November 15 has been changed to November 22, 2019.

6.4 Details of Optional Tour for DNHC Observers on May 27, 2019

Brian Devitt mentioned that Darlington Nuclear has invited DNHC Observers and others to participate in a tour of its DWMF on May 27 from 9:00 am to 12:00 pm. The tour will begin in the Conference Room at the Darlington Energy Complex.

Brian will email the DNHC Observers and others who did not attend the tour today with detailed information about the tour and request those interested in participating in the tour, to email him by April 26.

Darlington staff will follow-up with each participant requesting personal ID information required for the OPG security clearance for those joining the tour.

7. Next Meeting

Location

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

Date

June 14, 2019

Time

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

Host

DRHD

8. Adjournment 3:40 P.M.