

**Pickering Nuclear Generating Station  
Community Advisory Council  
Pickering Nuclear Information Centre  
Meeting Minutes, May 16, 2017  
Meeting Highlights**

**CAC Report to the Community**

Council members suggested some themes for a CAC report to the community to be developed in the fall.

**Site Update**

Randy Lockwood presented an update on employee safety performance, plant productivity, the appointment of the first woman as Director of Operations and Maintenance, placement of the fish diversion barrier net around the plant's water intake system, and other developments at the site.

**Public Affairs**

Carrie-Anne Atkins presented an update on recent and forthcoming OPG activities in the community. OPG hosting Durham Steps for Life (a fundraising event for families affected by workplace tragedy), hosting Durham College Brewing Memories Coffee Tour, involvement of public school students in release of salmon from the hatchery at the Information Centre to Duffins Creek, and other activities.

**Operational Safety Review Team (OSART) Update**

Chris Johnston provided an update on the Fall 2016 OSART mission to Pickering Nuclear and followup activities. OSART, a program of the International Atomic Energy Agency (IAEA) is comprised of an internationally-based team of experts (inspectors) who assess the safety of a plant. The OSART report on Pickering Nuclear is publicly available.

**PWMF Licence Renewal Update**

Glenn Pringle presented an update on the Pickering Waste Management Facility's licence renewal. He talked about a planned expansion of the PWMF and about the areas that OPG focused on in the recent CNSC hearing about the application for renewal of the PWMF licence to operate.

**Pickering 2024 and Site Licence Renewal Update**

Randy Lockwood presented an update on preparations at Pickering for extending commercial operations to 2024, and information gathering and planning for site licence renewal. He talked about steps being taken to ensure that the plant can operate safely and efficiently to 2024. He also talked about why this fall will be a very busy one for the site.

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**Pickering CAC:**

John Earley  
Donna Fabbro  
Natalie Harder  
Donald Hudson  
Tim Kellar  
Greg Lymer  
Pat Mattson  
Sean McCullough  
Ralph Sutton  
Deborah Wylie

**OPG:**

Carrie-Anne Atkins  
Chris Johnston  
Randy Lockwood  
Glenn Pringle

**PDA:**

Francis Gillis  
John Vincett

Regrets:

Jim Dike  
Keith Falconer  
Bill Houston  
Dinesh Kumar  
Zachary Moshonas  
Moe Perera  
Helen Shamsipour  
Kira Shan  
Dan Shire

**Topic #1: Correspondence**

CAC Facilitator John Vincett noted that Volume 15, Issue 1, 2017 of NWMO News is now on-line at:

<https://www.nwmo.ca/~media/Site/Files/PDFs/2017/04/12/09/41/NewsletterV1512017EN.aspx?la=en>. He flagged two items:

- An interview with Laurie Swami, who is now President and CEO of NWMO. As a number of Council members know, Laurie had a long career at OPG, where her last position was Senior Vice President of Decommissioning and Nuclear Waste Management.

- An article entitled “When the Glaciers Return,” which answers the question: How could future ice ages impact deep geological repositories?

## **Topic #2: Review of Minutes**

In reviewing the April minutes, Council members called for changing the wording in the last sentence on page 6: “...members of the Council were concerned that the general member of the public is not fully aware...” should be changed to: “...that the member of the general public...” With this change, the CAC minutes for April 18, 2017 were approved.

## **Topic #3: CAC Report to the Community**

John noted that it was time for the Council to put together a new Report to the Community, the last one having been published in 2014. Given that the June meeting will have a very full agenda, the CAC will not be in a position to develop the report in detail until the fall. For this evening, he called for some initial thoughts on what should be covered in the upcoming report. The following topics were put forward:

- The public was intrigued by the decision to extend the life of Pickering Nuclear. What did the Council learn about this project?
- Repurposing the Pickering site has been pushed further into the future, but what was the CAC's input into this discussion?
- The Deep Geologic Repository project at the Bruce site: what did the CAC learn from their visit to the site, and what role did they play in the federal hearing on the issue?
- Description of vehicles that transport low- and intermediate-level nuclear waste to the Western Waste Management Facility
- KI pill distribution
- Darlington Refurbishment
- PNERP – the changes to the emergency response plan
- Use the infographic

It was agreed that PDA should start developing themes for the newsletter and send them out for CAC review.

## Topic #4: Site Update

Site Vice President Randy Lockwood presented a site update:

- Recent staff changes: Last Friday, Stephanie Smith was named Director of Operations and Maintenance at the site, the first woman in this role at OPG and probably at any nuclear plant. Chris Johnston is now Director of Work Management and Maintenance at the site.
- Yesterday the Government of Ontario released a draft of proposed changes to the province's Nuclear Emergency Response Plan. The public has 60 days to forward comments to an expert panel. The goal is to get the plan approved by the end of the year and released by next spring.
- Employees have worked 241 days since the last lost time accident. Employee safety performance in the first quarter of this year was excellent. Last week, however, an employee injured their hand while operating a lathe. This incident has been taken very seriously; OPG has taken a step back and is reviewing safety basics.
- Worker exposure to both internal and external radiation remains very minimal, far below regulatory limits.
- Unit 5 remains in a planned maintenance outage. This maintenance is going very well and is nearing completion. We anticipate that the unit will be back on the grid next month. The other five active units are operating essentially at full power.
- The Fish Diversion System has been in place since last week.
- Our environmental performance in the first quarter was very good.
- During the weekend of May 5, problems with the Electronic Hydraulic Governor (EHG) system in Unit 7 caused a forced outage. A circuit board issue was resolved and the unit was returned to service.
- On Monday, May 8, Unit 1 was brought down into a forced outage to repair a valve. This event occurred after Unit 1 had been continuously on line for a record 622 days. The previous longest stretch of continuous operation for this unit had been 339 days, and that occurred years ago. This record performance with the oldest unit on the site shows that equipment reliability is much better today.
- The forced loss rate over the last two to three years is the best in the site's history. We are beating the target again this year.
- With the rain and flooding across the province this year, water levels are very high. OPG is warning the public to stay away from hydraulic plants.

- Once a year, OPG has a visit from a World Association of Nuclear Operators (WANO) team. At their last visit, they said that OPG's nuclear fleet excels at safety. They commented on safety improvements at Pickering Nuclear over the last two-and-a-half years. They urged the site to keep up the good work. OPG is determined to make safety performance even better.

Randy responded to Council questions:

- *How far behind Pickering is Darlington's performance?*  
My point is that Pickering's performance has really improved, not that Darlington's performance has declined. Darlington performance remains excellent.
- *In the incident you mentioned, what caused the employee to injure his hand?*  
This incident occurred on site, but not in the plant. The employee was wearing gloves while working on a lathe. Rotating equipment was involved, and he lost the tip of a finger. We took steps to determine what happened and how it happened. (Chris Johnston noted that OPG management stopped all lathing activities to talk to employees about the incident.)
- *Could Pickering extend operations even further, beyond 2024?*  
The licence that we are applying for stipulates a close of commercial operations in 2024. The whole of the plant is focused on that objective.

## **Topic #5: Public Affairs**

Carrie-Anne Atkins, Manager of Corporate Relations and Communications at Pickering Nuclear, presented an update on recent and forthcoming OPG activities in the community:

- On Sunday, May 7, OPG hosted—for the seventh year in a row—the Durham Steps for Life walk at the Pickering Nuclear Information Centre. Despite cold rainy weather, 250 walkers turned out for the event, which raised \$28,000 for families of workplace tragedy.
- OPG is currently planning this summer's Tuesdays on the Trail program at the Darlington and Pickering sites. This will include educational and environmental programs for families across Durham Region with many community partners. More details to follow closer to the date of the program's opening.
- On Wednesday, May 10, the site hosted an information session followed by a station tour with Pickering Councillor for Ward 3, Shaheen Butt.
- On Friday, May 12, The Regional Municipality of Durham conducted its annual spring Public Alerting System testing within the 10-kilometre area around Darlington and Pickering Nuclear.

- Last week, OPG released its 2017 first quarter financial and operating results. Pickering's nuclear capability factor increased to 78.5 percent for the three months ended March 31, 2017, compared to 72.8 percent for the same period in 2016. (Carrie-Anne is happy to provide anyone who is interested with the full package of financials electronically.)
- In celebration of Durham College's 50<sup>th</sup> anniversary, the college is hosting a DC Brewing Memories Coffee Tour throughout the year at 50 workplaces that employ Durham College graduates. OPG will be hosting three of these sessions.
- May 25 Backyard Buddies: Grade 7 students from Sir John A. Macdonald will join OPG at Alex Robertson Park to do maintenance on the wildflower garden and learn about the importance of pollinators.
- On May 29 and 30, Corporate Relations and Communications will be hosting a two-day benchmarking visit from Japan's Chubu Electric Company. The group has a keen interest in Pickering's Community Advisory Council. John Vincett will be providing an update to that group on behalf of the CAC.
- On June 6, Grade 6 students from Bayview Heights Public School will take part in a half day program, including releasing the salmon fry from the hatchery here at the Information Centre into Duffins Creek, along with a scavenger hunt within Greenwood Conservation Area.
- On June 13, Bayview Heights Public School will participate in the Yellow Fish Road program and will be painting yellow fish on storm drains within their school community. This activity is part of an educational program to draw attention to storm water pollution of local water bodies.
- The next edition of Neighbours Newsletter will be distributed in June. It will include a "Did you know?" feature regarding the type of waste that would be shipped to the proposed DGR in Kincardine, as suggested at the CAC meeting in April.

## **Topic #6: Operational Safety Review Team (OSART) Update**

Chris Johnston, Director of Work Management and Maintenance, provided an update on the Fall 2016 OSART mission to Pickering Nuclear and followup (Appendix 1). OSART is a program of the International Atomic Energy Agency (IAEA).

OSART, comprised of an internationally-based team of experts (inspectors), assessed the operational safety of the plant from September 19 to October 6, 2016. The team identified some opportunities for improvement in operational safety compliance and performance, and provided recommendations and suggestions for areas needing improvement. Action plans

have already been developed for each of the 10 recommendations and 11 suggestions – and owners have been identified internally to drive each of these improvements. Eight Best practices, identified through the team's in-depth reviews of operational safety compliance and performance, are shared with other nuclear operators through the IAEA.

During the three weeks, the team of inspectors acquired information from: plant documentation; interviews and discussions with plant personnel; and direct observations of staff performance and plant conditions.

The team was particularly impressed with the plant's handling of aging equipment and replacing it as required.

The OSART report on Pickering has been derestricted (made available to the public) by the IAEA. A follow-up OSART visit to Pickering will take place in 2018. A final mission report, including an IAEA evaluation of the actions taken as a result of the OSART recommendations, will be issued after the follow-up visit (mid-2018).

OPG staff responded to Council comments and questions:

- *A short summary of the OSART report should be published in Neighbours.*  
Carrie-Anne: If there is room in the fall issue, we could do that. The full report is on line at [http://www.opg.com/generating-power/nuclear/stations/pickering-nuclear/Documents/Pickering\\_OSART\\_Report\\_2016.pdf](http://www.opg.com/generating-power/nuclear/stations/pickering-nuclear/Documents/Pickering_OSART_Report_2016.pdf).

Randy: Yes, we could put a link in Neighbours to the full report. We are not shy about sharing it. It was viewed as a very positive report by the CNSC. I would echo Chris; an advantage of the OSART mission is that it brings together many different cultural perspectives and technologies. It allows us to see our plant through the eyes of visitors. That broadly based perspective is an advantage over WANO inspections. 2017 is about “fix the plant.” We have cut the work backlog back by one half since the beginning of this year; we will complete the other half by the end of the year.

- *Does the OSART process provide any feedback about good OPG practices adopted elsewhere in the world?*  
Chris: I don't know, but practical information about our practices is out there and available for people to use. We do get requests from people to come here and observe how we work. The OSART people are coming in fresh and bringing information on their own good practices and on issues that drove their improvement. The process provided good engagement and discussion.

John Vincett remarked that, from their visit to the Community Advisory Council during their review, it looked like a lot of good energy characterized the OSART visit.

## **Topic #7: PWF Licence Renewal Update**

Glenn Pringle, Manager of the Pickering Waste Management Facility (PWMF), presented an update on the Facility's licence renewal (Appendix 2).

Glenn talked about a planned expansion of the PWMF: three additional used fuel dry storage buildings (to accommodate Dry Storage Containers from Pickering until the end of commercial operations) and a new DSC processing building. He noted that, at the end of last year, a decision was made to postpone construction of the new processing building to 2023, a year before the Pickering plant is scheduled to close commercial operations.

The PWMF has applied to the CNSC to renew its licence to August 2028. At the CNSC hearing on April 13, OPG focused on three areas:

- Understanding the term of licence applied for
- Terms for environmental reporting control levels (PWMF strives to make sure action on environmental issues is taken well before environmental reporting control levels are reached.)
- Availability of the environmental documentation (The PWMF produces almost no emissions but reports emissions along with the Pickering station.)

Glenn said that OPG is now awaiting a decision from the CNSC, but expects to receive a renewed PWMF licence well before expiry of its current licence.

Glenn responded to Council questions:

- *Why is a new processing building required?*  
We currently add about 50 dry storage containers (DSCs) a year to the facility. The used fuel is stored in pools on removal from the reactors. However, water storage is more expensive than dry storage, so we want to get the waste into DSCs as soon as possible. A hundred new DSCs a year would cut the water storage timing in half. So we are planning ahead to save money.
- *What happens if the plant doesn't get approval from the CNSC for the life extension and it has to shut down early?*  
We still need all the increased storage space because of the volume of used fuel already there. An extra four years of operation doesn't make that much difference.

John noted that the CAC provided a written submission to the CNSC hearing in April regarding the PWMF licence renewal.

Glenn thanked the Council for their intervention.

## **Topic #8: Pickering 2024 and Site Licence Submission Update**

Randy presented an update on preparations at Pickering for extending commercial operations to 2024, and information gathering and planning for site licence renewal (application due to CNSC in August 2017) (Appendix 3).

Randy noted that OPG first created a business case for the life extension of Pickering Nuclear. This case was based on three questions:

1. Is there a demand for the additional power supply? (Yes.)
2. What is the value added?
3. Could OPG get regulatory approval?

Randy presented a chart on the benefits of continued operations. Pickering provides jobs for 3,000 employees and 1,500 contract workers and others across Durham Region.

Randy responded to Council questions and comments on the chart:

- *That chart should be used in the CAC report.*
- *The chart mentions a \$600 million saving—compared to what?*  
This is the saving from plant extension compared to other technologies. \$600 million is a conservative figure; it will actually be more.
- *What happens to the 4,500 workers in 2025?*  
I often get that question from workers: what's going to happen to me? My answer is: we can't run an asset forever. But I also point out that, five years ago, extending Pickering operations would not have been believable. So, many things progress; we don't know what things will look like five years from now. Some of those workers will be retiring during that timeframe. In the meantime, we've been given a mandate to 2024. Within OPG, union and management are thinking about how best to address the situation post 2024. But we don't yet know what the situation will look like at that time. Many factors are still to be decided.
- *What is the average age of the Pickering workforce?*  
We were surprised at how accurate predictions of the rate of attrition have been. But we're actually still hiring new workers. (Carrie-Anne said she could provide information on workforce average age and the rate of attrition to the Council.)

Randy continued, noting that the licence renewal process is on track (see timeline in Appendix 3, Slide 3). The plant is now undergoing a safety review, addressing the question: Is there a gap between plant operations and current and anticipated standards? The following will be looked at through to the end of 2017:

- Fuel channel assessment (growth of fuel channels is the age-limiting factor)
- Assessment of other major components
- Certain inspections of equipment during outages

The goal is to ensure that the margins are there for all six units to run to the end of 2024.

A good portion of the safety review is now done.

The next phase of licence renewal activities (2018 to 2020) will entail long outages for each

unit, during which additional inspections of fuel channels and other components will take place. There will also be a breakdown of costs based on what is learned from the inspections.

Randy noted that the schedule of 2016 – 2017 assessments is now basically done and is under budget. This gives OPG and the government confidence. OPG now knows that the extension of operations will cost less than anticipated, so the station will be commercially viable.

Randy noted that the current licence expires at the end of August 2018. OPG is seeking a 10-year licence to take the plant to the end of commercial operations and through the process of shutting the plant down and putting the reactors into safe storage. The licence application is due at the end of August 2017, though OPG could submit the application early if the CNSC is in a position to accept it.

OPG is developing a GAR (Global Assessment Report) to capture the gaps between the current status of plant operations and standards required by the extension of operations to 2024. This report will be sent to the CNSC at the end of October. An IIP (Integrated Implementation Plan) will be sent to the Commission at the end of November.

The CNSC hearing on the Pickering licence renewal application is tentatively scheduled for April (Part 1) and June (Part 2) of 2018.

By the end of June 2017, OPG will send a letter to the CNSC, a key part of which will indicate a plant shutdown date.

Randy then talked about Pickering's three priorities for the remainder of 2017—ensuring that the plant is: safe (the current focus); reliable; and cost effective.

Fall will be a very busy time for the plant. Activities will include:

- One unit in a planned outage
- Community information sessions
- A WANO audit
- Pickering Unified Response Exercise (will test emergency response plans and demonstrate how agencies and government work together to protect the public)
- Licence applications

Randy responded to further Council questions:

- *What if the CNSC comes back and does not approve extension of operations to 2024?*  
That's a possibility. There are other options that the CNSC has used in the past to place further checks on operations, including perhaps a total number of hours which OPG can operate the plant or a specific unit; or hold points that require satisfying criteria to the CNSC in order to continue operations.
- *I don't like the phrase "fix the plant." It suggests the plant is broken.*  
We wanted a phrase for the workers that would focus on the need to continuously

improve the plant. (John suggested that the phrase was really an external communications issue. “Fix the plant” is meaningful internally but has a different connotation externally.)

- *Could you explain further what is meant by fuel channel growth?*  
Over time the fuel channel will grow in length, and also radially. We want to keep it on the bearing pads. There are various ways of measuring the length of the channel so that we know where it is on the bearing pad. This is not a major concern, and we keep a close eye on these measurements.
- *Is the growth of the channel causing the walls to thin?*  
There are many reasons for some thinning of the fuel channel walls. We measure the thickness and sagging of the inner tube. We check to see if the inner tube is in contact with the outer tube. If the inner and outer tubes touch, there is a loss of energy—which is not desirable—but is also not dangerous.

Randy stated that, for major components at the plant, there is a life cycle management plan. “All our workers live here,” he said, “so they have an interest in the safety of plant equipment.”

## **Topic #9: June Meeting**

John noted that the June CAC meeting will take place here at the Information Centre with members of the Darlington CAC invited to join us. The agenda will include:

- The Annual Environmental Management Report for both stations
- Mary-Anne Pietrusiak of the Durham Region Health Department will provide additional information regarding health issues, including more nuanced information on cancer and other disease rates in the region.
- An update on refurbishment at Darlington

## **Topic #10: CNSC News**

For selected news items from the CNSC, please see Appendix 4.

**Next Meeting**  
**Tuesday, June 20, 2017, 6 pm**  
**Pickering Nuclear Information Centre**  
**(supper available at 5:30 pm)**

