

**PNGS Community Advisory Council  
Pickering Nuclear Information Centre  
Tuesday, Sept. 16, 2025  
Meeting Highlights**

**Site Update**

Senior Vice President of Pickering Paul Seguin provided an update on the operating status of the units. Unit 1 and 4 are now defueled. Water has been drained from Unit 1, and Unit 4 is undergoing the same process. Units 5, 6, 7, and 8 are currently online and operating at full power. Unit 6 is scheduled for one final outage before refurbishment, which will be shorter than usual because the units are scheduled to shut down next year prior to refurbishment.

**2024 Environmental Monitoring Program (EMP) Report**

Lindsay Parks presented the EMP 2024 results for Pickering Nuclear. She presented data showing that the site public dose remains a small fraction of both the annual legal dose limit and the annual natural background radiation in the area. She also noted that Tritium in drinking water measured at local water supply plants remained at a small fraction of the Ontario Drinking Water Quality Standard.

**2024 Groundwater Monitoring Program (GWMP) Report**

Raphael McCalla presented the 2024 GWMP results for Pickering Nuclear. He showed how groundwater data from key site areas remained stable, indicating consistent environmental performance. There were no indications of off-site impacts of Pickering Nuclear groundwater.

**Public/Community Affairs**

Analiene St.Aubin talked about OPG activities in the community. Among the items mentioned: a recent summer food drive for St. Paul's on the Hill Community Food Bank, update on the 2025 Tuesdays on the Trail program, tours and community presentations and the upcoming Community Power Expo which will take place at the Pickering Nuclear site for the first time.

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**CAC:**

Waqas Ahmad  
Craig Bamford  
Pam Collins  
Frank Dempsey  
Nicholas Fontana  
Pat Mattson  
Sean McCullough  
Dan Shire  
Peter Ottensmeyer  
John Simpson  
Nick West

Regrets:

Denise Bacon  
Mary Gawen  
Bill Houston  
Tim Kellar  
Tavis Nimmo

**OPG:**

Carrie-Anne Atkins (facilitator)  
Ali Esmaily  
Tiasi Ghosh  
Frank Katradis  
Sarah Malcom  
Raphael McCalla  
Paul Seguin  
Analiese St. Aubin

## **Topic #1: Health and Safety Moment**

Following a Land Acknowledgment, PNGS Senior Vice President Paul Seguin talked about hazards specific to preparing for the winter season. Recommendations included:

- Slips, trips and falls are one of the most common causes of injuries, but they are also among the most preventable.
- Whether you're working at heights or just walking, it's important to stay aware of your surroundings and follow safety procedures.
- Here are a few tips to help prevent falls:
  - Keep walkways and work areas clear. Remove clutter, cords, and spills right away.

- Use the right equipment. Always use ladders, scaffolds, and personal fall protection gear properly.
  - Check your footing. Watch for uneven surfaces, loose rugs, or wet floors.
  - Stay alert and focused. Avoid rushing and pay attention to what you're doing.
- Taking a few extra moments to complete projects safely can prevent serious injuries.

## Topic #2: Review of Minutes

Carrie-Anne introduced herself to the group and explained that she is stepping in to facilitate the meeting while OPG looks for a new facilitator following Dave Hardy's retirement. She provided some background on her qualifications, including completion of a facilitation program.

Carrie-Anne noted the main topics of the joint Pickering and Darlington CAC meeting in June. The minutes of the joint Pickering and Darlington CAC meeting of June 17, 2025 were approved without changes.

## Topic #3: Site Updates

Paul presented the PNGS Site Update.

- Units 5, 6, 7, and 8 are operating at or near full power.
- Defuelling is completed on Units 1 and 4. On Unit 1, we have drained heavy water from the systems and have started the work on Unit 4.
- Unit 6 is scheduled to begin an outage on Sept. 18. The duration of this outage is a little shorter than usual because the units will be shutting down next year, and we don't need to complete the number of inspections we have done in the past.
- The public can expect to see some road work around the plant in the coming weeks and months as we prepare the site for refurbishment:
  - Construction to repair Sandy Beach and Montgomery Park Roads beginning in early October will create some road closures.
  - The impacted area will be from just south of Parkham Road (Alex Robertson Park parking lot) south to the end of Sandy Beach. And then on Montgomery Park going east to approximately the entrance to the plant.
  - OPG is working with the City of Pickering.
- OPG has submitted the license application to the CNSC for early renewal of both the Pickering NGS Power Reactor Operating Licence (PROL) and the PWMF Waste Facility Operating Licence (WFOL) for a 10-year term from Jan. 1, 2027 to Dec. 31, 2036.
- The application includes OPG's plan to refurbish Units 5 to 8 and progress the decommissioning of Units 1 to 4. It also proposes a consolidation of the licensed activities under the current Pickering PROL with the Pickering WFOL to streamline regulatory processes.

- This will be a two-part hearing process. Part 1 will be held on April 1, 2026. This is where OPG and CNSC staff will present to the Commission. It is typically a virtual meeting.
- Part 2 will be held the week of June 22, 2026, and at this hearing, the public will have the opportunity to appear in front of the commission. The public hearing will be in person in the community, and webcast live.
- As always, there is an opportunity for the CAC to intervene. Those interventions are due to the CNSC by May 11, 2026.
- In 2026, we will host in person and virtual public information sessions. More details to come.
- All documents related to the license application will be available on the Operating Licenses page on opg.com.

Paul responded to Council questions:

- *Has the work been completed related to the tunnel in the lake?*  
Yes, samples have been taken at the site.
- *Any surprises?*  
The review is ongoing. Vendors are currently collecting and analyzing information.
- *There is quite a lot of talk about Wesleyville, including questions about traffic and construction.*  
The project is still in the early stages, and some funding has been provided to Port Hope during this phase. Analiese added that on Oct. 10, OPG will be opening a Public Information Centre for the community.
- *What size plant was Wesleyville designed for?*  
The original intention in the 1970s was to build an oil plant, which was constructed but never operated. The property is now primarily used for training.
- *Is the road work at OPG's expense?*  
Yes, OPG is covering the cost of the road work.
- *Do you have an approximate time for completion of the removal of water in Unit 4?*  
The water has been cleared, and drying is underway. All water is expected to be removed by the end of the year.
- *What level of protection is required for the workers entering Unit 4?*  
Our existing radiation protection procedures and processes remain for both Unit 1 and 4. The Radiation Personal Protective Equipment (RPPE) required to enter the Unit remains unchanged and is based on hazards that are assessed through regular monitoring.
- *Is the safe storage state for these reactors reversible? Is it impossible with CANDU? (Reference to Three Mile Island)*  
The Three Mile Island reactor was shut down many years ago and followed a different process than CANDU reactors. The safe storage state is reversible, but there are currently no plans to do so.

- *For Sandy beach Road, you mentioned construction on the bottom part of the road, but not the top part. What about that?*

Construction is starting at the bottom of the road, with a planned completion before winter. The plan is to start the remainder in the spring 2026.

**ACTION:** Provide an update on the opening of the Wesleyville information centre and the public engagement program.

## Topic #4: 2024 Environmental Monitoring Program (EMP) Report

Lindsay Parks, Environmental Advisor, presented the 2024 results of OPG Pickering's Environmental Monitoring Program (EMP) (Appendix 1). She talked about the key objectives of the program:

- Provide data to assess the level of risk on human health and the environment resulting from the operation of OPG nuclear facilities;
- 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; and,
- Confirm predictions by environmental risk assessments, refine models used, and reduce the uncertainty in the predictions made by these assessments and models.

Lindsay presented a map of Pickering Nuclear critical groups and sampling locations. Critical groups are divided into three age categories—infant, child and adult—with the members of each group having similar diets. Radiation doses are calculated for each age group.

She also presented a chart illustrating radiation dose examples ranging from a typical chest x-ray (0.1 millisieverts (mSv)) to average annual dose from natural background radiation (1.8 mSv) to annual dose limit for a nuclear energy worker (50 mSv) to a number of other activities.

Lindsay noted that the Pickering public dose for 2024 was 1.4 microsieverts ( $\mu\text{Sv}$ ). This very low dose is consistent with the 2023 public dose. The Pickering Nuclear dose is 0.1 percent of natural background radiation.

Lindsay presented a series of graphs from the 2024 EMP report, then summarized the data:

- 874 laboratory analyses performed for the 2024 Pickering Nuclear (PN) dose calculation
- Site emissions remained at a very small fraction of their respective derived release limits (DRLs).
- The 2024 PN site public dose remains a small fraction of both the annual legal dose limit and the annual natural background radiation in the area.
- Tritium in drinking water measured at local water supply plants remained at a small fraction of the Ontario Drinking Water Quality Standard (7,000 becquerels per litre (Bq/L)) and OPG's voluntary commitment (100 Bq/L)
- Dose calculations and annual report were reviewed and verified by an independent third party
- 2024 EMP report was submitted to CNSC in April 2025 and is available on [www.opg.com](http://www.opg.com).
- The overall EMPs encompass other programs that are reported separately.

Further information was provided on other monitoring programs, audits and inspections, and a look ahead.

- Other monitoring programs include supplementary studies (DNNP), a groundwater monitoring program, and CNSC's type two inspection, which found no evidence of risk to health and safety.
- An internal health and safety audit was conducted from April 15th to May 3rd of the previous year, with only documentation issues identified.
- The Health Physics Lab underwent two audits—one planned and one unplanned.
- Looking ahead, no major changes or supplementary programs are planned for 2025 as part of the EMP.
- The next Environmental Risk Assessment (ERA) updates for DN and PN will be completed in 2026 and 2027.

Lindsay responded to Council questions:

- *What I'd like to see on your graph as well is the extremes on earth. For example, near the Black sea, people receive a dose of 800 mSv and are perfectly healthy. If you put this into perspective, the human body tolerates a lot of radiation. They've measured everything genetically and people are fine.*

Paul mentioned that the source of that radiation is natural and noted this was an interesting fact.

*CAC member later clarified that the high natural background dose mentioned earlier is not from the Black Sea, but from the Black Deserts, where levels reach 260 mSv and suggested including data for people living at high altitudes in the chart for further perspective.*

- *Does the CNSC require you to go down to these small levels?*  
Yes. For the 2024 dose calculation, 874 laboratory analyses were performed. The annual dose from Pickering was 1.4  $\mu$ Sv, which is a license requirement by CNSC and is posted on the OPG website.
- *So, does the dose for Pickering take these environmental emissions into account?*  
Yes. The 2023 dose was 1.5  $\mu$ Sv, similar to previous years and well below the regulatory limit. The main dose contributors are Cs-134, noble gases, and tritium.
- *Are tritium levels at the water supply (Horgan Water Supply Plant (WSP) and Ajax WSP) within standards?*  
Yes. Both are well below the provincial and OPG drinking water standards, with results below 13.9 Bq/L.
- *Do these levels track releases at the generation station?*  
Yes.
- *How much of this is natural or background radiation? Is it all from the generation station?*  
No, not all radiation is from the generation station; some is natural background radiation.
- *Results for non-radiological emissions: Were there any Ozone Depleting Substances between 10kg and 100kg at PN in 2023?*

No.

- *Since you have those provincial results, why aren't the levels higher?*  
The levels are similar to provincial results.

*CAC member suggested that OPG should publicize these positive results, as they are noteworthy.*

- *Have there been any noncompliance issues for Pickering?*  
No, there have been no noncompliance issues.
- *How do you identify the harvester receptor? Do you work with Indigenous groups?*  
Yes, input is received from Indigenous groups. When surveys are distributed, there is an option for respondents to identify as Indigenous, targeting those living within a 5 km radius.

## **Topic #5: 2024 Groundwater Monitoring Program (GWMP) Report**

Raphael McCalla, Director Environment, Health and Safety, presented the 2024 results of OPG Pickering's Groundwater Monitoring Program (GWMP) (Appendix 2).

Raphael noted that this very robust program has been in existence for 25 years. Its objectives are to:

- Verify groundwater flow direction;
- Monitor changes to on-site groundwater quality to identify new issues in a timely manner and assess historical issues; and,
- Monitor groundwater quality at the site boundary to confirm there are no off-site impacts.

There are 124 sampling locations that are checked on a regular basis, with a focus on wells with the most risk of environmental impact. 330 samples were collected.

Raphael presented a series of graphs indicating groundwater quality (concentrations of becquerels per litre (Bq/L) on the site from 2011 to 2025. The findings for 2024 are quite similar to those of 2023.

He noted that there was a challenge with tritium in the Units 5 and 6 areas in 2020 but that the tritium is going down. He also noted that the site boundary groundwater quality shows no migration of tritium.

Raphael noted that both the EMP and GWMP reports are submitted to the CNSC on an annual basis.

In summary:

- At Pickering Nuclear, the groundwater flow patterns remain consistent with original interpretations.

- Groundwater data collected from the key areas remained stable, which indicate consistent environmental performance.
- There were no indications of off-site impacts from Pickering Nuclear and Darlington Nuclear groundwater.

Groundwater reports and GIS maps are available at [opg.com](http://opg.com).

Raphael responded to Council questions.

- *Is the existing shoreline the original shoreline?*  
We're not sure, but we believe there were changes made to the shoreline.
- *On slide 4, where it shows contour line 74, I would expect there to be a lake. Where does the water go? You're saying it's flowing in all sides.*  
There are two low points by the vacuum building, which are the lowest points, and another point near the B-side where water flows north.
- *So there should be a lake or pool of water?*  
Water does accumulate, but it flows through a monitored pathway.
- *When you say it accumulates, is that what the wells are?*  
No, the wells are at different depths. The monitoring is to understand what is happening underground, especially in low points.
- *Is that a natural or created pathway?*  
The water flows that way due to the plant's design.
- *You indicated that this is the natural decay of tritium with a 12-year half-life, correct? Isn't there a washout?*  
The majority of the decrease in tritium is due to natural decay.
- *What about flow into the lake? I recall concerns about tritium in Lake Ontario years ago. Do you monitor that?*  
Some water does reach the lake, but the impact is minimal and does not affect drinking water.
- *What would happen if we drank the water from the wells? Is it benign?*  
It is not recommended to drink the well water. Calculations show tritium levels are minimal, but the water supply plant should be relied upon for drinking water.
- *Does refurbishment affect groundwater flows or the topography?*  
OPG is currently reviewing this. The plant's footprint will remain the same, with the major excavation being the tunnel.
- *Will there be any upgrades to building areas to prevent future groundwater releases?*  
OPG is consulting with a contractor about ongoing water monitoring.
- *Is there a requirement to determine what is natural decay?*  
This is primarily done through modeling, with input from external consultants.
- *Is the water pumped out treated?*

The water is monitored and never exceeds regulatory limits.

- *Is that normally the case?*  
Yes.

## **Topic #6: Public/Community Affairs**

Analiene talked about recent and coming activities in the community:

- The team recently hosted tours for staff from the Office of the Premier, as well as the two new Members of Parliament (MPs) from Pickering and Ajax.
- Employees participated in the “Nourish to Flourish” program, collecting 500 food items in less than a week. Food bank usage has increased by over 400% and there is a greater need as kids head into summer vacation. OPG thanked CAC member Craig for his work with the food bank.
- OPG collaborated with the Pickering Library for the Summer Reading Club, engaging with families and community members and featuring SPOT, the robot dog.
- The 2025 Tuesdays on the Trail program welcomed approximately 200 community members throughout the summer. Partnerships included Soper Creek Wildlife Rescue, Pickering Public Library, Scientists in School and Durham Community Health Centre.
- OPG participated in a safety week at Trench, a local business on Clements Road. OPG provided a presentation on the company, the role of Pickering Nuclear and the distribution of KI pills. 180 employees attended and the sessions were recorded for those that could not attend.
- OPG’s annual Community Power Expo will take place at the Pickering Nuclear site for the first time. It will feature hands-on activities, including tours of the control room simulators, live demonstrations, an interactive energy demand wall, fire trucks and security vehicles, drones and robotics, a live remote with radio station Q107. and participation from community partners such as St. Paul’s on the Hill Community Food Bank, City of Pickering, Durham College, Ajax Pickering Board of Trade and Whitby Chamber of Commerce, and others.

## **Topic #7: Concluding Remarks**

Paul offered his final thoughts, expressing gratitude to everyone for returning after the summer break. He thanked all participants for their questions, engagement, and continued involvement.

### **Next Meeting**

Joint Session of Pickering and Darlington CACs  
(Venue to be announced)  
Tuesday, Dec. 9, 2025  
4 pm – 7 pm