



OPG Enterprise Emergency Management (EEM)
2024 Program Overview for Darlington Nuclear

| Marilena Michienzi, Section Manager, EEM Programs

ONTARIO **POWER**
GENERATION

Agenda

- 1 | EEM - Our Mandate
- 2 | EM Framework in Ontario
- 3 | 2023 Highlights
- 4 | 2024 Priorities



Enterprise Emergency Management – Our Mandate

To ensure OPG has adequate provisions for the preparedness, and response capability, to mitigate the effects of a nuclear emergency, and protect the health and safety of the public, personnel, and the environment.

How is this implemented?

- CNSC **Reg Doc 2.10.1** & **Provincial Nuclear Emergency Response Plan** (PNERP)
- To respond effectively to an emergency, OPG practices the response capability through **10+ simulated emergencies** every year, and maintains plans, equipment, and facilities to ensure that this capability is sustained
- Nuclear Emergency Preparedness capability via Facilities, Equipment, Procedures, Emergency Response Organization with approximately **1200 trained and proficient ERO members**, 54 unique qualifications
- Emergency Management—Business Continuity, Crisis Management, Grid
- Alignment and inter-operability of emergency plans with **off-site authorities and stakeholders**

Enterprise Emergency Management Pillars

1. Program Excellence

Strengthen OPG's social license through a robust EP program which is integrated with station goals, to ensure the protection of employees, the public and the environment

2. Perfect Practice

Maximize the Emergency Response Organization's effectiveness through drills and exercises that are realistic, challenging and evaluated against a high standard

3. Constant Improvement through Innovation

Develop a culture of continually challenging the status quo to improve the EP program through a cycle of: Ideation → Innovation → Integration → Iteration

Ontario Nuclear Emergency Framework

- **Province** has authority for off-site emergency response and makes all public protective action decisions
- **Municipalities** implement the response actions directed by the Province
e.g. Durham/Toronto Emergency Management Organizations
- **Utilities** quickly notify and transmit information to off-site parties when an event is occurring and deal with the on-site response
- Provincial Nuclear Emergency Response Plan ([PNERP](#)) determines the protective action to be used for public safety, plus the requirements for all stakeholders

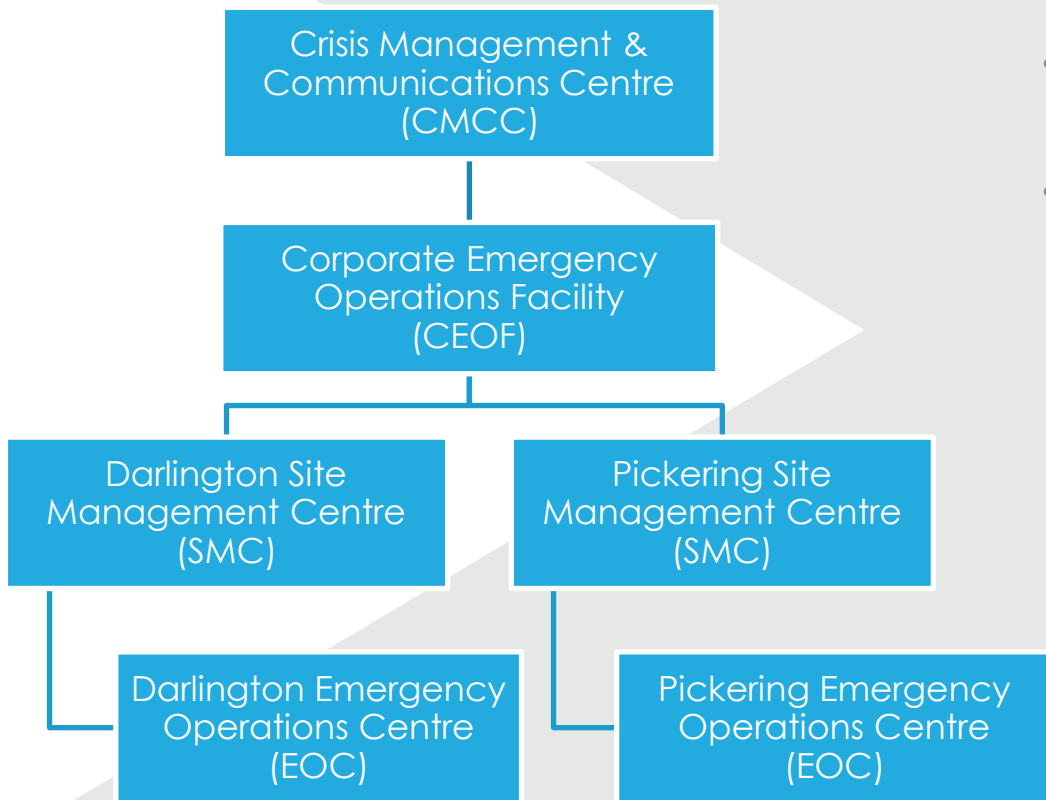


Provincial Public Protective Actions

- In the unlikely event of a nuclear emergency, the Province alerts people through a combination of outdoor sirens, automated telephone messages, AlertReady text messages, and radio, television and social media alerts in the area.
- The Province can order a number of public protective actions including:
 - Sheltering in place
 - Evacuations
 - Ingestion of potassium-iodide pills
 - Ingestion control measures



OPG Emergency Response Organization Structure



- OPGs tiered response structure is comprised of three scalable levels
- Depending on the severity of the incident various elements of the Emergency Response Organizations (ERO) may be activated:
 - Strategic (CMCC)
 - Operational (CEO, SMC)
 - Tactical (EOC)

OPG Drills & Exercises Program

- OPG executes 10 drills annually to evaluate every duty response team at Darlington and Pickering, plus several additional focused drills:
 - 5 Darlington station emergency drills
 - 5 Pickering station emergency drills
 - 1 focused Transportation Emergency Response drill
 - 1 focused Off-site Centre drill
 - 1 focused Liquid Emission Response drill
- Every 3 years, at each Darlington and Pickering, OPG executes a full-scale inter-operability exercise
 - Involves regional and provincial off-site authorities
 - Typically between 1-3 days in length



2023 Highlights

- **Exercise Unified Command 2023** executed successfully at Pickering, including participation from OPG, CNSC, Province EMO, Durham, Toronto, Pickering Fire, and Centennial College.
- **Proficiency of ERO (Emergency Response Organization):** Piloted an ERO Proficiency Dashboard to track performance across all key response roles.
- Updated **Evacuation Time Estimates** for Pickering site completed and available at opg.com
- **Drills & Exercises:** Successfully completed 7 evaluated drills, 1 Liquid Emission Response Drill, 1 Transportation Emergency Response Drill, and 10 Self-Assessed crew practices.
- **Potassium Iodide (KI) Pills:** Approximately 196 000 KI pills were distributed through 8800+ orders via preparetobesafe.ca and the New Neighbours program within the first three quarters of 2023.
- **External audit:** Mid-Cycle Review from 'World Association of Nuclear Operators' (WANO) in November and 2 field inspections/audits from the CNSC.
- Attended Community Open House with **Metis Nation of Ontario** to share emergency response practices for transportation emergencies and waste management.

Exercise Unified Command 2023

- **A 3-day, large-scale exercise simulating a nuclear emergency** at Pickering Nuclear Generating Station occurred in September 2023.
- The goal was to **test the interoperability and elements of each organization's respective emergency response plans** for a simulated incident. Lessons learned would be incorporated into the existing response plans for improvements.
- Participants included from a variety of organizations including:
 - CNSC
 - Province of Ontario
 - Regional Municipality of Durham
 - City of Toronto
 - Pickering Fire Services
 - Toronto Fire Services
 - Centennial College
- Several lessons from this exercise apply to both Pickering and Darlington sites and associated Offsite Centres



p10

- [<video>](#)

2024 Priorities

- **Drills & Exercises:** Full drill & exercise schedule through 2024, with added realism incorporated into scenarios.
- **Partnerships:** Maintain strong partnerships with external partners at all levels (Federal, Provincial, Regional, Municipal, Nuclear industry) through regular discussion, alignment and MOUs.
- **Indigenous Engagement:** Forming a team to identify additional engagement opportunities through the program
- **Performance:** Monitor changes in emergency response equipment and systems through data automation
- **Potassium Iodide (KI):** OPG will remain an active member of the ongoing CNSC-led KI Working Group in 2024, as well as consulting with municipal and provincial partners on various KI matters. OPG to enhance the KI Program by upgrading the PTBS website and expanding approved suppliers.
- **Innovation:** **Enhance audio-visual** technology in emergency response centres, and **integration of electronic fax system** into event documentation and communication software, WebEOC, investigate **drone technology** for off-site radiation monitoring
- **External evaluations and benchmarking:** Several external evaluations planned. Benchmarking in US planned with specific areas of focus (e.g., Site emergency communications protocols and equipment)
- **New Nuclear (Small Modular Reactor Darlington):** Continued support for initiative with staff and expertise.
- **Pickering Safe Storage:** Effort underway to define and plan the transition activities to maintain appropriate Emergency Response

Additional resources

- Visit www.opg.com/nuclearsafety for general information on nuclear safety
- Visit youtu.be/PGTgxXAJSpS for a brief summary of an OPG nuclear emergency exercise
- Partner organization resources:
 - Province www.ontario.ca/page/emergency-management
 - Durham www.durham.ca/en/living-here/emergency-preparedness.aspx
 - CNSC www.cnscccsn.gc.ca/eng/resources/learning-portal/index.cfm
 - CNSC video: www.youtube.com/watch?v=vggzl9OngAM



For more information, visit: www.opg.com/nuclearsafety

ONTARIOPOWER
GENERATION