

**NUCLEAR WASTE MANAGEMENT ORGANIZATION (NWMO)**

**BOARD OF DIRECTORS  
MEETING**

**November 27, 2014**

**AGENDA**

1. Constitution of Meeting and Approval of Agenda
2. Minutes of Previous Meeting
3. Business Arising from the Previous Minutes
4. *In Camera* Session
5. Report from the Advisory Council Meeting
6. Report from the Siting Committee (*in camera*)
7. Report from the Audit, Finance & Risk Committee
8. Report from the L&ILW DGR Oversight Committee
9. President's Report
10. Regulatory Approval to Construct
11. Update on APM Five-Year Lifecycle Cost Estimate
12. 2015-2019 Business Plan
13. Proof Testing Project Execution Plan
14. Update on Proof Testing Work
15. Lessons Learned for APM from L&ILW DGR Hearings
16. Path Forward on the Advisory Council
17. Waste Owner Cooperation
18. Legal / Corporate Secretary Report
19. Next Meeting of the Board
20. In Camera Session

Conclusion of Meeting

**MINUTES  
OF THE MEETING  
OF THE BOARD OF DIRECTORS OF THE  
NUCLEAR WASTE MANAGEMENT ORGANIZATION (NWMO) /  
SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES (SGDN)**

**convened in Toronto, ON  
on November 27, 2014  
commencing at 9:00 a.m. EST**

**Present**

Pierre Charlebois	Chair
Wayne Robbins	Vice Chair
Robin Heard	Director
Ron Jamieson	Director
Ken Nash	Director, President & CEO
Deborah Poff	Director (via conference call)
Ian Ross	Director
Josée Pilon	Director
Darren Murphy	Director

**Staff in attendance:**

Paul Gierszewski	Director, Safety & Licensing (except items 1-4)
Chris Hatton	Director, APM Repository Design Development (except items 1-4)
Pat Moran	General Counsel and Corporate Secretary
Gillian Morris	Assistant Board Secretary (except item 4)
Jennifer Spragge	VP, Human Resources (except items 1-4)
Sean Russell	Director, Environmental Assessment (except items 1-4)
Kathryn Shaver	VP, APM Engagement & Site Selection (except items 1-4)
Derek Wilson	VP, Design & Construction (except items 1-4)

**Guests:**

The Hon. David Crombie Chair, NWMO Advisory Council (item 8)

1. **Constitution of Meeting and Approval of Agenda**

Notice of the meeting having been given to all of the Directors of the Company in accordance with the by-laws and a quorum being present, the Chair declared the meeting duly constituted for the transaction of business and called the meeting to order at 9:00 am.

Board members agreed on revisions to the agenda proposed by the Chair.

2. **Minutes of Previous Meeting**

The minutes of the meetings of the Board of Directors held on September 24 and 25, 2014 copies having been sent to each member of the Board, were approved.

3. Business Arising from the Previous Minutes

Pat Moran reported that the two action items from the previous meeting were completed.

4. In Camera Session

The Board convened an *in camera* session to receive the report from the Chair of the Human Resources and Compensation (HRC) Committee on the November 26, 2014 HRC Committee meeting.

5. Report from the Advisory Council

David Crombie provided a report to the Board on the Advisory Council's November 25 meeting. At the meeting the Council discussed:

- an update from the President covering recent NWMO activities and developments in nuclear waste management nationally and internationally;
- key developments in the siting process including the findings for nine communities in the final stages Phase 1 Assessments. Council members supported NWMO's proposal for moving forward with regional study areas as the focus of Phase 2 Assessments;
- Council also discussed and provided advice on: a draft Communications plan for Phase 1 Assessments; the plans for recognizing communities' contributions at the conclusion of Phase 1 studies;
- an update on the status of the work in the four communities with Phase 2 Assessments underway and the extensive business planning exercise to scope out the multi-year activities and costs for Phase 2; and
- standing items included: an update on key areas of business risk relevant to near-term activities in Adaptive Phased Management (APM) implementation; NWMO's support to OPG (Ontario Power Generation) on the low and intermediate level waste DGR (deep geological repository); and a number of written reports.

Mr. Crombie reported that much of Council's agenda focused on topics specifically requested by Council members which included an opportunity to review and comment on the NWMO Transparency Policy and a special technical briefing on the APM engineered barrier system.

Mr. Crombie reported on a meeting held with several Advisory Council and Board members earlier in November, noting the following:

- the Council affirms its support for the siting process as it progresses;
- the current collaborative approach of reviewing and commenting on NWMO's reports works well and Council would like to continue this approach;
- there is a tremendous amount of activity in NWMO's programs and Council members are finding that more time is required for discussion; and
- Council would like to give more attention to strategic issues facing NWMO specifically including: Aboriginal law; transportation issues; NWMO's ethical framework; and technical and scientific evolution that may affect the NWMO program.

The Board discussed with Mr. Crombie the Council's input on the community recognition program and its interest in Aboriginal law.

The Board Chair reviewed the Council's mandate to report every three years to the Minister of Natural Resources. He noted that the Board will reflect on opportunities for more fully engaging the Council on strategic matters and suggests the Board meet annually with Council to hear the Council's assessment of key strategic issues for APM implementation and its advice to NWMO on navigating and managing these areas.

The Board convened an *in camera* session.

6. Report from the Siting Committee (*in camera*)

Mr. Jamieson provided a report from the Siting Committee meeting held on November 26, 2014.

7. Report from the Audit, Finance & Risk (AFR) Committee

The Chair of the AFR Committee, Ian Ross summarized items reviewed by the AFR Committee at its November 26, 2014 meeting.

A report was provided from the Pension Management Committee to the AFR Committee on the status of the pension fund. The pension fund investment advisor attended the AFR Committee meeting to discuss a review of the annual fund performance. There were also changes proposed by the investment advisor to the Statement of Investment Policies and Procedures which were reviewed with the Board and recommended for approval by the Committee.

**IT IS HEREBY RESOLVED THAT:**

On the recommendation of the Audit, Finance & Risk Committee, the Board approves the proposed changes to the Statement of Investment Policies and Procedures as recommended by the external investment advisor.

**The motion was made, seconded and unanimously passed.**

Mr. Ross also discussed the changes in the solvency deficit in the NWMO pension plan due to the increase in the discount rates since the beginning of the year. Management proposed a voluntary payment be made for 2014 similar to what was done in 2013. Mr. Ross noted this payment was provided for in the current 2014 budget, and there are no additional payments planned for 2015. The AFR Committee recommends that the additional payment for 2014 be approved by Board.

**IT IS HEREBY RESOLVED THAT:**

On the recommendation of the AFR Committee, the Board approves an additional voluntary contribution of \$1.5 million to the NWMO Pension Plan toward the Pension Fund Deficit.

**The motion was made, seconded and unanimously passed.**

Mr. Ross reported that Board approval was being sought for the 2015 budget. The Committee recommended that the Board approve the 2015 budget as proposed.

**IT IS HEREBY RESOLVED THAT:**

On the recommendation of the Audit, Finance and Risk Committee, the Board approves the 2015 budget as proposed.

The motion was made, seconded and unanimously passed.

Other items reviewed by the Committee included:

- progress on the five-year review of the APM lifecycle cost estimate;
- 2015 performance objectives and measures;
- proposed guidelines for controls for local and Aboriginal procurement;
- an update on the lifecycle liability management work;
- management reports including: 2014 performance, financial results, the cash flow forecast and compliance report;
- a review of the top 5 executives' expenditures; and
- an initiation of the Committee charter review and evaluation.

8. Report from the Low and Intermediate Level Waste (L&ILW) Deep Geological Repository (DGR) Oversight Committee Meeting

Mr. Wayne Robbins, Committee Chair provided a report on the November 25, 2014 Committee meeting noting the Committee discussed the following items:

- the progress on the Regulatory Review and Detailed Design Phases of work;
- an update on information regarding the close of the public record for the L&ILW DGR hearings and the timing of the Joint Review Panel's report to the Minister of Environment;
- an update on the Regulatory Approvals and Design and Construction work plans. It was reported that year-end costs will be below budget for both phases;
- an overview of key observations resulting from the L&ILW DGR hearings;
- the draft 2015 – 2019 Business Plan for the work on the OPG L&ILW DGR which have been finalized and approved by OPG;
- an overview of the activities required leading up to the receipt of a construction licence; and
- a briefing on the upcoming Committee self-evaluation and charter evaluation.

The Board convened an *in camera* session.

9. President's Report

Mr. Nash reported on the following key developments and activities since the September Board meeting:

- APM continues to progress well in all areas of siting and technical development;
- work continues on the APM life cycle cost estimate;
- an upcoming meeting with the Ontario Minister of Energy;
- work on the first of several detailed logistics studies on transportation is nearing completion; and
- an integrated technical and engagement program to support site selection is in place.

Directors discussed how NWMO has factored in transportation communities in the engagement planning process.

10. Regulatory Approval to Construct

Mr. Nash provided the Board with planning assumptions leading to regulatory approval to proceed with construction of a used fuel DGR. He noted that the assumptions have been updated since being presented at the September Board meeting. It was reported that these planning assumptions would be reviewed with Provincial and Federal regulatory bodies during 2015 and modified as needed to develop a common understanding and certainty in the regulatory process.

Directors discussed the revised planning assumptions and how they relate to the lifecycle cost estimate preparation. A focus of Directors' discussion was on how changes in planning will be communicated. Mr. Nash noted that the plan is a work in progress and management will work with the Board at future meetings on the communication of the plan.

11. Update on Five-Year Review of APM Lifecycle Cost Estimate

Derek Wilson provided a progress report on the plan to update the lifecycle cost estimate for APM by 2016. He reported on the planning milestones and schedule. Early indications were that the present value of the updated cost estimate would be within the current estimate. The pre-construction licence development costs and post-licence support will be further developed taking into account the time-line assumptions, the detailed Phase 2 and proof testing plans and associated costs. A review will be initiated on transportation and decommissioning cost elements.

12. 2015-2019 Business Plan

Mr. Nash reported that the Audit, Finance & Risk Committee held an extensive discussion on the preliminary business plan. He noted that the costs over the planning period were significantly lower than the approved 2014-2018 business plan and the preliminary 2015-2019 plan presented to the Board in September, mainly as a result of longer timelines. He discussed the two main multi-year projects: the Step 3, Phase 2 site selection project and; the Mark 2 engineered barrier proof testing project. Kathryn Shaver and Derek Wilson provided highlights of these two work areas to the Board.

Mr. Nash noted that approval of the 2015 budget was received under the report from the Audit Finance & Risk Committee Chair. The 2015-2019 business plan will remain preliminary pending NWMO Member review. Directors concurred with this process.

Directors requested that, as costs grow, management ensure that the Audit, Finance & Risk Committee review in detail the status of the expenditures against budget at each Committee meeting.

13. Proof Testing Project Execution Plan

Derek Wilson sought agreement of the Board to the Mark 2 proof testing project execution plan noting that at the September Board meeting, it was agreed to adopt the Mark 2 concept as the reference design for the engineered barrier system. He explained that the majority of the test work was aimed at providing the necessary basis for a licensing submission and doing that in a timely way.

Directors raised questions relating to the importance of aligning the proof testing plan with the NWMO siting plan.

The Board had an extensive discussion on the timelines of the project execution plan and timelines for work relating to containers and handling equipment. Mr. Wilson noted that NWMO is not currently focusing on detailed engineering but on concept demonstration.

Directors agreed that the current work needs to proceed on container design testing but would like to take a more in-depth look at the work elements and timelines for developing the handling system. Mr. Nash also suggested that it might be helpful to provide international benchmarks on this type of work to the Board. As a result, the Board deferred approval of the project execution plan.

14. Update on Proof Testing Work

A written update on the APM engineered barrier design and proof testing work was provided to the Board for information.

15. Lessons Learned for APM From L&ILW DGR Hearings

Derek Wilson summarized the key lessons learned for APM from OPG's L&ILW DGR regulatory approvals and public hearings process. Mr. Wilson talked about: NWMO's ability to demonstrate a robust technical assessment; the role of social acceptance in the regulatory process; the importance of an effective working relationship with the regulator; and the topic of proximity of a repository to the Great Lakes.

Directors discussed the importance of the independence of the regulator and how NWMO works with the regulator in the APM siting communities.

16. Update on Waste Owner Cooperation

Mr. Wilson reviewed the recent meetings of the NWMO Members' working group and also a recent meeting of an industry-created Nuclear Leadership Forum and the work of these two groups. It was noted that the Nuclear Leadership Forum looks at waste from an industry perspective and has a broader mandate than the NWMO Member group.

A Director suggested that NWMO's Board Chair discuss waste owner cooperation with the CEO of OPG and the role of the industry group addressing this topic (\*).

17. Legal / Corporate Secretary Report

Mr. Moran noted that the Board requested that management annually conduct a Charter review and self-evaluation of the Board and all Committees. This will be initiated in December.

Mr. Moran also noted that a new version of the BoardVantage board portal software would be rolled out in December and information would be provided to the Board at that time.

18. Upcoming Meetings

The next meeting of the Board will be held on:  
Thursday, February 19, 2015  
9:00 am – 3:00 pm EST, Toronto, ON

19. In Camera Session

Board Members held an in camera session.

20. Conclusion of Meeting

There being no other business, the Chair declared the meeting adjourned at 2:40 pm

\* Denotes actions to be taken.

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Pat Moran  
Corporate Secretary



Pierre Charlebois  
Chair