

**NUCLEAR WASTE MANAGEMENT ORGANIZATION (NWMO)**

**BOARD OF DIRECTORS  
MEETING**

**June 11, 2015**

**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 Siting Committee (*in camera*)
6. Report from the Audit, Finance & Risk Committee
7. Report from the L&ILW DGR Oversight Committee
8. Report from the Advisory Council Meeting
9. President's Report
10. Outline Plans for CNSC Licensing of an APM DGR
11. Confirm Next Steps on the 2016 Lifecycle Cost Estimate Arising from Special AFRC Meeting
12. Progress Against Proof Testing Plan
13. Approval of Project Execution Plan and Baseline Cost/Schedule for Proof Testing
14. Preliminary 2016-2020 Business Planning
15. Implications of Joint Review Panel Report on OPG DGR on APM
16. Transportation Logistics Study
17. Rolling List of Board Decisions
18. Submission of 2014 Annual Report to Members
19. Legal / Corporate Secretary Report
20. Alternative Fuel Cycles
21. Next Meeting of the Board
22. 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 Montreal, QC**  
**on June 11, 2015**  
**commencing at 8:00 a.m. EDT**

Present

Pierre Charlebois	Chair
Wayne Robbins	Vice Chair
Ron Jamieson	Director
Ken Nash	Director, President & CEO
Josée Pilon	Director
Deborah Poff	Director
Ian Ross	Director
Beth Summers	Director
Darren Murphy	Director (Items 4 – 22)

Staff in attendance:

Paul Gierszewski	Director, Safety & Licensing (except items 1-4, 20)
Chris Hatton	Director, APM Repository Design Development (except items 1-4, 20)
Michael Hung	CFO (except items 1-4, 20)
Pat Moran	General Counsel and Corporate Secretary
Gillian Morris	Assistant Board Secretary (except item 4, 20)
Kathryn Shaver	VP, APM Engagement & Site Selection (except items 1-4, 20)
Jennifer Spragge	VP, Human Resources
Derek Wilson	VP, Design & Construction (except items 1-4, 20)
Bob Watts	Associate Vice President, Aboriginal Relations (except items 1-4, 20)

Guests:

David Cameron	Vice Chair, NWMO Advisory Council (item 8 via conference call)
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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 8:00 am.

2. Minutes of Previous Meeting

The minutes of the meetings of the Board of Directors held on February 19, 2015 copies having been sent to each member of the Board, were approved.

3. Business Arising from the Previous Minutes

Pat Moran reviewed the actions list from the previous meeting. Mr. Nash discussed management's discussions following up on input from the Board on strategic planning provided at the last Board meeting. All other actions were reported to be complete or on the agenda for further discussion

4. Report from the Human Resources & Compensation Committee (In Camera)

The Board convened an *in camera* session to receive the report from the Chair of the Human Resources and Compensation (HRC) Committee on the June 10, 2015 HRC Committee meeting.

5. Report from the Siting Committee

The Chair of the Siting Committee reported on the June 10, 2015 Committee meeting. Mr. Jamieson reported that all Directors were in attendance at the June 10<sup>th</sup> Siting Committee meeting and brought forward a recommendation to the Board from the Siting Committee to approve the APM Phase 2 Siting Project Execution Plan:

**IT IS HEREBY RESOLVED THAT:**

On the recommendation of the Siting Committee, the Board approves the APM Phase 2 Siting Project Execution Plan and baseline cost estimate and schedule for implementation as proposed.

The motion was made, seconded and unanimously passed.

Mr. Jamieson reported on the Siting Committee's discussion on Community Recognition in camera.

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

The Chair of the AFR Committee, Ian Ross reported on the Committee's June 10 meeting. He reported that the Committee discussed:

- the status of pension fund with an update from the Pension Management Committee;
- a preliminary review of 2016-2020 business planning;
- an update on the Lifecycle Liability Management work program;
- standing management reports on performance objectives, financial status, cash flow and compliance;
- the submission of the 2014 Annual Report to Members at the AGM;
- an organizational authority register update; and
- appointment of the Auditors at the AGM.

The Committee also reviewed the audited 2014 Pension Fund Financial Statements and recommended approval of those to the Board of Directors:

**IT IS HEREBY RESOLVED THAT:**

On the recommendation of the AFR Committee, the Board of Directors approves the 2014 NWMO Pension Plan Fund Financial Statements as proposed for the NWMO fiscal year ended December 31, 2014, as audited and presented by the external auditors, Deloitte LLP.

The motion was made, seconded and unanimously passed.

Mr. Ross also reported on the Special Meeting of the AFR Committee which was held on June 8 to review and discuss the draft APM lifecycle cost estimate, timeline, financial risk assessment and funding formula parameters. He reviewed the agreed outcome of the meeting which was discussed further under Item 11.

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

Committee Chair Wayne Robbins reported on the June 9 meeting. The Committee discussed the following:

- the Joint Review Panel Report (JRP) which including key recommendations;
- progress on the Regulatory Approvals and Detailed Design phases of work, in particular the on-going work on site monitoring and waste characterization activities;
- an overview of the 2016-2019 business planning assumptions and cash flows;
- on-going discussions with OPG related to the requirement to be added to OPG's Approved Suppliers' List for engineering, procurement and construction management (EPCM) services for the OPG L&ILW DGR project;
- an update on the 2014 Waste Isolation Pilot Plant (WIPP) events;
- a review of the risks related to the design and construction phase; and
- the results of the Charter review and Committee evaluation.

Directors asked if NWMO had received feedback from OPG on its level of satisfaction on NWMO's work on the L&ILW DGR. Derek Wilson reported he will share with Directors correspondence received from OPG expressing appreciation for the NWMO team's work on the project. (\*)

Directors also asked questions about how NWMO is preparing for the L&ILW DGR project when the timeframes remain uncertain. It was suggested that the project preparation plan objectives to be tied to key milestones rather than specific dates.

8. Report from the Advisory Council Meeting

David Cameron, Vice-Chair of the NWMO Advisory Council reported the highlights of the Council's May 27 meeting:

- the significant contributions of the four outgoing Council Members: Fred Gilbert, Marlyn Cook, Michel Rheaume and Wes Cragge were recognized;
- three new members to the Advisory Council: Linda Thompson, Dean Jacobs and Diane Kelly were welcomed;
- the Council was given an update from the President on recent activities;
- key developments in the Siting process were reviewed. Council members appreciated the shift to reporting with a regional focus;
- a discussion was had regarding the options for recognizing community contributions in Phase 2;

- a discussion was had about the nature of agreements and involvement of Aboriginal Communities and Organizations in NWMO's work;
- a briefing was given on the outcome of the Joint Review Panel (JRP) Report for the OPG L&ILW DGR; and
- regular updates were provided on business risk, engagement and APM's proof testing and engineered barrier work.

9. President's Report

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

- the newly reformulated Advisory Council operated very well at its first meeting, providing valuable advice;
- the APM site selection process continues to progress;
- proof testing work continues to progress according to plan. Chris Hatton received the 2015 Nuclear Innovation award for his work;
- work on the APM lifecycle cost estimate continues;
- transportation logistics studies have confirmed the feasibility of transporting dry storage containers and helped to identify areas of work for future studies;
- the JRP report was a very strong endorsement of NWMO's technical and safety assessment capability;
- external parties continue to promote alternatives to DGR;
- a recent meeting of EDRAM, NWMO's international peer organization was held in Finland.

Directors discussed international developments including the continuing work in Sweden and Finland to respond to questions from their respective regulators. A Director noted that this emphasizes the importance of continuing with the engineered barrier work in Canada in parallel to the site selection work to develop regulatory certainty. Directors also discussed the funding models in Finland and Sweden. Directors requested an update on funding requirements on other countries' waste management programs. (\*)

10. Outline Plans for CNSC Licensing of APM DGR

The Board was provided with an overview of NWMO's discussions with the CNSC on the steps to receive a construction licence. The objective is to reach agreement on how the CNSC will be involved in pre-project (pre-licensing) activities and to develop clarity on several points in the licensing process. Paul Gierszewski outlined some of the proposed pre-project activities.

Directors encouraged management to ensure that all staff and management levels of the CNSC were informed on NWMO's work to ensure continuity. Directors asked about how progress with the CSNC is documented and if CNSC endorsement is provided throughout the process. Mr. Gierszewski noted that the CNSC is considering providing annual reports on licensees and working on producing new regulation documents.

11. Confirm Next Steps on the 2016 Lifecycle Cost Estimate Arising from Special Audit, Finance and Risk (AFR) Committee Meeting

Mr. Nash reviewed the points agreed upon at the Special AFR Committee Meeting:

- APM should be implemented as planned consistent with the Project Execution Plans (PEP) for site selection and proof testing;
- NWMO should start to communicate with communities and other stakeholders in accordance with the two PEPs;
- the 2016 cost estimate process should proceed as proposed;
- other financial planning parameters such as contingency and level of financial assurance should proceed to review with the finance departments of Member organization and government (\*); and
- the course of action will be reported to Members.

Mr. Nash also reported on two actions that arose from discussions on this topic at the Special AFR Committee meeting and the AFR Committee meeting.

12. Progress Against Proof Testing Plan

Derek Wilson provided the Board with an update on the progress against the proof testing plan, reporting the following highlights:

- the production of the first large bentonite block;
- the completion of the APM Mark 1 and Mark 2 conceptual design reports;
- progress on the development of emplacement equipment prototypes and bentonite placement techniques.

Chris Hatton reported on the progress of the development of the used fuel containers for the full scale pressure test. Directors discussed the pressure test parameters.

13. Mark 2 Proof Testing – Project Execution Plan (PEP)

Derek Wilson presented the Mark 2 Proof Testing – Project Execution Plan for approval. The PEP is a key document to describe the scope and accountabilities for the project and is required of NWMO's governance related to project execution. Mr. Wilson noted that there will be quarterly reporting at each Board meeting on the progress of this plan including updates on key milestones, risks, and change control.

Directors discussed the PEP and the authority level required for access to contingency funds. A Director requested a copy of a chart in the PEP that was difficult to read. (\*)

**IT IS HEREBY RESOLVED THAT:**

The Board approves the Mark 2 Project Execution Plan and baseline cost estimate and schedule for implementation as proposed.

The motion was made, seconded and unanimously passed.

14. Preliminary 2016-2020 Business Planning

Ken Nash provided an overview of the preliminary business plan for APM implementation and explained the assumptions on which it was based. He discussed the preliminary business plan for NWMO's work on the OPG L&ILW DGR. Mr. Nash reported that a more fully developed business plan would be brought to the Board in September.

Directors discussed the plan as proposed and asked about changes from the plan presented last November. Michael Hung reviewed the changes which reflect more refined planning with individual activities and costs identified. Ms. Shaver also reported that adjustments were made with the removal of Schreiber and Creighton from the process as well as some refinements and scheduling considerations. The Chair suggested that a separate provision for hiring and development of replacements for key positions be included when management returns with the updated business plan in September. (\*)

15. Implications of Joint Review Panel Report on OPG DGR on APM

Paul Gierszewski reviewed the findings of the Joint Review Panel (JRP) report on the OPG L&ILW DGR and discussed the possible implications for APM. He reported that the Panel's fundamental conclusion was that the DGR would provide a very high level of protection for Lake Huron and that the project should be undertaken as soon as possible. He also reported that NWMO is in the process of a draft response to the JRP recommendations as they relate to the L&ILW DGR for consideration by OPG.

Directors also discussed the lessons learned from the 2014 events at the WIPP facility.

Ken Nash reported that there were no negative implications emerging from the recommendations foreseen for APM.

16. Transportation Logistics Study

Chris Hatton reported to the Board on the scope and results of a draft transportation logistics study. The purpose of the study was to serve as a first draft model for future studies. He reviewed the current reference plan, types of transportation packages, possible methods of transportation and next steps related to the logistics study.

Directors discussed the study asking questions about length of time to move the fuel, the various methods of transporting fuel, the process of re-packaging, costs related to sites in sedimentary versus crystalline, and the possible need for an intermodal transfer site.

17. Rolling List of Board Decisions

Pat Moran provided the Board with a rolling list of items that are expected to be reviewed with the NWMO Board over the business plan period. It was noted that the items listed will be brought forward to appropriate Board Committees and Board meetings in a timely way to ensure full consideration and discussion.

The Chair asked that the rolling list of items be available for the regular agenda review meeting in advance of Board meetings. (\*) Mr. Nash asked that Board members if there were items they would like to see at a subsequent meeting to bring them forward at the end of each Board meeting.

18. Submission of 2014 Annual Report to Members

Pat Moran provided the Board with a summary of NWMO's key 2014 achievements for presentation to the members at the June Annual General Meeting of Members.

Directors discussed the report and their planned remarks to the AGM on this topic. A Director asked to what extent Member organizations looked at items beyond financial matters, such as technical matters. Chris Hatton reported that NWMO holds regular meetings with Members' technical staff.

19. Legal / Corporate Secretary Report

Pat Moran reviewed the important changes in the recently enacted *Nuclear Liability and Compensation Act* that has replaced the 1976 *Nuclear Liability Act*.

Mr. Moran also discussed the proposed plan to address the outcome of the Board evaluation process which identified a need for further Board education on key technical subject areas and Board governance. A Director also suggested that Directors may wish to attend industry-related conferences.

20. Alternative Fuel Cycles

Pierre Charlebois suggested it was important that the Board was aware of the information on alternative fuel cycles that was presented at the Candu Owners Group (COG) in response to several interest groups proposing a variety of alternatives to the current APM DGR. The Board was asked to consider whether NWMO or NWMO Member organizations should consider any additional action.

Mr. Charlebois noted that the Ontario Ministry of Energy has issued a request for bids for a feasibility study to identify candidate technologies which could provide incremental savings to Ontario relative to the current strategy for management of CANDU used fuel.

Several Directors expressed concerns about this matter and discussed whether action should be taken. Directors asked to be provided with an update at the next meeting on the status of the Provincial RFP and also to discuss NWMO's thoughts on an anticipated communication strategy on this topic including coordination with OPG communications. (\*)

21. Upcoming Meetings

The next meeting of the Board will be held on:  
Thursday, September 24  
9:00 am – 3:00 pm, Toronto, ON

Board members were asked to review the draft 2016 meeting schedule and report any conflicts to Gillian Morris.



22. In Camera Session

Board Members held an in camera session.

23. Conclusion of Meeting

There being no other business, the Chair declared the meeting adjourned at 1:45 pm.

\* Denotes actions to be taken.

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Pierre Charlebois  
Chair

