

**NUCLEAR WASTE MANAGEMENT ORGANIZATION (NWMO)**

**BOARD OF DIRECTORS  
MEETING**

**June 12, 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 Siting Committee
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. Development of a Plan to Obtain Approval to Construct
11. APM Five-Year Cost Review
12. Preliminary Business Case decision for Container Development and Proof Testing
13. Preliminary Business Plan
14. Benchmarking
15. Update on APM Technical Program
16. Plan for Advisory Council and ITRG Structure and Membership Review
17. Submission of 2013 Annual Report to Members
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 June 12, 2014**  
**commencing at 9:00 a.m. EST**

**Present**

Gary Kugler	Director, Chair
Pierre Charlebois	Director
Ron Jamieson	Director
Ken Nash	Director, President & CEO
Deborah Poff	Director
Ian Ross	Director
Josée Pilon	Director
Wayne Robbins	Director

**Regrets:**

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)
Michael Hung	Chief Financial Officer (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, via conference call)

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 8:30 am.

Directors were asked to consider the addition of an agenda item proposed by Josée Pilon to consider, for purposes of cost sharing, a resolution to determine the number of fuel bundles the members have in storage as of June 30, 2013. Directors agreed and the matter was added to Agenda Item 6.

2. Minutes of Previous Meeting

The minutes of the meeting of the Board of Directors held on February 20, 2014 copies having been sent to each member of the Board, were approved.

3. Business Arising from the Previous Minutes

Pat Moran reported on the action items from the previous meetings, stating that they had both been 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 June 11 HRC Committee and Joint HRC-AFR Committee meetings.

5. Report from the Siting Committee

Mr. Jamieson provided a report from the Siting Committee meeting held on June 11, 2014. Mr. Jamieson reported that the Committee discussed the following:

- the status of the remaining ten Phase 1 desktop assessments to be completed by the end of 2014 and possible timing for public release of the findings;
- the status of the first four Phase 2 assessments and an update on recent activities in this program;
- work in relation to NWMO's plan to safely transport used fuel to a DGR;
- a proposed engagement audit plan for 2014; and
- written reports on engagement; the external landscape; an update on the work of the Council of Elders; and the quarterly media analysis.

Mr. Jamieson informed Board members that it was announced at the Siting Committee Meeting that Pat Patton, Director, Aboriginal Relations would be retiring and thanked her for her significant contributions to NWMO in shaping and managing the Aboriginal relations file.

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

Mr. Ross summarized items reviewed by the AFR Committee at its June meeting, including the follow topics:

- a review of the preliminary 2015-2019 business plan for both APM and NWMO's work on the L&ILW DGR;
- a review of the plan for the 2014 engagement audit;
- an update on NWMO cost sharing discussions;
- a report from the Pension Management Committee;
- an update on the Lifecycle Liability Management work;
- standing management reports on performance against the 2014 objectives; a financial update; a cash flow update and the compliance report; and
- the 2013 Annual Report of Directors to be present to Members at the Annual General Meeting.

The AFR Committee reviewed the 2013 NWMO Pension Plan Fund Financial Statements for the fiscal year ended December 31, 2013 as audited and presented by the external auditors and recommended them to the Board of Directors for approval.

**IT IS HEREBY RESOLVED THAT:**

On the recommendation of the AFR Committee, the Board of Directors approves the 2013 NWMO Pension Plan Fund Financial Statements for the NWMO fiscal year ended December 31, 2013, as audited and presented by the external auditors, Deloitte LLP.

The motion was made, seconded and unanimously passed.

Mr. Ross reported that the Committee had received an update on the status of the members' review of the cost sharing calculation as required by the membership agreement. The cost-sharing is based on the number of used fuel bundles each member has in storage. That number had not been updated since June 2006. Ms. Pilon tabled a resolution requesting that the Board of Directors update the number as of June 30, 2013 as contemplated by the membership agreement. After discussion, the Directors agreed that it would be appropriate to update the number as requested.

**IT IS HEREBY RESOLVED THAT:**

The Board sets the number of fuel bundles in storage, effective as of June 30, 2013, as follows:

Ontario Power Generation Inc	2,140,007
New Brunswick Power Nuclear Corporation	122,990
Hydro-Québec	128,233
Atomic Energy of Canada	32,658

The motion was made, seconded and unanimously passed.

**7. Report from the L&ILW DGR Oversight Committee**

Dr. Gary Kugler, Chair of the Committee reported that the following items were discussed at the June 3, 2014 meeting of the L&ILW DGR Committee:

- a briefing on the progress on the Regulatory Review (RA) and Detailed Design Phases of work;
- progress report on the additional Joint Review Panel hearings tentatively scheduled for September 2014.
- an overview of issues raised related to the reference inventory and waste characterization planning;
- an outline of the planning assumptions for the balance of the L&ILW DGR regulatory approvals and design and construction phases to be incorporated into the 2015-2019 Business Plan;
- potential changes in contracted services related to NWMO's work on the L&ILW DGR in both the RA and Design and Construction agreements with OPG. Changes included OPG assuming full responsibility for community and Aboriginal

engagement; OPG's nuclear operating requirements and the need to be added to OPG's Nuclear Approved Suppliers List; and

- a review of the Design and Construction risks with the Committee. It was noted that with the changes in responsibilities for the RA phase that OPG will now maintain the RA risk register.

The Committee also reviewed the results of the Committee evaluation and a review of its charter undertaken earlier in the year. Committee members agreed on a minor change to its charter and sought Board approval for the change.

**IT IS HEREBY RESOLVED THAT:**

On the recommendation of the L&ILW DGR Oversight Committee, the Board approves a revision to the Committee's Charter to clarify the wording of the Committee's role.

The motion was made, seconded and unanimously passed.

8. Report from the Advisory Council

The Honourable David Crombie reported on the Council's February 3, 2014 meeting of the Advisory Council which included the following:

- at Council's request, the Honourable Bob Rae joined the Advisory Council meeting to discuss his experience with the Ring of Fire Project and in particular Aboriginal engagement. Mr. Crombie reported that Mr. Rae began by commending NWMO for the depth and thoughtfulness of NWMO's process and for allowing time for the process to unfold;
- an update from the President covering recent engagement activities and developments in nuclear waste management nationally and internationally;
- Council members were provided with an interim update for 10 communities in the Phase 1 Assessments from the perspective of geoscientific suitability and social aspects;
- Council was also provided with an update on the status of the work in the four communities with Phase 2 Assessments underway;
- Council received NWMO's report on building relationships which included a report on the external landscape, an engagement report, a report on the Council of Elders and a media analysis; and
- On May 28 Council also met *in camera* for a half-day session.

9. President's Report

Mr. Nash reported on NWMO's activities since the last Board meeting including;

- work underway on the 2015-2019 Business Plan and to scope and quantify costs on the two main projects of APM site selection and proof testing of engineered barriers;
- meetings with Minister of Natural Resources Canada and the President of Canadian Nuclear Safety Commission;
- continuing progress on APM site selection;
- work on updating the reference designs for repositories in crystalline and sedimentary rock with a target of completion by year-end;
- design detail now to be approved through engineering change control governance process and loaded into NWMO's new configuration management database;
- a continuation of the Joint Review Panel hearing on OPG's low and intermediate level waste repository has been announced for September and the changing level of risk compared to the initial round of hearings;
- in the Canadian nuclear industry, AECL proceeding with its second round of restructuring;
- internationally, NWMO has signed a cooperation agreement with Korea's nuclear waste management agency, KORAD; and
- Japan, Germany and the U.K. are working to develop new siting processes.

Directors discussed the cooperation agreement with Korea.

10. Development of a Plan to Obtain Approval to Construct

Ken Nash discussed the decisions and assumptions leading to regulatory approval to construct a used fuel DGR on Ontario Crown land. Key milestones incorporated in business plan were identified.

Mr. Nash reported that the outline plan would evolve and be further developed and reviewed with the Advisory Council and relevant Provincial and Federal authorities and other stakeholders as appropriate. NWMO is also developing its approach to supporting the Crown's duty to consult Aboriginal communities potentially affected by an APM DGR and how current engagement activities will support that duty.

Directors discussed the Advisory Council's recommendation in the Triennial Report associated with the amount of used fuel to be managed. It was noted that the *Nuclear Fuel Waste Act* does not limit the number of fuel bundles to be managed in the repository and that the amount of used fuel to be managed will be discussed and agreed upon with the host community. The Board also discussed whether memorandums of understanding were in place with specific Provincial and Federal ministries.

11. APM Five-Year Cost Review

Staff provided an update on the plan to re-evaluate the lifecycle cost for APM by 2016 which will include repository design updates for the Mark 1 and 2 container designs. The near-term milestones for the project were reviewed with the Board.

Directors discussed the stage of the design which was reported as still be considered conceptual. Directors also discussed the cost update and how it is coordinated in relation to ONFA (Ontario Nuclear Funds Agreement).

12. Preliminary Business Case Decision for Container Development and Proof Testing

Derek Wilson advised that the purpose of this item was to present the outline business case and to identify any additional information needs that the Board may have for September when the business case would be provided.

Mr. Wilson reported that the proof testing program has been aligned with the site selection process and is also an integral part of the safety case. He discussed that a business case recommendation will be brought to the Board in September regarding moving forward with the Mark 2 container development and proof testing program. The detailed project execution plan and request for Board approval to implement the Mark 2 proof test plan would be presented at the November Board meeting.

Directors discussed whether the Mark 2 container would be limited to CANDU fuel, as CANDU reactors might not necessarily be chosen if new reactors were built. Directors discussed handling and packaging methods and use of hot cells for the Mark 2 container. Directors asked to see the animation of the robotic handling methods at an upcoming meeting (\*).

13. Preliminary Business Plan

Mr. Nash explained that the preliminary 2015-2019 business plan is consistent with the approved plan and is based on the assumption that NWMO will continue to implement APM using an expeditious approach, paying due respect to risk mitigation and community expectations. He explained that the plan is primarily driven by two multi-year projects:

- the Step 3 Phase 2 site selection project with the objective of selecting a preferred location for detailed site characterization;
- the Mark 2 engineered barrier system proof testing project with the objective of confirming compliance with regulatory requirements and to demonstrate NWMO's ability to mass produce containers and operate in a cost-effective way.

Mr. Nash discussed risks related to the plan and reported that further refinements will be developed for the September and November Board meetings.

An overview was also provided for the work related to the OPG L&ILW DGR.

Directors asked questions related to issues recently raised in public discussions on reprocessing; proof testing risks; and the delay in the work on the OPG L&ILW DGR as a result of the additional Joint Review Panel hearing days which have been announced.

14. Benchmarking

Staff presented an update to the preliminary benchmarking information first provided to the Board in September 2012. It was noted that it is very difficult to compare programs internationally but that NWMO has systematically worked with other equivalent

organizations on the transfer of experience and best practises and on comparison of costs and schedule/planning assumptions.

Directors suggested that NWMO's timeframes for implementation appear optimistic when comparing them to other international programs. Directors also discussed the issue of who maintains intellectual property rights to research during collaborations between international organizations.

15. Update on APM Technical program

Staff updated the Board on the APM technical program including:

- the CNSC review of the Safety Case Studies in Crystalline Rock and in Sedimentary Rock;
- the international independent peer review on the Mark 2 container design; and
- work to advance the buffer and sealing systems.

Directors discussed the CNSC review of the safety cases and how transportation is considered in those studies.

16. Plan for Advisory Council and ITRG Structure and Membership Review

Ken Nash reported that the terms of membership for both the Advisory Council and the International Technical Review Group (ITRG) members finish at the end of 2014. The Board needs to consider revisions to the Terms of Reference and composition of both these groups.

Mr. Nash reported that the Advisory Council and ITRG were designed to be complementary and both have provided valuable advice. The membership of the Advisory Council comprises a range of socio-political and technical disciplines, consistent with requirements of the Nuclear Fuel Waste Act. ITRG members are selected mainly on requisite technical competencies. The ITRG reports annually to both the Advisory Council and the Board.

The ITRG has served NWMO well, but given the changes in emphasis of the technical program, it is proposed that the existing APM Geoscientific Review Group and a new Engineered Barrier Review Group be established in its place. These groups would both provide advice to management and report to the Board and Advisory Council on an annual basis.

Directors had a lengthy discussion about the options for oversight structure going forward. It was agreed that additional expertise in the Aboriginal relations area should be considered for the Advisory Council as membership is reviewed. Directors discussed the Advisory Council mandate for providing advice and expressed their support for the current arrangements for Advisory Council meetings.

17. Submission of 2013 Annual Report to members

Pat Moran presented the report on NWMO's 2013 fiscal year to be brought to the Members at the Annual General Meeting of Members.



Corporate Secretary Report

1. Corporate Secretary Report

2. Corporate Secretary Report

3. Corporate Secretary Report

4. Corporate Secretary Report

5. Corporate Secretary Report

6. Corporate Secretary Report

7. Corporate Secretary Report

8. Corporate Secretary Report

9. Corporate Secretary Report

10. Corporate Secretary Report

11. Corporate Secretary Report

  
\_\_\_\_\_