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 30, 2017 commencing at 8:00 a.m. EST

Present

Wayne Robbins

Chair

Laurie Swami

Director, President & CEO

Carlo Crozzoli Mark Elliott Director Director

Lesley Gallinger

Director

Ron Jamieson Josée Pilon Director Director

Janet A. Rieksts-Alderman

Director

Regrets:

Darren Murphy

Director

Staff in attendance:

Mahrez Ben Belfadhel

VP Site Selection (items 5-16)

Lisa Frizzell

VP Stakeholder Relations (items 5-16)

Michael Hung Gillian Morris Chief Financial & Risk Officer (items 5-16) Board Secretary (items 1-17)

Kevin She

Controller (item 9)

Jennifer Spragge

VP Human Resources & Chief Ethics Officer (items 1-16)

Doug Taylor

VP & General Counsel (items 1-16)

Robert Watts

VP Indigenous Relations (items 5-16)

Derek Wilson

Chief Engineer & VP Contract Management (items 5-16)

Guests:

David Cameron

Vice-Chair, Advisory Council (item 8) Via Conference Call

Jason Campbell

Eckler, Ltd. (item 9)

1. Constitution of Meeting

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 7:55 am EST.

The Chair recognized the work of David Crombie and Eva Ligeti as they completed their terms on the NWMO Advisory Council. Mr. Robbins reported that he had good

feedback from Advisory Council members on the meeting with the Board. Another Director reported that he thought it was an excellent discussion with the Council and thanked staff for the work to prepare for the meeting.

The Chair reported that the Canadian Nuclear Association (CNA) Conference will be taking place February 21-23 in Ottawa and suggested that Board members should advise staff if they would like to attend.

The Chair reviewed key areas for Board focus for the meeting.

2. Approval of Agenda / Consent Agenda Items (In Camera)

The Board reviewed and approved the Consent Agenda items and the items on the full agenda.

3. Report from HRC Committee (In Camera)

A report from the Human Resources & Compensation Committee Meeting November 29, 2017 was provided by the HRC Committee Chair.

4. <u>President's Update</u>

The CEO provided a verbal report on NWMO's work and recent developments in the nuclear industry in Canada and internationally. She reported a detailed summary of NWMO's work and accomplishments in 2017. Highlights included:

- NWMO's internal reorganization including the appointment of three new Vice Presidents:
- publishing the 2014-2016 Triennial Report;
- a strong focus on improved business planning;
- updating NWMO's values:
- narrowing down communities in the siting process and the commencement of borehole drilling;
- a presentation to the Canadian National Safety Commission;
- participation in many engagement events and conferences.

Ms. Swami also updated the Board on national and international developments in the nuclear industry. She reported to the Board on recent meetings with her international counterparts at the EDRAM meeting and highlighted the work underway on those countries' repositories. Directors asked about the operating structure of the repositories in Finland and Sweden.

Directors discussed how staff reacted to the many changes in 2017. Ms. Swami reported that the majority of staff have adjusted well to the changes.

5. Report from the Siting Committee

The Siting Committee Chair reported on the Committee's November 29, 2017 meeting. He noted that Mr. Richard Sexton, President & CEO of AECL joined the meeting in his role as Honorary Board Observer.

The Chair provided a report and in camera report on the Committee's discussions regarding NWMO's plans for stock-taking in the siting process.

The Chair reported that the Siting Committee:

- Heard from Dr. Michael Stephens of the APM Geoscientific Review Group (GRG) on its 2017 work. Mr. Jamieson reported that the APM GRG was supportive of NWMO's work and its very consistent approach to site evaluations.
- Received an update on progress on Site Selection and it was reported that borehole drilling activities in Ignace were proceeding well.
- Received a report from Bob Watts on recent IAEA meeting he attended with the Canadian delegation headed by Parliamentary Secretary Kim Rudd.
- Discussed the work underway to develop partnerships in the siting areas.
- Received standing updates on the Council of Elders and Youth, changes in the external landscape, an analysis of media stories and transportation engagement activities.

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

The AFR Committee Chair provided a report from the November 29, 2017 meeting. She reported on further reductions and refinements that had been made to the 2018-2022 Business Plan since the September Board meeting. She reported that the AFR Committee reviewed the business plan and recommends the Board approve the 2018-2022 Business Plan as proposed.

IT IS HEREBY RESOLVED THAT:

On the recommendation of the Audit, Finance & Risk Committee, the Board approves the 2018-2022 Business Plan as proposed.

The motion was made, seconded and unanimously passed.

A Director asked about NWMO's government relations work and asked for an update at a future Board meeting. (*)

The AFR Committee Chair reported that the internal auditor presented the audit and assessment plan for 2018. On reviewing the plan, the Committee suggested the inclusion of an audit of the engagement and site selection program and noted that the 2018 Audit and Assessment Plan is being recommended with that addition.

IT IS HEREBY RESOLVED THAT:

On the recommendation of the AFR Committee, the Board approves the planned audits as listed in the attached table and included in the NWMO 2018 Audit and Assessment Plan.

The motion was made, seconded and unanimously passed.

Ms. Gallinger also reported that the Committee discussed the following:

- An update from the pension management committee;
- As requested by the Committee, a presentation on pension plan assumptions;
- A discussion about NWMO's borehole contracting strategy;
- The status of the Membership Agreement;
- A minor revision to the Organizational Authority Register; and
- Management reports on cash flow forecast, financial results and the compliance report.

7. Report from Low and Intermediate Waste (L&ILW) DGR Oversight Committee

The Chair of the L&ILW DGR Oversight Committee reported that the Committee met in Toronto on November 27, 2017 and discussed the following:

- An update on the Regulatory Approvals and Detailed Design Phases of work which included an update on work related to waste characterization;
- Developments and timelines for Canadian Nuclear Laboratories (CNL) plans for a nears surface disposal facility;
- The 2018 annual work plan for NWMO's work related to the OPG L&ILW DGR.

8. Report from Advisory Council's November 28, 2017 Meeting.

The Advisory Council Vice-Chair reported on the discussions at the Advisory Council meeting held on November 28, 2017. Mr. Cameron reported that the Council discussed:

- A report from the President with a summary of NWMO's work in 2017;
- An update on the borehole drilling underway in Ignace;
- An update on NWMO's plans for stock-taking in the siting process;
- An update on NWMO's discussions with communities on partnerships:
- A presentation from the Geoscientific Review Group on its work;
- Follow up on one of the Council's Triennial Report recommendations on best practices for environmental sustainability;
- Standing updates on the Council of Elders and Youth, changes in the external landscape, an analysis of media stories and transportation engagement activities.

Mr. Cameron noted that the Advisory Council appreciated the productive discussion held with the Board on November 28.

A Director asked Mr. Cameron if the Advisory Council was satisfied with the response management is providing to its Triennial Report recommendations. Mr. Cameron

reported that the Council appreciated the organized, thorough and transparent approach management is taking to respond to the Council's recommendations.

9. <u>Alternative Investment Strategies</u>

Jason Campbell from Eckler Ltd. Joined the meeting to provide the Board with an education session on investment strategies and pension risk assessment.

Directors asked questions about mortality tables; what level of surplus is usually required to take on a derivatives de-risking strategy; how would rates of return be impacted; would the discount rate be impacted; what are the clear benefits to a derivatives strategy and what would be the expected fees. In response to the question regarding fees, it was confirmed that derivative costs including manager's fees, trading costs, and the interest cost are about 2% in total.

Mr. Hung noted that management will come back to the AFR Committee with a detailed analysis and recommendation at the next meeting.

10. Borehole Contracting Strategy

Derek Wilson led the discussion with the Board on the proposed borehole drilling and site investigation contracting approach in the implementation of the Phase 2 field studies, which allows for schedule and cost benefits. This proposal would require Board approval which will be brought forward to the AFR Committee and the Board in February 2018.

A Director provided suggestions on a number of things that she would like to see included in the proposal that will come forward to the Board. Directors asked management how it would ensure that local resourcing would be used when possible. Mr. Wilson noted that management will work with the contractors to ensure there is a plan to resource the work locally as much as possible. A Director asked if one company would have the contract for all of the drilling in crystalline rock. Mr. Wilson noted that the lead contractor would be constant but that sub-contractors may differ.

11. <u>Management of Additional Waste Streams – SMR Waste Program</u>

Both Derek Wilson and Michael Hung discussed the staged approach to NWMO's strategy for accommodating fuel wastes from Small Modular Reactors (SMR's). Mr. Wilson discussed the state of SMR development in Canada, NWMO's roles and responsibilities and various cost models that could be considered.

Directors discussed the types of waste created in SMRs; the vendors interested in building this technology; and, where these types of reactors are currently operating.

12. Annual Board & Committee Self-Evaluations

The Board Secretary reported that the annual Board and Committee self-evaluations would be sent out early in the New Year and the results would be discussed at the

Board and Committee meetings in March. Ms. Morris also noted that the updated Committee charters would be included in the surveys for feedback from Committee members.

13. Advisory Council Appointments (In Camera)

The Board discussed the proposed Advisory Council appointments in camera.

14. APM Technical Committee Appointments

Mr. Wilson reported that, as discussed at the September meeting, it was recommended that the Technical Committee include two external members; one with experience in fuel handling and nuclear operations, and the other with experience in technical research.

A Director asked that the Director appointed by either Hydro Quebec or NB Power be added to the Technical Committee membership. (*)

IT IS HEREBY RESOLVED THAT:

The NWMO Board of Directors approves the following appointments to the APM Technical Committee:

- Mark Elliot Committee Chair;
- Carlo Crozzoli Committee Member;
- Lesley Gallinger Committee Member;
- Laurie Swami Committee Member;

And the following non-Director members for a term of one year:

- Brad Curle Non-Director member
- Lawrence Johnson Non-Director member

The motion was made, seconded and unanimously passed.

15. Legal Report

Doug Taylor provided an update to the Board on legal developments and how the NWMO is managing certain topical legal and business risks.

This update included:

- Impact of Cannabis Legislation on the workplace;
- Preventing Workplace Violence & Harassment;
- NAFTA; and
- Indigenous Affairs recent Supreme Court of Canada Decisions

A Director asked for a refresher on the NWMO Code of Conduct. (*)

16. Next Meeting of the Board

The next meetings of the Board and Committees will be held as follows (this schedule updated at the request of Directors):

AFR Committee Meeting – Financial Statements Wednesday, February 14, 2018 – 8:00 am – 9:00 am Toronto, ON

Board of Directors' Meeting – Financial StatementsWednesday, February 14, 2018 - Conference call 9:00 am – 9:15 am Toronto, ON

HRC Committee Education SessionWednesday, February 14, 2018 – 9:30 - noon

Board of Directors Meeting #1 Thursday, March 22, 2018 Toronto, ON

A Director asked that the February meetings begin at 8 am (*). It was also requested by Directors that the education session requested by the HRC Committee also be arranged for February 14. (*)

17. In Camera Session

The Board Chair held an in camera session without the presence of staff and management.

Conclusion of Meeting

There being no other business, the Chair declared the meeting adjourned at 12:20 pm.

* Denotes actions to be taken.						
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Wayne Robbins Chair Gillian Morris ¹
Board Secretary