

**MINUTES**  
**FROM 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 September 25, 2008**  
**commencing at 8:00 a.m.**

Present

Gary Kugler	Director, Chairman
Pierre Charlebois	Director
Donn Hanbidge	Director
Ron Jamieson	Director
Sharon MacFarlane	Director
Ken Nash	Director, President & CEO
Josée Pilon	Director
Deborah Poff	Director
Ian Ross	Director

Staff in attendance

Angelo Castellan	Chief Financial Officer (except item 2, 16)
Jo-Ann Facella	Manager, Social Research and Dialogue (items 8, 13)
Frank King	Vice President, Science & Technology (except item 2, 16)
Pat Moran	Director, Legal Services and Corporate Secretary (except item 2, 16)
Gillian Morris	Assistant Board Secretary (except item 2, 16)
Pat Patton	Manager, Engagement & Aboriginal Relations (items 8, 13)
Kathryn Shaver	Vice President, Corporate Affairs (except item 2, 16)

Guests

David Crombie	NWMO Advisory Council Chair, via conference call (item 6)
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1. Approval of Agenda and Constitution of Meeting

Dr. Kugler chaired the September 25, 2008 Board 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 Chairman declared the meeting duly constituted for the transaction of business and called the meeting to order at 8:00 a.m.

The agenda for the September 25, 2008 meeting was approved with one amendment.

2. In Camera Session

Mr. Ian Ross, Chair of the Human Resources and Compensation Committee (HRCC) presented the committee's report on the September 9<sup>th</sup> HRCC meeting *in camera*.

The Board discussed and approved the proposed management group compensation structure.

**IT IS HERBY RESOLVED THAT:**

The Board of Directors approve the NWMO Management Group Compensation Structure as proposed.

The motion was made, seconded, and unanimously passed.

The Board discussed and approved the delegation of hiring authority to the President as proposed for employees other than senior executives.

**IT IS HERBY RESOLVED THAT:**

The Board hereby delegates to the President hiring authority for employees other than senior executives.

The motion was made, seconded, and unanimously passed.

3. Minutes of Previous Meeting

Copies of the minutes of the meeting of the Board of Directors held on June 19, 2008, having been sent to each member of the Board, were approved.

4. Business Arising from the Previous Minutes

Mr. Moran reviewed the outstanding actions arising from the previous Board meeting. All of the actions were reported to be either on the current Board agenda for discussion, or completed.

5. Report from the Audit, Finance and Risk Committee

Mr. Ian Ross, Chair of the Audit Finance and Risk Committee reported on the September 9 meeting.

It was reported that the Committee considered the following:

- the draft five-year business plan;
- risks facing the NWMO; and
- the second quarter cost summary report and the cost management report.

Mr. Ross reported that the Committee had approved the appointment of CIBC Mellon as NWMO's pension plan custodian.

The Committee considered and agreed upon the draft investment beliefs for the pension plan. Mr. Ross reported that principles for transferring pension assets from OPG are being established and noted that Hydro-Quebec and NB Power's interests will be respected. Once the principles are adopted, and the plan reaches a sufficient size, investment advisors will be sought.

Mr. Ross reported that the Committee conducted their semi-annual review of the Chair and President's expenses, and all were incurred in the interest of NWMO and were reasonable.

Mr. Ross noted that revisions were required to the Audit, Finance and Risk Committee Charter to reflect the Committee's responsibility for the pension plan. The Committee Chair asked for Board approval of the revised Charter.

The Directors discussed the revised charter and recommended two additions and all were in agreement with the proposed amendments.

**IT IS HEREBY RESOLVED THAT:**

The Charter for the Audit, Finance and Risk Committee, as amended by the Board, be approved.

The motion was made, seconded, and unanimously passed.

6. Update from the Advisory Council

The Advisory Council Chairman, Mr. David Crombie, joined the meeting via teleconference to provide the Board with an update from the September 8 Advisory Council meeting.

Mr. Crombie reported that the Council was provided with an overall update from the President on NWMO's activities and industry developments followed by more detailed staff reports on the engagement, social research and technical research programs.

The Council reviewed NWMO's Draft 2009-2013 Business Plan and had a detailed discussion on a number of its elements.

Mr. Crombie reported that Council identified the need for clarity on the legal scope of its mandate recognizing that NWMO's activities are growing beyond used fuel management. The Board discussed the topic of the Council's mandate and agreed that clarification of Council's legal mandate would be helpful.

Council also received an update on the Aboriginal program and provided feedback on NWMO's draft Aboriginal policy. The Chair reported that two Council members attended the June Elders' Forum and both remarked that they were impressed with the good relationships NWMO has with many Aboriginal people.

Mr. Crombie reported that Mr. Eero Patrakka, President of Posiva, Finland's nuclear waste management organization joined the Council meeting to discuss Finland's program. The Council had extensive discussion on a number of areas of Finland's program.

NWMO reviewed with Council its proposed Participant Funding program and invited input. Council was very supportive of the proposed program. Council reviewed, discussed and provided input on the proposed scope of NWMO's 2009 Engagement plan. A summary of the UK siting process, released earlier in the year, was also provided to Council.

The President invited Council review and discussion of actions planned by NWMO in support of its commitment to continually review, adjust and validate plans. Council expressed interest in staying abreast of evolving public attitude towards nuclear and nuclear waste.

The Board Chair commented that he was impressed with the management's tracking of Council recommendations and that it was a useful tool.

## 7. President's Report

The Chair invited Mr. Nash to update the Board on NWMO's activities since the June 19, 2008 Board meeting and provide an update on industry-wide developments.

The President reported that overall NWMO was on track with the 2008 business plan, and reported the following update based on NWMO's strategic objectives:

### *Engagement / Building relationships*

Mr. Nash reported that the following progress was made in NWMO's engagement program and building long-term relationships:

- staff preparations for the Fall dialogues on the design of the siting process are complete;
- NWMO met with several industry leaders;
- work to develop a Municipal Organization Committee continued;
- the Aboriginal program continued to make progress with on-going meetings with Niigani and other Aboriginal leaders; and
- federal and provincial government department briefings were held.

### *Research and Development*

Mr. Nash reported that additional technical work had been initiated including commissioning a report on emerging technologies including reprocessing. On social research, he reported that the final round of the citizen panels was complete.

### *Financial Surety*

It was reported that Natural Resources Canada is continuing its review of NWMO's funding formula and that NWMO has completed an initial assessment of the financial impact of new build. NWMO is also developing plans for future work on updating cost estimates.

### *Adapting Plans*

The Implementation Plan was distributed through mailings and was posted on the NWMO website in August. Mr. Nash noted that staff continued work on the next five-year business plan.

### *Governance*

The first meeting of the International Technical Review Group (ITRG) was held in September.

### *Developing Organizational Capacity*

Staff hiring continued with 27 new staff joining NWMO in 2008. The transition of OPG staff to NWMO was on target to be completed for January 1, 2009.

### *Siting Process Development*

The multi-party dialogues begin at the end of September with the first sessions taking place in Saskatoon, Toronto and Ottawa.

### *Industry Developments*

Mr. Nash reported the following industry developments:

- Bruce Power New Build Environmental Assessment guidelines were issued and an environmental impact statement was filed.
- Developments in the nuclear industry in Saskatchewan, Alberta and New Brunswick continue to unfold.

The President also updated the Board on developments in the L&ILW DGR project.

### *International developments*

NWMO staff received excellent presentations by leading members of the Swiss, Swedish, Finnish, and UK programs.

The Board was invited to comment on the President's report. The Chair reported that he attended the High-Level Radioactive Waste Management Conference in Las Vegas with a number of NWMO staff. He reported that he was very impressed with the professionalism of the NWMO staff and complimented them on their presentations and their participation in panel discussions.

8. Engagement Report

The Board Chair invited Ms. Shaver to provide an update to the Board on recent activities in NWMO's engagement program.

Ms. Shaver highlighted developments in the engagement program since the June Board meeting. She reported that staff efforts have been focused on planning for the flagship activity of the fall multi-party dialogues. The Siting Discussion Document was posted on the NWMO website and broadly distributed.

Ms. Facella was invited to provide more detail on the fall dialogues to the Board. She reported on the breadth of the registered participants.

Ms. Shaver reported on upcoming supplementary engagement activities: an e-dialogue; deliberative survey on the website; and public attitude research.

The Board was updated on projects underway in NWMO's Aboriginal program and recent meetings with Aboriginal leaders. NWMO's Traditional Knowledge project continued with NWMO staff and several members of Niigani. A further workshop will be held in November with additional NWMO technical staff.

On communications and media relations, opportunities are being sought to brief editorial boards.

The Chair invited the Board to comment on the engagement report. The Board discussed the breadth of participation in the dialogues. One of the Board members requested further detail on one of the Aboriginal projects underway. The Board discussed the selection process for choosing projects and suggested NWMO design a framework for decision making.

9. Technical Report

The Chair invited Mr. Frank King to provide the Board with an update on developments in the technical program.

Mr. King reported the following:

- NWMO is hosting an international meeting of an ad hoc working group established by the NEA Radioactive Waste Management Committee on the subject of reversibility and retrievability in early October;
- NWMO is hosting a portion of an IAEA training course on stakeholder development;
- AECL's Underground Research Laboratory in Manitoba is being decommissioned.

- NWMO is involved in a new international joint project on shaft sealing monitoring;
- NWMO is participating in the international technical committee for Äspö Hard Rock Laboratory in Sweden and co-funding a number of projects;
- an update of NWMO's watching briefs on reprocessing, partitioning and transmutation and alternative technologies for the long-term management of nuclear fuel waste has been initiated;
- NWMO staff participated and presented papers in the International High Level Radioactive Waste Conference in Las Vegas;
- a proposed protocol for a working relationship is being discussed with the Canadian Nuclear Safety Commission (CNSC); and
- NWMO's independent Technical Review Group (ITRG) has been established and held its first meeting in September. The ITRG will be reporting to the Board and Council in November.

The Board was invited to discuss Mr. King's report. The Board discussed current research underway.

10. Information Session on Low & Intermediate Level Waste Deep Geological Repository (L&ILW DGR)

The Chair invited Mr. King to provide a briefing on the Low & Intermediate Level Waste Deep Geological Repository (L&ILW DGR). Mr. King reviewed the history of the project, the hosting agreement, the site characterization work and design and construction of the project. He also outlined the community involvement in the Bruce area as well as work being done in other international facilities.

The Board was invited to ask questions and discuss Mr. King's presentation. The Board discussed the interaction with Aboriginal organizations in the area, the agreements with the host community, and costs of the project.

11. Progress Against 2008 Business Plan / Performance Objectives

The Board Chair invited Mr. Angelo Castellan to review NWMO's progress against the 2008 Business Plan, including progress on performance objectives and a financial update.

Mr. Castellan reported that the NWMO budget was under spent as of June and this was accounted for by timing of activities in the engagement and technical research projects. Mr. Castellan noted some of the under spending would be offset by additional costs incurred to upgrade NWMO's IT systems in preparation for NWMO's transition.

Cash flow was reported to be in a positive position and it was noted that Members would receive refunds of any unspent funds in the following year.

The Board was invited to discuss Mr. Castellan's report. The Board discussed the topic of hiring and staff retention.

12. Update on Fund Contributions and Cost-Sharing

Mr. Castellan provided an update on fund contributions and cost sharing. It was reported that a letter would be sent to Members shortly outlining the expected fund contributions for next year. Next year's budget also includes the L&ILW DGR and lifecycle liability management. Costs for these programs will be absorbed solely by OPG.

Mr. Castellan reported that Natural Resources Canada continues to review NWMO's proposed funding formula. Mr. Castellan noted that fuel bundle inventories were updated.

Mr. Nash provided an update on the status of cost estimates. Mr. Nash noted there have been a number of developments since 2002:

- Repository design has advanced in a number of areas and the conceptual design should be updated;
- The quantities of fuel bundles to be produced by existing and new reactors is significantly greater than the 3.6 million bundle reference case;
- Reports suggest that new nuclear and mining project costs may have escalated over the past two years at a greater rate than predicted by the labour and materials escalation factors used in NWMO's earlier estimates.

Mr. Nash advised that NWMO has carried out a high level assessment to reflect the impact of additional fuel bundles from refurbishments and new build and is planning to carry out three additional pieces of work:

- the redevelopment of the repository conceptual design followed by the development of new cost estimates (on which the funding formula is based), to be completed by 2011;
- a request for proposal to conduct an interim cost variance report, assessing the impact of nuclear and mining cost escalation on the existing cost estimates;
- the development of options for a revised cost sharing formula if new members (as a result of new build) joined the NWMO.

The Board discussed the need to have an external cost assessment conducted by a credible third party, and reviewed by Members. The President noted that this would be completed before mid 2009 and reported in the following year's Annual Report.

A Board member noted that international financial reporting standards are changing in 2010 and asked whether the development of the new cost estimates could be completed to meet this time frame. (\*)

13. Strategic Planning

A. *Overview for Strategic Planning*

The President provided an overview of the strategic planning work. He summarized management's view of the external environment and its impact on NWMO work. He also reviewed an assessment of internal progress. He noted that there will be an

opportunity to have further discussions at the November meeting on additional strategic planning items.

### *B. Scenario Analysis*

The President reviewed the various possible scenarios that NWMO reviewed for business planning purposes. He noted the importance of maintaining flexibility within the plan and balancing moving forward with continuing to build capacity.

The Board was invited to discuss the scenarios reviewed by NWMO. The Board suggested that further discussion may be required in the areas of transportation and geological screening.

The Board also discussed NWMO's public engagement and societal views and expectations. The Board had an extensive discussion on the potential for expectations of citizens regarding geological and technical screening.

### *C. Participant Funding Program*

Ms. Shaver introduced the Participant Funding program which has been developed to respond to requests from communities and organizations interested in learning more about Adaptive Phased Management and community well-being considerations. It was noted that the program was reviewed with the Advisory Council and strong support was expressed for the program.

Ms. Facella reviewed the program in detail with the Board noting that:

- Engagement participants have told the NWMO that broadening awareness and understanding of NWMO and its activities is an important component of a fair process – the participant funding program is designed to support interested individuals and organizations in increasing their understanding and building capacity to participate, and
- Research to better understand the drivers of community well-being may be of interest to both communities and the NWMO and is an opportunity to engage communities and other interested individuals and organizations early in the process in work that will contribute to their capacity to understand their own interest and at some later point, should they wish, consider the APM project
- Participation in the program would not prejudice the design of the siting process nor any later involvement by communities or others in the siting process.

The program suggests supporting geographic communities, other organizations and individuals. The program would be published and transparent and begin in early 2009.

The Board discussed the Participant Funding program. The Board asked questions around how NWMO might solicit proposals and what the adjudication process would be.

*D. Outline for Municipal Organization Committee*

Ms. Shaver introduced the development of a Municipal Organization Committee as a way of forging alliances and allowing communities to contribute to NWMO's work.

Early in NWMO's process, engagement was principally conducted at the national and provincial levels and with reactor site communities. Ms. Shaver outlined the importance of enhancing the design of the siting process with municipal input. The proposed approach will assist in supporting the implementation of the process by providing a neutral forum for municipal organizations and communities to ask questions and learn about NWMO.

Ms. Shaver reviewed with the Board the possible committee structure and the status of developing the organization. It was noted that a similar organization (NuLeaf) exists in the United Kingdom.

The Board was invited to comment on the Municipal Organization Committee plan.

The Board discussed whether all the municipalities in Ontario would be represented. Ms. Shaver reported that work is underway to identify any gaps in representation in the organization.

The Board had an extensive discussion on various aspects of the formation of the Committee and asked NWMO to:

- exercise financial prudence in the establishment of this committee;
- ensure that when forming committees that it is clear that there will be an end point to the work; and
- communicate and emphasize that NWMO is a not-for-profit organization.

The Board requested that NWMO bring forward for discussion with the Board, guidelines and policies to ensure the prudent allocation of funds relating to engagement activities, including Aboriginal and municipal engagement. (\*)

*E. Aboriginal Engagement*

Pat Patton was invited to discuss NWMO's plans for engagement with Aboriginal organizations and communities. She reviewed the elements and the objectives of NWMO's Aboriginal engagement program going forward. She discussed the role of protocols and NWMO's proposed approach.

Protocols will be developed as the siting process evolves, beginning at the national and provincial levels and gradually becoming focused at the regional and local levels as site selection proceeds.

The Board was invited to discuss NWMO's proposed approach to developing agreements with Aboriginal organizations.

A Board member supported the approach to also include provincial/regional organizations. The Board also discussed the Aboriginal Traditional Knowledge

workshops being conducted for NWMO staff and the relationship between Niigani and the Elders' Forum.

*F. Adapting to Change*

Ms. Shaver reviewed the NWMO's approach to adapting to change and specific activities planned to respond to changes such as new build nuclear, changing technological developments, and shifting public opinion. She noted that the Advisory Council urged NWMO to be transparent with respect to how it reviews and adapts its plans.

Some specific activities include:

- annual posting of used fuel inventory report;
- a report reviewing the technical design implications of potential changes in volumes and types of used fuel to be managed; and
- estimating the financial cost implications of potential future scenarios of varying volumes of used fuel to be managed.

The Board was invited to discuss Ms. Shaver's report. The Board discussed the potential for reaction to NWMO adapting its plans to manage additional fuel from new reactors. It was noted that NWMO has a statutory obligation to manage all of Canada's used fuel.

The President noted the importance of NWMO considering new build as NWMO may be called upon by the CNSC to participate in hearings related to new build as early as next year to report on what NWMO is doing to respond to possible increases in volume of used fuel.

*G. NWMO Considerations Related to Reprocessing*

Mr. Frank King was invited to discuss NWMO's consideration of used fuel reprocessing/recycling. Mr. King reviewed the technical steps in reprocessing with the Board. He outlined at a high level the benefits, disadvantages and the costs of this process and reviewed international work being conducted in this area. Mr. King reviewed the possible options for NWMO, which ranged from the Final Study commitment of maintaining a watching brief to the possibility of initiating a more comprehensive work program.

The Board had an extensive discussion on the topic of reprocessing, public perception of reprocessing and NWMO's involvement in the process. The Board agreed that undertaking reprocessing is not within NWMO's mandate and that NWMO should continue to maintain a watching brief on this and other technologies. The Board encouraged NWMO to write to the CANDU Owners Group to clarify NWMO's position on this topic. (\*)

#### *H. Wider Cooperation Options on Nuclear Waste*

The President reviewed the topic of coordination and cooperation on long-term nuclear waste management in Canada. Further to the June Board and Members meeting, the President reported that he had contacted Natural Resources Canada to discuss the topic of cooperation amongst waste owners on low and intermediate level waste.

The Board was invited to discuss the options for wider cooperation on Canada's nuclear waste. The Board was informed of AECL's plans for its waste and of the need to ensure coordination between AECL's and NWMO's activities to minimize public confusion over the two programs.

The Board concluded the strategic planning discussion by reviewing topics that require further discussion at future Board meetings: reprocessing, considerations of geology/geography in site selection, and wider industry cooperation.

#### 14. Draft Five-Year Business Plan

Mr. Castellan reviewed NWMO's draft five-year business plan with the Board of Directors. The plan addresses the three major areas of work for NWMO beginning in 2009: Adaptive Phased Management; the Deep Geologic Repository (DGR) for Low and Intermediate Level Waste (L&ILW); and the provision of Lifecycle Liability Management Services.

The 2008-2012 business plan previously approved by the NWMO Board included the first five-year financial outlook for implementation of Adaptive Phased Management (APM). Given that APM planning was at an early stage, the plan and the five-year financial projection were considered preliminary. The draft 2009-2013 plan provides an improved definition of the implementation of APM and is based on the following reference planning assumptions to guide NWMO's readiness:

- public review of the siting process in 2009;
- initiation of the siting process in 2010;
- responding to expressions of interest and carrying out feasibility studies in 2011 and 2012; and
- start of detailed feasibility studies on candidate sites in 2013.

It was emphasized that these assumptions were for planning purposes and that there was no guarantee of actual expressions of interest, given that APM relies on a willing host community. Mr. Castellan invited discussion on the proposed business plan.

The Board discussed the status of the services agreement to be in place on January 1, 2009 between NWMO and OPG. The Board discussed the projected staffing numbers and work entailed in the various program areas. For comparison, Directors also reviewed staffing numbers and program status of other international nuclear waste management organizations.

15. Board and Advisory Council Education

The Chair introduced the item of Director education and invited the Board's views. Several Directors supported a site visit to view a waste management site. Directors also commented that they found the news clippings e-mailed to Directors daily to be extremely useful.

Management was asked to formalize an appropriate Director Orientation and Education Policy appropriate for the Board and for the Advisory Policy.

16. In Camera Session

The Chairman convened an *in camera* session with Directors.

17. Next Meeting

The Chair asked Directors to report any conflicts with next year's proposed Board and Committee meeting schedule. No conflicts were reported. The Directors discussed the upcoming November Board meeting and agreed that an hour meeting with Niigani would be welcome and appropriate.

**BOARD MEETING #5**  
**November 13, 2008**  
**9:00 am – 4:30 pm**  
**Location: Toronto**

**Upcoming Committee Meetings:**

**Human Resources & Compensation Committee**  
October 30, 2008  
8:00 am – 10:00 am

**Audit, Finance & Risk Committee**  
October 30, 2008  
10:00 am – 12:00 pm

December 16, 2008 (Conference Call)  
1:00 pm – 2:30 pm

**Siting Committee Meeting**  
November 12, 2008  
1:00 PM – 3:30 PM

Conclusion of Meeting

There being no other business, the Chair declared the meeting terminated at 3:40 pm

(\*) Denotes actions to be taken.

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Pat Moran  
Corporate Secretary

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Dr. Gary Kugler  
Chair