

Advisory Council to the
Nuclear Waste Management Organization

Record of Discussion: January 22, 2005 Meeting

Record of discussion of the meeting of the Advisory Council to the
Nuclear Waste Management Organization (NWMO) /
Société de gestion des déchets nucléaires (sgdn)

held at Toronto, Ontario, commencing at 9:00 a.m. and concluding at 3:30 p.m. on
January 22, 2005.

Present

Advisory Council:

David Crombie	Chairman
David Cameron	Member
Helen Cooper	Member
Fred Gilbert	Member
Eva Ligeti	Member
Derek Lister	Member
Daniel Rozon	Member

NWMO:

Elizabeth Dowdeswell	President (Items 1-3 only)
Kathryn Shaver	Corporate Secretary (Items 1-3 only)

Regrets:

Donald Obonsawin	Advisory Council Member
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PART I

ADVISORY COUNCIL BUSINESS

1. Constitution of Meeting / Approval of Agenda

The Chairman called the meeting to order at 9:00 a.m.
The agenda was reviewed and approved.

1. Minutes of Previous Meeting

The Advisory Council reviewed and approved the minutes of the meeting convened on October 18, 2004.

PART II

REPORTS FROM THE PRESIDENT

3. Reports from NWMO's Public Engagement

The NWMO President tabled reports with the Advisory Council and addressed highlights from public engagement activities initiated following the release of Discussion Document 2:

- A draft summary of comments from the Public Discussion Sessions convened in 34 locations between September and December 2004;
- Highlights from focus groups convened in December 2004 as part of NWMO's ongoing public opinion research;
- The report produced by the Public Policy Forum from the roundtable discussion convened with NWMO, to invite comments from opinion leaders on implementation considerations for the long-term management of used nuclear fuel; and
- Highlights from the two E-Dialogues convened by NWMO in 2004.

The President noted some upcoming meetings:

- The NWMO will be convening a workshop on the nature of the hazard of used nuclear fuel.
- NWMO is reconvening participants from earlier workshops, to discuss and work through assessments of the management approaches presented in Discussion Document 2. Specifically, NWMO is inviting back participants from an earlier round of:
 - National and regional stakeholder workshops; and
 - The Community Dialogue with representatives from nuclear host communities.
- The President reported that NWMO was in the process of arranging a research visit to the organization responsible for managing used nuclear fuel in Sweden. She extended an invitation for an Advisory Council member to participate in the trip to learn first hand about Sweden's experiences in planning for the long-term management of used nuclear fuel.

The President reviewed meetings planned to keep government departments apprised of the NWMO study in progress:

- The NWMO Acting Chair, the NWMO President, and a member of the Advisory Council will meet with the Minister of Natural Resources Canada on January 31st.

- The President reported that she had met with the New Brunswick Minister and Deputy Minister of Energy on January 20, 2005. As part of this visit to New Brunswick, she also met with the President and CEO of New Brunswick Power on January 19, 2005.

The President previewed key items on the agenda for the Advisory Council's February 1st meeting, which includes discussion on the latest assessment work and invites Council comments on the next steps planned for NWMO's 2005 engagement. Further to the Council's direction, guest presentations from the Canadian Nuclear Association and Canadian Nuclear Society have been arranged as part of the February 1st meeting. The NWMO will also have an early draft of the 2004 Annual Report to review with the Advisory Council at that time.

The NWMO President and Corporate Secretary withdrew from the meeting at 10 am.

PART III

IN CAMERA COUNCIL MEETING

The Council convened in camera from 10:00 am to 3:30 pm for private discussion without the presence of NWMO management.

1. Council's Preparations for Independent Comments

In this portion of the agenda, the Advisory Council continued its planning discussions related to fulfilling Council's legislative obligations under the *Nuclear Fuel Waste Act*. The *Act* requires the Advisory Council to provide comment on the management approaches and NWMO's study, to be included in the final study that NWMO submits to the Minister of Natural Resources Canada by November 15, 2005.

During this session, members finalized and approved a paper which outlines how the Advisory Council intends to fulfill its mandate. The Council intends that this paper be shared publicly through posting on the NWMO website. In addition, the Council requests that NWMO include this paper in the NWMO's Draft Study Report, planned for public release in the first part of 2005.

5. Other Issues Raised by Council Members

Dr. Rozon brought to the attention of the Advisory Council the issue of whether used nuclear fuel should be considered a waste, or whether it should be considered to be a resource. He noted that the perspective adopted on this important issue will have a bearing on the nature of the long-term management strategy ultimately recommended for used fuel. Dr. Rozon suggested that minimal understanding of the fuel isotopics is essential if we are to make informed judgments on the fuel management options. With this in mind, Dr. Rozon presented a technical paper he prepared for discussion by the Advisory Council. The paper offers some technical insight on the disposal of spent

CANDU fuel from the perspective of the isotopic composition, and focuses on the economic incentives for reprocessing. His main observations were:

- although uranium isotopes make up as much as 99% of the spent fuel, there will be very little incentive to reprocess used fuel in Canada anytime in the future *if* the sole purpose is to recover the uranium. This is because of the very low fissile content in the recovered uranium, comparable in fact to the depleted tails assay in uranium enrichment plants. It would always be much cheaper to simply purchase the non-radioactive depleted uranium from the vast inventories available at enrichment plants rather than reprocess CANDU spent for its uranium content.
- on the other hand, CANDU spent fuel contains less than 0.4% of plutonium isotopes, mostly Pu-239 which is fissile. The presence of this seemingly small amount of plutonium is extremely important for various reasons, including:
 - the plutonium isotopes are mostly responsible for the level of radiotoxicity of the spent fuel beyond 1000 y (and up to one million years). Eliminating the plutonium (by converting it into fission products) would thus reduce significantly the long-term radiotoxicity of the wastes;
 - plutonium recovered from reprocessing of spent CANDU fuel could be recycled in new fuel to produce more energy, reducing the demand on natural uranium resources. It could also be used as an initial fissile feed for thorium fuel cycles;
 - however, plutonium *in separate form* would pose a serious security threat (proliferation, terrorism), unless it was closely guarded.

Council members thanked Dr. Rozon for raising the issue. Members agreed that this matter should be referred to the NWMO for consideration as the organization continues with the study of management approaches.

Dr. Lister pointed out that one individual with a great deal of experience of the nuclear industry and waste management issues is J.A.L. Robertson, who followed the Seaborn process assiduously and has made many submissions to the NWMO. His comments on the Discussion Documents make many pertinent points and criticisms about the processes for engaging Canadians, and should be considered by the Advisory Council. His submission on Discussion Document 2 was tabled.

Termination of Meeting

The Chairman declared the meeting terminated at 3:30 p.m.

Dated the 7th day of February, 2005
Corporate Secretary