



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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May 3, 2000

CHAIRMAN

MEMORANDUM TO: Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan ✓
Commissioner Merrifield

FROM: Richard A. Meserve *[Signature]*

SUBJECT: REPORT ON U.S.-SOUTH AFRICA SUSTAINABLE ENERGY
COMMITTEE MEETING, APRIL 12, 2000

On April 12, 2000, I attended the meeting of the U.S.-South Africa Sustainable Energy Committee which was held in Washington. Attachment 1 contains background material and remarks that were developed by OIP for use at the meeting; Attachment 2 identifies the key deliverables resulting from the meeting. The meeting was co-chaired by Secretary of Energy Bill Richardson and Minister of Minerals and Energy Affairs Phumzile Mlambo-Ngcuka.

During my presentation before the Sustainable Energy Committee, I noted the following significant progress:

On March 30, 2000, Dr. William Makgoba, the new Chairman of the Board of the National Nuclear Regulator (NNR), and I jointly renewed our bilateral Arrangement on nuclear safety cooperation for an additional five years. Dr. Makgoba took advantage of his presence in Washington to visit other NRC Commissioners and attend the Nuclear Regulatory Commission's three-day Regulatory Information Conference.

The NRC-NNR relationship has been active this past year: two NNR personnel spent three weeks each with NRC technical staff on International Atomic Energy Agency (IAEA)-sponsored fellowships and two other NNR staff visited for shorter periods to discuss specific technical issues. Additionally, we have regular staff interactions by means of e-mail and telephone covering a wide-range of regulatory safety subjects.

In response to a request by the Department of Minerals and Energy (DME), NRC is in the process of developing a two-week overview program for the next NNR Chief Executive Officer. Details and scheduling of the visit will be finalized following the appointment of the Chief Executive Officer.

I provided a copy of the letter I had written to the Minister indicating that the NRC would consider working with the NNR on the regulatory program for the development of the Pebble Bed Modular Gas Reactor (PBMR) project. She stated that she would review the letter with NNR and reply. In the subsequent discussion of the PBMR, the Minister

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emphasized that the safety case is vitally important, that the project must undergo careful scrutiny because of competing demands for funds, and that the work of the NNR must be transparent and above reproach.

In the past, nuclear safety had been the only nuclear topic on the Committee's agenda. At this meeting, DOE added three new topics to the nuclear energy agenda, namely assisting in the development of the PBMR, assisting in the conversion of the Safari research reactor to low enriched fuel, and establishment of a nuclear education program for South Africans. Summaries of these new activities are included in Attachment 2.

Both Minister Mlambo-Ngcuka and Secretary Richardson noted with pleasure the progress made on the Nuclear Energy topics.

Subsequent to the Committee meeting, I learned that a significant milestone for the PBMR development had been reached. In mid-April, the South African cabinet gave approval for a detailed feasibility design study and the performance of an environmental impact assessment that will include public involvement. The cost of this next step is approximately \$65 million. Government approval will be required again to proceed to the demonstration phase.

- Attachments: 1. Background and Remarks
2. Deliverables for the Energy Committee Meeting

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**PROPOSED PARTICIPATION OF
NRC CHAIRMAN MESERVE
IN THE
SUSTAINABLE ENERGY COMMITTEE OF THE
U.S. - SOUTH AFRICA BINATIONAL COMMISSION
(April 11-12, 2000)**

Background

The U.S.-South Africa Binational Commission (BNC) was established in 1994-1995 as a Vice Presidential initiative to strengthen high-level economic, technical and social ties to this important regional ally. Similar to the U.S.-Russian Federation Commission on Economic and Technological Cooperation, the body is subdivided into issue-oriented committees which report to a plenary at which the Vice Presidents officiate. Meetings are held roughly annually, and the venue alternates between Washington and South Africa. Secretary of Energy Richardson and his Minerals and Energy Affairs Minister counterpart chair the Sustainable Energy Committee, in which participate the NRC and the Council for Nuclear Safety (CNS, now renamed the National Nuclear Regulator, or NNR).

Past nuclear-related agenda issues have included an invitation to South Africa to participate in the DOE Reactor Vessel Annealing Demonstration Program (DOE subsequently canceled the program, negating the invitation), and NRC review of proposed South African nuclear safety legislation. There are also a range of non-nuclear agenda issues, including (1) energy investment projects (e.g., solar; coal-bed methane; focus on black townships), and (2) development of South African energy policy and regulation (e.g., renewable energy for rural development; oil and gas exploration and market investment; environmental sustainability; energy efficient housing employing low smoke technology; low smoke fuels development; capacity building; energy efficiency; energy data exchange; power pooling; provincial implementation of renewable energy projects; transfer of technology through model health clinic electrification; and advanced transportation vehicle technologies and fuels).

The NRC-NNR activities are consistent with the commitments undertaken in the arrangement for the exchange of technical information and cooperation in nuclear safety matters, which you renewed with NNR Chairman Makgoba on March 30, 2000.

1999 Sustainable Energy Committee Meeting

The last meeting of the Sustainable Energy Committee occurred on February 17, 1999 in Capetown, South Africa. Former NRC Chairman Jackson participated in this meeting with former Minister Paluella Maduna, Deputy Minister Susan Shabangu and Director General Sandile Nogxina, all of the Department of Minerals and Energy (DME). NRC-related items on the Committee's agenda were: (1) strengthening nuclear safety; (2) participation in international nuclear safety research; and (3) assisting with the development of nuclear safety legislation.

A key deliverable at the February 1999 Sustainable Energy Committee was the signing of a Memorandum of Cooperation (MOC) on information exchange between NRC and DME. The MOC initiates a bilateral nuclear safety dialogue, including regulatory training for DME officials.

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The arrangement complements NRC's existing cooperation with the CNS/NNR. The BNC plenary report also noted that the NRC and CNS/NNR signed a nuclear reactor safety research agreement on March 16, 1998. This agreement provides for CNS/NNR participation in three separate programs, namely, the thermal/hydraulic code assessment, the severe accident program and the probabilistic risk assessment program.

2000 Sustainable Energy Committee Meeting

On April 11, there will be a full day working level session, which Howard Faulkner, OIP, will attend. The plenary session, co-chaired by Secretary of Energy Richardson (or, in his absence, Dr. Ernie Moniz) and Minerals and Energy Minister Phumzile Mlambo-Ngcuka, will be held from 1-2:30 p.m. on April 12 in the Department of Energy Forrestal Building. Chairman Meserve is scheduled to attend the plenary meeting. Dr. Schalk de Waal, Director of Nuclear Energy, DME, and Mr. Jeff Leaver, Acting Chief Executive Officer, NNR, will attend the meetings.

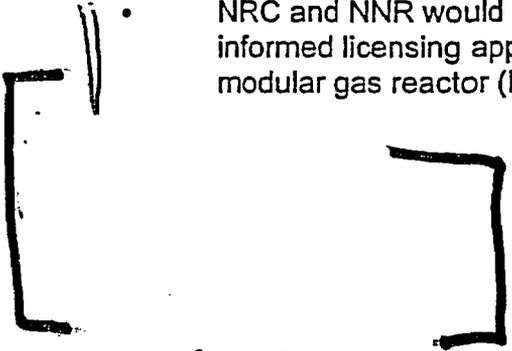
Under the Nuclear Energy portion of the agenda, there will be four separate topics addressed:

- Nuclear Safety
- Pebble Bed Modular Reactor (PBMR) Program
- Nuclear Energy Education Program
- Nuclear Non-Proliferation

Chairman Meserve will report on NRC-NNR nuclear safety activities and possible NRC participation with NNR in the regulatory component of the PBMR program. DOE will report on the nuclear energy education program and nuclear non-proliferation initiatives.

The most significant points recommended for Chairman Meserve to make, both formally and informally, during his participation in the Committee session are:

- significant progress has been made on the nuclear safety agenda;
- our interactions with DME and NNR are mutually beneficial and should continue; and
- NRC and NNR would mutually benefit by working together in the development of a risk-informed licensing approach for advanced nuclear technologies such as the pebble bed modular gas reactor (PBMR).



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