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December 17, 1999

The Honorable Richard Meserve
Chairman
U.S. Nuclear Regulatory Commission
One White Flint North Building
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Meserve,

We are writing to alert you to a possible attempt to circumvent a Commission order that was issued this summer, shortly before you took office. The order followed our petition for leave to intervene and a public meeting of the Commission at which we testified on a proposed export license application by the Canadian companies Nordion, Inc. and Atomic Energy Canada Ltd. for 130 kgs. of bomb-grade, highly enriched uranium (HEU) in the form of targets used to produce medical radio-isotopes. We expressed concern at the meeting and in our earlier petition that the applicant was flouting the intent of the so-called Schumer Amendment of the Energy Policy Act of 1992, by seeking U.S. export of HEU without making a good faith effort to convert its radio-isotope production to low-enriched uranium (LEU) targets.

As made clear in the meeting transcript, our major concern was that if the applicant commenced operations at its new processing facility prior to modifications that would permit future processing of LEU targets, the cost of such modifications would rise precipitously, making eventual conversion to LEU less likely. Without such modifications, the applicant would likely request U.S. HEU exports for decades to come, contrary to the intent of the Schumer Amendment, which is intended to phase out such commerce as quickly as possible in order to reduce risks of theft and diversion. We are confident that the vital supply of medical isotopes can be maintained during conversion to LEU targets, and the applicant has presented no evidence to the contrary.

Acknowledging the merits of our arguments, the Commission's decision expressed the expectation that "Atomic Energy Canada, Ltd. will cooperate fully with Argonne National Laboratory to complete a feasibility study" within three months to "consider whether minor modifications could be made prior to the [new] MAPLE reactors and their processing facility coming on line that would permit the use of LEU targets, or take other reasonable measures that would at least preserve the opportunity to move to LEU targets in the future."

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Strategies for stopping the spread and reversing the growth of nuclear arms.

Paul L. Leventhal, *President*, Peter A. Bradford, David Cohen, Julian Koenig, Sharon Tanzer, Roger Richter, Dr. Theodore B. Taylor
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The Commission approved the export license but required the applicant and the U.S. Executive Branch to submit a "yearly status report detailing the progress of the program and Canadian cooperation in developing LEU targets." Moreover, it warned: "If the Commission should make a finding, following review of these periodic status reports and a public meeting if necessary, that the requirements of the Schumer Amendment are not being met, the Commission may modify, suspend, or revoke the license pursuant to Section 186 of the AEA and 10 CFR 110.52."

The Commission also stated that "the Executive Branch Reports should include assurances that the funds necessary to develop the LEU targets in a timely manner have been made available to Argonne National Laboratory."

Recent evidence suggests that the applicant already is violating the terms of the Commission's order. First, the applicant has refused to cooperate with Argonne National Laboratory in conducting its feasibility study, so that there can be no independent check of the study's progress and conclusions. Second, the study is already one month overdue and not scheduled to be completed for several more months, despite the fact that the new processing facility is slated to commence operations in June. Third, a Nordion representative was recently characterized in the press as calling into question whether conversion to LEU ever would occur, because "switching to safer, low-enriched uranium fuel would be too costly and too troublesome."¹ Finally, neither the Canadian companies nor the Canadian government has provided any hint of funding for the modifications necessary to convert to LEU targets.

It thus appears that the applicant has little actual intent to convert to LEU targets. We urge the Commission promptly to investigate this situation. If it confirms our concerns, the Commission should follow the policy laid out in its order by suspending the export license until the applicant demonstrates existence of a real program to convert to LEU targets.

In addition, we understand the applicant already is attempting to modify the terms of the license in two ways that would undermine the intent of the Schumer Amendment and the Commission's order:

First, the applicant is requesting that the HEU be sent in one or two large shipments, rather than conventional smaller annual shipments. If the entire five years' worth of HEU covered by the license were exported in a single shipment, the United States would lose the leverage implicit in its ability to revoke the license.

Second, the applicant is requesting permission to have the HEU exported as metal rather than fabricated targets. If this change were approved and a target-fabrication capacity were established in Canada, the applicant could arrange for the original batch of HEU to be recycled repeatedly, avoiding future license applications and thereby perpetuating commerce in U.S.-origin HEU for decades to come.

¹ Peter Calamai, "Plant may use bomb-grade fuel; Cost of using safer uranium feared too high," *Toronto Star*, December 6, 1999.

We urge you to take immediate action to enforce the letter and intent of the Commission's order and the Schumer Amendment. We also request a meeting with you to discuss this matter at your earliest convenience. We will call to seek to schedule an appointment. Thank you for your consideration.

Sincerely,



Alan J. Kuperman
Senior Policy Analyst



Paul L. Leventhal
President

Enclosure

Cc: NRC Commissioners
NRC Office of International Programs
DOE Office of Arms Control and Non-Proliferation

CANADA

Plant may use bomb-grade fuel

Cost of using safer uranium feared too high

By PETER CALAMAI
SCIENCE REPORTER

OTTAWA — Two new nuclear reactors being built in Ontario may have to use bomb-grade enriched uranium to produce medical isotopes because switching to safer, low-enriched uranium fuel would be too costly and too troublesome.

The \$120-million MAPLE re-

actors, under construction at Chalk River, Ont., are owned by MDS Nordion, a Canadian company that is the leading world supplier of radioactive isotopes used for medical diagnosis and treatment.

Grant Malkoske, Nordion's technology vice-president, said the company is concerned about the cost of larger waste treatment facilities that could be necessary if the switch to low-enriched uranium fuel is made. An initial feasibility study strongly suggested that the processing facilities currently being erected might not

be big enough, he said.

"But we want to be able to make the change and we're still working toward that end," Malkoske said in an interview.

The potential concern over the increased waste treatment was raised by Malkoske in a Nov. 4 progress report to the U.S. state department, which has been pushing the reactor conversions as part of nuclear non-proliferation.

High-enriched uranium, which is more than 93 per cent U^{235} , can be used by terrorists to make nuclear bombs. Low-enriched uranium, at roughly 20

per cent U^{235} , cannot.

The Nordion letter was only recently placed on the public file at the U.S. atomic watchdog, the Nuclear Regulatory Commission, and released by a Washington-based advocacy group, the Nuclear Control Institute.

"We're worried that no one has said who would pay for any conversions," Alan Kuperman, the institute's expert on high-enriched uranium, said yesterday in an interview. "Once the processing facility starts up, the cost of making any changes increases 10-fold because ev-

erything is radioactive."

In June, the regulatory commission gave Kanata, Ont.-based Nordion the go-ahead to import high-enriched uranium into Canada for five years after the company pledged to investigate within three months whether the new facility could be switched to low-enriched uranium.

Nordion's Malkoske said that the first of the MAPLE reactors is scheduled to begin operating by mid-2000 but that the company hoped to decide by February if the conversion would be feasible.