

July 22, 2005

MEMORANDUM TO: Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons

FROM: Nils J. Diaz /RA/

SUBJECT: MULTINATIONAL DESIGN APPROVAL PROGRAM (MDAP), STAGE 1

Introduction

I believe that the maturity of the nuclear power technical and regulatory bodies today provides us with an opportunity to enhance safety and security by integrating the expertise of the NRC and other regulatory authorities into a multinational reactor design approval program. I previously described such a program in the white paper of May 24, 2005, entitled "Multinational Design Approval for New Nuclear Power Plants". This memorandum requests your consideration and support to initiate implementation of Stage 1 (previously Phase 1) of this program.

Stage 1 of the MDAP would increase and formalize the level of multinational cooperation in NRC's upcoming Design Certification reviews, including the reviews of the EPR, the Advanced CANDU Reactor 700/1200, and the GE, Economic Simplified Boiling Water Reactor (ESBWR). This activity would be an expansion and formalization of the type of bilateral cooperation that the staff has undertaken in earlier reviews, including the ABWR, AP-600 reviews and the ACR 700 pre-application reviews. In those cases, the staff held discussions and shared research information with other regulators. Those activities were productive and should be expanded under a more formal and comprehensive framework.

MDAP Objectives

The primary objective of the MDAP is to enhance the protection of public health and safety and the environment for the beneficial civilian use of nuclear energy. A multinational safety-focused design approval program would ensure the effectiveness and efficiency of nuclear power design reviews and associated programs, and would provide a practical forum for multinational cooperation and ultimate convergence on safety standards and their implementation.

Other important safety would be directly or indirectly achieved by this a program. Among these would be improved clarity and transparency of nuclear safety regulation across international borders, better communication, more standardization in reactor designs and in regulatory programs, better safety, security, and preparedness coordination among user countries, and improved public confidence. In addition, the program could contribute to energy security and

economical benefits.

The focal point of this effort will be to complete the largest and most technically challenging segment of the nuclear power plant safety review within a multinational framework to support national regulatory decisions, operating under approved guidelines. It would incorporate the expertise of the regulators of the country-of-origin to expedite and improve the safety review. This program can also accommodate the needs of regulatory authorities from countries interested in construction of those designs.

MDAP Stage 1 Status

Discussions to date with other regulatory authorities, with reactor vendors and with IAEA and OECD/NEA indicate that there is widespread interest in the MDAP. In particular, the regulatory authorities from France (ASN) and Finland (STUK) have indicated an interest in participating in NRC's EPR Design Certification review, and the Canadian regulatory authority (CNSC) has also indicated an interest in continued and expanded cooperation in the ACR 700/1200 Design Certification review. There is no doubt that we can benefit from the input and support of ASN and STUK in the EPR review and from the CNSC and others in the ACR review. The French, German, and Finnish regulatory authorities have been reviewing the EPR for several years and know the design and its safety issues well. Similarly, the Canadians and other regulatory authorities can be of significant assistance to NRC on the ACR review since they have decades of design and operating experience on pressurized heavy-water reactors.

Request for Commission Approval

I am therefore requesting Commission approval of a program of multinational cooperation in the NRC Design Certification Process (in particular, in the Final Design Approval) as the first stage of the MDAP. An increase of two FTE is estimated to be needed in FY-2006 to implement this activity. It is likely that efficiencies gained through the multinational cooperation will result in a net savings for the following years.

Following Commission approval, the staff will begin formalizing the detailed working arrangements with the vendors and the regulators interested in participating. The NRC Design Certification process will remain the regulatory framework for these efforts with participating regulatory authorities acting as expert consultants, similar to NRC contractors. The NRC staff would remain responsible for regulatory decisions and recommendations, and would incorporate the technical input from their counterparts just as they now do for expert contractors. My discussions with the General Council indicate that this arrangement, which is only an extension of earlier cooperative efforts, will be fully supportive of NRC's Design Certification process.

Further Plans

I propose to continue discussing the feasibility and desirability of further multinational cooperation with the regulatory authorities of other countries (i.e., Stages 2 and 3 as outlined in the Draft White Paper). I will keep the Commission informed of progress on these efforts and will seek your input and support when the preliminary thinking on Stages 2 and 3 has matured sufficiently to allow formulation of a specific proposal for your consideration.

SECY please track.

cc: SECY
OGC
EDO
OIP