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FINAL REPLY:

George E. Apostolakis, ACRS

TO:
Chairman Meserve

FOR SIGNATURE OF : ** GRN **

CRC NO: 02-0431

Travers, EDO

DESC:
Policy Issues Related to Advanced Reactor
Licensing

ROUTING:
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ACRS File
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DATE: 06/20/02

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SPECIAL INSTRUCTIONS OR REMARKS:

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AUTHOR: George Apostolakis
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ADDRESSEE: Chairman Richard Meserve
SUBJECT: Policy Issues related to advanced reactor licensing

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D.C. 20555-0001

June 17, 2002

The Honorable Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Chairman Meserve:

SUBJECT: POLICY ISSUES RELATED TO ADVANCED REACTOR LICENSING

During the 493rd meeting of the Advisory Committee on Reactor Safeguards (ACRS), June 6-8, 2002, we were briefed by representatives of the NRC's Office of Nuclear Regulatory Research (RES) on issues that have potential policy implications for advanced reactor licensing, and the plans for seeking the Commission's guidance for resolving these issues. We also had the benefit of the documents referenced.

CONCLUSIONS AND RECOMMENDATIONS

- (1) The RES staff has identified appropriate policy issues and posed questions that must be addressed to resolve them.
- (2) The existing agency positions on some of these policy issues should be reevaluated because of new perspectives on risk-informed regulation and defense in depth, as well as the new reactor designs that may be proposed.
- (3) The need for greater specificity in the application of defense in depth should be made a separate overarching issue.

DISCUSSION

The issues identified by the staff fall into the following five areas:

- event selection and safety classification
- fuel performance and qualification
- source term
- containment versus confinement
- emergency evacuation

We note that in order to resolve these issues, the role of PRA and high-level risk acceptance criteria are essential in the design approval process.

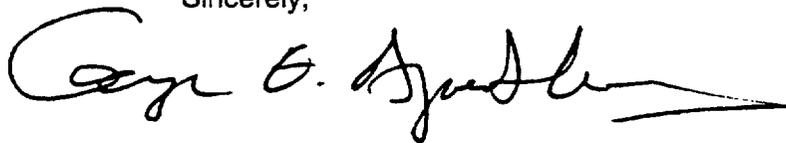
The staff also identified two overarching policy issues:

- (1) how to implement the Commission's "expectation" that advanced reactors will provide enhanced margins of safety
- (2) what should be the relationship between the NRC's safety requirements and international safety requirements

We recommend that the need for greater specificity in the application of defense in depth should be singled out of the first overarching issue and made a separate and distinct overarching issue. With respect to the second overarching issue, we agree that it would be highly desirable to understand the bases for the international safety requirements. Nonetheless, we note that it would not be unreasonable for different countries to have different safety standards on a cost/benefit basis.

The identification and resolution of these policy issues is important to the process of licensing advanced reactors. The existing agency positions on some of these policy issues should be reevaluated because of new perspectives on risk-informed regulation and defense in depth, as well as the new reactor designs that may be proposed. Much work remains to be done, and we plan to maintain continuing interactions with the staff on possible approaches and options for resolving these policy issues.

Sincerely,



George E. Apostolakis
Chairman

References:

1. Information Paper (Draft Predecisional) dated May 23, 2002, from William D. Travers, Executive Director for Operations, NRC, for the Commissioners, Subject: Plan for Resolving Policy Issues Resulting from Technical Considerations Related to Advanced Reactor Licensing.
2. U.S. Nuclear Regulatory Commission, NUREG-1226, "Development and Utilization of the NRC Policy Statement on the Regulation of Advanced Nuclear Power Plants," dated June 1988.