May 27, 1992

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52-004

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Robert C. Pierson, Director
Standardization and Non-Power Reactor Project Directorate

Subject: Information on the SBWR Testing Program Requested During the April 22, 1992 ACRS Thermal Hydraulic Phenomena Subcommittee Meeting.

During the subject meeting, data reports were requested by the subcommittee. The following reports are being transmitted in response to this request:

1) Paul Coddington, et.al., ALPHA -*The Long Term Passive Decay Heat Removal and Aerosol Retention Program at the Paul Scherrer Institute, Switzerland.*

2) Karen Vierow and Virgil Schrock, *Condensation in a Natural Circulation Loop with Noncondensable Gases, Parts I and II,* Proceedings of the International Conference on Multiphase Flows, Tsukuba, Japan, September 1991.

3) Mansoor Siddique, *The Effects of Noncondensable Gases on Steam Condensation Under Forced Convection Conditions,* Doctor of Philosophy Dissertation, Massachusetts Institute of Technology, January 1992.

Sincerely,

P. W. Marriott, Manager
Regulatory and Analysis Services
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cc:

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THE EFFECTS OF NONCONDENSABLE GASES ON STEAM CONDENSATION UNDER FORCED CONVECTION CONDITIONS

by

Mansoor Siddique

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Submitted to the Department of Nuclear Engineering
in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

January 1992

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The Publication entitled THE EFFECTS OF NONCONDENSABLE GASES ON STEAM CONDENSATION UNDER FORCED CONVECTION CONDITIONS consisting of a PhD Thesis (experimental and theoretical investigation conducted) to determine the effects of noncondensable gases on steam condensation under forced convection conditions by Mansoor Siddique. In particular, this work was aimed at predicting the steam condensation rate in the presence of air or hydrogen as applied to the analysis of the Isolation Condensers (IC's) of the proposed Simplified Boiling Water Reactor (SBWR), bearing a January 1992 Copyright Notice. Massachusetts Institute of Technology, hereby grants the Nuclear Regulatory Commission (NRC) the authority to make the number of copies of this copyrighted publication which are necessary for its internal use and to fulfill its legal responsibilities as regards public disclosure. This Copyright Notice covers the following type of documents generic or plant-specific reviews or approvals or the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation. This authorization is granted with the understanding that any copies of the publication made by the NRC will continue to bear the Copyright Notice, which will be reproduced along with any portion of the publication.

David J. Harrigan

DAVID J. HARRIGAN
Associate Director
Office of Sponsored Programs

DATE: 12/16/92

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