December 16, 2004

MEMORANDUM TO: David C. Lew, Chief
Probabilistic Risk Analysis Branch
Division of Risk Analysis and Applications
Office of Nuclear Regulatory Research

FROM: Hugh W. Woods   **/RA/**
Probabilistic Risk Analysis Branch
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SUBJECT: USE OF THE UNIVERSITY OF MARYLAND'S (UMD's) LETTER
REPORT, "THERMAL-HYDRAULIC UNCERTAINTY ANALYSIS IN
PRESSURIZED THERMAL SHOCK RISK ASSESSMENT," AS A
REFERENCE IN OUR NUREG-CR-6859, "PRA PROCEDURES AND
UNCERTAINTY FOR PTS ANALYSIS"

The attached University of Maryland (UMD) report, "Thermal-Hydraulic Uncertainty Analysis in
Pressurized Thermal Shock Risk Assessment - Methodology and Implementation on Oconee,
Beaver Valley, and Palisades Nuclear Power Plants," March, 2003, was provided to me as the
NRC/RES Project Manager for our Cooperative Research Agreement K-6007 with UMD.

The report describes methods used to account for uncertainties in the PTS calculations
performed by the RES staff and our contractors in re-evaluating PTS risk at U.S. PWRs. As
such, the report is cited as a reference in our NUREG/CR-6859 report, "PRA Procedures and
Uncertainty for PTS Analysis," to be submitted for publication before the end of 2004.

Much of the work described in UMD's report was performed several years ago (our cooperative
research agreement with UMD started in August, 1998, and an earlier draft of the report was
provided in December, 2001). The attached report includes that earlier work, plus work
performed between that time and March, 2003, but of course it does not take into account PTS
methods, corrections, and results since that time. Thus, the UMD report may not in all cases
be totally consistent with more recent reports such as the staff's NUREG-1806, "Technical
Basis for Revision of the Pressurized Thermal Shock (PTS) Screening Limit in the PTS Rule
(10CFR50.61): Summary Report," to be published by early 2005. If such inconsistencies are
noted, the more recent results should be given precedence. However, the UMD report does
provide a correct description of the general methods used to account for uncertainties in the
PTS calculations, and for that purpose it is cited in NUREG/CR-6859.

Attachment: UMD Report
Distribution: PRAB r/f, DRAA r/f

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