

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

May 2, 1990

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

FROM: Samuel J. Chilk, Secretary

SUBJECT: SECY-90-120 - RECOMMENDATIONS OF CONTAINMENT
PERFORMANCE IMPROVEMENT PROGRAM FOR PLANTS
WITH MARK II, MARK III, ICE CONDENSER, AND
DRY CONTAINMENTS

This is to advise you that the Commission (with all Commissioners agreeing) has approved the staff's recommendation in the subject paper. Attached is a suggested revision to page 1 of Supplement No. 2 of Generic Letter No. 88-20.

Attachment:
As stated

cc: Chairman Carr
Commissioner Roberts
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
OGC
OIG
ACRS
ASLBP
ASLAP

NOTE: THIS SRM AND THE SUBJECT SECY PAPER WILL BE MADE
PUBLICLY AVAILABLE IN 10 WORKING DAYS FROM THE DATE OF
THIS SRM

Enclosure 7
DRAFT

TO: ALL LICENSEES HOLDING OPERATING LICENSES AND CONSTRUCTION
PERMITS FOR NUCLEAR POWER REACTOR FACILITIES

SUBJECT: COMPLETION OF CONTAINMENT PERFORMANCE IMPROVEMENT PROGRAM
AND
FORWARDING OF INSIGHTS FOR USE IN THE INDIVIDUAL PLANT EXAMINATION
FOR SEVERE ACCIDENT VULNERABILITIES - GENERIC LETTER NO. 88-20,
SUPPLEMENT NO. 2

This letter announces the completion of the NRC staff's Containment Performance Improvement (CPI) program. Technical insights arising from this effort for PWR containments and for BWR Mark II and Mark III containments are being forwarded via this letter for use in licensee efforts as part of the Individual Plant Examination (IPE) effort described in Generic Letter 88-20. No regulatory requirements have resulted from the CPI program for these containment types. Similar technical information for BWR Mark I containments was discussed in SECY 89-017, "Mark I Containment Performance Improvement Program", dated January 23, 1989, and summarized in an enclosure to Generic Letter 88-20, Supplement 1, dated August 29, 1989. The technical information may be useful to licensees during their examinations of their plants for vulnerabilities to severe accidents.

Four specific insights are believed by the staff to be important enough to bring to the attention of licensees for use as they determine appropriate in the IPE for the plant types to which they apply. These insights are briefly summarized below. As final technical reports providing additional detail are published, they will be made available to all licensees.

Licensees should bear in mind that the insights listed below are not all inclusive and unique plant features may exist that also warrant consideration in the IPE. Licensees should search for possible "outliers" that might be missed absent a system search in areas of both mitigation and prevention.

Mark II Containments

For events where inadequate containment heat removal could cause core degradation, additional containment heat removal capability using plant-specific hardware procedures is expected to be considered as part of the IPE process. Potential methods of removing heat from containment include, but are not limited to, using a hardened vent or other means of improving reliability of suppression pool cooling. It is expected that the negative as well as the positive benefits of the enhanced containment heat removal capability will be considered. For example, for those events where venting is initiated after core melt and subsequent vessel failure have occurred, the benefit of scrubbing of fission products can not be assured for Mark II containments to the same degree as in Mark I plants. This is because molten core materials on the floor of the containment may fail downcomers or drain lines and result in suppression pool bypass.