

September 27, 2002

MEMORANDUM TO: Ashok C. Thadani, Director  
Office of Nuclear Regulatory Research

FROM: Samuel J. Collins, Director */RA/*  
Office of Nuclear Reactor Regulation

SUBJECT: OFFICE OF NUCLEAR REGULATORY RESEARCH (RES)  
RESPONSE TO OFFICE OF NUCLEAR REACTOR REGULATION  
(NRR) USER NEED REQUEST, AND RES INTENTIONS TO  
PERFORM CONTAINMENT INVESTIGATIONS FOR THE AP1000  
STANDARD PLANT DESIGN

Thank you for your response dated August 12, 2002, to our user need request regarding severe accident issues for the Westinghouse Electric Company's AP1000 standard plant design. Your staff's efforts in this area will assist us in performing a thorough review of the AP1000 design certification application.

In your memorandum of August 12, 2002, you also stated that "During the review of the AP600 containment, the ACRS [Advisory Committee on Reactor Safeguards] expressed concerns regarding several thermal-hydraulic processes on non-condensables, and film coverage by the Passive Containment Cooling System (PCCS). Even though they were acceptably bounded in the AP600 analysis, the understanding of these complex phenomena could be improved considerably. RES intends to investigate these processes more thoroughly, and provide a more realistic assessment of the AP1000 containment response to hypothetical accidents. As part of this investigation we will consider the effect of 'hot spots' on the containment shell, stratification and mixing, and disruptions in the PCCS film coverage."

I recommend that our staffs meet to better understand the issues associated with the phenomena and to jointly develop a plan for resolution of the issues. The AP1000 Project Manager, Larry Burkhart, will coordinate the development of the resolution plan.

CONTACT: Lawrence J. Burkhart, NRR/NRLPO  
301-415-3053

September 27, 2002

MEMORANDUM TO: Ashok C. Thadani, Director  
Office of Nuclear Regulatory Research

FROM: Samuel J. Collins, Director /RA/  
Office of Nuclear Reactor Regulation

SUBJECT: OFFICE OF NUCLEAR REGULATORY RESEARCH (RES)  
RESPONSE TO OFFICE OF NUCLEAR REACTOR REGULATION  
(NRR) USER NEED REQUEST, AND RES INTENTIONS TO  
PERFORM CONTAINMENT INVESTIGATIONS FOR THE AP1000  
STANDARD PLANT DESIGN

Thank you for your response dated August 12, 2002, to our user need request regarding severe accident issues for the Westinghouse Electric Company's AP1000 standard plant design. Your staff's efforts in this area will assist us in performing a thorough review of the AP1000 design certification application.

In your memorandum of August 12, 2002, you also stated that "During the review of the AP600 containment, the ACRS [Advisory Committee on Reactor Safeguards] expressed concerns regarding several thermal-hydraulic processes on non-condensables, and film coverage by the Passive Containment Cooling System (PCCS). Even though they were acceptably bounded in the AP600 analysis, the understanding of these complex phenomena could be improved considerably. RES intends to investigate these processes more thoroughly, and provide a more realistic assessment of the AP1000 containment response to hypothetical accidents. As part of this investigation we will consider the effect of 'hot spots' on the containment shell, stratification and mixing, and disruptions in the PCCS film coverage."

I recommend that our staffs meet to better understand the issues associated with the phenomena and to jointly develop a plan for resolution of the issues. The AP1000 Project Manager, Larry Burkhart, will coordinate the development of the resolution plan.

CONTACT: Lawrence J. Burkhart, NRR/NRLPO  
301-415-3053

\*See previous concurrence

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML022390234.wpd

ACCESSION NO. ML022390234-Response

ML022240417-Incoming

ML022390348-Pkg.

OFFICE	NRLPO/PM*	TechEd*	DSSA/D*	NRLPO/DD*
NAME	LBurkhart:cn	PGarrity	GHolahan	MGamberoni
DATE	8/28/02	8/28/02	8/27/02	8/28/02
OFFICE	NRLPO/D	ADIP	NRR/D or DD	
NAME	JLyons	RBorchardt	SCollins/JJohnson	
DATE	9/24/02	9/25/02	9/27/02	

OFFICIAL RECORD COPY

Distribution for Y020020217 dated September 27, 2002

Hard Copy

NRLPO Rdg.

JLyons

MGamberoni

LBurkhart

JSebrosky

E-mail

PUBLIC

NRLPO Rdg.

SCollins/JJohnson

BSheron

RBorchardt

RidsNrrWpcMail (Y020020217)

GHolahan

JWermiel

JHannon

EThrom

RPalla

ADrozd

SWeerakody

FEltawila

RLee

MFields

MJohnson

MRubin