

September 13, 2004

MEMORANDUM TO: Laura A. Dudes, Section Chief
New Reactors Section
New, Research and Test Reactors Program
Division Regulatory Improvement Programs, NRR

FROM: John Segala, Senior Project Manager */RA/*
New Reactors Section
New, Research and Test Reactors Program
Division Regulatory Improvement Programs, NRR

SUBJECT: AP1000 TELEPHONE CONFERENCE CALL SUMMARY
(MULTIPLE DATES)

Telephone conference calls were held with Westinghouse Electric Company (Westinghouse) representatives and Nuclear Regulatory Commission (NRC) staff to discuss draft safety evaluation report (DSER) open items (OI) and other related issues regarding the AP1000 design. The conference call dates and the associated open items which were discussed are as follows:

January 23, 2003 - OI 3.7.2.3-3 regarding stiffness reduction due to concrete cracking
March 9, 2004 - OIs 13.6-1 and 14.3.2-8 regarding security
March 11, 2004 - OI 3.6.3.4-2 regarding leak before break
July 14, 2004 - Cable pulling
July 20, 2004 - Passive containment cooling system (PCS) water storage tank
July 27, 2004 - Shutdown risk

A list of participants for each meeting is included in Attachment 1. NRC staff comments provided to Westinghouse are included in Attachment 2.

Docket No. 52-006

Attachments: As stated

MEMORANDUM TO: Laura Dudes, Section Chief
New Reactors Section
New, Research and Test Reactors Program
Division Regulatory Improvement Programs, NRR

September 13, 2004

FROM: John Segala, Senior Project Manager /RA/
New Reactors Section
New, Research and Test Reactors Program
Division Regulatory Improvement Programs, NRR

SUBJECT: AP1000 TELEPHONE CONFERENCE CALL SUMMARY (MULTIPLE DATES)

Telephone conference calls were held with Westinghouse Electric Company (Westinghouse) representatives and Nuclear Regulatory Commission (NRC) staff to discuss draft safety evaluation report (DSER) open items (OI) and other related issues regarding the AP1000 design. The conference call dates and the associated open items which were discussed are as follows:

January 23, 2003 - OI 3.7.2.3-3 regarding stiffness reduction due to concrete cracking
March 9, 2004 - OIs 13.6-1 and 14.3.2-8 regarding security
March 11, 2004 - OI 3.6.3.4-2 regarding leak before break
July 14, 2004 - Cable pulling
July 20, 2004 - Passive containment cooling system (PCS) water storage tank
July 27, 2004 - Shutdown risk

A list of participants for each meeting is included in Attachment 1. NRC staff comments provided to Westinghouse are included in Attachment 2.

Docket No. 52-006

Attachments: As stated

Distribution:

Hard Copy
RNRP R/F
BBeckner
LDudes
JSegala

E-mail

PUBLIC	SBajorek	DMatthews	NPKadambi
RWeisman	SRubin	JSegala	CAder
JColaccino	LQuinones	SBloom	

ACCESSION NUMBER: ML042450598

OFFICE	RNRP:PM	RNRP:SC
NAME	JSegala	LDudes
DATE	09/8/04	09/10/04

OFFICIAL RECORD COPY

JANUARY 23, 2003
TELEPHONE CONFERENCE CALLS SUMMARY
LIST OF PARTICIPANTS

Nuclear Regulatory Commission

L. Burkhart
T. Cheng
C. Constantino (NRC Contractor)
T. Tsai (NRC Contractor)

Westinghouse

M. Corletti
R. Orr
E. Cummins

MARCH 9, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
LIST OF PARTICIPANTS

Nuclear Regulatory Commission

J. Segala
S. Bloom
S. Stein
A. Tardiff

Westinghouse

R. Vijuk
E. Cummins
J. Winters

MARCH 11, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
LIST OF PARTICIPANTS

Nuclear Regulatory Commission

J. Segala
S. Bloom
E. Sullivan
C. Li
L. Dudes

Westinghouse

R. Vijuk
T. Hayes
J. Scobel
J. Li
E. Cummins
C. Brockhoff

JULY 14, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
LIST OF PARTICIPANTS

Nuclear Regulatory Commission

J. Segala
J. Colaccino
R. Jenkins
G. Morris
J. Wilson
A. Cabbage
L. Dudes

Westinghouse

T. Schulz
T. Hayes
E. Cummins
J. Winters

JULY 20, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
LIST OF PARTICIPANTS

Nuclear Regulatory Commission

J. Segala
E. Throm

Westinghouse

T. Schulz
C. Brockhoff

JULY 27, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
LIST OF PARTICIPANTS

Nuclear Regulatory Commission

J. Segala
J. Colaccino
N. Saltos
S. Bloom
L. Quinones

Westinghouse

R. Vijuk
R. Orr
T. Schulz

JANUARY 23, 2003
TELEPHONE CONFERENCE CALLS SUMMARY
COMMENTS

No comments provided.

MARCH 9, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
COMMENTS

No comments provided.

MARCH 11, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
COMMENTS

The following NRC staff comments (regarding Westinghouse's response to DSER Open Item 3.6.3.4-2) were provided to Westinghouse via e-mail on March 9, 2004:

Regarding the diversity and redundancy of the leakage detection system for the main steam line using the sump level instruments and the containment level instruments, the staff requests for the following information:

1. Discuss the reliability of the containment level instruments based on industry operating experience with similar containment level instruments. Reflect in the discussion the total instrument system from the detectors through control room display. The staff is interested in a quantitative assessment of reliability and the basis for such an assessment.
2. Westinghouse discussed the possible use of the containment level system as a backup to the containment sump level detectors in case both containment sump level detectors failed. Please discuss whether the failure of both containment sump level detectors without the knowledge of operators is a realistic scenario.
3. Discuss the sensitivity of the containment level instruments to detect leakage of 0.25 gpm for qualifying the main steam line system LBB application.
4. Discuss the quantitative basis for the statement that the steam line leak would be detected by the containment level system within 7 days in your worst scenario. Discuss how the containment level instruments pickup and transmit a signal; the location of the containment level instruments; and the ability to modify the design of the containment level instruments to enable earlier and more sensitive detection of leakage.
5. Discuss how the containment level system would be governed by technical specifications.
6. Westinghouse previously noted that not relying on diversity in the leak detection systems for potential leakage from the main steam line could be approached from a risk-informed perspective. Provide a complete risk-informed discussion of your basis for not relying on diversity. This discussion should be framed in terms of the principles in NRC Regulatory Guide 1.174.
7. In the response to AP600 RAI 410.145, Westinghouse mentioned "Containment air cooler condensate flow monitor" as one of the leakage detection method for main steam line leak detection. Please discuss this method, its sensitivity and reliability as compared to the containment level instruments using it as a diverse main steam line leak detection method.

JULY 14, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
COMMENTS

No comments provided.

JULY 20, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
COMMENTS

No comments provided.

JULY 27, 2004
TELEPHONE CONFERENCE CALLS SUMMARY
COMMENTS

The following NRC staff comments (regarding shutdown risk combined license action items) were provided to Westinghouse via e-mail on July 27, 2004:

The NRC staff would like you to consider including the following new COL Action Items in DCD Revision 13:

- 1) Item 81 of the PRA insights table should include the following:

When fire areas are breached, the COL applicant will implement appropriate outage management, administrative controls, procedures, and operator knowledge of plant configuration to minimize risk during shutdown. The COL applicant will establish procedures to address a fire watch for fire areas breached during maintenance.

- 2) Item 48 of the PRA insights table should include the following:

The COL applicant will control transient combustibles.

- 3) Make commensurate changes in DCD Tier 2 Table 1.8-2 for the above two COL Action Items.

AP 1000

cc:

Mr. W. Edward Cummins
AP600 and AP1000 Projects
Westinghouse Electric Company
P.O. Box 355
Pittsburgh, PA 15230-0355

Mr. James A. Gresham, Manager
Regulatory Compliance and Plant Licensing
Westinghouse Electric Company
P.O. Box 355
Pittsburgh, PA 15230

Ms. Lynn Connor
Doc-Search Associates
2211 SW 1ST Ave - #1502
Portland, OR 97201

Mr. Barton Z. Cowan, Esq.
Eckert Seamans Cherin & Mellott, LLC
600 Grant Street 44th Floor
Pittsburgh, PA 15219

Mr. Charles Brinkman, Director
Washington Operations
Westinghouse Electric Company
12300 Twinbrook Parkway, Suite 330
Rockville, MD 20852

Mr. Adrian Heymer
Nuclear Energy Institute
1776 I Street NW
Suite 400
Washington, DC 20006

Mr. Thomas P. Miller
U.S. Department of Energy
Headquarters - Germantown
19901 Germantown Road
Germantown, MD 20874-1290

Mr. David Lochbaum
Nuclear Safety Engineer
Union of Concerned Scientists
1707 H Street NW, Suite 600
Washington, DC 20006-3919

Mr. Paul Gunter
Nuclear Information & Resource Service
1424 16th Street, NW., Suite 404
Washington, DC 20036

Mr. Tom Clements
6703 Guide Avenue
Takoma Park, MD 20912

Mr. James Riccio
Greenpeace
702 H Street, NW, Suite 300
Washington, DC 20001

Mr. James F. Mallay, Director
Regulatory Affairs
FRAMATOME, ANP
3315 Old Forest Road
Lynchburg, VA 24501

Mr. Ed Wallace, General Manager
Projects
PBMR Pty LTD
PO Box 9396
Centurion 0046
Republic of South Africa

Mr. Glenn Archinoff
Licensing Manager
AECL Technologies Inc.
481 North Frederick Avenue
Suite 405
Gaithersburg, MD 20877

Mr. Gary Wright, Manager
Office of Nuclear Facility Safety
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

Mr. Paul Leventhal
Nuclear Control Institute
1000 Connecticut Avenue, NW
Suite 410
Washington, DC 20036

Mr. Jack W. Roe
SCIENTECH, INC.
910 Clopper Road
Gaithersburg, MD 20878

Ms. Patricia Campbell
Winston & Strawn
1400 L Street, NW
Washington, DC 20005

Mr. Brendan Hoffman
Research Associate on Nuclear Energy
Public Citizens Critical Mass Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Mr. Ronald P. Vijuk
Manager of Passive Plant Engineering
AP1000 Project
Westinghouse Electric Company
P. O. Box 355
Pittsburgh, PA 15230-0355

Mr. Russell Bell
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708