

November 28, 2012

Mr. Rich DeLong, Director
AP1000 Licensing
Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, PA 16066

SUBJECT: AUDIT PLAN FOR REVIEW OF WESTINGHOUSE TOPICAL REPORT
WCAP-17577-P, REVISION 1, "TOPICAL REPORT ON AMERICAN SOCIETY OF
MECHANICAL ENGINEERS SECTION III PIPING FATIGUE ANALYSIS UTILIZING
THE WESTEMS™ COMPUTER CODE"

Dear Mr. DeLong:

The U.S. Nuclear Regulatory Commission (NRC) staff prepared an audit plan related to the review of the Westinghouse topical report, WCAP-17577-P, Revision 1, "Topical Report on ASME Section III Piping Fatigue Analysis Utilizing the WESTEMS™ Computer Code." The audit plan describes the scope and purpose of the audit, identifies the audit team, and describes the documents required by the NRC staff. The audit plan is enclosed.

The audit will take place at the Westinghouse Twinbrook Office in Rockville, Maryland, and is currently scheduled to begin on December 3, 2012, and end on December 13, 2012, with the potential to extend the duration, if necessary.

If you have any questions, please contact the Project Manager, Bruce Baval, at (301) 415-6715 or Bruce.Baval@NRC.gov.

Sincerely,

/RA/

Lawrence J. Burkhart, Acting Chief
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

Project No. 0799

Enclosure:
As stated

cc: See next page

November 28, 2012

Mr. Rich DeLong, Director
AP1000 Licensing
Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, PA 16066

SUBJECT: AUDIT PLAN FOR REVIEW OF WESTINGHOUSE TOPICAL REPORT
WCAP-17577-P, REVISION 1, "TOPICAL REPORT ON AMERICAN SOCIETY OF
MECHANICAL ENGINEERS SECTION III PIPING FATIGUE ANALYSIS UTILIZING
THE WESTEMS™ COMPUTER CODE"

Dear Mr. DeLong:

The U.S. Nuclear Regulatory Commission (NRC) staff prepared an audit plan related to the review of the Westinghouse topical report, WCAP-17577-P, Revision 1, "Topical Report on ASME Section III Piping Fatigue Analysis Utilizing the WESTEMS™ Computer Code." The audit plan describes the scope and purpose of the audit, identifies the audit team, and describes the documents required by the NRC staff. The audit plan is enclosed.

The audit will take place at the Westinghouse Twinbrook Office in Rockville, Maryland, and is currently scheduled to begin on December 3, 2012, and end on December 13, 2012, with the potential to extend the duration, if necessary.

If you have any questions, please contact the Project Manager, Bruce Bavol, at (301) 415-6715 or Bruce.Bavol@NRC.gov.

Sincerely,

/RA/

Lawrence J. Burkhart, Acting Chief
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

Project No. 0799

Enclosure:
As stated

cc: See next page

DISTRIBUTION:

Public	RidsNroDnrl	DMcGovern	JColaccino
RidsNroDnrlLB4	KHsu	CWu	YLi
RidsOgcMailCenter	TClark	LBurkhart	RJoshi
RidsRgn2MailCenter	SBrunell	RButler	BBavol
RidsAcrsAcnwMailCenter			

ADAMS Accession No.: ML12331A299

NRO-002

OFFICE	DNRL/LB4:LA	DNRL/LB4:PM	DNRL/LB4:BC (A)
NAME	RButler	BBavol	LBurkhart
DATE	11/28/12	11/28/12	11/28/12

OFFICIAL RECORD COPY

**Audit Plan for Reviewing WCAP-17577-P, Revision 1, "Topical Report on ASME Section III
Piping Fatigue Analysis Utilizing the WESTEMS™ Computer Code"**
Westinghouse Electric Company
Project No. 0799
December 3 - 13, 2012

I. Purpose

Westinghouse Electric Company (WEC) submitted WCAP-17577," Topical Report (TR) on ASME Section III Piping Fatigue Analysis Utilizing the WESTEMS Code," Revision 1 to the Nuclear Regulatory Commission (NRC) for staff review and approval to be used in the AP1000 design. To enhance the efficiency of the review, NRC staff will perform an audit of supporting references prior to addressing any need for submitting requests for additional information (RAIs).

II. Background and Audit Bases

In a letter dated February 29, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML120610676), Westinghouse Electric Company, LLC submitted WCAP-17577, "Topical Report on ASME Section III Piping Fatigue Analysis Utilizing the WESTEMS™ Computer Code," to the NRC for review. The staff completed an acceptance review of the Topical Report WCAP-17577 and concluded that it did not provide sufficient technical detail to enable the staff to start the detailed review. Westinghouse subsequently revised the computer code to address the staff's concerns and submitted Revision 1 of TR, WCAP-17577 to the NRC for review.

III. Objectives

During this on-site audit, the staff will review WESTEMS supporting references in sufficient detail to enable a complete detailed review of the TR. Staff will focus on the five gaps that were identified in the acceptance review of WCAP-17577 and documented in the Enclosure of "Withdrawal Acknowledgement Letter for WCAP-17577," dated June 1, 2012 (ADAMS Accession No. ML12151A221).

IV. Scope

The NRC staff will review the WESTEMS computer code references that were listed in the WCAP-17577. Additional references, portions of the computer code, and inputs and outputs from example problems may be audited if required.

V. Audit Activities

The audit will be conducted by a team of NRC staff members who are knowledgeable in various aspects of the piping and component stress evaluation, fatigue analysis and computer program review. Based on the identified scope, it is expected that the team will spend two consecutive weeks at the Westinghouse Twinbrook Office in Rockville, MD to conduct the audit.

Enclosure

VI. Audit Team and Schedule

The audit team members will be Kaihwa (Robert) Hsu, Cheng-Ih (John) Wu, Yueh-Li (Renee) Li, Bruce Bovol, and the chief of the Engineering Mechanics Branch. The audit is currently scheduled to begin on December 3, 2012 and end on December 13, 2012, with the potential to extend the duration if necessary.

V. Audit Result

The audit outcome will be used to identify any additional information to be submitted for making regulatory decisions and will assist the NRC staff in the preparation and issuance of further RAIs for the licensing review of WCAP-17577. An audit report documenting findings from the audit will be prepared in accordance with the applicable office instruction.

DC Westinghouse - IRIS Mailing List
cc:

(Revised 09/26/2012)

Ms. Michele Boyd
Legislative Director
Energy Program
Public Citizens Critical Mass Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Dr. Charles L. King
Licensing Manager, IRIS Project
Westinghouse Electric Company
Science and Technology Department
20 International Drive
Windsor, CT 06095

Mr. Tony Robinson
AREVA NP, Inc.
3315 Old Forest Road
Lynchburg, VA 24501

DC Westinghouse - IRIS Mailing List

Email

APH@NEI.org (Adrian Heymer)
awc@nei.org (Anne W. Cottingham)
Bojan.Petrovic@gatech.edu (Bojan Petrovic)
charles.bagnal@ge.com (Charles Bagnal)
cwaltman@roe.com (C. Waltman)
david.lewis@pillsburylaw.com (David Lewis)
dchapin@mpr.com (Douglas Chapin)
ggeaney@mpr.com (George Geaney)
jahalfinger@babcock.com (Jeff Halfinger)
Jim.Kinsey@inl.gov (James Kinsey)
Joseph_Hegner@dom.com (Joseph Hegner)
kouhestani@msn.com (Amir Kouhestani)
KSutton@morganlewis.com (Kathryn M. Sutton)
kwaugh@impact-net.org (Kenneth O. Waugh)
Ichandler@morganlewis.com (Lawrence J. Chandler)
maria.webb@pillsburylaw.com (Maria Webb)
mark.beaumont@wsms.com (Mark Beaumont)
mark.holbrook@inl.gov (Mark Holbrook)
matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz)
media@nei.org (Scott Peterson)
MSF@nei.org (Marvin Fertel)
nirsnet@nirs.org (Michael Mariotte)
Nuclaw@mindspring.com (Robert Temple)
patriciaL.campbell@ge.com (Patricia L. Campbell)
Paul@beyondnuclear.org (Paul Gunter)
pbessette@morganlewis.com (Paul Bessette)
pcarlone@mpr.com (Pete Carlone)
rbarrett@astminc.com (Richard Barrett)
RJB@NEI.org (Russell Bell)
sabinski@suddenlink.net (Steve A. Bennett)
sfrantz@morganlewis.com (Stephen P. Frantz)
shobbs@enercon.com (Sam Hobbs)
spellmandj@ornl.gov (Donald J. Spellman)
stephan.moen@ge.com (Stephan Moen)
TJKim@babcock.com (T.J. Kim)
trsmith@winston.com (Tyson Smith)
Vanessa.quinn@dhs.gov (Vanessa Quinn)
Wanda.K.Marshall@dom.com (Wanda K. Marshall)