

June 30, 2010

MEMORANDUM TO: Michael L. Scott, Chief
Safety Issues Resolution Branch
Division of Safety Systems
Office of Nuclear Reactor Regulation

FROM: Joseph A. Golla, Project Manager */RA/*
Generic Communications and Power Uprate Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JUNE 3, 2010, PUBLIC MEETING WITH THE
BOILING WATER REACTOR OWNER'S GROUP

On June 3, 2010, Nuclear Regulatory Commission (NRC) staff met with representatives of the Boiling Water Reactor Owners Group (BWROG), in a public meeting in Rockville, Maryland. The purpose of the meeting was to discuss the progress of and changes to the schedule of the BWROG program plan for the review of treatment of boiling water reactor (BWR) emergency core cooling system (ECCS) suction strainer issues. Enclosure 1 provides a list of those in attendance. Enclosure 2 is the meeting agenda. Information presented at the meeting is available in the NRC Agencywide Documents Access and Management System (ADAMS) under Accession No. ML101620025.

After opening remarks, Mr. Steve Scammon, Committee Chairman of the BWROG ECCS Suction Strainers Committee, presented a briefing entitled, "BWROG ECCS SS Resolution Plan." This briefing covered the background of the issue, recent activities, overall philosophy for the effort, schedule of major milestones for the four technical issues involved, final resolution of the issue, and conclusion.

Mr. Michael Scott, Chief of the Safety Issues Resolution Branch, Division of Safety Systems (DSS), Office of Nuclear Reactor Regulation (NRR), commented that the presentation did not include a detailed plan for interactions between the BWROG and the NRC going forward. It was decided that the BWROG would provide an interaction plan to the staff the week of June 7, 2010. The staff would provide feedback to the BWROG within two weeks of receiving the interaction plan, and the BWROG would, by July 15, 2010, send a letter to the NRC more formally defining their plan for resolution. Mr. William Ruland, Director of DSS, also stated the need for close communication between the staff and the BWROG and suggested that, if available, the BWROG provide a Gantt Chart, or equivalent information. It was decided that the expected BWROG letter would include information of this kind showing linkages between tasks.

Mr. Scott stated that the NRC needs confidence that the BWROG is on a path to success and that the NRC needs near-term plans to discuss the issues. Mr. Scammon stated that, going forward, the BWROG would communicate with the NRC individually on each of the twelve issues identified in the April 10, 2008, letter from John A. Grobe, NRC (ADAMS Accession No. ML080500540), to the BWROG.

Mr. Tony Mendiola, Chief of the Nuclear Performance and Code Review Branch, DSS, NRR, expressed concern about the scheduled submittal of Licensing Topical Report (LTR) 1 in the near term, (3Q 2010) and then testing significantly before LTR 2 and LTR 3 are submitted (1Q 2012). (LTR 1 will generically analyze blockage effects for determination of limiting conditions and apply those conditions to the testing of the General Electric (GE) "Global Nuclear Fuel" fuel bundle design. The testing of the two other BWR fuels, AREVA and Westinghouse, will be treated in separate LTRs similar to LTR 1.) The concern was that GE fuel assembly designs that come after LTR 1 submittal will not be tested.

Mr. David Czufin, BWROG Executive Committee Vice Chairman, stated that it is the intent of the BWROG to submit LTR 1 as soon as possible, recognizing they may need to revise it later as they develop LTRs 2 and 3 (i.e., there would be opportunity to incorporate GE fuel assembly designs that are implemented after the first submittal of LTR 1).

Slide no. 4 of the BWROG briefing presented at the meeting indicates that for loss of coolant analysis, General Electric – Hitachi (GE-H) is switching to using 'SAFER' methodology rather than 'TRACG.' (SAFER and TRACG are GE-H proprietary computer codes used for thermal-hydraulic analysis.) This was the subject of teleconferences between the NRC and the BWROG on March 30, 2010, April 15, 2010, and May 21, 2010. (See the information retained at ADAMS Accession No. ML101620027 regarding this.) GE-H had intended to use a part of TRACG, for their in-vessel downstream effects loss-of-coolant accident analysis. The staff did not consider this to be appropriate for the current effort because the code, in its entirety, would have to be reviewed and approved before GE-H could use any part of it for licensing purposes. The review and approval process could potentially take up to two years to complete. After discussing these issues on the three occasions listed above, the BWROG decided to use SAFER methodology. (Note, SAFER is an approved code.)

Regarding slide no. 10, "Source Term," of the BWROG's presentation which speaks to chemical effects and head loss correlations, the NRC staff requested that, for issues where the planned BWROG approach was not consistent with existing staff technical positions, the BWROG interact with the NRC staff sooner than the scheduled milestone dates. One specific instance of an approach that is inconsistent with existing staff technical positions was the BWROG intent to rely upon head loss correlations to demonstrate adequate strainer performance, rather than performing plant-specific testing. Based on strainer head loss testing associated with Generic Safety Issue 191, the NRC staff believes that head loss correlations are not adequate for predicting limiting plant-specific debris bed head losses. In addition, if chemical precipitates are significant for BWR environments, the staff emphasized that determining the impact of chemical precipitates through a head loss correlation may not be feasible.

There were no questions or comments from the public and the meeting was adjourned.

Enclosure 1: List of Attendees

Enclosure 2: Meeting agenda

Mr. David Czufin, BWROG Executive Committee Vice Chairman, stated that it is the intent of the BWROG to submit LTR 1 as soon as possible, recognizing they may need to revise it later as they develop LTRs 2 and 3 (i.e., there would be opportunity to incorporate GE fuel assembly designs that are implemented after the first submittal of LTR 1).

Slide no. 4 of the BWROG briefing presented at the meeting indicates that for loss of coolant analysis, General Electric – Hitachi (GE-H) is switching to using 'SAFER' methodology rather than 'TRACG.' (SAFER and TRACG are GE-H proprietary computer codes used for thermal-hydraulic analysis.) This was the subject of teleconferences between the NRC and the BWROG on March 30, 2010, April 15, 2010, and May 21, 2010. (See the information retained at ADAMS Accession No. ML101620027 regarding this.) GE-H had intended to use a part of TRACG, for their in-vessel downstream effects loss-of-coolant accident analysis. The staff did not consider this to be appropriate for the current effort because the code, in its entirety, would have to be reviewed and approved before GE-H could use any part of it for licensing purposes. The review and approval process could potentially take up to two years to complete. After discussing these issues on the three occasions listed above, the BWROG decided to use SAFER methodology. (Note, SAFER is an approved code.)

Regarding slide no. 10, "Source Term," of the BWROG's presentation which speaks to chemical effects and head loss correlations, the NRC staff requested that, for issues where the planned BWROG approach was not consistent with existing staff technical positions, the BWROG interact with the NRC staff sooner than the scheduled milestone dates. One specific instance of an approach that is inconsistent with existing staff technical positions was the BWROG intent to rely upon head loss correlations to demonstrate adequate strainer performance, rather than performing plant-specific testing. Based on strainer head loss testing associated with Generic Safety Issue 191, the NRC staff believes that head loss correlations are not adequate for predicting limiting plant-specific debris bed head losses. In addition, if chemical precipitates are significant for BWR environments, the staff emphasized that determining the impact of chemical precipitates through a head loss correlation may not be feasible.

There were no questions or comments from the public and the meeting was adjourned.

Enclosure 1: List of Attendees

Enclosure 2: Meeting agenda

DISTRIBUTION: See next page

ADAMS ACCESSION NUMBERS: ML101620020 (Package)

ML101620014 (Memo)

ML101620027(BWROG Presentation)

OFFICE	LA:DPR:PGCB	PM:DPR:PGCB	BC:DSS:SNPB	BC:DCI:CSGB	BC:DSS:SSIB
NAME	CHawes CH	JGolla JG	TMendiola TM	RTaylor RT	MScott MLS
DATE	6/16/2010	6/16/2010	6/16/2010	6/21/2010	6/30/2010

**List of Attendees for June 3, 2010,
Meeting With The BWROG**

Steve Scammon	BWROG
Ted Schiffley	Exelon/BWROG
Rob Whelan	GEH/BWROG
Rob Choromokos	Alion
David Czufin	Exelon/BWROG
Craig Nichols	GEH/BWROG
Tom Bilger	AREVA
Fariba Gartland	AREVA
James Vail	NRC
John Lehning	NRC
Len Ward	NRC
Rob Taylor	NRC
Tony Mendiola	NRC
Matt Yoder	NRC
Paul Klein	NRC
Nageswar Karipineni	NRC
Steve Smith	NRC
Bill Ruland	NRC
Fred Emerson*	GEH
Deann Raleigh*	Scientec

*Attended via telecon

Enclosure 1

MEETING AGENDA
U.S. NUCLEAR REGULATORY COMMISSION (NRC)
FOLLOW UP MEETING WITH BOILING WATER REACTOR OWNER'S GROUP
June 3, 2010

8:30-8:50	Introductions and committee overview	NRC/BWROG
8:50-9:10	Long term core cooling including chemical effects	BWROG
9:10-9:30	Source term	BWROG
9:30-9:50	Strainer head loss	BWROG
9:50-10:10	Components downstream effects	BWROG
10:10-10:30	Discussion and feedback	BWROG/NRC
10:30-10:40	Opportunity for public comment	Public/NRC

Enclosure 2

Memorandum to Michael Scott from Joe Golla

SUBJECT: SUMMARY OF PUBLIC MEETING ON JUNE 3, 2010, WITH THE
BWROG

DISTRIBUTION:

PUBLIC

E-Mail:

RidsNrrOd
RidsNrrDss
RidsNrrDci
RidsNrrDpr
RidsNrrDprPgcb
RidsEdoMailCenter
RidsAcrsAcnwMailCenter
RidsOgcMailCenter

Joe Golla
Stacey Rosenberg
Anthony Mendiola
Leonard Ward
Paul Klein
John Lehning
Michael Scott
Matthew Yoder
Sher Bahadur
Stephen Smith
Roberto Torres
William Ruland
Rob Whelan (Robert.Whelan@ge.com)