August 28, 2009

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 JULY 30, 2009, PUBLIC MEETING WITH THE BOILING WATER REACTOR OWNER'S GROUP (BWROG), TO DISCUSS THE BWROG SUCTION STRAINER EVALUATION PROGRAM

On July 30, 2009, Nuclear Regulatory Commission (NRC) staff met with representatives of the BWROG, in a public meeting in Rockville, Maryland. 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. ML092310001.

The purpose of the meeting was for the BWROG to provide a status of their emergency core cooling system (ECCS) suction strainer evaluation program.

After opening remarks by NRC and the BWROG, Mr. Steve Scammon, Chair of the BWROG ECCS Suction Strainers Committee, presented an overview of the efforts of the Suction Strainers Committee. The strainer evaluation program is divided into four elements: downstream effects fuel, downstream effects components, debris source term characterization, and strainer head loss. Mr. Scammon stated that the Licensing Topical Report (LTR) process will be used and that the BWROG will seek NRC approval for significant portions of its resolution plans prior to implementation. Mr. Scammon proposed that the BWROG and the NRC meet semiannually for status meetings with intermediate meetings or telephone conferences held as necessary to provide significant updates in plans and schedules. Mr. Scammon stated that several plants have conducted preliminary walkdowns and that the target completion time frame for all plant walkdowns is Spring 2011. The Suction Strainers Committee is preparing an evaluation that will analyze the differences in guidance given in the two principal guidance documents for analysis and treatment of strainer issues. These are NEI 04-07 for pressurized water reactors (PWRs) and the Utility Resolution Guidance document for boiling water reactors (BWRs). A briefing was then given on the status of each of the four program elements.

Mr. Michael Scott, Chief of the Safety Issues Resolution Branch of the NRC, made a briefing on the status of the staff review of WCAP-16793-NP, "Evaluation of Long Term Core Cooling Associated with Sump Debris Effects." He indicated that the staff has found that the proposed acceptance criteria are not supported by the data presented in the document. Mr. Scott

indicated that the BWROG would benefit by reviewing the staff's requests for additional information concerning the report.

Mr. Stewart Bailey of the NRC made a briefing concerning ongoing work the NRC is doing related to BWR strainer performance. He stated that the staff is developing Revision 4 to Regulatory Guide 1.82, "Water Sources For Long-Term Recirculation Cooling Following A Loss-of-Cooling Accident." He indicated the revision will have PWR and BWR-specific sections. He stated that the staff is currently developing a Commission Paper that will inform the Commission on the path forward for BWRs. He indicated that, in order to support this paper, the NRC is evaluating BWR/PWR treatment disparities and gave examples of these.

Mr. Scott summarized the NRC's current position regarding the BWROG strainer evaluation program with the following remarks:

1. The NRC would like to witness in-vessel downstream effects testing including evaluating the test rig to be used and would like to review the test program before it is implemented.

2. There may be a potential sticking point with the BWROG's use of air jet testing data. The NRC is not convinced that it is conservative or prototypical of actual jet impingement phenomena from pipe breaks.

3. The NRC staff would like more detailed information on debris source term analysis, including whether it will be generic or plant-specific.

4. The NRC would like a progress report on components downstream effects in the mid-2010 time frame. (The LTR for this is not scheduled for NRC review until July 2011.)

5. The NRC technical staff is not convinced that the BWROG's plans to use a head loss correlation to determine head loss will be found to be acceptable.

Mr. Scott also provided the following general remarks to the BWROG representatives:

1. The NRC appreciates the effort put forth and progress made thus far by the BWROG. The efforts put forth demonstrate intent by the BWROG to bring this issue to closure.

2. There is a high degree of difficulty involved with bringing this issue to closure, and the BWROG should recognize this going forward.

3. In the field of suction strainer technical evaluation, it is difficult to balance conservatisms with non-conservatisms. Therefore, non-conservatisms should be reduced such that it is clear that conservatisms outweigh the remaining non-conservatisms.

4. The BWROG should have a questioning attitude and should learn lessons from the PWR strainer experience. They should “ask themselves the hard questions” first before proceeding with expensive testing programs or submission of LTRs to the NRC for review.

Enclosure 1: List of Attendees
Enclosure 2: Meeting agenda

4. The BWROG should have a questioning attitude and should learn lessons from the PWR strainer experience. They should "ask themselves the hard questions" first before proceeding with expensive testing programs or submission of LTRs to the NRC for review.

Enclosure 1: List of Attendees
Enclosure 2: Meeting agenda

ADAMS ACCESSION NUMBER: Memo: ML092250344 Package: ML092310001

OFFICE	LA:DPR:PGCB	PM:DPR:PGCB	BC:DPR:PGCB	BC:DCI:CSGB	BC:DSS:SSIB
NAME	CHawes CH	JGolla JG	MMurphy MM	MGavrilas (MYoder for)	MScott MLS
DATE	8/19/2009	8/19/2009	8/25/2009	8/27/2009	8/28/2009

List of Attendees for July 30, 2009,
Meeting With The BWROG

Fred Emerson	GEH/BWROG
Douglas Coleman	BWROG
Tony Borger	BWROG
Kip Walker	Enercon
Brian Davenport	BWROG/Exelon
Patricia Campbell	GEH
Craig Nichols	GEH
Gilbert Zigler	Alion
Steve Scammon	Energy Northwest
Edward Holcomb	NPPD/Cooper Station
Eric Crabtree	Enercon
John Butler	NEI
Marwan Charrouf	MPR Associates
Deann Raleigh	Scientec
John Lehning	NRC
Stewart Bailey	NRC
Matt Yoder	NRC
Jerome Bettle	NRC
Michael Scott	NRC
Joe Golla	NRC
Eric Miller	NRC
Bruce Lin	NRC
Weidong Wang	NRC
Greg Makar	NRC
Ervin Geiger	NRC
Bill Ruland	NRC
*Tim Andreychek	Westinghouse
*John Enneking	Areva
*Jim Hulstman	Areva

*indicates participated via teleconference

Enclosure 1

MEETING AGENDA
U.S. NUCLEAR REGULATORY COMMISSION (NRC)
PUBLIC MEETING WITH BOILING WATER REACTOR OWNER'S GROUP
July 30, 2009

1:00	Introductions, meeting purpose, opening remarks	NRC
	Introductions & opening remarks	BWROG
1:15	BWROG ECCS suction strainers committee overview -June meeting -gap analysis -project plan and schedule -completed activities	BWROG
1:45	Debris source terms -survey summary (non-chemical & chemical effects) -ZOI methodology -walkdown status (decision tree) -planned submittals	BWROG
2:15	Downstream effects – fuel -July 23, 2009, meeting summary	BWROG
2:35	Review status of WCAP-16793-NP, "Evaluation of Long Term Core Cooling Associated with Sump Debris Effects"	NRC
2:45	Break	
3:00	Downstream effects – components -methodology -strainer bypass -planned submittals	BWROG
3:30	Strainer head loss -fleet testing & analysis summary -maximum debris loading -thin bed evaluation -planned submittals	BWROG
4:00	BWR/PWR treatment disparities review	NRC
4:30	Opportunity for public comment	NRC/Public
4:45	Closing remarks	NRC/BWROG
5:00	Adjourn	

Enclosure 2

Memorandum to Michael Scott from Joe Golla

SUBJECT: NOTICE OF PUBLIC MEETING ON JULY 30, 2009, WITH THE BWROG TO DISCUSS THE BWROG SUCTION STRAINER EVALUATION PROGRAM

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