

December 2, 2004

MEMORANDUM TO: Robert Gramm, Chief, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Mel Fields, Senior Project Manager, Section 2 **/RA/**
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MEETING HELD ON NOVEMBER 3, 2004, WITH
GENERAL ELECTRIC NUCLEAR ENERGY (GENE) TO DISCUSS AN
ACTIVE EMERGENCY CORE COOLING SYSTEM (ECCS) SUMP
SCREEN DESIGN

On November 3, 2004, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of GENE at NRC Headquarters to discuss GENE's active ECCS sump screen design for pressurized-water reactor (PWR) plant designs.

The GENE representatives began the meeting with an overview presentation of the active sump screen design, based on testing performed during the 1995 Boiling-Water Reactor (BWR) Owners Group Strainer Program, and the modifications made for application of this screen design to PWR plants. GENE discussed the mechanical and structural design requirements and the testing that would be performed to demonstrate sump screen operability for the types of debris expected following a design-basis accident.

After the GENE presentation, the NRC staff was requested to provide feedback on the feasibility of licensees using section 50.59 of Title 10 of the *Code of Federal Regulation* (10 CFR 50.59) process to modify current passive plant sump designs to incorporate the new GENE active sump screen design.

The consensus of the NRC staff is that, from a strictly regulatory process viewpoint, there is no basis to preclude use of 10 CFR 50.59 process to implement the modification. There are several issues that the industry should be made aware of in conjunction with this feedback.

1. Any 10 CFR 50.59 evaluation should be conducted utilizing the revised design basis for resolution of Generic Safety Issue 191, "Assessment of Debris Accumulation on PWR Sump Performance."
2. Any licensee who implements this design modification under 10 CFR 50.59 would be subject to NRC review of its 10 CFR 50.59 evaluation after the modifications have been installed. At this time, the NRC staff has insufficient understanding of the proposed system to conclude that this modification would meet the 10 CFR 50.59 criteria for not requiring prior NRC staff approval of the design. Not only are there new failure modes of the sump screen to consider, but there might be the possibility of additional debris

passing through the active sump screens (compared to the current passive screen design) reaching the ECCS pumps downstream that could trip one or more of the 10 CFR 50.59 criteria.

3. NRC staff review of any associated technical specifications (TSs) may involve a review of more design details than that associated specifically with the TS surveillance requirement under review. Licensees should not assume that the NRC staff would only look at the portion of the active sump screen design that is related to the proposed surveillance requirements.
4. One licensee representative noted that a possible benefit of installing an active sump screen could be minimizing the need for enhancing the containment monitoring programs for cleanliness and paint conditions, in response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors." At this point, it is unclear what level of monitoring programs would end up being acceptable to the NRC staff for an active sump screen design. The licensee would have to justify the basis for its monitoring programs in accordance with Generic Letter 2004-02, and the NRC staff would review the justification in accordance with its processes.

Regarding the TS changes that might be associated with the active screen design, it is the NRC staff's position that a licensee would not have to postpone installing a new sump screen design, such as GENE's active screen, until the NRC staff had reviewed and approved associated TS changes. However, this position assumes that: 1) The licensee's 10 CFR 50.59 evaluation concludes that the new system performs the required safety function as well as or better than the system being replaced, and 2) there are no existing TS requirements that would be negatively impacted by the new system being placed in operation. If these assumptions are correct, then a licensee could operate the plant with the modification in place, pending receipt of approved TSs from the NRC staff.

An attendance list is provided in the attachment. The slides used during the meeting are available in ADAMS under accession number ML043090100.

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Attachment: Meeting Attendees

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MEETING NOTICE ACCESSION NO.: ML042930880

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Slides: ML043090100

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MEETING ATTENDEES

MEETING WITH GENERAL ELECTRIC NUCLEAR ENERGY (GENE)

NOVEMBER 3, 2004

GENE

Sal Cimorelli
Rufus Drury
Bruce Lobel
Ralph Hayes
George Stramback

NRC

Michael Johnson
John Hannon
Mel Fields
Hanry Wagage
David Solorio
Rich Guzman
Joe Golla
Tom Hafera
Jon Hopkins
Mark Giles
Mark Kowal
Ralph Architzel
Dave Cullison
B. Parks
Steve Unikewicz
Christopher Jackson

Other Organizations

Getachew Tesfaye	Constellation Energy Group
Mark Kostelnik	Constellation Energy Group
Andre3Drake	Constellation Energy Group
Eric Oesterle	Bechtel Power Corporation
Tim Andreychek	Westinghouse
John Butler	NEI
Bob Coward	MPR Associates
A. K. Singh	Sargent & Lundy
Alan Bilanin	Continuum Dynamics

GE Nuclear Energy

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