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Project Number 691

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Mr. Joe Golla (NRC)

Subject: Submittal of BWROG Technical Reports Addressing the NRC Guidance Document on the Use of Containment Accident Pressure (CAP) in Analyzing Emergency Core Cooling System (ECCS) and Containment Heat Removal System Pump Performance in Postulated Accidents

- References:
1. NRC Guidance Document for the Use of Containment Accident Pressure in Reactor Safety Analysis (ADAMS Accession No. ML102110167)
 2. Submittal of GEH BWROG Topical Reports NEDC-33347P Revision 0 (Proprietary Version) and NEDO-33347 Revision 0 (Non-Proprietary Version), "Containment Overpressure Credit for Net Positive Suction Head (NPSH)" (ADAMS Accession No. ML080520268)
 3. NRC Letter dated September 29, 2009, from Stacy Rosenberg to Doug Coleman, "Draft Safety Evaluation of Boiling Water Reactors Owners' Group (BWROG) Topical Report NEDC-33347, Revision 0, 'Containment Overpressure Credit for Net Positive Suction Head (NPSH)' (TAC No. MD8146)" (ADAMS Accession No. ML092440176)

The attached technical reports are being submitted to address several topics in the NRC guidance document for the use of CAP contained in Reference 1, which is Enclosure 1 of Staff Requirements Memorandum SECY-11-0014 (ADAMS Accession No. ML102780586). These technical reports evaluate a Sulzer CVDS model pump typical of single stage double suction centrifugal pumps used in BWR ECCS and containment heat removal systems. The reports are supplementary information for the BWROG Licensing Topical Report previously submitted in Reference 2 and the corresponding Draft NRC Safety Evaluation issued in Reference 3. The reports evaluate the following topics.

- Task 1 – Computational Fluid Dynamics (CFD) Report and Combined NPSHr Uncertainty for Monticello RHR CVDS Pump
- Task 2 – Equation for Pump Speed Correction (CVDS Pump)

- Task 3 – Pump Operation at Reduced NPSHa conditions (CVDS Pump)
- Task 4 – Operation in the Maximum Erosion Rate Zone (CVDS Pump)
- Task 5 – Effects of Non-Condensable Gases on Seals (CVDS Pump)
- Task 6 – NPSHr Test Instrument Inaccuracy Effect on Published Results (CVDS Pump)

In part, the BWROG is submitting these reports to address pump NPSH uncertainties for Design Basis Accident (DBA) Loss-of-Coolant Accident calculations as described in Reference 1. As noted in Reference 1 (section 6.5), calculations for non-DBA events do not require consideration of NPSH uncertainties.

Attachment 1 contains an affidavit requesting withholding of Attachments 2 through 7. The affidavit states that information in Attachments 2 through 7 has been handled and classified as proprietary to the BWROG. The BWROG hereby requests that Attachments 2 through 7 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17. Attachments 8 through 13 are redacted versions of Attachments 2 through 7 for public disclosure. Inquiries regarding BWROG proprietary information may be directed to Kenneth Welch, BWROG Containment Accident Pressure Committee Project Manager, at 910-819-7904 (Kenneth.Welch@ge.com).

If you have questions or desire further discussion, feel free to contact me or Kenneth Welch, BWROG Committee Project Manager, at 910-819-7904.

A handwritten signature in black ink, appearing to read 'F. Schiffley II', with a large, sweeping flourish at the end.

Frederick P. "Ted" Schiffley, II
Chairman
BWR Owners' Group

cc: C.J. Nichols, BWROG Program Manager
BWROG Primary Representatives

Attachments

Attachment	Report
1	Proprietary Information Affidavit
2	Task 1 – CFD Report and Combined NPSHr Uncertainty for Monticello RHR CVDS Pump
3	Task 2 – Equation for Pump Speed Correction (CVDS Pump)
4	Task 3 – Pump Operation at Reduced NPSHa conditions (CVDS Pump)
5	Task 4 – Operation in the Maximum Erosion Rate Zone (CVDS pump)
6	Task 5 – Effects of Non-Condensable Gases on Seals (CVDS pump)
7	Task 6 – NPSHr Test Instrument Inaccuracy Effect on Published Results (CVDS Pump)
8	Task 1 – CFD Report and Combined NPSHr Uncertainty for Monticello RHR CVDS Pump (Redacted Version)

Attachment	Report
9	Task 2 – Equation for Pump Speed Correction (CVDS Pump) (Redacted Version)
10	Task 3 – Pump Operation at Reduced NPSHa conditions (CVDS Pump) (Redacted Version)
11	Task 4 – Operation in the Maximum Erosion Rate Zone (CVDS Pump) (Redacted Version)
12	Task 5 – Effects of Non-Condensable Gases on Seals (CVDS Pump) (Redacted Version)
13	Task 6 – NPSHr Test Instrument Inaccuracy Effect on Published Results (CVDS Pump) (Redacted Version)

Document Components:

- 001 BWROG-12051 Cover Letter.pdf
- 002 BWROG-12051 Attachment 1 Affidavit.pdf
- 003 BWROG-12051 Attachment 2 Proprietary.pdf
- 004 BWROG-12051 Attachment 3 Proprietary.pdf
- 005 BWROG-12051 Attachment 4 Proprietary.pdf
- 006 BWROG-12051 Attachment 5 Proprietary.pdf
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