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L-09-056

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

SUBJECT:
Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Downstream Effects for Recirculation Spray System Pumps and Low Head Safety Injection System Pumps (TAC No. MC4665)

This letter provides supplemental information regarding the FirstEnergy Nuclear Operating Company (FENOC) response to Generic Letter 2004-02 (Reference 1) for Beaver Valley Power Station Unit No. 1 (BVPS-1). FENOC indicated in a letter dated October 29, 2008 (Reference 2) in response to Review Area 3.m (Reference 3) that during the final review of the downstream analysis, the need for additional evaluation was identified for the recirculation spray (RS) and low head safety injection (LHSI) pump wear analysis, and that evaluation results would be provided by March 20, 2009.

Additional evaluation of downstream effects on the BVPS-1 RS and LHSI pumps has been completed. Pump component wear, hydraulic performance, and seal leakage were considered as discussed below. The results of the downstream analysis indicate that the pumps are acceptable for their 30 day mission time.

The wear analysis for the BVPS-1 RS and LHSI pumps were developed in accordance with the requirements of WCAP-16406-P-A, Revision 1, "Evaluation of Downstream Debris Effects in Support of GSI-191." Modifications to replace calcium-silicate and fibrous Insulation are scheduled for the spring 2009 maintenance and refueling outage (1R19). The debris concentration inputs used for the pump analysis were based on the final predicted debris transported to the sump after insulation modifications are completed. The wear results for all components evaluated were found to be within the wear acceptance criteria of WCAP-16406-P-A.

A hydraulic performance assessment was performed based on the guidance of WCAP-16406-P-A. With relatively low wear predicted, the hydraulic performance of the pumps was evaluated as acceptable.

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The effects of seal leakage on room habitability, room equipment operation, and environmental qualification were reviewed for the pumps located outside of the containment. These pumps use a tandem mechanical seal arrangement with a demineralized water accumulator that maintains a positive seal against leakage of radioactive fluid from the seals of these pumps and prevents debris-laden fluid from entering the seal. Therefore seal leakage for the RS and LHSI pumps is not an issue requiring evaluation under downstream effects analysis.

This information is provided in accordance with 10 CFR 50.54(f). There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager –Fleet Licensing, at 330-761-6071.

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 11, 2009.

Sincerely,

Peter P. Sena III

References:

1. NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized- Water Reactors," dated September 13, 2004.
2. FENOC letter dated October 29, 2008, Beaver Valley Power Station Unit Nos. 1 and 2, Supplemental Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized- Water Reactors," (TAC Nos. MC4665 and MC4666).
3. NRC Content Guide for Generic Letter 2004-02 Supplemental Response, dated August 15, 2007 and revised November 21, 2007.

cc: Mr. S. J. Collins, NRC Region I Administrator
Mr. D. L. Werkheiser, NRC Senior Resident Inspector
Ms. N. S. Morgan, NRR Project Manager
Mr. D. J. Allard, Director BRP/DEP
Mr. L. E. Ryan (BRP/DEP)