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

Subject: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Commitment Changes and
Report of Facility Changes, Tests and Experiments

In accordance with 10 CFR 50.59(d)(2), the Report of Facility Changes, Tests, and Experiments for the Beaver Valley Power Station Unit No. 1 is provided as Attachment 1. This report provides a brief description of facility and procedure changes which required a 50.59 evaluation and a summary of each evaluation. The report covers the period of October 10, 2001, through April 29, 2003, which corresponds to a period ending with Fuel Cycle 15.

Three commitment changes are described in Attachment 2, and are forwarded as part of this submittal in accordance with the NRC endorsed guidance of the Nuclear Energy Institute (NEI) related to the commitment change process (Reference: NEI 99-04). There are no regulatory commitments contained in this letter or Attachment 1.

If you have any questions regarding this report, please contact Mr. Larry R. Freeland, Manager, Regulatory Affairs/Performance Improvement at 724-682-5284.

Sincerely,

L. William Pearce

Attachments

c: Mr. T. G. Colburn, NRR Senior Project Manager
Mr. P. C. Cataldo, NRC Sr. Resident Inspector
Mr. H. J. Miller, NRC Region I Administrator

IE47

Change Title

Operating Procedure Change to Minimize Effect of Positive Moderator Temperature Coefficient (MTC) while Increasing Turbine Load

Change

Because MTC may be positive early in core life, operating procedures have been changed to minimize the effects of positive MTC while loading the reactor from 5 percent to full power operation by providing a method for achieving slower reactor power increases. Instead of allowing the turbine to directly load the reactor at its own rate, an artificial load may be applied to the reactor (via turbine bypass valves) at a slower rate than the turbine would allow. Load may then be transferred from the artificial load to the turbine without affecting reactor power level, making reactor power transitions less abrupt. This process is repeated as necessary to achieve the desired power level. It was determined that use of turbine bypass valves during startup could potentially affect the "excessive load increase" incident evaluated in the UFSAR. However, potential increases in frequency of the incident or in the likelihood of malfunction of the bypass system were judged not to be more than minimal based on infrequency of performing the proposed evolution. Consequences of the incident would be unchanged. Therefore, a license amendment was not required.

Change Title

DCP 2424 - Replacement of River Water Pumps and Motors

Change

The river water pumps that provide service water for safety-related functions were replaced with pumps having improved design features. The UFSAR indicates that the system was designed so that there is 100 percent margin above the minimum submergence specification during an extreme low river level condition. The new pumps would have a reduced submergence margin of 92 percent. Although the reduced margin may represent a potential increase in the probability of malfunction, technical specifications require that the plant is to shut down when water level is at 654' level or about 219 percent above minimum submergence. Design improvements in other aspects of the pumps are intended to reduce the probability of malfunction. Therefore, probability was not increased more than minimally and a license amendment was not required.

Change Title

ECP 02-0410 – Addition of Soluble Zinc to Reactor Coolant

Change

This change would permit soluble zinc to be added to reactor coolant to inhibit primary water stress corrosion cracking of primary system materials and to reduce radiation exposure. The effects of zinc on the reactor coolant system pressure boundary and fuel cladding as well as potential for hydrogen generation and zinc isotope production were considered. Demonstration use of zinc has shown it to be effective in reducing radiation dose without adverse effects on materials. Because zinc does not adversely affect the probability of accidents or malfunctions, does not create the potential for a new type of accident, and has generally positive effects, it was determined that a license amendment was not required.

Change Title

UFSAR Change to Turbine Missile Evaluation Method

Change

The deterministic turbine missile evaluation described in the UFSAR has been replaced by a probabilistic method that is NRC approved. Turbine inspection at regular intervals results in calculated missile generation probabilities that conform to the limiting value specified in the NRC SER for Westinghouse topical reports WSTG-1-P and WSTG-3-P dated February 1987. Therefore, it was determined that a license amendment was not required.

Change Title

Modification of Response to Generic Letter 88-17 dated January 13, 1989
Condition Report 02-04676

Change

In accordance with the NEI Commitment Change process (NEI 99-04), a commitment contained in the BVPS response to NRC Generic Letter 88-17 issued on January 13, 1989 to maintain a self-study guide available for appropriate plant personnel as a training method to be used shortly before entering a reduced RCS inventory condition is being modified to use "Just-In-Time" training and the Infrequently Performed Task or Evolution (IPTE) program in place of a self-study guide. The use of this training and procedure meet the same objectives as intended by the original commitment and is equivalent to the original commitment.

Change Title

Modification of Response to Generic Letter 88-14, dated February 17, 1989
Reference: Condition Report 02-05026

Change

In accordance with the NEI Commitment Change process (NEI 99-04), a commitment contained in the BVPS response to Generic Letter 88-14 issued on February 17, 1989 that instrument air systems should maintain a dew point under 35°F is being modified to indicate that dew points on indoor installations may exceed 35°F provided the dew point at line pressure is at least 18°F below the minimum temperature to which any part of the instrument air system is exposed at any season of the year. This modified commitment will be used to establish acceptance criteria for system operation. The revised commitment will continue to ensure liquid water free instrument air.

Change Title

Modification to Response to Immediate Action Letter 81-16, dated March 18, 1981

Change

In accordance with the NEI Commitment Change process (NEI 99-04), a commitment contained in the BVPS response to Immediate Action Letter 81-16 issued on March 18, 1981 regarding the frequency of periodic inspection, testing, and lubrication of valves with reach rod operators is being modified. Previously, fixed frequencies of 18 months (for key safety-related valves) and five years (for remaining valves) were used. The modified commitment will base the manual reach rod valve PM program on vendor recommendations and engineering judgement, and determine the PM frequency by the importance of the valve to plant safety/reliability, the valve usage rate, and a review of past inspection results. The revised commitment will be performance based and will continue to provide for a periodic inspection and testing program for the subject valves as intended by the original commitment.