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January 4, 2002  
L-02-003

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

**Subject: Beaver Valley Power Station, Unit No. 2**  
**Docket No. 50-412, License No. NPF-73**  
**Inservice Testing Program, Proposed Revision 2G**

Attached for NRC review and approval is proposed Revision 2G to the Beaver Valley Power Station Unit 2 (BVPS-2) Inservice Testing (IST) Program. This revision incorporates a new relief request, Valve Relief Request No. 3 (VRR3), which is being submitted for NRC review and approval in accordance with 10 CFR 50.55a(f)(5)(iii).

VRR3 requests relief from testing the Recirculation Spray (RSS) Heat Exchanger Service Water (SWS) Supply Isolation Valves [2SWS\*MOV103A and B] and the SWS Supply Header Isolation Valves [2SWS\*MOV106A and B] on a quarterly frequency while on-line. The valves are currently required to be tested at each refueling outage and are cycled during the SWS Full Flow Tests (2OST-30.13A and B) as noted in Valve Refueling Outage Justification Nos. 46 and 47 (VROJ46 and VROJ47). Because of our desire to minimize refueling outage durations, maximize work management opportunities, and because it has been determined that testing can be done on-line during certain times of the year when SWS cooling load demands are low, relief is being requested to test these valves at a refueling outage frequency while on-line (in the weeks just prior to the refueling outage) or during the refueling outage.

Relief is needed because the ASME XI Code does not recognize testing on-line at any frequency other than quarterly. VRR3 provides the basis for why testing on-line each quarter is not practical. Testing on-line is already being planned for January 2002, prior to 2R09, which will invalidate VROJ46 and VROJ47. Therefore, subsequent quarterly testing of these valves will be required per the ASME XI Code unless relief is granted per above. In order to obtain relief from the requirement to test these valves quarterly following their testing in January 2002, NRC approval of VRR3 is requested by May 1, 2002. This date assumes testing in January begins no earlier than January 8, 2002, and includes a 25% grace period as permitted by Technical Specifications.

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If you have any questions regarding this submittal, please contact Mr. Thomas S. Cosgrove, Manager, Regulatory Affairs at 724-682-5203.

Sincerely,

*Robert E. Donnell*  
FOR

Lew W. Myers

- c: Mr. L. J. Burkhart, Project Manager
- Mr. D. M. Kern, Sr. Resident Inspector
- Mr. H. J. Miller, NRC Region I Administrator

BEAVER VALLEY POWER STATION

Unit 2

Inservice Testing (IST) Program For Pumps And Valves

Proposed Revision 2G

Preparer	<i>Original signed by:</i> David T. Jones	Date: 1/3/02
IQR/OSC Meeting #	<i>Original signed by:</i> Joann H. West	Date: 1/3/02
Owner Approval    RGW /	<i>Original signed by:</i> M. D. Mitchell for J. L. Freels	Date: 1/3/02
Approval Authority	<i>Original signed by:</i> L. W. Pearce	Date: 1/3/02

(PROPOSED REVISION 2G)

**VALVE RELIEF REQUEST 3**

**Valve Mark No(s):** 2SWS\*MOV103A  
2SWS\*MOV103B  
2SWS\*MOV106A  
2SWS\*MOV106B

**Category:** B      **Class:** 3

**System:** 30 - Service Water

**Function:** The Recirculation Spray (RSS) Heat Exchanger Service Water (SWS) Supply Isolation Valves [2SWS\*MOV103A and B] must open to supply SWS cooling water to the RSS Heat Exchangers during a CIB. They must re-close in the long term post-accident following a CIB and with the residual heat removal (RHR) system placed into service, to provide SWS cooling for the Component Cooling Water (CCP) Heat Exchangers in order to cool the RHR Heat Exchangers and bring the plant to cold shutdown conditions.

The SWS Supply Header Isolation Valves [2SWS\*MOV106A and B] must close on receipt of a CIB signal to ensure sufficient SWS cooling flow to the Recirculation Spray Heat Exchangers. They must re-open in the long term post-accident following a CIB to provide SWS cooling for the Component Cooling Water (CCP) Heat Exchangers in order to cool the Residual Heat Removal (RHR) Heat Exchangers and bring the plant to cold shutdown conditions.

**Test Requirement:** Per OM-10, Paragraph 4.2.1.1, "Exercising Test Frequency," active Category B valves shall be tested nominally every 3 months.

**Basis for Relief:** In accordance with 10 CFR 50.55a(f)(5)(iii), relief is requested on the basis that compliance with the code requirements is impractical for BVPS-2.

[2SWS\*MOV103A and B] are normally closed during plant operation to isolate SWS flow to the RSS Heat Exchangers which are maintained in a dry lay-up condition. Their safety positions are open to supply DBA flow to the RSS Heat Exchangers following a CIB, and closed to ensure adequate SWS cooling for RHR cooldown of the plant to cold shutdown conditions. [2SWS\*MOV106A and B] are normally open during plant operation to support SWS operation. Their safety position is closed to ensure sufficient SWS supply to the Recirculation Spray Heat Exchangers, and open to support RHR operation for cooldown of the plant to cold shutdown conditions.

Opening [2SWS\*MOV103A and B] cannot be performed during plant operation unless [2SWS\*MOV106A and B] or RSS H/X Inlet Isolation Valves [2SWS\*MOV104A-D] are closed because the SWS cannot simultaneously support normal plant operations and full flow to the RSS Heat Exchangers. In order to full-stroke exercise [2SWS\*MOV103A and B] in both directions quarterly or during cold shutdowns, SWS flow would have to be directed to the RSS Heat Exchangers or upstream SWS piping which are all maintained in a dry lay-up condition. Plant operating experience has shown that this would degrade the operational readiness of the RSS Heat Exchangers or upstream

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**VALVE RELIEF REQUEST 3**

SWS piping over time by depositing Asiatic clams, other marine life, river mud and silt in the heat exchangers or SWS piping. This would also lead to either increased maintenance and exposure to drain the SWS piping or to increased maintenance, exposure and plant shutdowns to clean the heat exchangers since the heat exchangers cannot be cleaned on-line within the remaining 72 hour LCO action time. Attempting to perform this testing during a cold shutdown would also not be practical since cleaning of the heat exchangers or draining of the SWS piping could delay plant startup.

Closing [2SWS\*MOV106A and B] without also directing flow to the RSS Heat Exchangers would practically isolate all SWS flow to the plant, potentially causing a plant trip or causing damage to the SWS Pumps due to low flow conditions.

[2SWS\*MOV103A(B) and 106A(B)] have typically been full-stroke exercised and timed open and closed during refueling outages when performing the SWS Full Flow Tests (2OST-30.13A and B) by placing SWS flow through the RSS Heat Exchangers. In order to remove the impact on refueling outages of performing the SWS Full Flow Tests, relief is requested to perform this testing on-line, just prior to the refueling outage. Following the testing on-line, the RSS Heat Exchangers will be drained to remove most of the mud, silt, Asiatic clams and other marine life flushed into the heat exchangers. Actual cleaning of the heat exchangers will occur during the refueling outage as part of the GL 89-13 Program. Therefore, performing this test in the weeks just prior to the refueling outage will minimize the impact of the test on the station, while ensuring that the heat exchangers are maintained operationally ready.

Testing prior to a refueling outage may not always be possible during certain times of the year when SWS cooling demand is high because interrupting flow of cooling water to the inservice Primary (CCP) and Secondary (CCS) Component Cooling Water and Chiller Unit Heat Exchangers in addition to other Train A or B cooling loads by closing [2SWS\*MOV106A and B] could result in undesirable thermal transients, operational concerns of stability problems and a potential plant trip if at power. Therefore, testing may still have to be performed during the refueling outage versus on-line in the weeks just prior to the refueling outage. This testing has been reviewed from a risk perspective and is considered to be acceptable when appropriate environmental conditions exist.

**Alternate Test:** Full-stroke exercised and timed open and closed on a refueling frequency while on-line (in the weeks just prior to the refueling outage) or during refueling outages per 2OST-30.13A and 2OST-30.13B (SWS Full Flow Tests).

**References:** OM-10, Paragraphs 4.2.1.1 and 4.2.1.2.