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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
Updated Inservice Testing Program, Issue 2, Revision 2**

The purpose of this submittal is to provide the Nuclear Regulatory Commission (NRC) with an informational copy of revisions to the Beaver Valley Power Station Unit 2 (BVPS-2) Inservice Testing (IST) Program.

Enclosure 1 provides a summary of the IST program changes which have been incorporated into Issue 2, Revision 2.

Enclosure 2 is Issue 2, Revision 2 of the BVPS-2 IST Program. It has been determined that the Revision 2 IST program changes do not require NRC approval prior to implementation. This determination was based on the fact that all of the changes are either:

- in accordance with the ASME/ANSI Operations and Maintenance Standard Parts 6 and 10 (OM-6 and OM-10), or
- in compliance with the positions delineated in Attachment 1 and Supplement 1 of Generic Letter No. 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," or
- editorial in nature.


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If you have any questions regarding this submittal, please contact Mr. Mark S. Ackerman, Manager, Safety & Licensing at (412) 393-5203.

Sincerely,


James E. Cross

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

ENCLOSURE 1

SUMMARY OF CHANGES TO THE BVPS-2 IST PROGRAM (ISSUE 2, REV. 2, INCLUDING PARTIAL REVS. 1A AND 1B)

- Revised the flow indicators referenced in the "Comments" section of the "Pump Outline" sheets for Charging Pumps [2CHS*P21A, B and C]. More accurate branchline flow indicators are now used versus a header flow instrument during full flow testing. (Pages 8, 9 and 10)
- Revised the discharge pressure instruments referenced in the "Comments" section of the "Pump Outline" sheets for Recirculation Spray Pumps [2RSS*P21A, B, C and D]. A local temporary discharge pressure test gauge is used for calculating delta-p versus the installed discharge pressure indicators [2RSS-PI156A, B, C and D]. (Pages 21, 22, 23 and 24)
- On Pump Relief Request No. 2 for IST Pump Instrumentation, the typical "reference" suction pressures for the Recirculation Spray (RSS) Pumps [2RSS*P21A, B, C and D] were revised from 5-30 IWC to 20-30 IWC for an accuracy reading within ± 1.2 IWC based on current test dam elevation changes during recent RSS Pump Testing. Per OM-6, Paragraph 4.6.1.2(a) and Table 1, three times the smallest reference value at $\pm 2\%$ accuracy yields a variance of ± 1.2 IWC; therefore, this change is considered to be editorial and does not need NRC approval. (Page 46)
- Revised the shape of the Minimum Operating Point (MOP) Curve for the "A" Component Cooling Water Pump [2CCP*P21A] based on post-maintenance testing following installation of a new pump impeller. (Page 70)
- Provided additional details in the "Valve Testing Requirements" section about "fail-safe" testing of valves with fail-safe actuators (e.g., SOVs, AOVs and air operated control valves). (Pages 85 and 86)
- Incorporated forward direction testing of check valves [2CHS*31, 870 and 871] into the BVPS-2 IST Program (Rev. 1B). A self-assessment review had determined that although these check valves were located in the normal charging header, they also had a function to open as part of the emergency boration flowpath. (Pages 96 and 100)
- Revised the referenced test for cycling closed weighted arm check valves [2CHS*31] and [2CHS*474, 475 and 476] from 2OST-1.10 to 2BVT 1.47.11. The valves were already being cycled in 2BVT 1.47.11 to support leakage testing of adjacent valves. This will eliminate duplicate testing. Also revised VROJ3 and VROJ12. (Pages 96, 100, 214 and 230)
- Noted that [2CHS*FCV113A] is also "fail open" tested quarterly per 2OST-47.3B. (Page 96)

ENCLOSURE 1 (Continued)

SUMMARY OF CHANGES TO THE BVPS-2 IST PROGRAM (ISSUE 2, REV. 2, INCLUDING PARTIAL REVS. 1A AND 1B)

- Noted that [2CHS*FCV114A] is also "fail closed" tested quarterly per 2OST-47.3B. (Page 96)
- Re-numbered the Valve Cold Shutdown Justification for [2CHS*HCV142] from VCSJ32 to VCSJ1 (editorial change). Also revised the "Basis for CSJ" in VCSJ1 to note that loss of valve actuating power is performed by "local isolation of its air supply." (Pages 97 and 169)
- Noted that [2CHS*LCV460A and B] are also "fail closed" tested at cold shutdown per 2OST-1.10. Also revised VROJ10. (Pages 99 and 226)
- Revised the referenced test and method for testing weighted arm check valves [2SIS*83, 84, 94 and 95] from a break-away torque measurement per 2OST-1.10 to a full flow test per 2OST-11.14B. VROJ18 was also revised to reflect this change. (Pages 107, 108, 239 and 240)
- Revised the referenced test and method for testing weighted arm check valve [2SIS*130] from a break-away torque measurement per 2OST-1.10 to a full flow test per 2OST-11.14A. VROJ22 was also revised to reflect this change. (Pages 109, 244 and 245)
- Revised the referenced test and method for testing weighted arm check valve [2SIS*132 and 133] from a break-away torque measurement per 2OST-1.10 to a full flow test per 2OST-11.14A. VROJ23 was also revised to reflect this change. (Pages 109, 246 and 247)
- Clarified the leakage monitoring testing of LHSI Check Valves [2SIS*545, 546, 547, 548, 550 and 552] by stating that they will be "monitored approximately monthly during RCP operation, and additionally monitored during planned RCP shutdowns per 2OM-51.4.C, and during RCP startups per 2OM-50.4.A when maximum d/p conditions exist." (Page 111)
- Revised the referenced test listed for remote position verification (RPV) of [2LMS*SOV950, 951, 952 and 953] from 2OM-51.4.D / 2OM-12.4.A to 2OST-47.105. (Page 119)
- Changed the frequency for stroking and timing [2RSS*MOV154C and D] from quarterly per 2OST-47.3B to refueling per 2BVT 1.13.5 as justified in new Valve Refueling Outage Justification (VROJ55). (Pages 123, 124 and 291)
- Revised the referenced test listed for reverse direction testing of check valve [2SWS*106] from 2OST-30.8A or 8B to only 2OST-30.8A. Revised the referenced test listed for reverse direction testing of check valve [2SWS*107] from 2OST-30.8A or 8B to only 2OST-30.8B. (Page 150)

ENCLOSURE 1 (Continued)

SUMMARY OF CHANGES TO THE BVPS-2 IST PROGRAM (ISSUE 2, REV. 2, INCLUDING PARTIAL REVS. 1A AND 1B)

- Updated the "Valve Mark Number" for [2SWS*SOV130A and B] to [2SWS*AOV130A and B]. The operator was changed to an AOV during 2R7. (Page 151)
- Valve Cold Shutdown Justification (VCSJ29) was revised to only refer to forward direction testing of vacuum break check valves [2SWS*486, 487 and 488] since reverse direction testing can be done quarterly during testing of each SWS Pump and is not dependent on the idle SWS Pump being available. (Pages 152, 153 and 205)
- Clarified in VCSJ2 that testing of [2CCP*MOV112A and B] during removal of the RHR system from service during station startups from cold shutdown need only be performed "if greater than 92 days will pass until the respective quarterly test is scheduled." (Pages 170 and 171)
- Noted in VCSJ10 that [2SIS*HCV868A and B] are also full-stroke exercised and timed "open and closed" and "failed closed in accordance with OM-10, Paragraph 4.2.1.6." (Page 183)
- Noted in the "Alternate Test" section of VCSJ17 that [2MSS*AOV101A, B and C] may be full-stroke exercised and timed closed "when going to or" following cold shutdowns with TAVG \geq 515F. This also supports the requirements of Tech Spec 4.7.1.5.b. (Pages 191 and 192)
- Noted in the "Alternate Test" section of Valve Refueling Outage Justification VROJ3 that [2CHS*31] is "full-stroke exercised open quarterly with flow per 2OST-7.4, 5 or 6 (Charging Pump Tests)." This is a follow-up change which added full-stroke testing of [2CHS*31] with flow to the BVPS-2 IST Program in Rev. 1B. Also noted that closure testing is now performed by 2BVT 1.47.11 (Safety Injection and Charging System Containment Penetration Integrity Test) versus 2OST-1.10. (Pages 213 and 214)
- The BVPS-2 IST Program was revised in Rev. 1A to test the CCP Cooling Isolation Valves to the RHR heat exchangers [2CCP*MOV112A and B], quarterly during normal operations and when placing the RHR System into service or when removing it from service, but not quarterly during cold shutdowns. This was a recommendation made to ensure that the operability of the RHR System is not jeopardized with respect to maintaining the "defense in depth" strategy of NUREG-1449 (Shutdown and Low-Power Operation at Commercial Nuclear Power Plants in the United States) for shutdown safety during cold shutdowns. (See VCSJ2 for details.)

ENCLOSURE 1 (Continued)

SUMMARY OF CHANGES TO THE BVPS-2 IST PROGRAM (ISSUE 2, REV. 2, INCLUDING PARTIAL REVS. 1A AND 1B)

- The BVPS-2 IST Program was revised in Rev. 1A to test the CCP Supply and Return Containment Isolation Valves [2CCP*MOV150-1, 2 / 151-1, 2 / 156-1, 2 and 157-1, 2], only when defueled. This was necessary to ensure that the operability of the RHR System is not jeopardized with respect to maintaining the "defense in depth" strategy of NUREG-1449 (Shutdown and Low-Power Operation at Commercial Nuclear Power Plants in the United States) for shutdown safety during cold shutdowns. (See VROJ37 for details.)
- The BVPS-2 IST Program was revised in Rev. 1A to preclude process system differential pressure across the disc from affecting the test results for all Atwood & Morrill weighted arm check valves. Therefore, the required test methods and test frequencies for the following weighted arm check valves were revised in accordance with the following justifications.

<u>Check Valve</u>	<u>Justification</u>
[2RCS*68]	VROJ52
[2RCS*72]	VROJ53
[2CHS*31]	VROJ3
[2CHS*473]	VROJ11
[2CHS*474, 475, 476]	VROJ12
[2SIS*42]	VROJ16
[2SIS*46, 47]	VROJ17
[2SIS*83, 84, 94, 95]	VROJ18
[2SIS*130]	VROJ22
[2SIS*132, 133]	VROJ23
[2QSS*3, 4]	VROJ32
[2QSS*267]	VROJ34
[2RSS*29, 30, 31,32]	VCSJ14
[2FPW*382, 388, 753]	VCSJ30
[2FPW*761]	VROJ54
[2IAC*22]	VROJ49

ENCLOSURE 1 (Continued)

SUMMARY OF CHANGES TO THE BVPS-2 IST PROGRAM (ISSUE 2, REV. 2, INCLUDING PARTIAL REVS. 1A AND 1B)

- The BVPS-2 IST Program was revised in Rev. 1A to test the following valves only when placing the RHR System into service or when removing it from service or when defueled, not more often than once per 92 days. This was a recommendation made to ensure that the operability of the RHR System is not jeopardized with respect to maintaining the "defense in depth" strategy of NUREG-1449 (Shutdown and Low-Power Operation at Commercial Nuclear Power Plants in the United States) for shutdown safety during cold shutdowns. (See the following justifications for details.)

<u>Valves</u>	<u>Description</u>	<u>Justification</u>
[2RHS*MOV701A, B]	RHR Pump Suction Isolation Valves	VSCJ7
[2RHS*MOV702A, B]	RHR Pump Suction Isolation Valves	VSCJ7
[2RHS*MOV720A, B]	RHR Pump Discharge Isolation Valves	VSCJ7
[2RHS*FCV605A, B]	RHR H/X Bypass Valves	VSCJ6
[2RHS*HCV758A, B]	RHR H/X Flow Control Valves	VSCJ8
[2RHS*3 and 4]	RHR Pump Discharge Check Valves (in closed direction only)	VCSJ5