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Vice President - Nuclear Group

April 9, 1992

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
Inservice Test Program; SER Response and
Proposed Revision 2B

Reference: Unit 2 IST Program SER, dated December 27, 1991

The purpose of this submittal is to provide the following for NRC review:

1) Enclosure 1 provides our response to each anomaly identified in the Reference SER Appendix A, which evaluated the Unit 2 Inservice Test (IST) Program. The responses are listed in the order presented in the SER.

2) Enclosure 2 is pump relief request 7 for NRC approval of proposed revision 2B of the Unit 2 IST program. Relief is requested to use a pump curve which will provide an equivalent level of quality and safety in trending pump performance and degradation. This relief request is based on Appendix A, Anomaly 1, which evaluated the use of pump curves as reference values for pump testing and suggests that individual requests for relief be submitted.

Section 2.0 of the SER requested that program or procedural changes covered in Appendix A should be completed within 1 year of the SER date. We request NRC approval of Proposed Revision 2B by September 27, 1992, so that respective programs can be revised to meet this date.

If you have any questions regarding this submittal, please contact Mr. Steve Sovick at (412) 393-5211.

Sincerely,

J D Sieber
J. D. Sieber

Enclosures

cc: Mr. L. W. Rossbach, Sr. Resident Inspector
Mr. T. T. Martin, NRC Region I Administrator
Mr. A. W. DeAgazio, Project Manager
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Response to Appendix A of NRC SER dated December 27, 1991

Anomaly No. 1

It was stated that relief should be requested for each pump in the Unit 2 IST Program that uses a pump curve. It also stated that a discussion on vibration measurement should be included in the relief request. At present, no pump relief request exists for those pumps for which we wish to use a pump curve for inservice testing. The enclosed pump relief request No. 7 (Enclosure 2) is submitted as Proposed Revision 2B of the Unit 2 IST Program. Separate vibration acceptance criteria will be established for the flow conditions described in the relief request. We request NRC review of Proposed Revision 2B to be completed by September 27, 1992

Anomaly No. 2

Appendix A to the SER stated that pump relief request No. 3 for the recirculation spray pumps and service water pumps did not address the issue of accuracy. The NRC stated that the proposed alternative to calculate suction pressure is acceptable provided the calculations are within the accuracy that would result from using instruments meeting the Code accuracy requirements. Relief for calculating suction pressure for the recirculation spray pumps was deleted in Revision 8 to the Unit 2 IST Program implemented on November 8, 1991. Test gauges are installed at valves in the suction lines of the recirculation spray pumps so there is no longer a need to calculate suction pressure based on the water elevation in the containment sump test dam. The present suction pressure calculations for the service water pumps, which are based on Ohio River water level, were reviewed and verified to be within the Code accuracy requirements. No changes are required to the Unit 2 IST Program.

Anomaly No. 3

Appendix A to the SER stated that pump relief request No. 4 for the emergency diesel fuel oil transfer pump did not address the issue of accuracy. The NRC stated that the proposed alternative to calculate pump flowrate is acceptable provided the calculations are within the accuracy that would result from using instruments meeting the Code accuracy requirements. The present flowrate calculations for these pumps which are based on a level change over time in the diesel fuel oil day tank were reviewed and verified to be within the Code accuracy requirements. No changes are required to the Unit 2 IST Program.

Enclosure 1

Response to Appendix A of NRC
SER dated December 27, 1991

Anomaly No. [illegible]

Appendix A to the SER approved pump relief request No. 8 provided pump testing was performed at a reference speed and reference discharge pressure equal to or greater than the pressure at which the pumps would be required to perform their safety function. Further, the measured values of flow should be compared to reference values and [illegible] acceptance criteria applied as outlined in WP-3100. The [illegible] contained in Proposed Revision 2A, including the [illegible] for the chemical injection pumps, were incorporated [illegible] 9 of the Unit 2 IST Program implemented on March 9, [illegible] In addition, future inservice testing of the chemical injection [illegible] will be in accordance with the requirements discussed in Anomaly No. 4. Please note that the chemical injection pumps have a constant speed induction motor thus reference speed cannot be varied. The inservice test procedures for the chemical injection pumps have been revised and will be utilized during the next scheduled performance of the pump surveillance tests in May.

Anomaly No. 5

Anomaly No. 5 of Appendix A to the SER stated that the assigned maximum group leakage rates for valve relief request Numbers 23, 24, 25, 26, 27 and 28 should be based on the smallest valve in the group so that corrective actions are taken whenever the leak-tight integrity of any valve of that group is in question. The leak rate acceptance criteria assigned to the group of valves in the penetrations for each of the above relief requests was reviewed. The leak rate acceptance criteria for the group of valves in relief request Numbers 24 25 and 27 were verified to already be set conservatively. The leak rate acceptance criteria for the group of valves in relief request Numbers 23 and 26 was revised on March 3, 1992, and are based on the leak rate criteria for the smallest valve in the group. Past leakage rates were also verified to be less than the new smaller leak rate for each group, The leak rate criteria for the group of valves in relief request Number 28 (one valve in parallel with a relief valve) was reviewed and is based on the size of the valve and not the size of the parallel relief valve which in all cases is the same size or smaller than the valve. The reason for doing this is because the parallel relief valve is tested for any signs of leakage if a measured leak rate is found for the penetration. If the relief valve shows any signs of leakage, then it is removed from the system and repaired. A leakage test with acceptance criteria of less than 0.1 cc/min is then performed on the relief valve at 90% of its design pressure. In all cases, this pressure is greater than the test pressure of 46 psig used to test the penetration. The group of valves in the penetration is then leak tested again with the parallel relief valve reverified to have no leakage at 46 psig, and a measured leak rate is applied to the group with acceptance criteria based on the size of the parallel valve only. NO changes are required to the Unit 2 IST Program.

Anomaly No. 6

The SER presumed that the inservice test procedures are in accordance with the Code requirements or Generic Letter No. 89-04 positions. This is true in all cases except for valve relief request Numbers 6, 7, 8, 9, 10, 11, and 12. The test method used in 2OST-11.14, "Safety Injection Full Flow Test" to verify the full-stroke capability of the check valves associated with relief request Numbers 6, 7, 8, 9, 11, and 12 is the "Full Flow Through Parallel Branch Line" test method. This test method will only be used again for testing during the in-progress third refueling outage and a revised test method which meets the requirements of the Code and Generic Letter No. 89-04 will be implemented in time to support the fourth refueling outage. The test method used in 2BVT 1.11.3, "Accumulator Discharge Check Valve Test" to verify the full-stroke capability of the check valves associated with relief request No. 10 will only be used again for testing during the third refueling outage and a revised test method which meets the requirements of the Code and Generic Letter No. 89-04 will also be implemented in time to support the fourth refueling outage. Revisions to the above mentioned relief requests may be necessary to support future testing and will be submitted in a future proposed revision to the Unit 2 IST Program if necessary.

This test method was the subject of our submittal to the NRC dated February 27, 1992, wherein we identified an open item associated with the Unit 2 program resulting from our review of the NRC's supplemental safety evaluation report on the Unit 1 IST Program. Within that submittal we indicated that our test methods would be utilized during the third refueling outage since the NRC concluded that this method has provided an acceptable level of assurance that the valves will open if required in the interim period until the revised testing can be performed. In assessing anomaly Number 6 we have determined that valve relief requests Numbers 7 and 9 which were not discussed in the February 27, 1992, submittal also utilize the test method discussed in the NRC's supplemental SER on Unit 1. They will be addressed in the same manner as our commitment contained in our February submittal.

Response Summary

Anomaly Numbers 2, 3, and 5 requested a 90 day response. The above represents our response and indicates that there are no changes required for the IST Program. All procedure changes are in place to support the third refueling outage. SER section 2.0 requests that program or procedural changes covered in Appendix A should be completed within 1 year of this Safety Evaluation. Anomaly No. 1 requests relief from the NRC and will be implemented on a schedule which results from the NRC review of our request. Anomaly No. 4 will be implemented during the current refueling outage. Anomaly No. 6 will be implemented on a schedule consistent with our commitment documented in our February 27, 1992, submittal. If it becomes necessary to submit additional requests for relief, a schedule for implementation will be developed at that time which will be based on NRC approval of our requests for relief.

Enclosure 2