

ATTACHMENT A

Beaver Valley Power Station, Unit No. 1  
Proposed Technical Specification Change No. 192

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Revise the Technical Specification as follows:

Remove Page

3/4 7-5  
3/4 7-6  
B 3/4 7-2

Insert Page

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B 3/4 7-2

PLANT SYSTEMSAUXILIARY FEEDWATER SYSTEMLIMITING CONDITION FOR OPERATION

3.7.1.2 At least three steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

- a. Two feedwater pumps, each capable of being powered from separate emergency busses, and
- b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one auxiliary feedwater pump inoperable, restore at least three auxiliary feedwater pumps (two capable of being powered from separate emergency busses and one capable of being powered by an OPERABLE steam supply system) to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.
- b. With the motor driven auxiliary feedwater pump supplying the redundant header inoperable, realign the two remaining auxiliary feedwater pumps to separate headers within 2 hours.

ADD  
INSERT "B" →

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. When tested pursuant to Specification 4.0.5:
  1. By verifying, that on recirculation flow the above required motor driven pumps develop a discharge pressure greater than or equal to 1155 psig.
  2. By verifying, that on recirculation flow the above required steam turbine driven pump develops a discharge pressure greater than or equal to 1155 psig when the secondary steam pressure is greater than 600 psig.

REPLACE WITH  
INSERT "A"

ADD →

(1) Secondary side steam pressure shall be greater than 600 psig when performing this surveillance for the steam turbine driven pump.

(Proposed Wording)

Attachment to "Auxiliary Feedwater System"

Insert "A"

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. When tested pursuant to Specification 4.0.5:
  - 1. By verifying, that the pump's developed head at the flow test point is greater than or equal to the required developed head as specified in the Inservice Testing Program. The provisions of Specification 4.0.4 are not applicable for entry into Mode 3 for the steam turbine driven pump testing.<sup>(1)</sup>

Insert "B"

- c. With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- d. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible.

PLANT SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days by:

1. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
2. Re-verifying the requirements of Technical Specification Surveillance 4.7.1.2.b.1 by a second and independent operator.
3. Establish and maintain constant communications between the control room and the auxiliary feed pump room while any normal discharge valve is closed during surveillance testing.
4. Verifying operability of each River Water Auxiliary Supply valve by cycling each manual River Water to Auxiliary Feedwater System valve through one complete cycle.

DELETE

- c. ~~Following an extended plant outage~~ Verify Auxiliary Feedwater flow from WT-TK-10 to the Steam Generators with the Auxiliary Feedwater Valves in their normal alignment. (a)

ADD

d. At least once per 18 months during shutdown by:

1. Cycling each power operated (excluding automatic) valve in the flow path that is not testable during plant operation, through at least one complete cycle of full travel.
2. Verifying that each automatic valve in the flow path actuates to its correct position on a test signal.
3. Verifying that each pump starts automatically upon receipt of a test signal.

ADD

(2) This surveillance is required to be performed prior to entry into Mode 2 whenever the plant has been in Modes 5 or 6 for greater than 30 continuous days.

BASES

SAFETY VALVES (Continued)

- U = maximum number of inoperable safety valves per operating steam line
- (109) = Power Range Neutron Flux-High Trip Setpoint for (N) loop operation
- (W) = 71 percent of RATED THERMAL POWER permissible by P-8 Setpoint for 2 loop operation with stop valves open.
- (W) = 66 percent of RATED THERMAL POWER permissible by P-8 Setpoint for 2 loop operation with stop valves closed.
- X = Total relieving capacity of all safety valves per steam line in lbs/hour (4,261,666)
- Y = Maximum relieving capacity of one safety valve in lbs/hour (873,600)

3/4.7.1.2 AUXILIARY FEEDWATER PUMPS

The OPERABILITY of the auxiliary feedwater pumps ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss of off-site power.

← DELETE

~~Each electric driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 350 gpm at a pressure of 1153 psig to the entrance of steam generators. The steam driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 700 gpm at a pressure of 1153 psig to the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the Residual Heat Removal System may be placed into operation.~~

3/4.7.1.3 PRIMARY PLANT DEMINERALIZED WATER

The capacity of each auxiliary feedwater pump

The OPERABILITY of the PPDW storage tank with the minimum water volume ensures that sufficient water is available for cooldown of the Reactor Coolant System to less than 350°F in the event of a total loss of off-site power. The minimum water volume is sufficient to maintain the RCS at HOT STANDBY conditions for 9 hours with steam discharge to atmosphere.



## ATTACHMENT B

### Beaver Valley Power Station, Unit No. 1 Proposed Technical Specification Change No. 192 REVISION OF TECHNICAL SPECIFICATION 3.7.1.2

#### A. DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment would add two additional action statements "c" and "d" to Limiting Condition For Operation (LCO) 3.7.1.2. The proposed action statement "c" deals with the condition when two auxiliary feedwater (AFW) pumps are inoperable. The proposed action statement "d" deals with the condition when all three auxiliary feedwater pumps are inoperable. Surveillance Requirement (SR) 4.7.1.2.a would be revised by deletion of the specific auxiliary feedwater pump parameter for discharge pressure. The proposed wording would require that the auxiliary feedwater pumps be demonstrated operable by testing pursuant to Specification 4.0.5. The testing will include verification that the pump's developed head at the flow test point is greater than or equal to the required developed head as specified in the Inservice Testing (IST) Program. Additionally, an exception to Specification 4.0.4 will be added for the steam turbine driven auxiliary feedwater pump testing. A note would be added to the bottom of the page which states that the steam turbine driven pump testing shall be conducted only when secondary side steam pressure is greater than 600 psig. Surveillance requirement 4.7.1.2.c would be revised to clarify that this surveillance requirement applies when the plant is in Modes 5 or 6 for greater than 30 continuous days and must be performed prior to entry into Mode 2. The Bases for Limiting Condition for Operation 3.7.1.2 would be revised by deleting the specific pump parameters for flow and pressure delivered to the steam generators.

#### B. BACKGROUND

The current SR 4.7.1.2.a wording requires that a specific discharge pressure be obtained for each auxiliary feedwater pump. The proposed change to SR 4.7.1.2.a deletes these specific values and will allow the required developed head and flow rates to be established and periodically reevaluated through our procedures for ASME Section XI testing.

The AFW pumps are equipped with minimum flow recirculation lines which include orifices large enough to ensure that the pumps will not overheat when run with all other flow paths closed. This minimum flow was the basis for the current pump discharge pressure specified in SR 4.7.1.2.a. The current value of 1155 psig discharge pressure was found to be in error and has been administratively raised to ensure that the AFW pumps will perform as assumed in the accident analyses. Review of past AFW pump performance data has shown acceptable pump operation when evaluated against the new acceptance criteria.

The value for pump discharge pressure specified in the current wording for SR 4.7.1.2.a is derived by first determining the minimum operating point (MOP) for the required pump head and flow as assumed in applicable safety analysis for the AFW pumps. Once

the MOP is determined, a value for pump discharge pressure is determined for the full recirculation conditions specified in SR 4.7.1.2.a by following the shape of pump performance curve of record from the MOP to that specific point on the curve. Once this value for pump discharge pressure for full recirculation conditions has been determined and incorporated into SR 4.7.1.2.a, the pump(s) must always be run at this test point for the purpose of demonstrating pump operability.

The proposed change to SR 4.7 1.2.a would delete the reference to this specific test point. The proposed wording for SR 4.7.1.2.a allows the AFW pumps to be tested at any point from complete recirculation to full flow conditions. The curve which will define whether the AFW pumps develop the specific head required to meet safety analyses will be the individual MOP curve for each AFW Pump. Each MOP curve will be contained in the IST Program and controlled in accordance with program requirements. A draft revision to the IST program is contained in Attachment B-1 for informational purposes. Future changes to these MOP curves, if this amendment request is approved, will be made as necessary through the 10 CFR 50.59 process and will be sent to the Nuclear Regulatory Commission (NRC) as part of revision updates to the IST Program.

The proposed addition of action statement "d" is for the condition where all three AFW pumps are inoperable. The plant is in a degraded condition with no safety related means for conducting a cooldown, and only limited means for conducting a cooldown with non-safety related equipment. In such a condition, the plant should not be perturbed by any action that might result in a reactor trip.

The proposed exception to Specification 4.0.4 for entry into Mode 3 for the steam driven AFW pump is necessary due to insufficient amount of steam in Mode 4, 5 or 6 to perform a valid test.

#### C. JUSTIFICATION

The proposed addition of action statement "c" is consistent with the Standard Technical Specifications (STs) and BVPS Unit 2 Technical Specifications. The proposed action statement "c" will allow the plant to be shutdown to Mode 4 under the guidance of the LCO action statement when two AFW pumps are inoperable rather than being required to enter LCO 3.0.3. Without the proposed action statement "d", the plant would enter LCO 3.0.3 which would require the plant to commence a shutdown within one hour without a safety related means for conducting the cooldown. Without any AFW pumps, the plant is in a safer condition by not attempting a plant cooldown than it would be by entering LCO 3.0.3 and possibly resulting in a reactor trip without a safety related means for conducting the cooldown.

The proposed exception to Specification 4.0.4 for entry into Mode 3 for the steam driven AFW pump is consistent with STS and BVPS Unit 2 Technical Specifications. This proposed exemption is necessary since there is insufficient amount of steam in Modes 4, 5 or 6 to perform a valid test.

The proposed addition of the note which states that the steam turbine driven pump testing shall be conducted only when secondary side steam pressure is greater than 600 psig is consistent with existing wording and is necessary due to the specific design of this turbine driven pump to ensure valid test results.

The proposed revision to SR 4.7.1.2.a will continue to verify that each AFW pump will develop the specific head and flow necessary to demonstrate acceptable pump operation. The specific criteria for pump head and flow will be controlled in accordance with the IST Program requirements. Any future changes to these pump head and flow requirements will be made under the 10 CFR 50.59 process and will be forwarded to the NRC as part of the IST Program revision process. This will reduce the need to submit a request for a technical specification change on this Surveillance Requirement due to changes in plant analyses or changes in pump performance characteristics due to pump overhaul. This is consistent with the NRC's policy on Technical Specification improvements.

The proposed change to SR 4.7.1.2.a will also allow the AFW pumps to be tested for the purposes of satisfying SR 4.7.1.2.a at full flow conditions as plant conditions allow. Full flow pump testing is similar to conditions when the pump(s) are performing their safety function. With the current wording contained in SR 4.7.1.2.a, the AFW pumps must be run in full recirculation conditions since the surveillance specifies only one flow test point. In certain cases, the AFW pump testing must be performed more than once per specific surveillance interval due to the specific test conditions which must be met when performing the current SR 4.7.1.2.a. With the proposed wording of SR 4.7.1.2.a when an AFW pump is running for any reason, SR 4.7.1.2.a can be performed as necessary at that flow condition. This will result in less AFW pump running time for the purpose of satisfying SR 4.7.1.2.a. AFW pump run time and wear would be reduced due to this added testing flexibility.

The proposed revision to SR 4.7.1.2.c would clarify that this surveillance requirement applies when the plant is in Modes 5 or 6 for greater than 30 continuous days and must be performed prior to entry into Mode 2. The existing wording only states the surveillance is applicable following an extended plant outage and does not define what length of time an extended plant outage involves. The proposed wording will clearly specify when this surveillance must be performed, and is consistent with the STS.



#### D. SAFETY ANALYSIS

The AFW pumps will continue to be tested in a manner which will demonstrate that they will deliver sufficient feedwater to the steam generators to remove decay heat from the reactor coolant system upon the loss of normal feedwater supply. The proposed changes to SR 4.7.1.2 will not affect the ability of the AFW system to perform this function. Changes to the AFW pump head and flow requirements will be made under the 10 CFR 50.59 process and controlled under the IST Program administrative requirements. Therefore, changes to these specific pump parameters will be controlled under a process which will continue to ensure safe plant operation. The added flexibility of allowing the AFW pumps to be run at various flow conditions for the purposes of satisfying SR 4.7.1.2.a will reduce the time the pumps are run on recirculation flow and total pump running time. This will reduce pump wear as a result of these two factors. The addition of the third action statement will address the condition when two AFW pumps are inoperable. This change to the action statements is administrative in nature. The plant will continue to be placed in a mode where the L.C.O. does not apply for the condition when two AFW pumps are inoperable. Therefore, plant safety will not be affected by this proposed change.

The addition of a fourth action statement will ensure that when no safety related means for conducting a plant cooldown are available, the plant is not forced to shutdown. Therefore, plant safety will be enhanced by this proposed change.

The addition of the exemption to Specification 4.0.4 for the steam driven pump is an administrative change and does not affect the availability of the steam driven pump to perform as required. The additional wording which would be added to SR 4.7.1.2.c is an editorial change intended to clarify when this surveillance is required to be performed. Therefore, plant safety will not be affected by this proposed change.

Therefore, this change is considered safe based on the fact that the AFW pumps will continue to perform as assumed in the safety analysis to automatically deliver the required flow to the steam generators in order to remove decay heat from the reactor coolant system, the plant will not be forced into a shutdown with no safety-related means for conducting the cooldown, and the added testing flexibility will have a net result in reducing pump wear.

#### E. NO SIGNIFICANT HAZARDS EVALUATION

The no significant hazard considerations involved with the proposed amendment have been evaluated, focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below:

The Commission may make a final determination, pursuant to the procedures in paragraph 50.91, that a proposed amendment to an operating license for a facility licensed under

paragraph 50.21(b) or paragraph 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The following evaluation is provided for the no significant hazards consideration standards.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The probability of occurrence of a previously evaluated accident is not increased because the allowable outage time for the AFW pumps remains unchanged. The AFW pump performance and reliability will also not be changed by this proposed amendment. The probability of an accident will be reduced by the addition of action statement "d". By not requiring the plant to commence a shutdown without any safety related means for conducting the cooldown, the probability that a reactor trip will occur concurrent with the loss of the safety related means for removing decay heat is lowered. Due to these factors, the probability of an accident previously evaluated is not significantly increased.

The proposed changes to SR 4.7.1.2 do not affect the ability of the AFW pumps to perform as assumed in the safety analyses. The proposed changes will not result in any additional challenges to the plant equipment. Because the plant design limits will continue to be met, the fuel and reactor coolant system pressure boundary integrity is not challenged for the assumptions employed in the calculation of the offsite radiological doses. Hence, the consequences of the accidents considered in the BVPS Unit No. 1 licensing basis remain unchanged.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

There would be no change to system configurations, plant equipment or analysis as a result of this proposed amendment.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

The proposed changes will not affect the heat removal capability of the auxiliary feedwater system to a value less than that assumed in the safety analysis. The proposed changes will not result in any additional challenges to the plant equipment including the fuel and reactor coolant system pressure boundary. The plant will continue to operate within the bounds of the various safety analyses.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

#### F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the considerations expressed above, it is concluded that the activities associated with this license amendment request satisfies the no significant hazards consideration standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

ATTACHMENT B-1

Beaver Valley Power Station, Unit No. 1  
Proposed Technical Specification Change No. 192

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Proposed Revisions to the Inservice Testing Program for Pumps and  
Valves

4. The pump shall not be returned to service until the condition has been corrected. The corrective action shall be considered completed when a satisfactory inservice test has been conducted in accordance with IWP-3111.

Per IWP-3500 each pump shall run at least 5 minutes under conditions as stable as the system permits prior to measurement of the specified parameters (when bearing temperature measurements are not required). When bearing temperature measurements are required, each pump shall be run until the bearing temperatures stabilize prior to making the specified measurements. A bearing temperature is considered stable when three successive readings taken at 10 minute intervals do not vary by more than 3%. Bearing temperature measurements are required annually (normally in August).

At certain times plant conditions may preclude returning a pump to the same reference condition for its normally scheduled surveillance. Since IWP-3112 permits the establishment of additional sets of reference values, a pump curve which is merely a graphical representation of these reference values will be used.

Records of the results of inservice tests and corrective actions as required by subsection IWP-6000 are trended in tabular form. Pump performance characteristics will be examined for trends.

**"Pump Minimum Operating Point (MOP) Curves"**

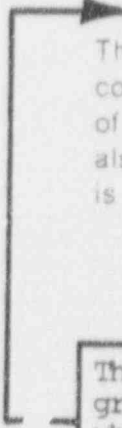
The following ~~two~~ <sup>three</sup> sections of this document are the "Pump Testing Outlines" and "Pump Relief Requests" sections. The "Pump Testing Outlines" section is a listing of all the pumps in the IST Program, their testing requirements, and their specific relief request reference numbers. The pumps are arranged according to system and pump mark number. The following abbreviations and designations are used on the Pump Testing Outlines and throughout the IST Program for pumps:

1. Under Parameter column
  - a. (N) - Speed
  - b. (Pi) - Inlet Pressure
  - c. ( $\Delta P$ ) - Differential Pressure
  - d. (Q) - Flowrate
  - e. (V) - Vibration
  - f. (Tb) - Bearing Temperature
  - g. (L) - Lubricant Level or Pressure
2. Under OST column
  - a. (1BVT) - Unit 1 Beaver Valley Test
  - b. (1OST) - Unit 1 Operating Surveillance Test
  - c. (Q) - Quarterly Test Frequency
  - d. (A) - Annual Test Frequency
  - e. (R) - Refueling Test Frequency
  - f. (NA) - Not Applicable



3. Under Req'd column

- a. (RR) - Relief Request
- b. (X) - Meets or exceeds ASME requirements
- c. (E) - Exempt
- d. (NA) - Not Applicable



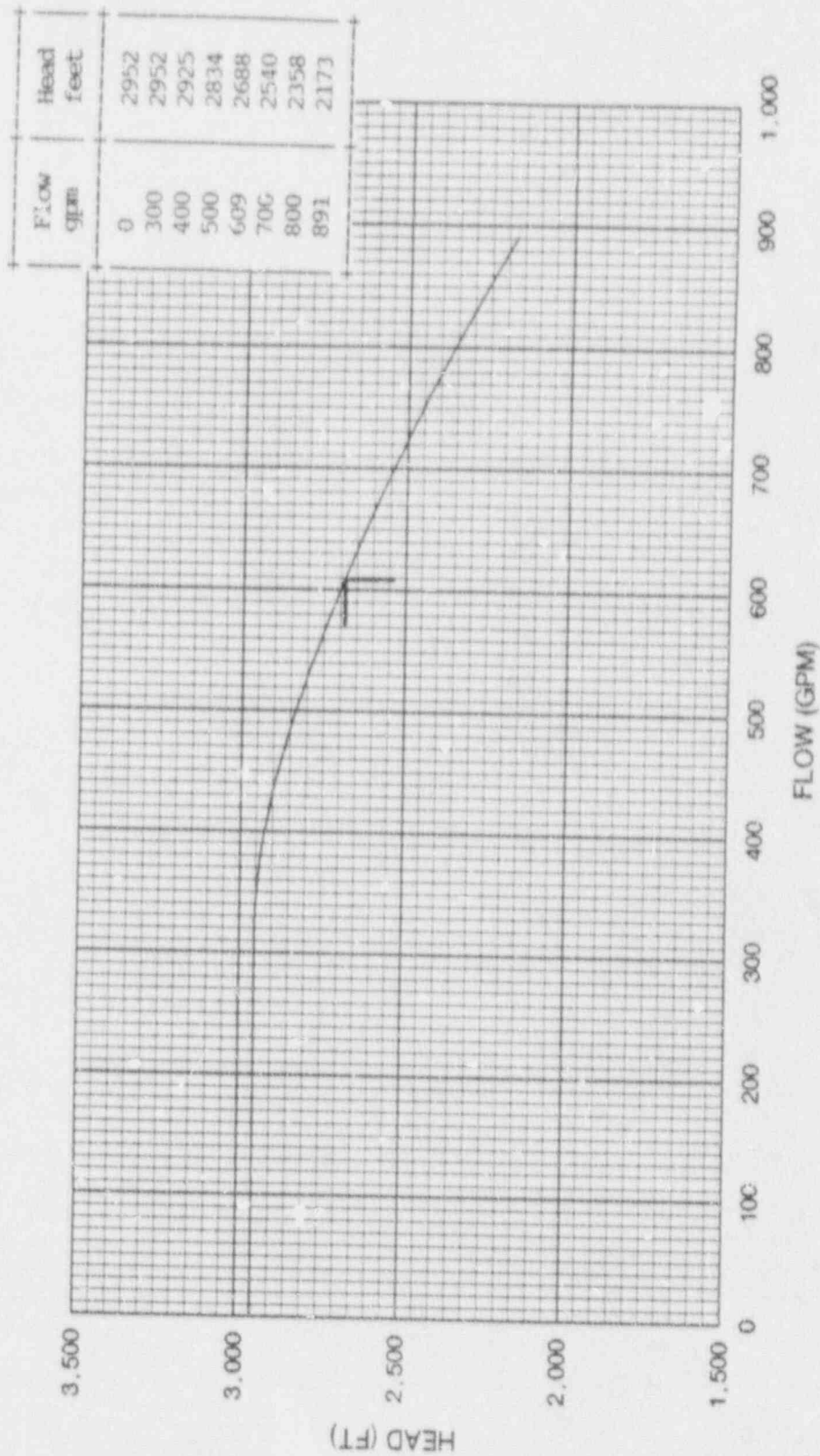
The "Pump Relief Requests" section contains the detailed technical description of particular conditions and equipment installations prohibiting the testing of some of the characteristics of safety-related pumps. An alternate test method and the frequency of revised testing is also included to meet the intent of 10CFR50.55a. The relief request(s) for a specific pump is referenced by the number(s) listed on the pump's testing outline sheet.

The "Pump Minimum Operating Point (MOP) Curves" section contains a graphical representation of the minimum allowable pump flow versus head which is required to meet applicable safety analyses for each pump in the Unit 1 IST Program.

SECTION III: PUMP MINIMUM OPERATING POINT (MOP) CURVES

Pump Name: Steam Driven Auxiliary Feed Pump

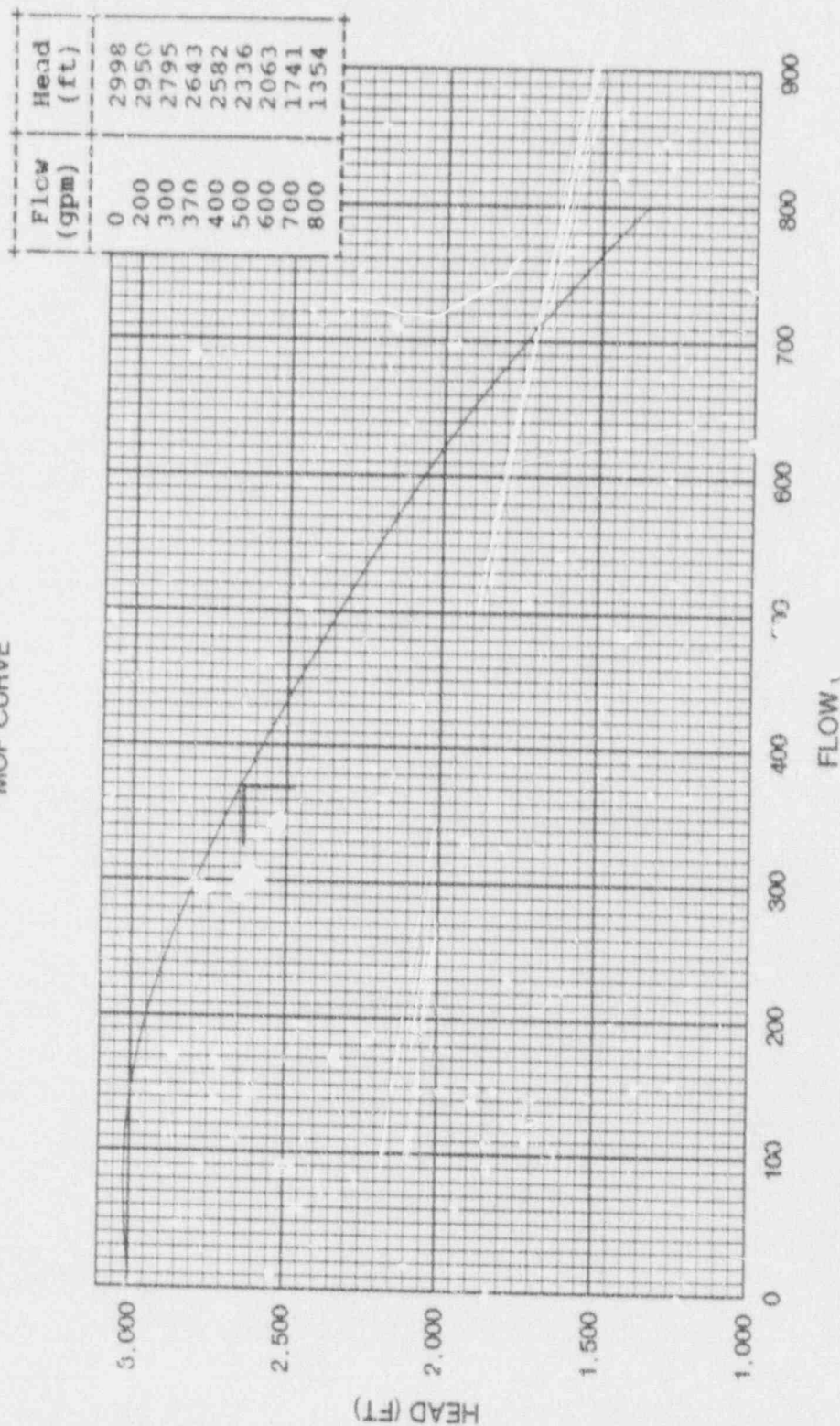
Pump Number: 1FW-P-2

1FW-P-2  
MOP CURVEDERIVED AS 90% OF MANUFACTURER'S TEST CURVE.  
PER CALCULATION #8700 24.46 REV 0.

AUGUST 12, 1992

Pump Name: Motor Driven Auxiliary Feed Pump

Pump Number: 1FW-P-3A

1FW-P-3A  
MOP CURVEBASED ON THE MINIMUM ANALYZED FLOW OF 350 GPM  
TO THE S/G, PER CALCULATION #8700.24.46 REV 0.

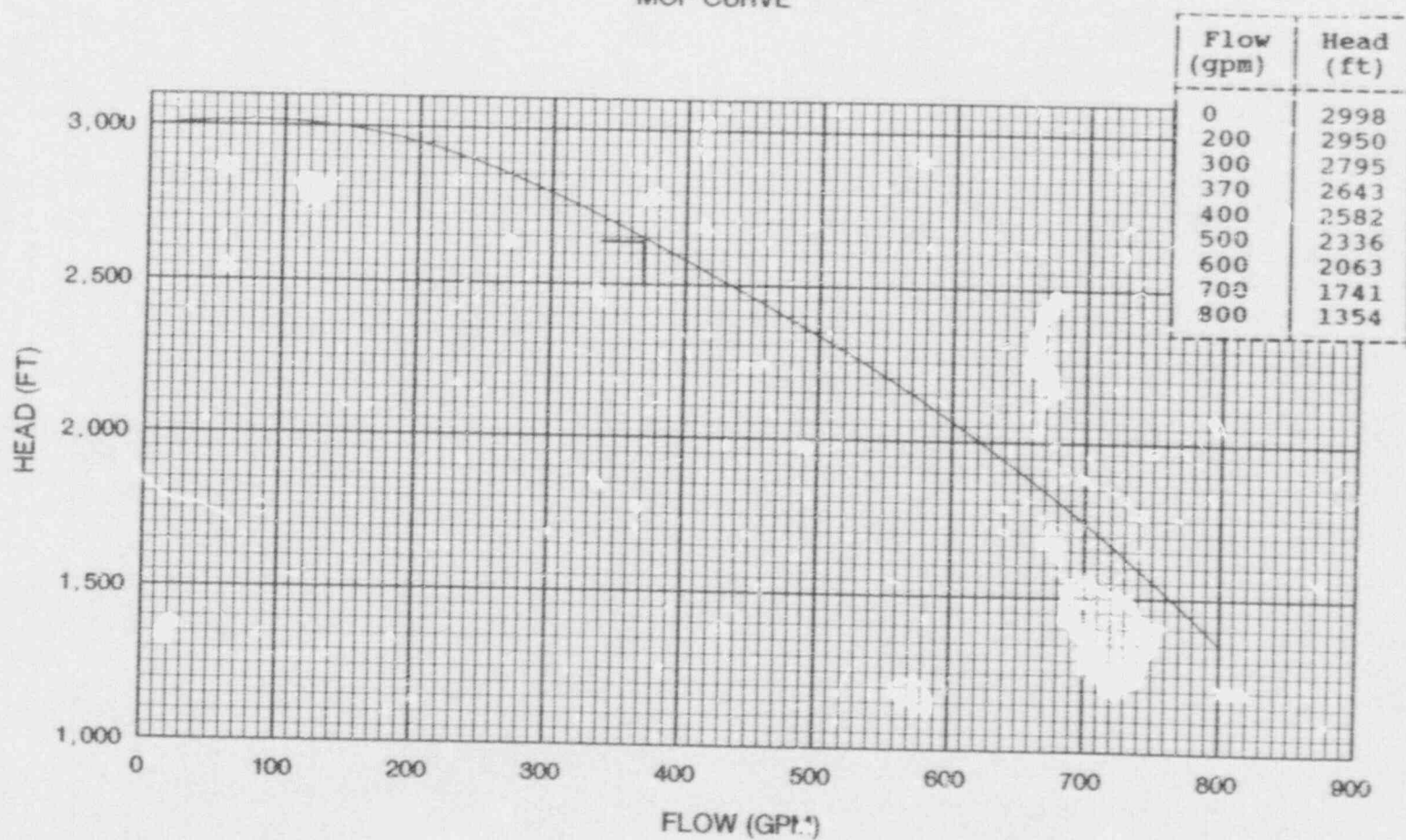
APRIL 15, 1991

## INSERVICE TESTING (IST) PROGRAM FOR PUMPS AND VALVES

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Pump Name: Motor Driven Auxiliary Feed Pump

Pump Number: 1FW-P-3B

1FW-P-3B  
MOP CURVE

BASED ON THE MINIMUM ANALYZED FLOW OF 350 GPM  
TO THE S/G, PER CALCULATION #8700.24.46 REV 0.

APRIL 15, 1991



ATTACHMENT C

Beaver Valley Power Station, Unit No. 1  
Proposed Technical Specification Change No. 192

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## PLANT SYSTEMS

### AUXILIARY FEEDWATER SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.7.1.2 At least three steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

- a. Two feedwater pumps, each capable of being powered from separate emergency busses, and
- b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

#### ACTION:

- a. With one auxiliary feedwater pump inoperable, restore at least three auxiliary feedwater pumps (two capable of being powered from separate emergency busses and one capable of being powered by an OPERABLE steam supply system) to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.
- b. With the motor driven auxiliary feedwater pump supplying the redundant header inoperable, realign the two remaining auxiliary feedwater pumps to separate headers within 2 hours.
- c. With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- d. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible.

#### SURVEILLANCE REQUIREMENTS

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4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. When tested pursuant to Specification 4.0.5:
  1. By verifying, that the pump's developed head at the flow test point is greater than or equal to the required developed head as specified in the Inservice Testing Program. The provisions of Specification 4.0.4 are not applicable for entry into Mode 3 for the steam turbine driven pump testing.<sup>(1)</sup>

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(1) Secondary side steam pressure shall be greater than 600 psig when performing this surveillance requirement for the steam turbine driven pump.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 31 days by:
  - 1. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
  - 2. Reverifying the requirements of Technical Specification Surveillance 4.7.1.2.b.1 by a second and independent operator.
  - 3. Establish and maintain constant communications between the control room and the auxiliary feed pump room while any normal discharge valve is closed during surveillance testing.
  - 4. Verifying operability of each River Water Auxiliary Supply valve by cycling each manual River Water to Auxiliary Feedwater System valve through one complete cycle.
- c. Verify Auxiliary Feedwater flow from WT-TK-10 to the Steam Generators with the Auxiliary Feedwater Valves in their normal alignment. <sup>(2)</sup>
- d. At least once per 18 months during shutdown by:
  - 1. Cycling each power operated (excluding automatic) valve in the flow path that is not testable during plant operation, through at least one complete cycle of full travel.
  - 2. Verifying that each automatic valve in the flow path actuates to its correct position on a test signal.
  - 3. Verifying that each pump starts automatically upon receipt of a test signal.

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(2) This surveillance is required to be performed prior to entry into Mode 2 whenever the plant has been in Modes 5 or 6 for greater than 30 continuous days.

## PLANT SYSTEMS

### BASES

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- U = maximum number of inoperable safety valves per operating steam line
- (109) = Power Range Neutron Flux-High Trip Setpoint for (N) loop operation
- (W) = 71 percent of RATED THERMAL POWER permissible by P-8 Setpoint for 2 loop operation with stop valves open.
- (W) = 66 percent of RATED THERMAL POWER permissible by P-8 Setpoint for 2 loop operation with stop valves closed.
- X = Total relieving capacity of all safety valves per steam line in lbs/hour (4,261,666)
- Y = Maximum relieving capacity of an one safety valve in lbs/hour (873,600)

### 3/4.7 1.2 AUXILIARY FEEDWATER PUMPS

The OPERABILITY of the auxiliary feedwater pumps ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss of off-site power.

The capacity of each auxiliary feedwater pump is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the Residual Heat Removal System may be placed into operation.

### 3/4.7.1.3 PRIMARY PLANT DEMINERALIZED WATER

The OFFRABILITY of the PPDW storage tank with the minimum water volume ensures that sufficient water is available for cooldown of the Reactor Coolant System to less than 300°F in the event of a total loss of off-site power. The minimum water volume is sufficient to maintain the RCS at HOT STANDBY conditions for 9 hours with steam discharge to atmosphere.