

ATTACHMENT A

Beaver Valley Power Station, Unit No. 1  
Proposed Technical Specification Change No. 185

Revise the Technical Specifications as follows:

Remove Page

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Insert Page

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PLANT SYSTEMS  
MAIN STEAM LINE ISOLATION VALVES  
LIMITING CONDITION FOR OPERATION

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3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODES 1 - With one main steam line isolation valve inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours;

Otherwise, be in HOT SHUTDOWN within the next 12 hours.

MODES 2 - With one main steam line isolation valve inoperable,  
and 3 subsequent operation in MODES 2 or 3 may proceed after:

a. The inoperable isolation valve is restored to OPERABLE status, or

b. The isolation valve is maintained closed;

Otherwise, be in HOT SHUTDOWN within the next 12 hours.!

SURVEILLANCE REQUIREMENTS

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4.7.1.5 Each main steam line isolation valve ~~that is open~~ shall be demonstrated OPERABLE by ~~verifying full closure within 5 seconds when~~ *tested pursuant to Specification 4.0.5.*

~~a. Part-stroke exercising the valve at least once per 92 days, and~~

~~b. Verifying full closure within 5 seconds on any closure actuation signal while in HOT STANDBY with  $T_{avg} \geq 515^{\circ}F$  during each reactor shutdown except that verification of full closure within 5 seconds need not be determined more often than once per 92 days.~~

## ATTACHMENT B

### Beaver Valley Power Station, Unit No. 1 Proposed Technical Specification Change No. 185 Revised MSIV Surveillance Requirements

#### A. DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment would modify the surveillance requirements of Specification 4.7.1.5, Main Steam Line Isolation Valves, to reflect the Standard Technical Specification (STS) requirements and eliminate the technical specification (TS) requirement to part-stroke the valves. The STS require verification of the main steam line isolation valve (MSIV) closure time when tested in accordance with Specification 4.0.5.

#### B. BACKGROUND

Specification 4.0.5 requires testing applicable components in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. The ASME Code, Section XI, Article IWV-3000 states that "Valves shall be exercised to the position required to fulfill their function unless such operation is not practical during plant operation. If only limited operation is practical during plant operation, the valve shall be part-stroke exercised during cold shutdown."

Since closing a MSIV during operation would result in a plant trip, the plant has been doing partial-stroke testing quarterly as specified by the ASME Code and full stroke and time testing during reactor shutdown.

A review of past reactor trip history indicates there have been several plant shutdowns caused by inadvertent closing of the MSIV's during partial stroke testing. A change to eliminate the specific technical specification requirement to part-stroke exercise the MSIV's will provide an opportunity to consider revising the IST Program testing through a modified cold shutdown justification if the testing has the potential to introduce undesirable plant transients, i.e. emergency plant shutdown or plant trip.

#### C. JUSTIFICATION

The current MSIV testing requirements are consistent with the ASME requirements and are being modified to reflect the STS format by reference to testing in accordance with Specification 4.0.5. The MSIV's will continue to be operated in the same manner and the revised surveillance requirements provide consistency with the 1983 edition of ASME Section XI. This will eliminate the need for future TS changes to reflect changes to ASME Section XI.

D. SAFETY ANALYSIS

The proposed surveillance requirements only require verifying full MSIV closure within 5 seconds when tested pursuant to Specification 4.0.5 and eliminate reference to specific testing requirements already contained in ASME. This will be consistent with future changes to the ASME program and eliminate unnecessary TS changes.

The proposed TS change will allow a change to the IST program applicable to the MSIV's to eliminate the specific requirement to part-stroke exercise these valves. Part-stroke exercising these valves has in the past been the initiating event which has led to inadvertent closure of an MSIV which caused a plant transient that resulted in challenging the reactor trip system. This is an undesirable condition which we are striving to avoid by improving the TS and modifying those requirements with the potential to cause transient events. Attachment D provides changes to the UFSAR to accommodate the above change by removing reference to specific testing of the MSIV's. The UFSAR changes are provided for information only and will be incorporated following approval of the proposed TS change. These changes are considered safe since they are consistent with the regulations and will not affect the operation or function of the plant.

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 proposed changes eliminate requirements that are redundant to the requirements already contained in the ASME program. Replacing the current requirements with reference to testing pursuant to Specification 4.0.5 removes the potential for future TS changes as a result of changes in the ASME program. The modified surveillance requirements are consistent with the STS and comply with the requirements of 10 CFR 50.55a(g) 4(i). The proposed changes are administrative in nature and do not require physical change to any plant safety related systems or components and will not affect the function or operation of safety related equipment. The proposed TS change will allow a change to the IST program if deemed appropriate to eliminate the specific requirement to part-stroke exercise these valves. Part-stroke exercising these valves has in the past led to inadvertent closure of an MSIV which caused a plant transient that resulted in challenging the reactor protection system. The proposed change will not affect the operation or function of the MSIV's, therefore, the probability of occurrence or the consequences of accidents previously evaluated will not be increased.

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

The MSIV's will continue to be full stroke exercised to verify closure within 5 seconds in accordance with the accident analyses. Removal of the requirement to part-stroke the MSIV's will provide an opportunity to revise the IST program. MSIV testing will be in accordance with ASME XI. Attachment D provides changes to UFSAR Section 7.3 and 10.3 to remove reference to specific testing of the MSIV's. These changes are provided for information purposes and will be incorporated following approval of this technical specification change. Valve testing will continue to be performed in accordance with the IST program, therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The accident analyses assume valve closure in 5 seconds and they will continue to be tested to this criteria. The valves will continue to be operated in the same manner and

under the same conditions. Additionally, the MSIV Bases will not be affected by these changes. Therefore, the proposed change does not involve a significant reduction in a margin of safety and will act to reduce challenges to the reactor protection system.

F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the above safety analysis, 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.

G. ENVIRONMENTAL EVALUATION

The proposed changes have been evaluated and it has been determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed changes is not required.

ATTACHMENT C

Beaver Valley Power Station, Unit No. 1  
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PLANT SYSTEMS  
MAIN STEAM LINE ISOLATION VALVES  
LIMITING CONDITION FOR OPERATION

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3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

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and 3 subsequent operation in MODES 2 or 3 may proceed after:

a. The inoperable isolation valve is restored to OPERABLE status, or

b. The isolation valve is maintained closed;

Otherwise, be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

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4.7.1.5 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 5 seconds when tested pursuant to Specification 4.0.5.



ATTACHMENT D

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Applicable UFSAR Changes.

Devices are assigned to the slave relays such that no undesired effect on unit operation occurs. This procedure minimizes upset to the unit and again ensures that overlap in the testing is continuous, since the normal power supply for the slave relays is utilized.

During this last procedure, close communication between the main control room operator and the man at the test panel is required. Prior to the energizing of a slave relay, the operator in the main control room ensures that unit conditions will permit operation of the equipment that will be actuated by the relay. After the tester has energized the slave relay, the main control room operator observes that all equipment has operated as indicated by appropriate indicating lamps, monitor lamps and annunciators on the control board, and using a prepared check list, records all operations. He then resets all devices and prepares for operation of the next slave relay actuated equipment.

By means of the procedure outlined above, all devices actuated by ESF systems initiation circuits, with the following exceptions, are operated by the test circuitry:

1. MAIN STEAM ISOLATION: The main steam isolation valves can be partially tested during normal operation. The test sequence involves a test of solid state protection system output relay contact operation and continuity of solenoid coil initiating steam line isolation. These are tested via the on-line test cabinets. ~~A partial test of disc movement is also accomplished, which involves lowering the valve disc 3 degrees from its open position and the return of the disc to its full open position. The angle movement is not great enough to cause uncontrolled closure, which would be undesirable during normal operation, but it is sufficient to ascertain that the disc support pin is free to rotate and not hung up.~~
2. FEEDWATER ISOLATION: Air-operated, spring closed regulating control valves are provided for each main feedwater line. Operation of these valves is continually monitored by normal operation.
3. REACTOR COOLANT PUMP ESSENTIAL SERVICE ISOLATION:
  - a. Component cooling water supply and return. These valves cannot be fully tested during normal operation.
  - b. Seal water return header. These valves cannot be fully tested during normal operation.

nonreturn valve in the ruptured line prevents blowdown from the other steam generators. This is the worst steam break accident and is discussed in Section 14.2.5.

#### 10.3.1.4 Tests and Inspections

During unit refueling shutdown, the tripping mechanisms for the swing trip valves in the main steam lines are tested for proper operation in accordance with the BVPS Technical Specifications. ~~They are also inservice tested for partial closure periodically.~~ The nonreturn valves are also tested to verify that they are in operable condition.

Preoperational testing includes a hydrostatic line test and a clean flush plus complete checkout of instrumentation components.

The turbine steam bypass system and the steam dump valves are operated during startup in conjunction with the turbine overspeed test (Section 10.3.3.4).

To meet the inservice inspection requirements, the lines will be provided with removable insulation to permit ultrasonic testing of the welds upstream of the isolation valves. These welds are prepared to suit this inspection.

#### 10.3.2 Auxiliary Steam System

The auxiliary steam system is shown in Figure 10.3-2.

##### 10.3.2.1 Design Bases

The auxiliary steam system piping is designed in accordance with the Code for Pressure Piping, ANSI B31.1.

The purpose of the auxiliary steam system (capable of supplying 86,000 lb per hr of saturated steam) is to distribute 150 psig steam throughout the station for auxiliary services, including the following:

1. Turbine gland steam during startup and shutdown
2. Condenser steam jet air ejectors
3. Condenser vacuum priming ejectors
4. Building heating and other building services
5. Outdoor tank heating
6. Containment vacuum ejector.

ATTACHMENT E

Beaver Valley Power Station, Unit No. 1  
Proposed Technical Specification Change No. 185

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MSIV Cold Shutdown Justification

BVPS-1 IST

COLD SHUTDOWN JUSTIFICATION 24

Valve No.: TV-MS-101A  
TV-MS-101B  
TV-MS-101C

Category B Class 2

Function: Main Steam isolation valves.

Test Requirements: Quarterly stroke and time.

Basis for CSJ: These valves are normally open at power but must close in the event of a high energy line break. Stroking these valves fully closed during full power operation would cause a reactor trip with the possibility of a safety injection. A review of plant history also indicates that several forced plant shutdowns have resulted from part stroke testing these valves at power due to their inadvertent closure for reasons not related to valve operability. For this reason part stroke testing is not considered practical. Therefore, in accordance with ASME XI, paragraph IWV-3412(a), relief is requested from both quarterly full and part stroke time testing at power. This change as proposed will make the IST Program consistent with the intent of Technical Specification Change Request 1A-185.

Alternate Test: Full stroke and time in hot standby with  $T_{avg} \geq 515^{\circ}\text{F}$  per OST 1.21.4, 5 and 6.