

ATTACHMENT A-1

Beaver Valley Power Station, Unit No. 1  
Proposed Technical Specification Change No. 196

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Revise the Technical Specification as follows:

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Insert Page

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NOTATION

- \* - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.
- (1) - If not performed in previous 7 days.
- (2) - Heat balance only, above 15% of RATED THERMAL POWER.
- (3) - *At least once every 31 Effective Full Power Days (EFPD)*  
Compare incore to excore axial imbalance above 15% of RATED THERMAL POWER. Recalibrate if absolute difference  $\geq 3$  percent.
- (4) - (Not Used)
- (5) - Each train tested every other month.
- (6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (7) - Below P-10.
- (8) - P-6.
- (9) - Required only when below Interlock Trip Setpoint.
- (10) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).
- (11) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.
- (12) - Local manual shunt trip prior to placing breaker in service.
- (13) - Automatic undervoltage trip.

ATTACHMENT A-2

Beaver Valley Power Station, Unit No. 2  
Proposed Technical Specification Change No. 63

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Revise the Technical Specification as follows:

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TABLE 4.3-1 (Continued)

TABLE NOTATION

- \* - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.
- (1) - If not performed in previous 7 days.
- (2) - Heat balance only, above 15% of RATED THERMAL POWER.
- (3) - *At least once every 31 Effective Full Power Days (EFPD)*  
Compare incore to excore axial imbalance above 15% of RATED THERMAL POWER. Recalibrate if absolute difference  $\geq 3$  percent.
- (4) - (Not used)
- (5) - Each train tested every other month on a STAGGERED TEST BASIS.
- (6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (7) - Below P-10.
- (8) - Below P-6.
- (9) - Required only when below Interlock Trip Setpoint.
- (10) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).
- (11) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.
- (12) - Local manual shunt trip prior to placing breaker in service.
- (13) - Automatic undervoltage trip. The specified surveillance interval during the first fuel cycle may be extended to coincide with completion of the first refueling outage.

## ATTACHMENT B

### Beaver Valley Power Station, Unit Nos. 1 and 2 Proposed Technical Specification Change No. 196/63 REVISION OF TABLE 4.3-1 NOTATION (3)

#### A. DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment would modify the frequency specified for Table 4.3-1 Notation (3) from "monthly" to "31 effective full power days" (EFPD).

#### B. BACKGROUND

Most surveillances which require a flux map are performed on a frequency of once per 31 EFPD, however, Table 4.3-1 specifies monthly (31 calendar days) for determining the incore to excore axial imbalance. Modifying the frequency for Table 4.3-1 Notation (3) from once per 31 calendar days to once per 31 EFPD will allow this surveillance to be performed on a frequency consistent with other surveillances associated with incore flux maps.

#### C. JUSTIFICATION

Table 4.3-1 Notation (3) requires comparing the incore to excore axial imbalance. Changing the frequency from once per 31 calendar days to once per 31 EFPD will ensure this surveillance is performed at the same time the flux maps are performed that verify the power distribution requirements are met. Performing these surveillances simultaneously will reduce the number of flux maps required and decrease future wear on the incore flux mapping components.

#### D. SAFETY ANALYSIS

Flux mapping is required by various technical specifications to verify peaking factors are within the limits at least once per 31 EFPD and as required by other specifications. One of these other specifications, Table 4.3-1 Notation (3), requires comparison of the incore and excore imbalance on a monthly frequency and requires recalibration of the excore detectors if the absolute difference is greater than or equal to 3 percent. Monthly is defined in the technical specifications as 31 days and is equivalent to 31 EFPD at 100 percent power. A flux map is required to obtain the incore data to compare the incore to excore axial imbalance. To ensure all surveillances that require flux maps on a regular basis are on the same frequency, Table 4.3-1 Notation (3) has been modified to specify a frequency of once per 31 EFPD. This will ensure all surveillances that require a flux map on a regular basis are performed at the same frequency and will eliminate additional flux maps that would otherwise have to be performed to satisfy the one surveillance with a monthly frequency.



If the core was operated for an extended time period at low power the effect on incore to excore axial imbalance would be a fraction of the effect observed at full power operation. The effects on incore to excore axial imbalance due to operation at low power for extended periods are bounded by technical specification rod insertion and delta flux limits. At low power, boron and exposure are homogeneous effects while the control rod position in the core could affect axial offset. However, since the rod insertion and delta flux technical specifications limit allowable rod positions, the effects are bounded by these limits.

If a difference greater than the allowable difference were to exist, the reactor trip setpoint is reduced and during a transient a reactor trip will occur prior to reaching the design trip setpoint. This change will not affect the UFSAR accident analyses and plant safety is inherent in the system design, therefore, changing this surveillance to a 31 EFPD frequency will not reduce the safety 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?

Incore flux mapping is performed in accordance with various technical specifications to verify the core is operating within the design limits and to verify the operability of the excore detectors. Comparison of the incore and excore axial imbalance is required monthly in accordance with Table 4.3-1 Notation (3) and requires recalibration of the excore detectors if the absolute difference is greater than or equal to 3 percent. Flux maps are required to perform this surveillance and this change proposes to modify the monthly surveillance frequency to once per 31 EFPD to ensure all surveillances that require flux maps on a regular basis are performed on the same frequency. This will eliminate additional flux maps that would otherwise be performed to satisfy this one surveillance with a monthly frequency.

The effects on incore to excore axial imbalance due to operation at low power for extended periods are bounded by control rod and delta flux limits. At low power, boron and exposure are homogeneous effects while the control rod position in the core could affect axial offset. However, since the rod insertion and delta flux technical specifications limit allowable rod insertion, these effects are bounded by the limits.

If a difference greater than the allowable difference were to exist, the reactor trip setpoint is reduced and during a transient a reactor trip will occur prior to reaching the design trip setpoint. The change will not affect the UFSAR accident analyses and plant safety is inherent in the system design, therefore, changing this surveillance to a 31 EFPD frequency will 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?

The proposed change will not significantly affect the overall method and manner of plant operation and can be accommodated without compromising the performance or qualification of safety related equipment. This change will not adversely affect the reliability of the reactor protection system or the excore detectors, therefore, this change 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 surveillance frequency for comparing the incore to excore axial imbalance has been modified to be consistent with other surveillances that require flux maps. The proposed change does not affect any plant operating limits and is intended to reduce the potential for equipment failures due to unnecessary testing. Plant operation will be maintained within required limits to ensure that the plant design basis is met, therefore, the proposed change does 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 C-1

Beaver Valley Power Station, Unit No. 1  
Proposed Technical Specification Change No. 196

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NOTATION

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- (4) - (Not Used)
- (5) - Each train tested every other month.
- (6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (7) - Below P-10.
- (8) - Below P-6.
- (9) - Required only when below Interlock Trip Setpoint.
- (10) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).
- (11) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.
- (12) - Local manual shunt trip prior to placing breaker in service.
- (13) - Automatic undervoltage trip.

ATTACHMENT C-2

Beaver Valley Power Station, Unit No. 2  
Proposed Technical Specification Change No. 63

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Typed Page: 3/4 3-13

TABLE 4.3-1 (Continued)

TABLE NOTATION

- \* - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.
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- (9) - Required only when below Interlock Trip Setpoint.
- (10) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).
- (11) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.
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- (13) - Automatic undervoltage trip. The specified surveillance interval during the first fuel cycle may be extended to coincide with completion of the first refueling outage.