

ATTACHMENT A

Revise the Technical Specifications as follows:

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TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	ALLOWANCE (TA)	Z	S	TRIP SETPOINT	ALLOWABLE VALUE
13. Steam Generator Water Level-Low-Low	15.5 11.5	14.18 10.18	1.67	15.5% ^{11.57%} of narrow range instrument span-each steam generator	14.7% ^{10.7%} of narrow range instrument span-each steam generator
14. a. Steam/Feedwater Flow Mismatch	20.0	2.66	See Note 6	< 40% of full steam flow at RTP*	< 43.1% of full steam flow at RTP*
b. Coincident with Steam Generator Water Level Low	25.0	2.18	1.67	> 25% of narrow range instrument span	> 23.2% of narrow range instrument span
15. Undervoltage - Reactor Coolant Pumps	27.7	1.39	0	>75% of BUS Voltage-each bus	>73% of BUS Voltage - each bus
16. Underfrequency-Reactor Coolant Pumps	16.0	0.20	0	>57.5 Hz-each bus	>57.4 Hz-each bus
17. Turbine Trip					
a. Emergency Trip Header Low Pressure	N.A.	N.A.	N.A.	>1000 psig	>958 psig
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	>1% open	>1% open
18. Safety Injection Input from ESF	N.A.	N.A.	N.A.	N.A.	N.A.
19. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	N.A.	N.A.	N.A.
20. Reactor Trip Breakers	N.A.	N.A.	N.A.	N.A.	N.A.

BEAVER VALLEY - UNIT 2

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Proposed Wording

BEAVER VALLEY - UNIT 2

Proposed Wording
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TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE ³ (TA)	Z	SENSOR DRIFT (S)	TRIP SETPOINT	ALLOWABLE VALUE
7. AUXILIARY FEEDWATER (Continued)					
b. Steam Generator Water Level - Low-Low					
1. Start Turbine Driven Pump	11.5 15.5	10.18 14.18	1.67	11.5% > 15.5% of narrow range instrument span	10.7% > 14.7% of narrow range instrument span
2. Start Motor Driven Pumps	11.5 15.5	10.18 14.18	1.67	11.5% > 15.5% of narrow range instrument span	10.7% > 14.7% of narrow range instrument span
c. Undervoltage - RCP (Start Turbine Driven Pump)	27.7	1.39	0.0	> 75% of nominal bus voltage	> 73% of nominal bus voltage
d. Safety Injection (Start Motor-Driven Pumps)	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				
e. Turbine Driven Pump Discharge Pressure Low with Steam Valve Open (Start Motor-Driven Pumps)	5.0	2.0	0	Discharge pressure > 150 psig with steam inlet valves open	Discharge pressure > 145 psig with steam inlet valves open
f. Trip of Main Feedwater Pumps (Start Motor-Driven Pumps)	N.A.	N.A.	N.A.	N.A.	N.A.

ATTACHMENT B

Proposed Unit 2 Technical Specification Change No. 2A-9 Safety Analysis

Description of amendment request: The proposed amendment would revise the steam generator water level low-low reactor trip setpoint in Table 2.2-1 "Reactor Trip System Instrumentation Trip Setpoints" and the steam generator water level low-low auxiliary feedwater actuation setpoint in Table 3.3-4 "Engineered Safety Features Actuation System Instrumentation Trip Setpoints" of the Unit 2 Technical Specifications from $\geq 15.5\%$ narrow range level span to $\geq 11.5\%$ narrow range level span. This change removes a 4% environmental allowance that was added in to the steam generator low-low level setpoint calculation to account for radiation effects on the steam generator level transmitters. The values for "Allowable Value", "Total Allowance", and "Z" for these setpoints in Tables 2.2-1 and 3.3-4 were also revised accordingly.

The steam generator low-low level reactor trip and auxiliary feedwater actuation protection is assumed in the following accidents as discussed in section 15.2 of the Unit 2 FSAR.

- Loss of External Electrical Load/Turbine Trip
- Loss of Non-emergency AC Power to the Station Auxiliaries
- Loss of Normal Feedwater Flow
- Feedwater System Pipe Breaks

None of these events result in fuel failures that would produce accident radiation levels comparable to a LOCA. Therefore the 4% of uncertainty added in for transmitter radiation effects should not be included into the environmental error assumed for this instrument channel. This allows the steam generator low-low level setpoint to be reduced as described below.

The Unit 2 Reactor Trip and Engineered Safety Features setpoints were calculated using the standard Westinghouse methodology as presented in Westinghouse WCAP-11366. The required setpoints are obtained by adding the specific Channel Statistical Allowance (for channel inaccuracies) to the safety analysis limit. The safety analysis limit for steam generator low-low water level is 0% of narrow range level span as provided in Table 15.0-4 of the Unit 2 FSAR. The Channel Statistical Allowance for the steam generator low-low level protection channel included a 12% environmental allowance of which 4% accounted for transmitter radiation effects. Removing the 4% uncertainty for radiation effects revises the overall Channel Statistical Allowance for this protection channel from 15.3% to 11.3%. The revised setpoint of $\geq 11.5\%$ therefore meets the safety analysis limit with the required channel accuracies included and a 0.2 % additional margin.

The steam generator water level low coincident with steam flow/feedwater flow mismatch and the steam generator water level high-high protection setpoints do not include a 4% allowance for transmitter radiation effects in their setpoint calculation and therefore require no change.

The revised setpoints for steam generator level low-low reactor trip and auxiliary feedwater actuation are consistent with the values assumed in the Unit 2 FSAR safety analysis and approved setpoint methodology, as revised by this evaluation, for Unit 2 and is therefore considered safe.

References

- BV-2 FSAR Tables 15.0-4 and 15.0-6 and Section 15.2
- Letter 2NRC-7-013, "Setpoint Methodology for Protection Systems", dated January 26, 1987
- WCAP-11419 Westinghouse Methodology for Protection System - Beaver Valley Unit 1
- WCAP-11366 Westinghouse Methodology for Protection System - Beaver Valley Unit 2
- Engineering Memorandum No. EM-62925 "Steam Generator Level Channel Shifting"
- Letter DMW-D-6165, "4% Uncertainty For Transmitter Radiation Effects" dated December 23, 1987
- Engineering Memorandum No. EM-79068 "Steam Generator Level Channel Shifts - EM 62925 Follow-up"

A T T A C H M E N T C

No Significant Hazard Evaluation

Proposed Technical Specification Change
Unit No. 2 - Change No. 2A-9

Basis for Proposed No Significant Hazards Consideration Determination: The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a 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; (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 proposed change does not involve a significant hazards consideration because:

1. This change does not effect the capability of the Reactor Trip System to ensure that the reactor core and Reactor Coolant System are prevented from exceeding their safety limit and the capability of the Engineered Safety Features Actuation System to mitigate the consequences of any postulated accidents. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.
2. The proposed change does not reflect any equipment or plant design change. Thus no adverse safety considerations are introduced by the change. Therefore, the probability of an accident or a malfunction of a different type than previously evaluated would not be created.
3. This change will not affect the assumptions or consequences of any safety analysis presented in the FSAR. The revised steam generator low-low level setpoint will continue to ensure that this protection channel setpoint meets the values assumed in the safety analysis when all channel inaccuracies have been considered.

Based on the above considerations, it is proposed to characterize the change as involving no significant hazards consideration.