

ATTACHMENT A

Revise the Beaver Valley Unit No. 2 Technical Specifications as follows:

Remove Pages

3/4 4-8
3/4 4-9
B3/4 4-2

Insert Pages

3/4 4-8
3/4 4-9
B3/4 4-2

9004170042 900402
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REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY VALVES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting* of 2485 psig + 1% - 3%. **

APPLICABILITY: MODES 4 and 5

ACTION:

- a. With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE RHR loop into operation in the shutdown cooling mode.

SURVEILLANCE REQUIREMENTS

4.4.2 No additional requirements other than those required by Specification 4.0.5.

- b. After any pressurizer code safety valve lift, as indicated by the safety valve position indicator, involving loop seal or water discharge; borate to a SHUTDOWN MARGIN equivalent to at least 1 % delta K/K at 200 deg F within the next 24 hours. Inspect that valve for potential damage, initiate corrective action to return the valve to OPERABLE status prior to increasing RCS temperature and document the inspection results in the Annual Report pursuant to Specification 6.9.1.5.b.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

**Within $\pm 1\%$ following pressurizer code safety valve testing.

REACTOR COOLANT SYSTEM

3/4.4.3 SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting* of 2485 psig + 1% - 3%.**

APPLICABILITY: MODES 1, 2, and 3

ACTION:

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional requirements other than those required by Specification 4.0.5.

- b. After any pressurizer code safety valve lift, as indicated by the safety valve position indicator, involving loop seal or water discharge; be in at least HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the following 6 hours.

*The lift setting shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

**Within $\pm 1\%$ following pressurizer code safety valve testing.

REACTOR COOLANT SYSTEM

BASES

3/4.4.2 and 3/4.4.3 SAFETY VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2735 psig. Each safety valve is designed to relieve 345,000 lbs. per hour of saturated steam at the valve set point. The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operated relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

3/4.4.4 PRESSURIZER

The requirement that 150 kw of pressurizer heaters and their associated controls and emergency bus provides assurance that these heaters can be energized during a loss of offsite power condition to maintain natural circulation at HOT STANDBY.

3/4.4.5 STEAM GENERATORS

One OPERABLE steam generator in a non-isolated reactor coolant loop provides sufficient heat removal capability to remove decay heat after a reactor shutdown. The requirement for two OPERABLE steam generators, combined with other requirements of the Limiting Conditions for Operation ensures adequate

Safety valves similar to the pressurizer code safety valves were tested under an Electric Power Research Institute (EPRI) program to determine if the valves would operate stably under feedwater line break accident conditions. The test results indicated the need for inspection and maintenance of the safety valves to determine the potential damage that may have occurred after a safety valve has lifted and either discharged the loop seal or discharged water through the valve. Additional action statements require safety valve inspection to determine the extent of the corrective actions required to ensure the valves will be capable of performing their intended function in the future.

ATTACHMENT B

SAFETY ANALYSIS

Beaver Valley Power Station, Unit No. 2 Proposed Technical Specification Change No. 34

Description of amendment request: The proposed amendment would incorporate an additional action statement in pressurizer code safety valve specifications 3.4.2 and 3.4.3 to require valve inspection for potential damage following loop seal or water discharge. This reflects the recommendation specified in the NRC Safety Evaluation Report on safety/relief valves, dated September 13, 1989.

The BV-2 Crosby 6M₁6 safety valve was not tested during the EPRI safety valve test program, however, operability was demonstrated based on testing the Crosby 6M6 safety valve with typical ring settings and similar plant inlet fluid conditions. Based on the FSAR analyses, the feedwater line break was the only event during which the safety valves would be required to pass water. After testing in which valve chattering occurred, the valve was disassembled and inspected which revealed galled guiding surfaces. Damaged parts were refurbished or replaced before the next test. The test results indicated the valve performed well after each repair, but the closing chatter recurred in subsequent tests. Duquesne Light has agreed to revise the technical specifications to include the valve inspection requirements after a pressurizer code safety valve lift involving loop seal or water discharge. The proposed action statements provide additional requirements to account for a special transient event which has the potential to degrade the valve functional capability. Entry into this action statement will result only after a safety valve has lifted involving either loop seal or water discharge. In the event damage is found during the valve inspection, the valve can then be repaired or replaced to ensure the continued pressure relief capability is available to protect the plant. The Bases have been revised to document the basis for the proposed action statements. Therefore, the proposed action statements will not affect the accident analysis or reduce the safety of the plant.

ATTACHMENT C

No Significant Hazard Evaluation Beaver Valley Power Station, Unit No. 2 Proposed Technical Specification Change No. 34

Basis for proposed no significant hazards consideration determination: The Commission has provided standards for determining whether a significant hazards consideration exists in accordance with 10CFR50.92(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 changes do not involve a significant hazard consideration because:

1. The additional action statement requires valve inspection for potential damage following a pressurizer code safety valve lift involving loop seal or water discharge. This reflects the recommendation specified in the NRC Safety Evaluation Report on safety/relief valves dated September 13, 1989.

The BV-2 Crosby 6M₁6 safety valve was not tested during the EPRI safety valve test program, however, operability was demonstrated based on testing the Crosby 6M6 safety valve with typical ring settings and similar plant inlet fluid conditions. Based on the FSAR analyses, the feedwater line break was the only event during which the safety valves would be required to pass water. After testing in which valve chattering occurred, the valve was disassembled and inspected which revealed galled guiding surfaces. Damaged parts were refurbished or replaced before the next test. The test results indicated the valve performed well after each repair, but the closing chatter recurred in subsequent tests. Duquesne Light has agreed to revise the technical specifications to include the valve inspection requirements after a pressurizer code safety valve lift involving loop seal or water discharge. The valves will only be disassembled and inspected when the plant is shutdown, therefore, the probability of occurrence or consequences of an accident previously evaluated will not be affected.

2. The feedwater line break is the only event postulated with the potential for liquid water discharge through the safety valves. The proposed action statements require a valve inspection only if it has been determined that a safety valve has lifted and involved either loop seal or water discharge. The plant would then be shutdown for valve disassembly and inspection. Therefore, the additional action statements will not affect the operation of the plant and will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The technical specifications provide limitations on safety valve operability requirements and the proposed action statements provide additional requirements to account for a special transient event which has the potential to degrade the valve functional capability. Entry into this action statement will result only after a pressurizer code safety valve has lifted and involved either loop seal or water discharge. In the event damage is found during the valve inspection, the valve can then be repaired or replaced to ensure the continued pressure relief capability is available to protect the plant. The Bases have been revised to describe the basis for the proposed action statements. Therefore, the proposed action statements will provide additional assurance that the plant safety margin is not reduced.

Therefore, based on the above considerations, this amendment does not involve a significant hazard.