

ATTACHMENT IV
PROPOSED TECHNICAL SPECIFICATION CHANGES

9810280020 981023
PDR ADOCK 05000482
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3/4.5 EMERGENCY CORE COOLING SYSTEMS

3/4.5.1 ACCUMULATORS

LIMITING CONDITION FOR OPERATION

3.5.1 Each Reactor Coolant System accumulator shall be OPERABLE with:

- a. The isolation valve open and power removed,
- b. A contained borated water volume of between 6122 and 6594 gallons,
- c. A boron concentration of between 2300 and 2500 ppm, and
- d. A nitrogen cover-pressure of between 585 and 665 psig.

APPLICABILITY: MODES 1, 2, and 3*.

ACTION:

- a. With one accumulator inoperable due to boron concentration not within limits, either restore the boron concentration to within the above limits within 72 hours or be in at least HOT STANDBY within the next 6 hours and reduce RCS pressure to less than 1000 psig within the following 6 hours.
- b. With one accumulator inoperable for reasons other than ACTION a., restore the inoperable accumulator to OPERABLE status within ~~1 hour~~ 24 hours or be in at least HOT STANDBY within the next 6 hours and reduce RCS pressure to less than 1000 psig within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.5.1.1 Each accumulator shall be demonstrated OPERABLE:

- a. At least once per 12 hours by:
 - 1) Verifying that the contained borated water volume and nitrogen cover-pressure in the tanks are within their limits, and
 - 2) Verifying that each accumulator isolation valve is open.

*Pressurizer pressure above 1000 psig

3/4.5 EMERGENCY CORE COOLING SYSTEMS

BASES

3/4.5.1 ACCUMULATORS

The OPERABILITY of each Reactor Coolant System (RCS) accumulator ensures that a sufficient volume of borated water will be immediately forced into the core through each of the cold legs in the event the RCS pressure falls below the pressure of the accumulators. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on accumulator volume, boron concentration and pressure ensure that the assumptions used for accumulator injection in the safety analysis are met.

The accumulator power operated isolation valves are considered to be "operating bypasses" in the context of IEEE Std. 279-1971, which requires that bypasses of a protective function be removed automatically whenever permissive conditions are not met. In addition, as these accumulator isolation valves fail to meet single failure criteria, removal of power to the valves is required.

The allowed outage time limit for operation with one accumulator inoperable due to boron concentration not within limits reflects the fact that no credit is taken in the accident analysis for boron concentration in the accumulators during the LOCA blowdown phase. Injection of borated water provides the fluid medium for heat transfer from the core and prevents excessive clad temperatures, contributing to the filling of the reactor vessel downcomer. The downcomer water elevation head provides the driving force required for the reflooding of the reactor core. Negative reactivity is initially a function of the void formation in the core. One accumulator below the minimum boron concentration limit will have no effect on available ECCS water and an insignificant effect on core subcriticality during reflood. Boiling of ECCS water in the core during reflood concentrates boron in the saturated liquid that remains in the core. Boron concentration during the sump recirculation phase is dominated by the RWST boron concentration.

The allowed outage time limit for operation with one accumulator inoperable for any reason other than boron concentration not within limits ensures that prompt action will be taken to return the inoperable accumulator to OPERABLE status. This allowed outage time limit has been determined to have an insignificant effect on core damage frequency.

Technical Specification 4.5.1.2, which required the performance of a channel calibration of each accumulator water level and pressure channel once per 18 months, was relocated to the Updated Safety Analysis Report. This was accomplished in accordance with the recommendations of Generic Letter 93-05 and NUREG-1366. These recommendations were based on the recognition that accumulator instrumentation operability is not directly related to the capability of the accumulators to perform their safety function.

3/4.5.2, 3/4.5.3, and 3/4.5.4 ECCS SUBSYSTEMS

The OPERABILITY of two independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the accumulators is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double ended break of the largest RCS cold leg pipe downward. In addition, each ECCS subsystem provides long-term core cooling capability in the recirculation mode during the accident recovery period.

With the RCS temperature below 350°F, one OPERABLE ECCS subsystem is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

Attachment V
List of Commitments

LIST OF COMMITMENTS

The following table identifies those actions committed to by Wolf Creek Nuclear Operating Corporation (WCNOC) in this document. Any other statements in this submittal are provided for information purposes and are not considered to be commitments. Please direct questions regarding these commitments to Mr. Michael J. Angus, Manager Licensing and Corrective Action at Wolf Creek Generating Station, (316) 364-8831, extension 4077.

COMMITMENT	Due Date/Event
This proposed revision to the WCGS technical specifications will be fully implemented within 30 days of formal Nuclear Regulatory Commission approval.	Thirty days following NRC issuance of the requested amendment.