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October 28, 2002
LIC-02-0120

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

- References:
1. Docket No. 50-285
 2. Letter from OPPD (R. T. Ridenoure) to NRC (Document Control Desk), "Fort Calhoun Station Unit No. 1 License Amendment Request, Steam and Feedwater Systems," dated July 23, 2002 (LIC-02-0065)
 3. Letter from OPPD (R. T. Ridenoure) to NRC (Document Control Desk), "Fort Calhoun Station Unit No. 1 License Amendment Request, Steam and Feedwater Systems," dated October 8, 2002 (LIC-02-0101)

SUBJECT: Fort Calhoun Station Unit No. 1 License Amendment Request, "Steam and Feedwater Systems" – Additional Information

In Reference 2 and 3, Omaha Public Power District (OPPD) submitted an Application for Amendment of Facility Operating License to revise the Fort Calhoun Station (FCS) Unit No. 1 Technical Specifications (TS). In a telephone discussion with Mr. A. B. Wang (NRC Project Manager) on October 18, 2002, OPPD verbally communicated its intention to provide additional discussion and justification for the proposed amendment. Attached please find Additional Discussion and Justification supporting the amendment.

If you have any questions or require additional information, please contact Dr. R. L. Jaworski at (402) 533-6833.

I declare under penalty of perjury that the foregoing is true and correct. (Executed on October 28, 2002)

Sincerely,

D. J. Bannister
Manager – Fort Calhoun Station

DJB/RRL/rfl

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Attachment: Additional Discussion and Justification

c: E. W. Merschhoff, NRC Regional Administrator, Region IV
A. B. Wang, NRC Project Manager
J. G. Kramer, NRC Senior Resident Inspector
Division Administrator - Public Health Assurance, State of Nebraska
Winston & Strawn

ATTACHMENT

Additional Discussion and Justification

Additional Discussion and Justification

Provide a justification for the use of 300 °F T_{Cold} over that of the values in Improved Technical Specification (ITS) and/or 350 °F T_{Hot} .

Technical Specification (TS) 2.5 is revised to be consistent with the wording of ITS (NUREG-1432). This change provides Fort Calhoun Station (FCS) with the capability to perform the required surveillances.

The ITS defines and uses modes in the Auxiliary Feedwater (AFW) technical specification that are not defined or are not equivalent at FCS, i.e., MODE 4. The closest equivalent to the ITS MODE 4, Hot Shutdown, for FCS is the plant condition between FCS MODE 3, Hot Shutdown Condition and FCS MODE 4, Cold Shutdown Condition.

The FCS Hot Shutdown Condition (FCS MODE 3) actually correlates better with the ITS Hot Standby (ITS MODE 3). For this reason, rather than establish a new listing of modes for FCS, which would require an extensive revision to the Technical Specifications, requirements in the ITS that the plant be in MODE 4 are instead replaced with the requirements that the plant be in the plant condition between FCS MODE 3 and FCS MODE 4. This plant condition is most succinctly defined and described in FCS Technical Specification 2.1.1, "Reactor Coolant System, Operable Components." This specification provides the requirements for those components that must be operable to provide redundancy of decay heat removal.

Therefore, in adapting the words from the ITS for FCS TS 2.5 the required action conditions refer to the values as specified in FCS TS 2.1.1(2) and 2.1.1(3). FCS considers this as meeting the intent of the ITS recommendations in that:

1. The operable AFW pumps support heat removal requirements of TS 2.1.1 at Reactor Coolant System (RCS) temperatures above 300 °F. The limits established in TS 2.1.1 refer to 300 °F T_{Cold} . The RCS Pressure - Temperature limit curves, in the FCS Core Operating Limit Report (COLR) are described in terms of °F T_{Cold} . Also, plant procedures implementing this specification are based upon a T_{Cold} RCS temperature above 300 °F. The addition of a different temperature, e.g., 350 °F T_{Hot} or 350 °F RCS Average (as in the ITS) could create confusion;
2. TS 2.1.1(3) also establishes that the shutdown cooling be OPERABLE at temperatures less than 300 °F T_{Cold} . This value is based upon the design of the FCS shutdown cooling system. As the shutdown cooling system is not designed to be operated above 300 °F, specifying a different value for the AFW system could create a potential area of non-compliance with TS 2.1.1;
3. ITS refers to average reactor coolant temperature for the modes while the value in the proposed specification and TS 2.1.1 refers to T_{Cold} . This is justified by the fact that when the RCS temperature is 300 °F during plant shut down and startup, the difference between RCS T_{Hot} and T_{Cold} is nominally less than 2 °F. This difference is close to the accuracy of the temperature instrument. Thus, the temperature specified in the proposed TS is essentially equivalent and conservative to the ITS temperature limit;

4. The additional conditional statement "without reliance on the steam generators for decay heat removal" which is equivalent to the note in ITS Section 3.7.5, "Applicability," assures that the AFW trains are operable regardless of the temperature specified in the specification;
5. If different temperatures were established, then the operator could unknowingly violate one or the other of TS 2.1.1 or 2.5, for example, by not having the AFW OPERABLE when it must be operable to declare the reactor coolant loop(s) operable;
6. Even if the value in TS 2.5 was changed to one of these other values the AFW system must be operable to support the requirements of 2.1.1 and, therefore, would still need to be operable whenever the RCS was at or above $300^{\circ}\text{F } T_{\text{Cold}}$.

~~Thus, it is more consistent with FGS operational practices to use $300^{\circ}\text{F } T_{\text{Cold}}$ rather than the ITS value of 350°F RCS average temperature in the proposed change.~~

Provide a justification for the removal of the requirement to verify that manual valves that could interrupt auxiliary feedwater flow to the steam generator shall be locked in the position required to ensure a flow path to the steam generators.

The present Specification 2.5(3) identifies the valves, interlocks, and piping separately from the AFW pumps and additionally states "manual valves that could interrupt auxiliary feedwater flow to the steam generator shall be locked in the position required to ensure a flow path to the steam generators." This statement is being deleted from the proposed technical specification because:

1. The wording of the present TS could be implied to be applicable to any manual valve that could prevent the AFW train from providing flow not just those valves in the AFW flow path;
2. FCS Technical Specification 3.7.1 requirements exceed the ITS surveillance requirements as defined in NUREG-1432, (SR 3.7.5);
3. Many FCS surveillances require the manipulation and realignment of valves affecting the AFW flow path. With this statement (TS 2.5.(3) second sentence) in the technical specification limiting conditions for operation section, any time one of the locked valves is unlocked and or realigned, then the plant is placed in TS 2.0.1 (motherhood). Technical specifications requirements do not allow entering 2.0.1 for the performance of a surveillance test, thus it would be impossible to perform these surveillances;
4. This specification (FCS TS 2.5(3)) is no longer generically required as evidenced by its removal from the ITS (NUREG-1432).

It is not the intent of the proposed specification to eliminate the need to maintain these valves locked. Those valves presently locked are part of several FCS surveillance procedures and station administrative controls standing orders. In accordance with 10 CFR 50.59, removal of these locked valves from these procedures would be considered "adverse" and, in many cases, require NRC approval prior to implementation, unless justification could be provided that unlocking these valves had "less than minimal" effect upon accidents, malfunctions, and/or consequences of systems, structures, or components affecting design functions.