



444 South 16th Street Mall
Omaha NE 68102-2247

March 12, 2003
LIC-03-0037

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

References: 1. Docket No. 50-285
2. Letter from OPPD (D. J. Bannister) to NRC (Document Control Desk), Fort Calhoun Station Unit No. 1 License Amendment Request, Low Pressure Safety Injection System Allowed Outage Time, dated October 8, 2002 (LIC-02-0097)

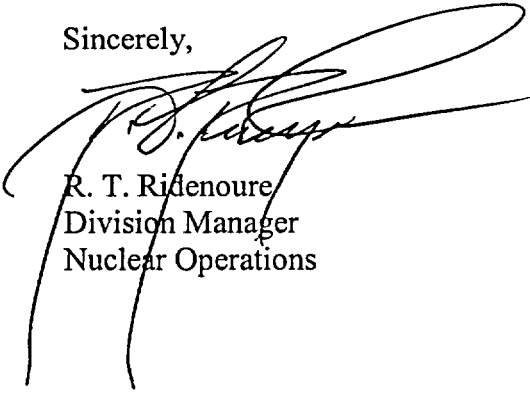
SUBJECT: Fort Calhoun Station Unit No. 1 License Amendment Request, "Low Pressure Safety Injection System Allowed Outage Time," Replacement Attachment

In Reference 2, 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 March 10, 2003, Mr. Wang indicated that there were minor typographical errors in paragraph and page numbers in Attachment 3, "Proposed Technical Specification Pages," to Reference 2. OPPD subsequently identified minor, non-technical, errors in Attachment 2 to Reference 2. OPPD verbally communicated its intention to provide replacement pages for Attachment 2 and 3 of Reference 2, correcting these typographical errors. Attached please find a complete replacement for Attachment 2 and 3 to Reference 2.

If you have any questions or require additional information, please contact Dr. R. L. Jaworski at (402) 533-6833. No commitments are made to the NRC in this letter.

I declare under penalty of perjury that the foregoing is true and correct. (Executed on March 12, 2003)

Sincerely,



R. T. Ridenoure
Division Manager
Nuclear Operations

A001

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RTR/RRL/rrl

Attachments:

1. Replacement to Attachment 2 of Letter LIC-02-0097, Markup of Technical Specification Pages
2. Replacement to Attachment 3 of Letter LIC-02-0097, Proposed Technical Specification Pages

c: E. W. Merschoff, 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 1

Replacement to Attachment 2
of Letter LIC-02-0097

Markup of Technical Specification Pages

TECHNICAL SPECIFICATIONS

2.0 LIMITING CONDITIONS FOR OPERATION

2.3 Emergency Core Cooling System

Applicability

Applies to the operating status of the emergency core cooling system.

Objective

To assure operability of equipment required to remove decay heat from the core.

Specifications

(1) Minimum Requirements

The reactor shall not be made critical unless all of the following conditions are met:

- a. The SIRW tank contains not less than 283,000 gallons of water with a boron concentration of at least the refueling boron concentration at a temperature not less than 50°F.
- b. One means of temperature indication (local) of the SIRW tank is operable.
- c. All four safety injection tanks are operable and pressurized to at least 240 psig with a tank level of at least 116.2 inches (67%) and a maximum level of 128.1 inches (74%) with refueling boron concentration.
- d. One level and one pressure instrument is operable on each safety injection tank.
- e. One low-pressure safety injection pump train is operable on each associated 4,160 V engineered safety feature bus.
- f. One high-pressure safety injection pump is operable on each associated 4,160 V engineered safety feature bus.
- g. Both shutdown heat exchangers are operable.
- h. Piping and valves shall be operable to provide two flow paths from the SIRW tank to the reactor coolant system.
- i. All valves, piping and interlocks associated with the above components and required to function during accident conditions are operable. HCV-2914, 2934, 2974, and 2954 shall have power removed from the motor operators by locking open the circuit breakers in the power supply lines to the valve motor operators. FCV-326 shall be locked open.

TECHNICAL SPECIFICATIONS

2.0 **LIMITING CONDITIONS FOR OPERATION**

2.3 **Emergency Core Cooling System (Continued)**

(2) Modification of Minimum Requirements

During power operation, the Minimum Requirements may be modified to allow one of the following conditions to be true at any one time. If the system is not restored to meet the minimum requirements within the time period specified below, the reactor shall be placed in a hot shutdown condition within 12 hours. If the minimum requirements are not met within an additional 48 hours the reactor shall be placed in a cold shutdown condition within 24 hours.

- a. One low-pressure safety injection pump train may be inoperable provided the pump train is restored to operable status within ~~24 hours~~ seven (7) days.
- b. One high-pressure safety injection pump may be inoperable provided the pump is restored to operable status within 24 hours.
- c. One shutdown heat exchanger may be inoperable for a period of no more than 24 hours.
- d. Any valves, interlocks or piping directly associated with one of the above components and required to function during accident conditions shall be deemed to be part of that component and shall meet the same requirements as listed for that component.
- e. Any valve, interlock or piping associated with the safety injection and shutdown cooling system which is not covered under d. above but which is required to function during accident conditions may be inoperable for a period of no more than 24 hours.
- f. One safety injection tank may be inoperable for reasons other than g. or h. below for a period of no more than 24 hours.
- g. Level and/or pressure instrumentation on one safety injection tank may be inoperable for a period of 72 hours.
- h. One safety injection tank may be inoperable due to boron concentration not within limits for a period of no more than 72 hours.
- i. Components in excess of those allowed by Conditions a, b, d, and e may be inoperable provided they are returned to operable status within 1 hour when performing the quarterly recirculation actuation logic channel functional test (Table 3-2 item 20) under administrative controls. This allowance applies only to the remaining portion of Cycle 20 and all of Cycle 21.

TECHNICAL SPECIFICATIONS

2.0 LIMITING CONDITIONS FOR OPERATION

2.3 Emergency Core Cooling System (Continued)

The USAR Loss of Coolant Accident analysis assumes a minimum SIRW tank inventory of 250,000 gallons has been pumped from the SIRW tank when recirculation begins. Technical specification 2.3(1) requires that the SIRW tank contains a minimum of 283,000 gallons of usable water. This additional volume over that assumed in the USAR analysis provides sufficient margin to account for instrument uncertainty. The SIRW tank contains water containing a boron concentration of at least the refueling boron concentration. This is sufficient boron concentration to provide a shutdown margin of 5%, including allowances for uncertainties, with all control rods withdrawn and a new core at a temperature of 68°F.⁽²⁾

The limits for the safety injection tank pressure and volume assure the required amount of water injection during an accident and are based on values used for the accident analyses. The minimum 116.2 inch level corresponds to a volume of 825 ft³ and the maximum 128.1 inch level corresponds to a volume of 895.5 ft³. Prior to the time the reactor is brought critical, the valving of the safety injection system must be checked for correct alignment and appropriate valves locked. Since the system is used for shutdown cooling, the valving will be changed and must be properly aligned prior to start-up of the reactor.

The operable status of the various systems and components is to be demonstrated by periodic tests. A large fraction of these tests will be performed while the reactor is operating in the power range.

If a component is found to be inoperable, it will be possible in most cases to effect repairs and restore the system to full operability within a relatively short time. For a single component to be inoperable does not negate the ability of the system to perform its function. If it develops that the inoperable component is not repaired within the specified allowable time period, or a second component in the same or related system is found to be inoperable, the reactor will initially be put in the hot shutdown condition to provide for reduction of cooling requirements after a postulated loss-of-coolant accident. This will also permit improved access for repairs in some cases. After a limited time in hot shutdown, if the malfunction(s) is not corrected, the reactor will be placed in the cold shutdown condition utilizing normal shutdown and cooldown procedures. In the cold shutdown condition, release of fission products or damage of the fuel elements is not considered possible.

The plant operating procedures will require immediate action to effect repairs of an inoperable component and therefore in most cases repairs will be completed in less than the specified allowable repair times. The limiting times to repair are intended to assure that operability of the component will be restored promptly and yet allow sufficient time to effect repairs using safe and proper procedures.

The time allowed to repair a safety injection tank is based on the deterministic and probabilistic analyses of Reference (8). CE-NPSD-994, "CEOG Joint Applications Report for Safety Injection Tank AOT/SIT Extension," May 1995. The time allowed to repair a LPSI train is based on the deterministic and probabilistic analyses of Reference (9). These analyses concluded that the overall risk impact of the completion times are either risk-beneficial or risk neutral. The requirement for core cooling in case of postulated loss-of-coolant accident while in the hot shutdown condition is significantly reduced below the requirements for a postulated loss-of-coolant accident during power operation. Putting the reactor in the hot shutdown condition reduces the consequences of a loss-of-coolant accident and also allows more free access to some of the engineered safeguards components in order to effect repairs.

Failure to complete repairs within 48 hours of going to the hot shutdown condition is considered indicative of a requirement for major maintenance and, therefore, in such a case, the reactor is to be put into the cold shutdown condition.

TECHNICAL SPECIFICATIONS

2.0 LIMITING CONDITIONS FOR OPERATION

2.3 Emergency Core Cooling System (Continued)

Components in excess of those allowed by Conditions a, b, d, and e may be inoperable provided they are returned to operable status within 1 hour when performing the quarterly recirculation actuation logic channel functional test (Table 3-2 item 20) under administrative controls. This allowance applies only to the remaining portion of Cycle 20 and all of Cycle 21. This prevents violating Technical Specifications or necessitating a unit shutdown due to inability to perform the quarterly recirculation actuation logic channel functional test. These administrative controls consist of stationing three dedicated operators at the Engineered Safeguards Features (ESF) panel controls in the control room. In this way, the following conditions are maintained and actions can be rapidly performed should a valid ESF actuation occur:

- the appropriate Safety Injection Refueling Water Tank (SIRWT) to Safety Injection (SI) and Containment Spray (CS) pumps suction valve control switch is maintained in the OPEN position (spring-return switch),
- the appropriate SI and CS pumps to SIRWT recirculation minimum flow valve control switch is maintained in the OPEN position (spring-return switch),
- the appropriate Recirculation Actuation Signal (RAS) lockout relays and initiating signal can be rapidly reset,
- the appropriate SI and CS pumps to SIRWT recirculation minimum flow valve control switch can be rapidly returned to the AUTO position,
- the appropriate SIRWT to SI and CS pumps suction valve control switch can be rapidly returned to the AUTO position, and
- the appropriate Containment Sump to SI and CS pumps suction valve control switch can be rapidly returned to the AUTO position.

The appropriate SI and CS pumps to SIRWT recirculation minimum flow valve control switch and the appropriate SIRWT to SI and CS pumps suction valve control switch are held in the OPEN position during the test to enhance the reliability of the appropriate SI and CS pumps by maintaining the associated valves open.

References

- (1) USAR, Section 14.15.1
- (2) USAR, Section 6.2.3.1
- (3) USAR, Section 14.15.3
- (4) USAR, Appendix K
- (5) Omaha Public Power District's Submittal, December 1, 1976
- (6) Technical Specification 2.1.2, Figure 2-1B
- (7) USAR, Section 4.4.3
- (8) CE NPSD-994, "CEOG Joint Applications Report for Safety Injection Tank AOT/SIT Extension," May 1995.
- (9) CE NPSD-995, "CEOG Joint Applications Report for Low Pressure Safety Injection System AOT Extension," May 1995.

ATTACHMENT 2

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Proposed Technical Specification Pages

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- d. One level and one pressure instrument is operable on each safety injection tank.
- e. One low-pressure safety injection train is operable on each associated 4,160 V engineered safety feature bus.
- f. One high-pressure safety injection pump is operable on each associated 4,160 V engineered safety feature bus.
- g. Both shutdown heat exchangers are operable.
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- a. One low-pressure safety injection train may be inoperable provided the train is restored to operable status within seven (7) days.
- b. One high-pressure safety injection pump may be inoperable provided the pump is restored to operable status within 24 hours.
- c. One shutdown heat exchanger may be inoperable for a period of no more than 24 hours.
- d. Any valves, interlocks or piping directly associated with one of the above components and required to function during accident conditions shall be deemed to be part of that component and shall meet the same requirements as listed for that component.
- e. Any valve, interlock or piping associated with the safety injection and shutdown cooling system which is not covered under d. above but which is required to function during accident conditions may be inoperable for a period of no more than 24 hours.
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- the appropriate SIRWT to SI and CS pumps suction valve control switch can be rapidly returned to the AUTO position, and
- the appropriate Containment Sump to SI and CS pumps suction valve control switch can be rapidly returned to the AUTO position.

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- (9) CE NPSD-995, "CEOG Joint Applications Report for Low Pressure Safety Injection System AOT Extension," May 1995.