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U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Duke Energy Corporation
Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414
Notice of Enforcement Discretion (NOED) Request
Pressurizer Heaters Surveillance 4.4.3.3
TAC Numbers MA1921 and MA1922

Attached is the written documentation of the background and technical information supporting the Catawba Units 1 and 2 Notice of Enforcement Discretion (NOED) request. This information was discussed with the NRC staff in a telephone conference call on May 22, 1998.

Testing currently being performed to satisfy Catawba Technical Specifications Surveillance Requirement 4.4.3.3 does not literally comply with the requirements of the Technical Specifications. As shown in the attached justification, Duke maintains that granting of discretionary enforcement in this case is in the best interests of nuclear safety.

This request for enforcement discretion was approved by the Catawba Plant Operations Review Committee (PORC) on May 21, 1998.

Should you have any questions concerning this information, please call M.S. Kitian, Jr. at (803) 831-3205.

Very truly yours,

G.R. Peterson

Enclosure and Attachment

xc (with attachments):

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Enclosure and Attachment 1
Catawba Nuclear Station
Request for Enforcement Discretion
Technical Specification 4.4.3.3
Pressurizer Heater Surveillance Requirement

Duke hereby requests that the NRC grant discretion in enforcing the requirements of Technical Specification (TS) Surveillance Requirement (SR) 4.4.3.3 and permit continued operation of Catawba Nuclear Station, Units 1 and 2, pending approval of a license amendment to revise the SR.

Duke identified that the testing currently being performed to satisfy TS SR 4.4.3.3 does not literally comply with the requirements of the TS. This constitutes a missed surveillance. As discussed herein, the surveillance cannot be conducted at power as specified in the TS since the TS as written does not reflect the plant design. A missed surveillance means that the Limiting Condition for Operation (LCO) is not being met and the appropriate Action statement must be entered. The Action requirement for LCO 3.4.3 for this situation is: ".. be in at least HOT STANDBY with the Reactor Trip breakers open within 6 hours and in HOT SHUTDOWN within the following 6 hours." TS 4.0.3 allows a 24 hour delay in implementing this Action requirement since the allowable outage time is less than 24 hours. The pressurizer heaters were declared inoperable at 1250 hours on May 21; therefore, unless enforcement discretion is granted, Catawba will have to commence a shutdown of both Unit 1 and Unit 2 by 1250 hours and be shut down with the reactor trip breakers open by 1850 hours on May 22.

1. Technical Specifications Violated

Catawba is requesting enforcement discretion from the requirements of TS SR 4.4.3.3. Failure to perform SR 4.4.3.3 would constitute noncompliance with the operability requirements of LCO 3.4.3 unless enforcement discretion is granted.

2. Circumstances surrounding the situation

Background

On October 31, 1996, during a review of Generic Letter 96-01, "Testing of Safety-Related Logic Circuits", Catawba observed that the pressurizer heaters were not being properly tested. In response to this review, the ESF test procedures were revised to verify that the control lights for the heaters did in fact come on when the heaters were tested. A Problem Investig tion Process

(PIP) was initiated to document this issue. On November 6, 1996, a second PIP was initiated to address how SR 4.4.3.3 was being satisfied by the use of the above described overlapping procedures. This PIP concluded that the intent of SR 4.4.3.3 was being met. Catawba has since recognized that this conclusion was inappropriate with respect to the current emphasis on literal compliance. In May of 1998, a surveillance procedure working group was formed to review compliance with TS surveillance requirements. On May 13, 1998, the second PIP described above was reexamined to address the fact that there was no manual transfer of power to test the heaters. This reexamination evaluated compliance with the requirements of SR 4.4.3.3 from a literal standpoint. On May 14, 1998, a third PIP was initiated to further evaluate this issue based on the review conducted by the surveillance working group. Review of this third PIP led to the site concluding that literal compliance with SR 4.4.3.3 was not being met.

Technical Discussion

Pressurizer Heaters 1(2)A and 1(2)B are fed from 600 Vac Blackout Load Centers 1(2)LXI and 1(2)LXH, respectively (Reference UFSAR Figure 8-21). The 600 Vac Blackout Load Centers 1(2)LXI and 1(2)LXH are fed from the 4160 Vac Blackout Switchgear 1(2)FTA and 1(2)FTB, respectively. During normal operations (with offsite power available), the Blackout Switchgear is fed from the offsite power source via the 6900 Vac Power System. During a blackout (loss of offsite power), the 4160 Vac Blackout Switchgear bus is automatically transferred via load sequencer logic to the emergency 4160 Vac Essential Switchgear, which is fed from the emergency diesel generators.

TS SR 4.4.3.3 requires that the pressurizer heaters be manually transferred to their emergency power source and energized every 18 months. The method Catawba has used to satisfy this surveillance requirement involves overlapping procedures (PT/1(2)/A/4200/09, "Engineered Safety Features Actuation Periodic Test", and PT/1(2)/A/4600/16, "Surveillance Requirements for Unit Startup"). Both of these tests were performed during the last outages for both Unit 1 and Unit 2. PT/1(2)/A/4200/09 performs an ESF (Engineered Safety Features) test which simulates a blackout every refueling outage. This causes the 4160 Vac Blackout Switchgear bus to be automatically loaded onto the 4160 Vac Essential Switchgear bus via load sequencer logic. Once this occurs, the 600 Vac Blackout Load Center busses are verified to be energized. Furthermore the pressurizer heater breaker control logic is verified to be energized without actually energizing the pressurizer heaters. The heaters are not actually energized since ESF testing occurs during a plant mode when there is insufficient water in the Reactor Coolant System and Pressurizer

to allow the heaters to be energized without damage. It is verified that the heaters can be energized both during unit startup and also quarterly per the requirements of TS SR 4.4.3.2. Since none of pressurizer heater control interlocks are dependent on the source of power, Catawba had always maintained that the intent of TS SR 4.4.3.3 was met by successfully performing the overlapping procedures.
The present design of the power system will not allow the pressurizer heaters to be manually transferred from the normal power source to the emergency power source without physically manipulating individual supply breakers to allow a dead-bus transfer. A hot-bus transfer could only be accomplished by defeating electrical interlocks (placing jumpers) and manipulating individual supply breakers. Testing at power utilizing either of these methods would subject the plant to an undesirable transient. The dead-bus transfer would result in the loss of a 600 Vac Blackout Load Center and several motor control centers and low-voltage power panelboards. Some of the loads fed from these busses that could cause a plant transient during a dead-bus transfer include:

- Feedwater System recirculation valves will fail open which would cause a secondary system transient,
- Component Cooling Water System Heat Exchanger Outlet Throttle Valves fail open on loss of power which would cause an adverse temperature swing on the reactor coolant pump seals and/or a reactivity transient due to temperature change on letdown,
- Loss of Instrument Air Compressor which will result in a reduction in instrument air capacity,
- Loss of the 125 Vdc Auxiliary Control Power Battery Chargers,
- Loss of the 250 Vdc Auxiliary Power Battery Chargers.

A hot-bus transfer is not part of the Catawba design and would result in voltage transients of unknown magnitude on both the essential and blackout busses. Protective relaying on these busses would be adversely affected and could result in the loss of a 4160 Vac Essential Switchgear bus.

Manual realignment of these busses, through either method mentioned above, during Mode 5 has not been evaluated. Even so, manual alignment of these busses does not test the design features of the CNS blackout and essential power systems since a transfer is designed to occur automatically. For these reasons, CNS tests the pressurizer heater logic as stated above.

Based on the literal interpretation of TS SR 4.4.3.3, CNS has declared the pressurizer inoperable and entered the appropriate specification for a missed surveillance.

3. The safety basis for the request, including the evaluation of the safety significance and potential consequences of the proposed action.

There are no safety consequences associated with this request. The pressurizer heaters are completely functional. Granting of this request will not affect the ability of the heaters to perform their design function. The heaters are now and will continue to be fully tested according to the manner in which they were designed. They are tested during unit startup and are also tested quarterly per TS requirements. This testing methodology was validated during the Loss of Offsite Power event which occurred on Catawba Unit 2 in 1996, whereby the heaters functioned as designed.

4. The basis for the licensee's conclusion that noncompliance will not be of potential detriment to the public health and safety and that neither an unreviewed safety question nor a significant hazard consideration is involved.

NRC granting of this request for enforcement discretion will not have any adverse consequences from the standpoint of public health and safety. Although Catawba has not literally complied with the requirements of Technical Specification Surveillance Requirement (SR) 4.4 3.3 as presently written, Catawba does presently test emergency power operation of the affected pressurizer heaters. Catawba currently demonstrates that the power supply for the heaters can be automatically transferred under accident conditions from the normal to the emergency source. Catawba also demonstrates that the heaters can be energized, although this energization does not occur while the heaters are being powered from the emergency source. Catawba's method of testing the pressurizer heaters per this surveillance tests all necessary equipment and is safer from a plant operational perspective. The test method is also consistent with the design of the electrical system and pressurizer heaters power supply.

There are no significant hazards considerations associated with this request for enforcement discretion. This is demonstrated as follows:

This request for enforcement discretion does not involve a significant increase in the probability or consequences of an accident previously evaluated. The purpose of having an emergency power supply to pressurizer heaters is to establish and maintain natural circulation at hot standby conditions.

Catawba's method of performing SR 4.4.3.3 cannot result in any increase in accident probabilities or consequences. The heaters are demonstrated to remain fully capable of fulfilling their role when powered from the emergency power source.

This request for enforcement discretion does not create the possibility of a new or different kind of accident from any accident previously evaluated. No new accident causal mechanisms are created as a result of the method by which Catawba conducts SR 4.4.3.3. All facets of emergency power operation to the heaters are successfully demonstrated by the manner in which the SR is conducted. This request for enforcement discretion does not impact any plant systems that are accident initiators.

This request for enforcement discretion does not involve a significant reduction in a margin of safety. Margin of safety is related to the confidence in the ability of the fission product barriers to perform their design functions during and following an accident situation. These barriers include the fuel cladding, the reactor coolant system, and the containment system. The performance of these fission product barriers will not be impacted by the NRC's granting of this request. No safety margins will be impacted.

5. The basis for the licensee's conclusion that the noncompliance will not involve adverse consequences to the environment.

This request for enforcement discretion will not result in any changes in the types, or increase in the amounts, of any effluents that may be released offsite. In addition, no increase in individual or cumulative occupational radiation exposures will be involved. Therefore, it can be concluded that the NRC's granting of this request for enforcement discretion will not involve any adverse consequences to the environment.

6. Proposed Compensatory Measures

No compensatory measures are proposed. This issue does not create any safety concerns which warrant compensatory measures.

7. Justification for the duration of the non-compliance

Duke will submit a request for license amendment on May 22, 1998. The duration of the noncompliance is dependent on the time required for the NRC to approve an exigent license amendment to

change the surveillance requirement for Technical Specification 4.4.3.3. As stated in items 3 and 4, there is no safety significance or potential detriment to the health and safety of the public.

8. Statement that the request has been approved by the facility organization that normally reviews safety issues.

This request was reviewed and approved by the Catawba Plant Operations Review Committee in a special meeting on May 21, 1998.

9. How one of the NOED criteria for appropriate plant conditions specified in Section B is satisfied.

This request meets the requirements of NRC Administrative Letter 95-05, Section B, Item 1. Approval of this NOED will avoid a shutdown of Catawba, Units 1 and 2, by allowing continued operation while pursuing a TS change to reflect pressurizer heater testing requirements that are consistent with the Catawba design.

10. If a follow-up license amendment is required, the NOED request must include marked-up TS pages showing the proposed TS changes.

See Attachment 1 for a copy of the affected marked-up TS pages for both Unit 1 and Unit 2. A formal license amendment request will be submitted for NRC review by the close of business on May 22, 1998.

11. A statement that prior adoption of approved line-item improvements to the TS or the ITS would not have obviated the need for the NOED request.

The ITS surveillance would obviate the need for this request and Catawba has submitted an amendment to adopt the ITS. However, the ITS submittal has not been approved so this NOED request is necessary.

Attachment 1
(1 of 2)

REACTOR COOLANT SYSTEM

3/4.4.3 PRESSURIZER

LIMITING CONDITION FOR OPERATION

3.4.3 The pressurizer shall be OPERABLE with a water volume of less than or equal to 1656 cubic feet and at least two groups of pressurizer heaters each having a capacity of at least 150 kW.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one group of pressurizer heaters inoperable, restore at least two groups to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With the pressurizer otherwise inoperable, be in at least HOT STANDBY with the Reactor trip breakers open within 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.1 The pressurizer water volume shall be determined to be within its limit at least once per 12 hours.

4.4.3.2 The capacity of each of the above required groups of pressurizer heaters shall be verified by energizing the heaters and measuring circuit current at least once per 92 days.

4.4.3.3 The emergency power supply for the pressurizer heaters shall be demonstrated OPERABLE at least once per 18 months by manually transferring power from the normal to the emergency power supply and energizing the heaters.

At least once per 18 months, verify required pressurizer heaters are capable of being powered from an emergency power supply.

Attachment 1

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