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DUKE POWER

February 5, 1991

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

Subject: Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414
Operating License Amendments

Attached are proposed license amendments to the Catawba Nuclear Station Facility Operating Licenses for Units 1 and 2, NPF-35 and NPF-52, respectively.

The attachment outlines proposed amendments to license condition 2.C.(12)(a) of operating license NPF-35 and license condition 2.C.(8)(a) of operating license NPF-52. These amendments would allow two additional fuel cycles for the generic resolution of the cold leg accumulator instrumentation issue.

Pursuant to 10 CFR 50.91 (b)(1) the appropriate South Carolina State Official is being provided a copy of this amendment request.

Very truly yours,

A handwritten signature in cursive script that reads "M. S. Tuckman".

M. S. Tuckman, Vice President
Nuclear Operations

CRL/15

Attachment

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PDR ADOCK 05000413
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xc: Mr. S. D. Ebnetter
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
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Mr. W. T. Orders
NRC Resident Inspector
Catawba Nuclear Station

Mr. R. E. Martin
Office of Nuclear Reactor Regulations
U. S. Nuclear Regulatory Commission
One White Flint North, Mail Stop 9H3
Washington, D. C. 20555

M. S. Tuckman, being duly sworn, states that he is Vice President of Duke Power Company; that he is authorized on the part of said Company to sign and file with the Nuclear Regulatory Commission this revision to the Catawba Nuclear Station Facility Operating License, License Nos. NPF-35 and NPF-52; and that all statements and matters set forth therein are true and correct to the best of his knowledge.

M. S. Tuckman

M. S. Tuckman, Vice President

Subscribed and sworn to before me this 5th day of February, 1991.

Londa Case Smith

Notary Public

My Commission Expires:

May 6, 1995

ATTACHMENT
DUKE POWER COMPANY
CATAWBA NUCLEAR STATION, UNITS 1 AND 2

PROPOSED LICENSE AMENDMENTS
TO
FACILITY OPERATING LICENSES NPF-35 AND NPF-52
LICENSE CONDITIONS 2.C.(12)(a) AND 2.C.(8)(a)

(1) Requested Amendments

Amend Facility Operating License NPF-35 License Condition
2.C.(12)(a) to read:

Prior to startup following the seventh refueling outage, Duke Power Company shall provide qualified accumulator discharge instrumentation.

Amend Facility Operating License NPF-52 License Condition
2.C.(8)(a) to read:

Prior to startup following the sixth refueling outage, Duke Power Company shall provide qualified accumulator discharge instrumentation.

(2) Background

Supplement 1 to NUREG-0737 - Requirements for Emergency Response Capability (Generic Letter 82-33) included additional clarification regarding Regulatory Guide 1.97, Revision 2. By letter dated September 26, 1983, Duke Power Company provided the information concerning the exceptions to conformance to the regulatory guide. Pending completion of the Staff's review of the Catawba design for conformance to the guidance of the regulatory guide, the operating licenses for Catawba Unit 1 and Unit 2 were conditioned to require that modifications be completed to provide compliance with the regulatory guide unless the exceptions were reviewed and approved by the staff before startup following the first refueling outage. The items identified were:

- (a) Reactor coolant system cold leg water temperature
- (b) Containment sump water level
- (c) Residual heat removal heat exchanger outlet temperature
- (d) Accumulator tank level and pressure
- (e) Steam generator pressure
- (f) Containment sump water temperature
- (g) Chemical and volume control system makeup flow and letdown flow
- (h) Emergency ventilation damper position
- (i) Area radiation
- (j) Plant airborne and area radiation

Ms. Elinor G. Adensam's letter of August 6, 1985 transmitted a draft Technical Evaluation Report (TER) regarding Catawba's conformance to Regulatory Guide 1.97, Rev. 2. The TER also requested additional justification for some of the exceptions taken by Duke. By letter dated October 22, 1985, Duke provided the requested information. In Supplement 5 to the Catawba Safety Evaluation Report dated February 1986, the Staff approved all of the exceptions except for accumulator level and pressure, requiring that Duke designate either level or pressure as the key variable to be upgraded. This position was incorporated into the operating

license (NPF-35) for Catawba Unit 1 on January 17, 1987 and into the operating license (NPF-52) for Catawba Unit 2 on May 15, 1986.

By letter dated March 25, 1986, Duke requested additional technical justification from the Staff in order for Duke to be able to evaluate the merits of the Staff's requirement. The NRC's letter dated July 27, 1990 responded to Duke's March 25, 1986 letter by stating that the Staff was continuing to generically review the need for environmentally qualified Category 2 instrumentation to monitor accumulator tank level and pressure. This letter also stated that no further plant specific action was required and that the NRC would inform Duke as to whether or not the existing Catawba instrumentation is acceptable when the generic review was completed.

(3) Discussion

The primary function of the accumulator pressure and level instrumentation is to monitor the pre-accident status of the accumulators to assure that this passive safety system is in a ready state to serve its safety function. The only safety function of the accumulator tank is to empty upon rapid, uncontrolled depressurization of the primary system. Accumulator tank level and pressure are not referenced in any emergency procedure covering design basis events which may cause a harsh environment. No operator actions in these procedures are based on accumulator indications. The only operator action involving the accumulator portion of the Safety Injection System is to isolate the accumulator when the primary system pressure is below 1000 psig and primary system conditions indicate that the accumulator inventory is not needed to make up lost Reactor Coolant System volume. That action is based on system pressure for which fully qualified instruments are provided (see variable sheet A-1, from the original response to RG 1.97).

Cold leg accumulator tank pressure is used in certain emergency procedures which deal with events beyond the design basis of Catawba. These procedures are EP/1C5, Loss of Emergency Coolant Recirculation, EP/2B1, Inadequate Core Cooling, and EP/2B2, Degraded Core Cooling. In these procedures, accumulator pressure is used to determine when to isolate the accumulator after it has emptied. In an internal NRC document, H. B. Clayton to D. L. Ziemann, "Meeting Summary, Westinghouse Owners' Group and Westinghouse Emergency Operating Procedures Guidelines," February 24, 1982, the NRC acknowledged that "for some accident sequences, non-safety-grade equipment and instrumentation is needed and this is reflected in the guidelines." The use of cold leg accumulator pressure is in accordance with this philosophy.

Therefore, it is Duke's position that the accumulator tank level and pressure are not key variables for any design basis events which result in harsh environment. Providing environmental qualification for the post accident in-containment harsh environment should not be required in that the instruments have no post-accident monitoring function.

Catawba Unit 1 license amendment numbers 15 and 55 and Unit 2 license amendment numbers 27 and 48 granted similar requests which allowed additional time for the resolution of the accumulator instrumentation issue. The requested extension for Catawba Unit 1 and Unit 2 would allow additional time for the NRC Staff to resolve the cold leg accumulator instrumentation issue generically. If the Staff's generic review ultimately requires the upgrade of the Catawba instrumentation, it is estimated that approximately 20 months lead time would be required for implementation during a refueling outage. This is the average time for a station modification to go through design, procurement, scheduling, and installation.

(3) Safety Analysis

The primary function of the accumulator pressure and level instrumentation is to monitor the preaccident status of the accumulators to assure that the passive safety system is in a ready state to serve its safety function. Accumulator tank level and pressure are not referenced in any emergency procedure covering design basis events which may cause a harsh environment. No operator actions in these procedures are based on accumulator indications. It is therefore Duke Power Company's conclusion that extension of the date for upgrading the accumulator pressure or level instrumentation does not involve any adverse safety considerations.

(4) Analysis of Significant Hazards Consideration

As required by 10 CFR 50.91, this analysis is provided concerning whether the proposed amendment involves significant hazards considerations, as defined by 10 CFR 50.91. Standards for determination that a proposed amendment involves no significant hazards considerations are 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; or 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 amendment would not involve a significant increase in the probability of an accident previously evaluated because the accumulator level and pressure are provided for preaccident monitoring of the status of the cold-leg accumulators and as such have no effect on cause mechanisms.

The proposed amendment would not create the possibility of a new or different kind of accident than previously evaluated since the design and operation of the unit will not be affected.

The proposed amendment would not cause a significant reduction in a margin of safety. The extension of time in which to resolve the accumulator instrumentation issue would have no impact on safety margins since the instrumentation is fully qualified for its intended function of preaccident monitoring of the cold-leg accumulators.