



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 23, 1994

MEMORANDUM TO: James M. Taylor
Executive Director for Operations

FROM: Thomas L. King, Deputy Director *TL King*
Division of Systems Research
Office of Nuclear Regulatory Research

SUBJECT: REPORT ON REVIEW OF DIFFERING PROFESSIONAL OPINION (DPO)

Your memorandum of August 10, 1994, appointed a panel to perform an independent review of a July 28, 1994, DPO (C. Morris, NRR, to J. Taylor, EDO), "Differing Professional Opinion Concerning Uncoordinated Circuit Breakers at Catawba Nuclear Station." As requested, I have served as panel chairman along with the panel members, Patrick Baranowsky (AEOD) and Jitendra Vora (RES). We have completed our review. Our findings and recommendations, along with some related background information are described below.

Background

In a memorandum, dated July 28, 1994, to Mr. James M. Taylor, Mr. Charles E. Morris (NRR) raised a DPO in response to a July 21, 1994, report from Ashok Thadani to William Russell on Mr. Morris's differing professional view (DPV) regarding uncoordinated breakers at the Catawba Nuclear Station. In his July 28, 1994, DPO, Mr. Morris was concerned that the July 21, 1994, report from Thadani to Russell on his DPV did not address his most important concern, which was stated as:

The most important concern raised in this DPV is that if the staff accepts the licensee's argument that because a fully redundant safety train might perform the requisite safety functions . . . the staff can permit the licensee to change the FSAR, only, and can allow him to operate with known safety deficiencies.

Mr. Morris went on to state that what is needed is a "policy statement" from a higher level than a branch on this issue. Accordingly, the panel focused on the generic "policy" concern raised in this DPO and not on the specific Catawba issue which initiated Mr. Morris's original DPV, and which was addressed in Mr. Thadani's July 21, 1994, memorandum to Mr. Russell.

In the course of reviewing this DPO, the panel interviewed the following individuals:

- Mr. Charles E. Morris, DPO originator
- Mr. Eric Weiss, Mr. Morris's immediate supervisor
- Dr. Brian W. Sheron, Mr. Morris's Division Director
- Mr. Ashok Thadani, Mr. Morris's Associate Director
- Ms. Janice Moore, OGC

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The interviews with Mr. Morris focused on understanding and better defining the exact nature of his DPO. After two interviews and the review of some draft material attempting to summarize his DPO, Mr. Morris agreed on the following statement as adequately characterizing his main concern:

The presence of a redundant system/component should not be justification for compensating for known safety deficiencies in other systems/components.

His view was that a policy statement should be developed to support the above.

Upon further discussion with Mr. Morris, it became clear that he was not opposed to exempting systems/components from certain design requirements or changing licensee commitments (provided the exemptions/changes are supported by a thorough safety analysis, which may include probabilistic and risk considerations) but rather the basis for such exemptions/changes should not include reliance on redundant safety systems/components. It should be noted that in the panel's limited review of the Catawba issue, and during interviews with NRR staff, no instances were cited in which a simple redundancy argument was used as justification for not meeting specific design commitments. More typically, other factors, such as the safety implications of the specific application of the single failure criterion, including the likelihood and consequences of electrical faults, were considered in granting exemptions. In addition, a limited search was made of previous exemption requests, and the panel found no evidence where redundancy was used as the sole basis for accepting deficiencies in other systems or components. However, it does appear to the panel that the licensee did not follow a systematic process in submitting information on the safety significance of the specific Catawba issue.

As part of this review, the panel looked into what processes, practices and policies currently allow licensees to request changes in commitments or exemptions from rules or license conditions, and what is the basis for acceptance of such changes/exemptions. The current regulations define a general process for requesting exemptions (10 CFR 50.12), license amendments (10 CFR 50.90), or changing the FSAR (10 CFR 50.59). However, the nature of what information must be submitted to support such requests and the criteria for acceptance are less well defined.

Findings and Recommendations

Currently, there is no Agency policy or criterion which prohibits granting an exemption or change in requirements or commitments based upon the presence of a redundant system or component. Although, in general, it would not seem appropriate to allow safety deficiencies in one train of a redundant system solely on the basis that there is a redundant train, each situation should be evaluated on its own merits. Further, a stand alone criterion, such as suggested by Mr. Morris, by itself (without a clear nexus to safety) could be detrimental by causing resources to be spent on items of little safety

significance. What is much more important is to ensure that well defined processes exist whereby all exemptions and changes in commitments undergo systematic and thorough review by licensees for their safety significance and that such exemptions or changes are not implemented or requested unless such a review is done and criteria, based on safety significance, are met.

Currently, licensee's requests for exemptions or changes in commitments can vary in approach and criteria, although the industry has attempted, through the development of NSAC-125, "Guidelines for 10CFR 50.59 Safety Evaluations," to establish some guidelines for 50.59 changes. In this regard, it should be noted that NRR is currently working with industry (NEI) to review and endorse a procedure for "Managing NRC Commitments." This activity is discussed in SECY-94-243 "Status of Implementation of Regulatory Review Group Recommendations" as Topic Area No. 7. The panel has reviewed a draft (dated July 1994) of this procedure and believes that it contains all of the elements to ensure a systematic and thorough review by licensees of proposed exemptions or changes to commitments or requirements. This procedure also provides criteria for determining the safety significance of the item in question by referencing a PSA Application Guide (under development by EPRI) and NSAC-125, as well as including some criteria of its own. The panel endorses the work to arrive at an acceptable procedure and believes that, when complete, this work should result in a comprehensive consistent process of value to both industry and NRC which should be implemented as soon as practical. It is recognized that this effort may also involve review of the key reference documents mentioned above. The implementation of a procedure such as discussed above, should help ensure a systematic preparation and review of proposed exemptions or changes in requirements or commitments.

Docket No.
(10 C.F.R. § 2.206)

Mr. C. Morris
6516 Roy Shafer Road
Middletown, Maryland 21769

Dear Mr. Morris:

This is to acknowledge receipt of your letter dated February 13, 1996, requesting action with regard to the Catawba Nuclear Station (CNS) and ten other nuclear power plant licensees. Your request is being treated as a petition under 10 C.F.R. § 2.206.

Your Petition requests that the operation of the CNS and "some ten other licensees with uncoordinated breakers" (not specifically identified in your Petition) be suspended until the lack of circuit breaker coordination has been remedied. Since you assert that the situation is urgent, your request is being treated as one for immediate relief. The Petition also requests that the Nuclear Regulatory Commission (NRC) take enforcement action against CNS and the ten other nuclear Plant licensees.

As bases for the requests you have submitted documentation included a memorandum to William T. Russell, Director of the Office of Nuclear Reactor Regulation, dated May 6, 1994, wherein you expressed a differing professional view (DPV) regarding the resolution of a breaker coordination issue identified during an electrical distribution system functional inspection (EDSFI) conducted at CNS during the period January-February 1992, and the NRC memorandum, dated July 21, 1994, responding to your DPV. The NRC memorandum responding to the DPV indicates that the results of the EDSFI showed that the CNS licensee's analysis prepared during the inspection showed that the breaker coordination at CNS did not satisfy Regulatory Guide 1.32 and the CNS FSAR. You also included your memorandum to James M. Taylor, Executive Director for Operations, dated July 28, 1994, wherein you expressed a differing professional opinion concerning the uncoordinated breakers at CNS, based on your concern about the staff proposal that the licensee only change the FSAR and not change the deficient circuit breakers. Furthermore, you state that the "safety deficiency" was known by the CNS licensee prior to its discovery by the EDSFI, however, the NRC was not informed. In another memorandum, dated September 15, 1993, you state that the EDSFI found uncoordinated breakers at ten other nuclear power plants in 1991 and 1992.

Your request for the immediate suspension of the CNS license and "ten other licenses" until the lack of circuit breaker coordination has been remedied is _____ because _____. [NRC to provide reasons for grant or denial of this request for immediate relief]

C. Morris

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Your Petition has been referred to me pursuant to 10 C.F.R. § 2.206 of the Commission's regulations. As provided by section 2.206, action will be taken on your requests within a reasonable time. I have enclosed for your information a copy of the notice that is being filed with the Office of the Federal Register for publication.

Sincerely,

William T. Russell, Director
Office of Nuclear Reactor Regulation

Enclosure: As stated

cc w/encl: Duke Power Company

U.S. NUCLEAR REGULATORY COMMISSION

Docket No.

DUKE POWER COMPANY

(Catawba Nuclear Station)
(License No.)

RECEIPT OF PETITION FOR DIRECTOR'S DECISION

UNDER 10 C.F.R. § 2.206

Notice is hereby given that by a letter dated February 13, 1996, Mr. C. Morris requested the Nuclear Regulatory Commission (NRC) to take action with regard to the Catawba Nuclear Station (CNS) of Duke Power Company.

The Petition requests that the operation of the CNS and "some ten other licensees with uncoordinated breakers" (not specifically identified in the Petition) be suspended until the lack of circuit breaker coordination has been remedied. Since the Petitioner asserts that the situation is urgent, the request is being treated as one for immediate relief. The Petition also requests that the NRC take enforcement action against CNS and the ten other nuclear plant licensees.

As bases for the requests, Petitioner, a former NRC employee, has submitted documentation including a memorandum to William T. Russell, Director of the Office of Nuclear Reactor Regulation, dated May 6, 1994, wherein the Petitioner expressed a differing professional view (DPV) regarding the resolution of a breaker coordination issue identified during an electrical distribution system functional inspection (EDSFI) conducted at CNS during the period January-February 1992, and the NRC memorandum dated July 21, 1994, responding to the Petitioner's DPV. The NRC memorandum responding to the DPV indicates that the results of the EDSFI showed that the CNS licensee's

analysis prepared during the inspection showed that the breaker coordination at CNS did not satisfy Regulatory Guide 1.32 and the CNS FSAR. The Petitioner also included his memorandum to James M. Taylor, Executive Director for Operations, dated July 28, 1994, wherein he expressed a differing professional opinion concerning the uncoordinated breakers at CNS, based on his concern about the staff proposal that the licensee only change the FSAR and not change the deficient circuit breakers. The Petitioner further states that the "safety deficiency" was known by the CNS licensee prior to its discovery by the EDSFI, however, the NRC was not informed. In another memorandum, dated September 15, 1993, the Petitioner states that the EDSFI found uncoordinated breakers at ten other nuclear power plants in 1991 and 1992.

The Petition is being treated pursuant to 10 C.F.R. § 2.206 of the NRC's regulations. The Petition has been referred to the Director of Nuclear Reactor Regulation (NRR). As provided by section 2.206, appropriate action will be taken on this Petition within a reasonable time. By letter dated____, the Director [granted or denied] Petitioner's request for immediate suspension of the CNS and ten other nuclear plant licenses. A copy of the Petition is available for inspection at the Commission's Public Document Room at 2120 L Street, N.W., Washington, D.C. 20555.

FOR THE NUCLEAR REGULATORY COMMISSION

William T. Russell, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland

this ____ day of _____ 1996