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DENTON, H. R. Office of Nuclear Reactor Regulation

SUBJECT: Forwards Amend 84 to FSAR. Amend revises FSAR in areas of auxiliary feedwater sys, alternate reserve auxiliary electrical sys & waste gas decay tanks.

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Donald C. Cook Nuclear Plant Units No. 1 and 2
Dockets No. 50-315 and 50-316
Licenses No. DPR-58 and DPR-74
FSAR Amendment No. 84

August 9, 1979
AEP:NRC:00176

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

This letter transmits to your office forty copies of Amendment No. 84 to the Donald C. Cook Nuclear Plant Final Safety Analysis Report (FSAR). This amendment consists of revisions of the FSAR on the following topics:

(1) Modifications being made to the auxiliary feedwater system,

(2) Alternate reserve auxiliary electrical system,

(3) Results of the main feedwater pipe break analysis,

(4) Waste gas decay tanks.

A discussion of these topics follows.

Item (1)

Two sets of modifications are being made to the Auxiliary Feedwater System (AFS):

a) electrical modifications to the Turbine Driven Auxiliary Feedwater Pump (TDAFP) train in fulfillment of Unit 2 license condition (3)(k). The same modifications are being made on both Units.

b) modifications to provide an additional Motor Driven Auxiliary Feedwater Pump (MDAFP) to the Unit 1 and Unit 2 auxiliary feedwater systems.

These two modifications are described below.

1.a) TDAFP

The TDAFP train of the AFS is being converted from AC power to DC power. License condition (3)(k) requires that the change to a DC power supply be completed prior to startup following the first scheduled refueling outage of Unit 2. The electric power supply for the steam admission trip and throttle valve (for steam supply to the Terry turbine which drives the pump) and for the four (4) discharge valves, is being converted to DC power in order to comply with the NRC's position and fulfill license condition (3)(k). As part of the Engineered Safety Features (ESF), this power supply must be a dedicated DC power source such as one of the two safety related station batteries. However, when the additional MDAFP is installed as described below in Item 1 b), the use of either of the two existing station batteries for this purpose is no longer possible. Each of the two MDAFP's in each Unit will be served by its own ESF electrical train and associated station battery. Hence, we are installing a third station battery, designated as train N, for each Unit of the Cook Plant. This battery will provide the dedicated DC power source for the TDAFP train in conjunction with the conversion from AC to DC power. The new train N station battery is considered to be part of the ESF systems at Cook Plant. Thus, we will propose Technical Specifications in a separate submittal to include the new train N station battery for both Units 1 and 2.

This part of Amendment 84 to the FSAR is provided as a general update and for supporting information for the associated Technical Specification change request to be submitted separately.

1 b) MDAFP

At present the operation of the Cook Plant's two MDAFP's is shared between Unit 1 and Unit 2. One MDAFP is associated with the Unit 1 CD electrical train and the other is associated with the Unit 2 CD electrical train.

We are modifying the AFS at the Cook Plant to accomplish separation of the shared operation of the MDAFP's by adding another MDAFP to the AFS of each Unit. The new MDAFP will be associated with the AB electrical train in its respective Unit and the shared operation between both Units 1 and 2 will be eliminated.

With the present sharing of the MDAFP's, our current Technical Specifications require that if one pump is out of service for more than 72 hours, both Units 1 and 2 be brought to a shutdown condition until the inoperable pump is restored to operable status. Our modified AFS would require only one Unit to be shutdown under these conditions without affecting operation of the other Unit. The economics of modifying the AFS versus the potential downtime of both Units 1 and 2 clearly favor making permanent modifications. The necessary engineering, design and procurement is fully underway to perform this modification during the first refueling outage of Unit 2. During this outage, the installation of the train N battery will also be accomplished. After the modifications, the AFS in each Unit of the Cook Plant will have two (2) MDAFP's and one (1) TDAFP. Each pump will be associated with a separate electrical train. The Technical Specification requirements for the AFS operability for each Unit can then be met without reliance on equipment in the other Unit. We will submit a Technical Specification change request for Unit 2 in a separate submittal to remove the notation which states that the MDAFP's are shared with Unit 1. This will be included with the forthcoming Technical Specifications proposal regarding battery train N mentioned above in Item 1 a).

This part of Amendment 84 to the FSAR is provided as a general update and for supporting information for the associated Technical Specifications change request to be submitted separately. The required license amendment fee, per the provisions of 10 CFR 170.22 will be transmitted along with the requested revisions to the Technical Specifications. The FSAR revisions for item 1 a) and 1 b) do not involve an unreviewed safety question as defined in 10 CFR 50.59.

The plant modifications described above in 1 a) and 1 b) apply to both Units 1 and 2. The FSAR revisions include changes in Chapter 8 (Electrical System), Section 9.8 (Facility Service Systems), Section 10.5 (Condensate and Feedwater System), Section 14.1.9 (Loss of Normal Feedwater Analysis), Appendix C (table of shared systems),

Appendix O (Postulated Pipe Failure Analysis Outside the Containment), and response 212.35 in Appendix Q (Licensing Questions regarding Unit 2). On some of the revised pages additional editorial changes are made to correct typographical errors and minor inconsistencies.

Item (2)

The description of the alternate reserve auxiliary electrical system is revised to reflect the replacement of a temporary alternate with a permanent one. The temporary alternate was previously described in Amendment 81 to the FSAR. This new reserve transformer (No. 5) is provided as a full service alternate to the reserve transformer (No. 4) for the purpose of supplying the plant's reserve auxiliary loads. Reserve auxiliary loads can be supplied by transformer No. 5 or transformer No. 4 in the event either one is out of service. This revision is for information only and does not involve a Technical Specification change, a significant hazards considerations or an unreviewed safety question as defined in 10 CFR 50.59. Thus, no facility license amendment is required and the fee schedule in 10 CFR 170 is not applicable. This revision applies to both Units 1 and 2 and makes changes to Chapter 8 of the FSAR.

Item (3)

This revision incorporates into the FSAR the results of the analysis of a main feedwater pipe rupture inside containment. These results were previously submitted by a letter dated November 28, 1977 from Mr. J. A. Tillinghast (I&M Power Company) to Mr. Edison G. Case (NRC). Minor editorial changes have been made for the purpose of clarification. These changes include additional information on page 14.2.8-5 concerning operator action and DNB and the removal of an apparent inconsistency in time period between Section 14.2.8.3 and Table 14.2.8-1. These minor changes do not affect the conclusion in any way. Because the information in this part of Amendment 84 was previously submitted, the fee schedule in 10 CFR 170 is not applicable.

This revision applies to Unit 2 only and includes changes to yellow pages in Chapter 14 (Safety Analysis) and in response 212.8 in Appendix Q.

Item (4)

The value of the maximum pressure setpoint for the waste gas decay tanks is reduced from 110 to 100 psig to ease the maximum load on the compressor and the number of gas decay tanks is increased

from six to eight. This revision is provided for information only and does not involve a Technical Specification change or unreviewed safety question. Thus, no facility license amendment is required and the fee schedule in 10 CFR 170 is not applicable. This revision applies to a system shared by both Units and is a change to Section 11.1 (Waste Disposal System) of the FSAR.

Very truly yours,

John E. Dolan
Vice President

JED/js

cc: R. C. Callen
G. Charnoff
D. V. Shaller - Bridgman
R. W. Jurgensen
R. S. Hunter

Sworn and subscribed to before me
this 9th day of August , 1979
in New York County, New York

Kathleen Barry
Notary Public

KATHLEEN BARRY
NOTARY PUBLIC, State of New York
No. 41-4606792
Qualified in Queens County
Certificate filed in New York County
...on 30, 1981