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STOLZ,J.F. Operating Reactors Branch 4

SUBJECT: Forwards response to 820408 request for addl info re seismic qualification of emergency feedwater sys.

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May 25, 1982

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

Attention: Mr. J. F. Stolz, Chief
Operating Reactors Branch No. 4

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

By letter dated April 8, 1982, the NRC requested additional information with regard to the seismic qualification of the Oconee emergency feedwater system. Attached please find our response to that request.

Very truly yours,

William O. Parker, Jr.

RLG/php
Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
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Duke Power Company
Oconee Nuclear Station
Response to NRC Request for Information

Seismic Qualification of the Auxiliary Feedwater System

Question 1: Enclosure 1 of Generic Letter 81-14 (GL 81-14) defines the auxiliary feedwater (AFW) system to be considered as:

(a) "The AFW system boundary from suction to discharge (including the water source and heat sink) shall include those portions of the system required to accomplish the AFW system function and connected branch piping up to and including the second valve which is normally closed or capable of automatic closure when the safety function is required."

(b) "The AFW system boundary shall also include any portion of branch piping that is structurally coupled to the AFW system boundary such that the seismic response of the branch piping transmits loads to the AFW system. As a minimum, this includes the branch lines outside the AFW system boundary to a point of three orthogonal restraints."

(c) "All mechanical and electrical equipment, piping (e.g., instrument air), conduits and cable trays, which are necessary or contain items which are necessary for the operation of the AFW system, shall also be considered."

(d) "In addition, the structures housing these systems and components shall be included."

Clarify the extent to which your standby shutdown facility boundary, considered in your January 28, 1981 response letter, coincides with the boundary defined in GL 81-14, especially part (b) above.

Response:

The Auxiliary Service Water System (ASW) of the Standby Shutdown Facility (SSF) is defined in Section 4.0 of the document entitled "Information in Support of Standby Shutdown Facility" submitted by letter dated March 28, 1980. The ASW system when installed will tie into the Emergency Feedwater System (EFS) as indicated on the marked Figure 1 (attached) from our January 28, 1982 response letter. At the time of tie-in (ASW to EFW), portions of the EFW will be altered. The area of alterations has been circled on the attached Figure 1. The tie-in point and the entire ASW system are shown in Figure 4-1 of our March 28, 1980 submittal. For seismic considerations the design overlap region at tie-in points is described in the first paragraph of Page 7 of our January 28, 1982 response.

Question 2: Generic Letter 81-14 states:

(a) "We are also requesting that PWR licensees perform a walk-down of the non-seismically qualified portions of their AFW systems to identify apparent and practically

correctable deficiencies that may exist."

(b) "The results of any walk-down are requested within 120 days of receipt of this letter. These results should include all identified deficiencies and all corrective actions taken, or planned along with the schedules for such."

Our review of your response to Generic Letter 81-14 indicates that this information has not been provided for those non-seismically qualified items of your emergency feedwater system. Clarify whether a walk-down was performed and provide the results of any walk-down performed.

Response:

No walkdown was performed due to reliance upon the Standby Shutdown Facility - Auxiliary Service Water System which is seismically qualified and independent of non-seismic portions of the existing EFW system.

Question 3: Generic Letter 81-14, Enclosure 1, Part B states: "Where seismic qualification is indicated by leaving Table 1 blank, provide a description of the methodologies and acceptance criteria used to support your conclusion of seismic qualification, including: seismic analyses methods employed, seismic input, load combinations which include the SSE, allowable stresses, qualification testing and engineering evaluations performed."

Our review of your response to Generic Letter 81-14 indicates that this information has not been provided for power supplies, water and supply paths, and the initiation and control system of your standby shutdown facility. Please correct this deficiency.

Response:

The Standby Shutdown Facility is designed to withstand and is available following a Safe Shutdown Earthquake (SSE).

The power supplies and instrumentation and controls that are required (indicated on Page 6 of our January 28, 1982 response) are designed to withstand the SSE defined in Section 2.2.5, "Seismic Design," of our March 28, 1980 submittal.

The seismic qualification of supply paths (listed under "Mechanical System" on Page 6 of our January 28, 1982 response) is described in detail by our letters of February 16, March 31, and April 13, 1981, related to the SSF design review. The water source, a buried portion of the Condenser Circulating Water (CCW), is designed for seismic conditions.

Analyses performed for consideration of seismic loadings on the CCW Intake Piping are in conformance with the equivalent static loading method, utilizing the MHE acceleration for overburden as defined in Section 5A.2.2 of the Oconee FSAR. Loading combinations include seismically induced loads due to overburden in conjunction with internal piping loads. Allowable stresses are in conformance with those specified in applicable sections of the ASME Boiler & Pressure Vessel Code, Section VIII, 1965 edition.

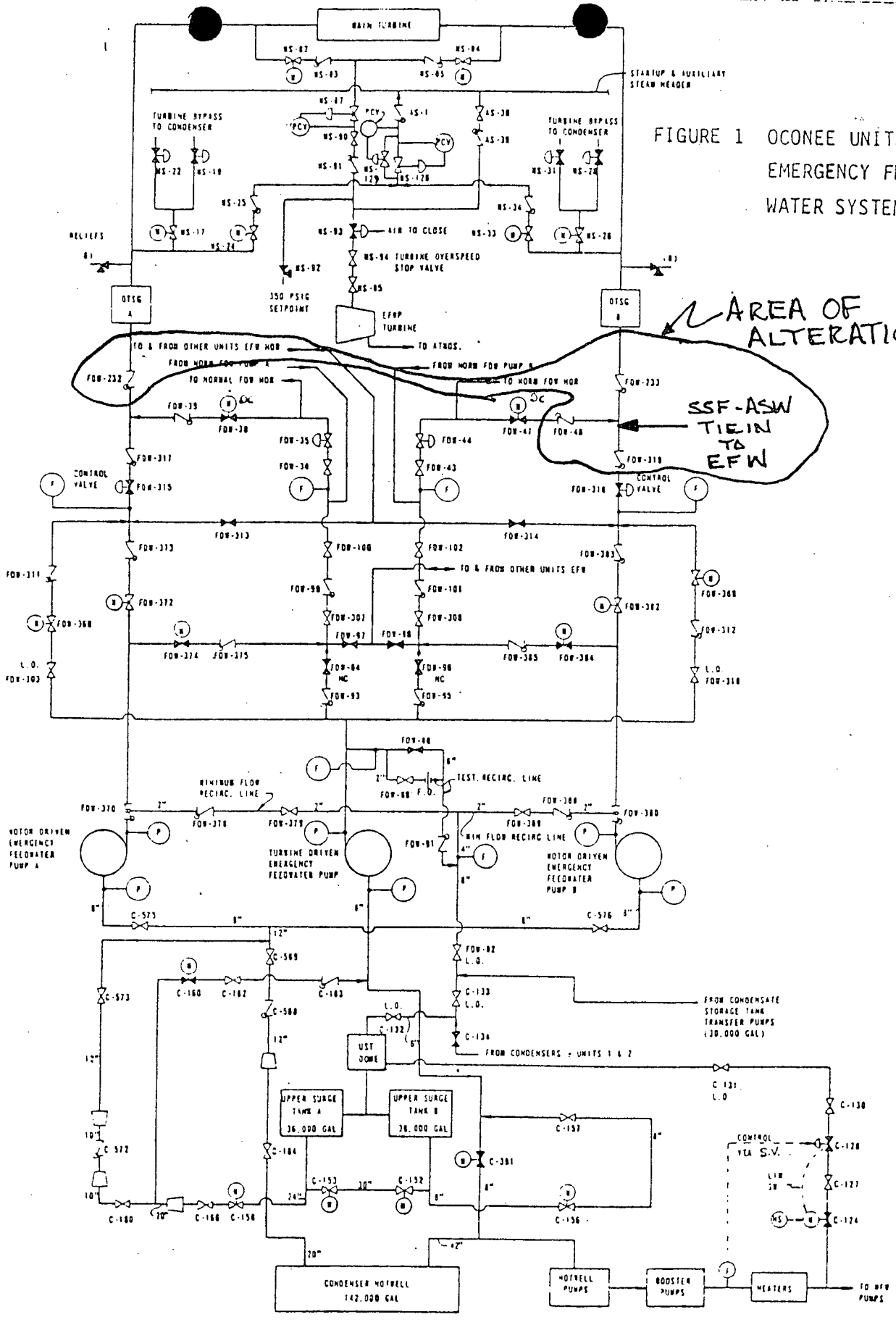

FIGURE 1 OCONEE UNITS-EMERGENCY FEED-WATER SYSTEM