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TO:	FROM:	DATE OF DOCUMENT
Mr. Edson G. Case	Carolina Power & Kight Company Raleigh, North Carolina M. A. McDuffie	6/28/77
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DESCRIPTION

Consists of supplementary clairifications to their 5/17/77 ltr. requesting authorization from the NRC to use certain components which have been certified to earlier code addenda of ASME III than those prescribed by Sec. 50.55a(c), (d), and (e) of 10 CFR Part 50..... ..notorized 6/28/77...

(2-P)

PLANT NAME:
Shearon Harris Units 1-2-3-4
RJL 7/1/77

ENCLOSURE

ACKNOWLEDGED

DO NOT REMOVE

FOR ACTION/INFORMATION

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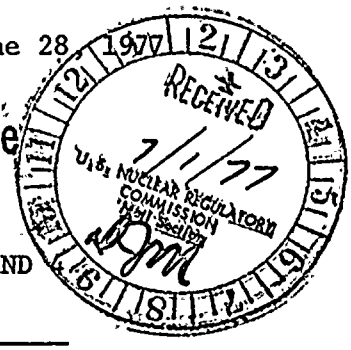
CP&L
Carolina Power & Light Company

June 28, 1977



Regulatory Docket File

Mr. Edson G. Case, Acting Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

SHEARON HARRIS NUCLEAR POWER PLANT, UNITS 1, 2, 3 AND
DOCKET NOS. 50-400, 50-401, 50-402 AND 50-403
10CFR50.55a, CODES AND STANDARDS

Dear Mr. Case:

Carolina Power & Light Company (CP&L) hereby submits supplementary clarifications to Mr. M. A. McDuffie's letter of May 17, 1977, to Mr. B. C. Rusche requesting authorization from the Nuclear Regulatory Commission to use certain components in the Shearon Harris Nuclear Power Plant (SHNPP) which have been certified to earlier code addenda of ASME III than those prescribed by Sections 50.55a(c), (d), and (e) of 10 CFR Part 50. Such authorizations are permitted under 10CFR50.55a(a)(2)(i) upon demonstration that compliance with the otherwise applicable requirements of Paragraphs (c), (d), and (e) would result in hardships or unusual difficulties without a compensating increase in the level of quality and safety.

These clarifications are related to Items 1 through 3 of the above-referenced letter and are as follows:

1. Units 1 and 2 Reactor Vessels - As indicated in our May 17, 1977, letter, these reactor vessels were originally purchased to the S71 edition of ASME III but were upgraded to the W71 addendum. Subsequently, upgrading to the S72 addendum was initiated even though fabrication and testing of the vessels had already begun to the W71 requirements. The principal difference between the S72 and W71 addenda, that is applicable to reactor vessels, is in the requirement to provide additional fracture toughness testing to further categorize materials used in fabrication. These new (S72) requirements were anticipated and were fulfulled for the majority of material utilized in these vessels. However, because sufficient additional test specimens from a limited number of heat lots of material were no longer available, the additional S72 testing requirements could not be fulfilled for five heat lots of welding electrode material which were used in the noncore regions of the vessels and the base material for one coolant nozzle. Thus, for these limited heat lots of material, all requirements of the W71 addendum were met (including fracture toughness testing requirements), whereas for all other portions of the vessels, the S72 requirements were met as well. (Fracture toughness properties of the coolant nozzle for which tests could not be conducted were estimated, using the method described in the NRC Standard Review Plan 5.3.2 and Branch Technical Position NTEB 5-2. These estimated properties met or exceeded the requirements of the S72 addendum.) Thus, although the majority of heat lots of material

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comply with the S72 addendum, the W71 addendum was the latest code to which these reactor vessels could be certified. An additional clarification to our letter referenced above is that tests for the heat affected zones were not mandatory for these reactor vessels, and the welding procedure qualification tests are in compliance with the S72 addendum.

2. Units 1 and 2 Reactor Coolant Pumps - The reactor coolant pumps were originally ordered to the S72 edition of the ASME code. During the manufacturing process, later codes were satisfied when practicable. The pump casings of the pump were manufactured to the S73 edition. (Different pump components are fabricated at different plants at different times with final assembly at the site. Due to the time frame of manufacture, some components will be normally supplied to a later code.) The only part which was not upgraded to at least the W72 addendum was the thermal barrier heat exchanger, due to its advanced stage of design and manufacture at the time the W72 edition was published. Thus, although the majority of components comply with W72 or later addenda, the S72 addendum was the latest code to which these pumps could be certified.

3. Units 1, 2, 3, and 4 Class I Control Valves - The Safety Class I control valves had progressed too far in fabrication to permit upgrading to the requirements of the W72 addendum because Paragraph NA-5200 of ASME III requires the authorized inspector to review design details prior to fabrication. Even though the control valves were in fact manufactured to the W72 addendum, the certification requirement of NA-5200 could not be retrofitted. References to the W72 edition in our previous letter of May 17, 1977, i.e., making changes on welding materials, NB-2420, inspection requirements, NB-2510, and hydrotesting NB6111.1, were intended only to illustrate paragraphs where differences exist between the S72 and W72 addenda.

We believe that this information is sufficient to enable the Nuclear Regulatory Commission to grant authorization to use the equipment covered by this letter and the referenced letter of May 17, 1977 in the SHNPP.

Yours very truly,

M. A. McDuffie
Senior Vice President
Engineering & Construction

MAM/gsm

Sworn to and subscribed before me this 28th day of June, 1977.

Notary Public

My commission expires July 4, 1980