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RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards response to NRC question re flood protection.Rev to SER Section 2.4.2.2 requested to reflect that Tech Spec for watertight & airtight doors w/o curbs at 261 feet elevation not needed.

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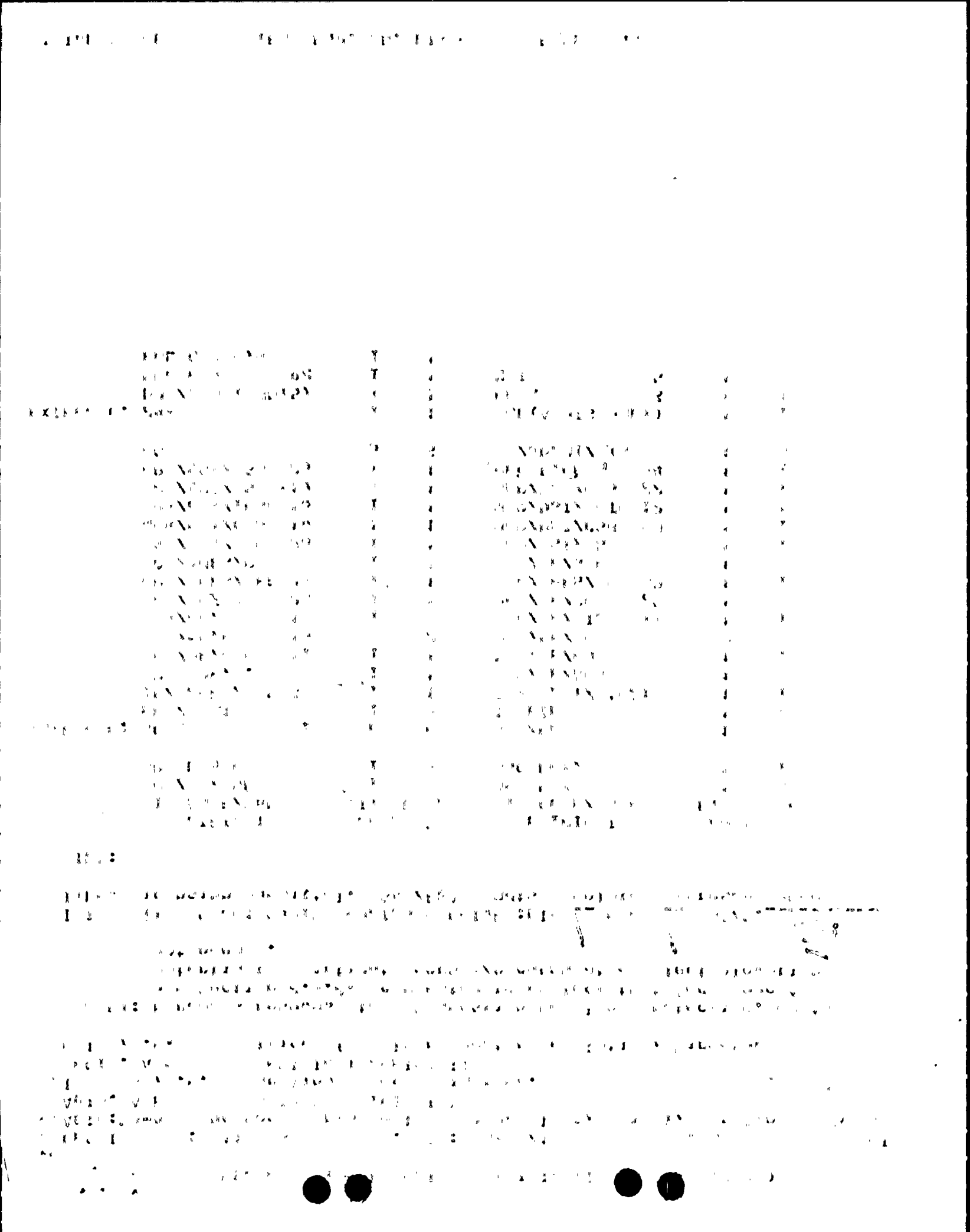

CP&L

Carolina Power & Light Company

SERIAL: NLS-85-348

NOV 12 1985

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
UNIT NO. 1 - DOCKET NO. 50-400
FLOOD PROTECTION

REFERENCE: 1) Letter dated October 25, 1984 from Mr. S. R. Zimmerman (CP&L) to Mr. Harold R. Denton (NRC).

2) Letter dated April 23, 1985 from Mr. A. B. Cutter (CP&L) to Mr. Harold R. Denton (NRC) transmitting updated "pen and ink" copy of Technical Specifications.

Dear Mr. Denton:

Carolina Power & Light Company (CP&L) provides additional information regarding flood protection to address questions raised by an Environmental and Hydrologic Engineering Branch reviewer. Each concern is identified and addressed in Enclosure 1.

In Section 2.4.2.2 of the Shearon Harris Nuclear Power Plant (SHNPP) Safety Evaluation Report (SER), the NRC Staff required that a Technical Specification (TS) be written to ensure that watertight and airtight doors are normally in a closed position. The TS would cover those doors without curbs on the 261 feet elevation. The CP&L position stated in Reference 1 is that since security surveillance will ensure that these few doors are normally closed, a separate TS would not serve any useful purpose. Therefore, Carolina Power & Light Company did not propose any specification on door position status in Reference 2.

Based on the information provided to you in this letter and Reference 1, CP&L considers this matter closed and requests that you revise the SHNPP SER Section 2.4.2.2 to reflect that a TS is not needed. If you have any questions, please contact Mr. Gregg A. Sinders at (919) 836-8168.

Yours very truly,

S. D. Floyd for

S. R. Zimmerman
Manager
Nuclear Licensing Section

GAS/crs
Enclosure

cc: Mr. R. Benedict (NRC)
Mr. B. C. Buckley (NRC)
Mr. G. F. Maxwell (NRC-SHNPP)
Mr. R. Gonzales (NRC-EHEB)
Dr. J. Nelson Grace (NRC-RII)
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ENCLOSURE 1

A. NRC Question

In a letter dated October 25, 1984 (Serial: NLS-84-420), you stated that the only doors potentially exposed to high water from a probable maximum precipitation (PMP) event are three doors shown on FSAR Figure 1.2.2-27. You further state these doors are normally locked and electronically monitored to alarm if opened. FSAR Figure 1.2.2-28 which was not mentioned in your letter shows other exterior entrances which appear to also be exposed to potential high water. Please explain why water will not enter safety-related buildings through these exterior entrances. Also, provide assurances that water will not enter safety-related buildings through interior openings. For example, if water enters the Turbine Building or some other nonsafety-related building, will it be possible for this water to then enter a safety-related building through an opening between the two structures?

The staff notes that in a letter dated October 5, 1983 (Serial: LAP-83-458), you committed to providing "watertight or airtight doors". It is not clear whether the doors that you identified on FSAR 1.2.2-27 are air or watertight. Please describe the type of door at each entrance and if not watertight, provide a discussion of how much water will leak in during a PMP event. Also discuss the effect that leakage will have on safety-related components.

B. Response

1. FSAR Figure 1.2.2-28

FSAR Figure 1.2.2-28 was deleted from the SHNPP FSAR by Amendment 15 due to the cancellation of Unit 2. The openings for doors that were indicated on deleted FSAR Figure 1.2.2-28 will be closed, sealed, and will not exist.

2. Water from Nonsafety-Related Building Entering a Safety-Related Building

Carolina Power & Light Company has previously addressed this concern in response to DSER Open Item #224 and applicable discussions are presented in FSAR Sections 2.4.2.3, 3.4.1, and 10.4.5.3. Water entrance from nonsafety-related buildings into safety-related buildings is prevented by seismically designed reinforced concrete walls, curbs, waterstops, doors and drain systems.

For example, the Waste Processing Building has five entrances at elevation 261 feet msl. Three of these entrances are protected by tornado missile doors with approximately a two-inch door sill and a door sealing system that will prevent water from entering through these normally closed, outswinging doors. These doors are shown on FSAR Figure 1.2.2-49. The two remaining doors are outswinging, industrial steel, personnel doors of which one is a normally closed emergency exit door. These doors, as discussed in FSAR Section 2.4.2.3 and on SER pg. 2-16 lead to areas containing locker rooms and shower stalls which do not contain any safety-related equipment.

Flooding of safety-related areas of the RAB from the Turbine Building were addressed in our transmittal of October 25, 1985 (Reference 1). Doors at site grade elevation 261' - 0" (D-1, D-5, D-7, D-52) are normally closed tornado

type doors with seals that will prevent PMP related water entry. Water entry from the Turbine Building lower elevation to RAB areas is discussed in FSAR Section 10.4.5.3. Therefore, it is not possible for water due to flooding from PMP to enter safety-related buildings through openings between the nonsafety buildings and safety buildings or via ponding at site grade.

3. Watertight or Airtight Doors

In a letter dated October 5, 1983, CP&L stated that watertight or airtight doors were provided. Upon further review of the applicable door specifications, it was determined that the manufacturers of the doors were not required to provide an "airtight" or "watertight" door but a door that will meet tornado or tornado missile resistance criteria. However, these doors will also prevent PMP related water from entering safety-related plant areas as described above although not specifically designed for this event (i.e., PMP flooding).

4. Pump Operability

Page 2-18 of the SHNPP SER requires that the applicant describe how pump operability and ponded water levels in the area between the Retaining Wall and the Fuel Handling Building will be monitored and the actions to be taken if pumps malfunction or the level of ponding rises above elevation 236 feet msl.

Two pumps are located in each of the areas (Unit 3 area and Unit 4 area) between the Retaining Wall and the Fuel Handling Building on the west side of the Fuel Handling Building. These pumps will operate to remove water that accumulates in the respective area. To assure that the area above the 216' elevation remains free of water under normal conditions, the operation of each pump will be checked weekly by jogging the level control switch for each sump pump. In addition, the area will be checked subsequent to heavy rainfall to observe for removal of water from the area. If both pumps become inoperable and water accumulates to elevation 221 feet msl, additional temporary pumps will be installed to remove the accumulated water.

5. Fuel Handling Building Wall Design

Page 2-18 of the SHNPP SER states "The staff, however, will require that the applicant provide assurance that the wall of the fuel handling building can withstand a hydrostatic level of 236 feet msl.

As stated in FSAR Section 3.4.2, the walls of the Fuel Handling Building and Waste Processing Building exposed to accumulated storm water in the area between the Retaining Wall and the Fuel Handling Building are capable of withstanding the corresponding hydrostatic loads. The wall of the Fuel Handling Building can withstand a hydrostatic load up to a level of 236 feet msl due to flooding from the PMP.