BEFORE THE UNITED STATES

ATOMIC ENERGY COMMISSION

In the Matter of

CAROLINA POWER & LIGHT COMPANY
H. B. Robinson Unit No. 2

Docket No. 50-261

Formal

SUPPLEMENTAL STATEMENTS BY APPLICANT

March 21, 1967

Supplemental Statements by Applicant

The following supplemental statements are furnished in response to questions posed by the Safety and Licensing Board at the pre-hearing conference on March 10, 1967.

I. CONTAINMENT PROOFTESTING

Upon completion of the structure and its appurtenances a structural test program will be carried out to provide assurance of adequacy of structural design. The purpose of this test will be to assure that the structure will withstand stresses equal to or greater than those calculated for the maximum credible accident condition as well as for the stresses resulting from accident condition plus the hypothetical earthquake without loss of function, and to confirm that the structure behaves in the manner which the design intended.

One of the design objectives for the containment has been to develop a design that would minimize and perhaps eliminate the need for periodic pressure testing and the consequent interference with plant operation. This objective is reflected in the measures which have been taken to prevent leakage from the containment and to permit leak testing without pressurization of the entire structure. The containment will be virtually leaktight with provisions for blocking potential leak paths and continuously monitoring

leakage status. In designing the liner, provisions are included for periodic leak testing of welds in the steel liner and for continuously pressurized double containment of all penetrations of the containment. A seal water system is provided to eliminate potential leak paths to the environment after a loss-of-coolant accident.

Measures have also been taken to assure the integrity of the containment structure throughout plant life without the need for periodic prooftesting. The tendons in the walls of the containment structure will be encased in galvanized steel pipe which will be filled with grout to insure a noncorrosive atmosphere. To substantiate past experience of the corrosive resistence of steel embedded in concrete and to provide assurance of the tendon protective system utilized, sample sections of the tendon bars will be inserted in pipe sections and grouted in a similar manner to the tendons. These tendon samples will be stressed to the same loading conditions as the tendons in the wall and will be maintained at the site for future inspection.

Nevertheless, provisions are being made which will permit periodic pressure testing, should some unforeseeable event indicate a desirability of such a test. Therefore, the question of postoperational testing, including frequency and pressure level of tests, can appropriately be left to the operating license stage.

II. COMPARISON OF HEAT REMOVAL CAPACITY WITH TURKEY POINT, GINNA AND INDIAN POINT II

The heat removal capacity in question is that provided by containment fan coolers and the containment spray system. These systems were sized so that any possible post-blowdown energy release would not cause the containment pressure to exceed design. The H. B. Robinson Unit No. 2 containment heat removal systems meet this objective with suitable margin for all postulated cases including the hypothetical case where no credit is taken for core cooling.

The evaluation of the containment heat removal system performance reflects the energy absorbing characteristics of the containment itself. Referring to Table IV of the Staff Safety Analysis to illustrate this point, one will note that the larger free volume of the Robinson Unit No. 2 containment compensates for the lower cooling system capacity when compared with the Turkey Point units which have identical reactor characteristics and similar containment performance margins.

Indian Point II containment cooling systems have additional capacity beyond which would be inferred as adequate from an extrapolation in plant thermal rating and containment free volume. This fact is attributable

to conservatism in initial equipment selections, forced by schedular requirements to be made in advance of detailed evaluation of the resulting performance margin.

III. COMPARISON OF OTHER PLANT FEATURES

A comparison of design parameters for Robinson Unit No. 2, Brookwood, Indian Point No. 2, and Turkey Point No. 3 shows that there is considerable similarity between the four plants. This comparison is given in detail in the Preliminary Safety Analysis Report, Volume 1, Pages 1-12 through 1-26. The thermal and hydraulic parameters are essentially the same. The major differences result from the fact that the Robinson Unit No. 2 and Turkey Point No. 3 and 4 units have three loops and vessels sized for 157 fuel assemblies, while Indian Point Unit No. 2 has four loops and Brookwood two loops, with vessels and number of fuel assemblies sized accordingly. The loop components e.g., steam generators, pump and reactor coolant pipe sizes are the same. A summary plant comparison and a comparison of safety features are made in the Safety Analysis by the Division of Reactor Licensing U. S. AEC in Appendix I Tables I through IV. The applicant agrees with these comparisons and is prepared to discuss them further if the Board has any questions. In addition, Applicant plans at the public hearing to present further oral testimony describing and commenting on the "novel" features of Robinson Unit No. 2 which have been previously identified in the AEC Staff Safety Analysis Report and Applicant's partial summary of the application.

UNITED STATES OF AMERICA

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CERTIFICATE OF SERVICE

I hereby certify that copies of the Supplemental Statements by Applicant dated March 21, 1967, in the above-captioned matter were served upon the following by deposit in the United States mail this 21st day of March, 1967.

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