

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

1 Supplemental Statements by Applicant

2

3 The following supplemental statements are furnished

4 in response to questions posed by the Safety and Licensing

5 Board at the pre-hearing conference on March 10, 1967.

6

7 I. CONTAINMENT PROOFTESTING

8 Upon completion of the structure and its appurten-

9 ances a structural test program will be carried out to

10 provide assurance of adequacy of structural design. The

11 purpose of this test will be to assure that the structure

12 will withstand stresses equal to or greater than those

13 calculated for the maximum credible accident condition as

14 well as for the stresses resulting from accident condition

15 plus the hypothetical earthquake without loss of function,

16 and to confirm that the structure behaves in the manner

17 which the design intended.

18 One of the design objectives for the containment has

19 been to develop a design that would minimize and perhaps

20 eliminate the need for periodic pressure testing and the

21 consequent interference with plant operation. This ob-

22 jective is reflected in the measures which have been taken

23 to prevent leakage from the containment and to permit leak

24 testing without pressurization of the entire structure.

25 The containment will be virtually leaktight with provisions

26 for blocking potential leak paths and continuously monitoring

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

7 Measures have also been taken to assure the integrity
8 of the containment structure throughout plant life without
9 the need for periodic prooftesting. The tendons in the
10 walls of the containment structure will be encased in gal-
11 vanized steel pipe which will be filled with grout to in-
12 sure a noncorrosive atmosphere. To substantiate past ex-
13 perience of the corrosive resistance of steel embedded in
14 concrete and to provide assurance of the tendon protective
15 system utilized, sample sections of the tendon bars will
16 be inserted in pipe sections and grouted in a similar
17 manner to the tendons. These tendon samples will be
18 stressed to the same loading conditions as the tendons
19 in the wall and will be maintained at the site for future
20 inspection.

21 Nevertheless, provisions are being made which will
22 permit periodic pressure testing, should some unforeseeable
23 event indicate a desirability of such a test. Therefore,
24 the question of postoperational testing, including fre-
25 quency and pressure level of tests, can appropriately be
26 left to the operating license stage.

1 II. COMPARISON OF HEAT REMOVAL
2 CAPACITY WITH TURKEY POINT,
3 GINNA AND INDIAN POINT II
4

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

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

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

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

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1 III. COMPARISON OF OTHER PLANT FEATURES

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3 A comparison of design parameters for Robinson Unit

4 No. 2, Brookwood, Indian Point No. 2, and Turkey Point

5 No. 3 shows that there is considerable similarity between

6 the four plants. This comparison is given in detail in

7 the Preliminary Safety Analysis Report, Volume 1, Pages 1-12

8 through 1-26. The thermal and hydraulic parameters are

9 essentially the same. The major differences result from

10 the fact that the Robinson Unit No. 2 and Turkey Point

11 No. 3 and 4 units have three loops and vessels sized for

12 157 fuel assemblies, while Indian Point Unit No. 2 has

13 four loops and Brookwood two loops, with vessels and number

14 of fuel assemblies sized accordingly. The loop components

15 e.g., steam generators, pump and reactor coolant pipe sizes

16 are the same. A summary plant comparison and a comparison

17 of safety features are made in the Safety Analysis by the

18 Division of Reactor Licensing U. S. AEC in Appendix I

19 Tables I through IV. The applicant agrees with these com-

20 parisons and is prepared to discuss them further if the

21 Board has any questions. In addition, Applicant plans at

22 the public hearing to present further oral testimony des-

23 cribing and commenting on the "novel" features of Robinson

24 Unit No. 2 which have been previously identified in the

25 AEC Staff Safety Analysis Report and Applicant's partial

26 summary of the application.

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U.S. ATOMIC ENERGY COMM.
REGULATORY
MAIL & RECORDS SECTION

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

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

Docket No. 50-261
(filed)

CERTIFICATE OF SERVICE

I hereby certify that copies of the Supplemental State-
ments 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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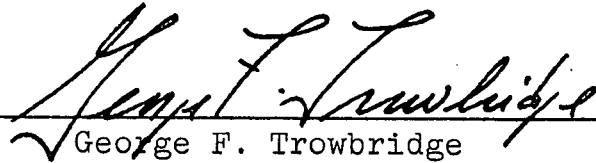
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