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SUBJECT: Forwards addl info re control room habitability upgrade.

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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
ADDITIONAL INFORMATION REGARDING CONTROL ROOM
HABITABILITY UPGRADE

Gentlemen:

Carolina Power & Light Company (CP&L) provided responses to six of seven NRC questions regarding the planned upgrade of the H. B. Robinson Steam Electric Plant Unit No. 2 (HBR2) Control Room Habitability System by letter dated August 23, 1990. The response to the seventh question is attached.

Yours very truly,


for L. I. Loflin
Manager
Nuclear Licensing Section

JSK/ecc (798RNP)

cc: Mr. S. D. Ebnetter
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Attachment

Question 7. Technical Specification 4.4.3 used for the leakage basis in the dose calculation included only RHR leakage. Commit to including Safety Injection System leakage in the basis or justify why the use of the existing Technical Specification 4.4.3 is acceptable.

Response 7. Technical Specification 4.4.3 properly excludes the SI system and is applied only to components in the RHR System. This is consistent with the basis statement for this specification which states: "The limiting leakage rates from the recirculation system are judgement values based primarily on assuring that the components could operate without mechanical failure for a period on the order of 200 days after a design basis accident." CP&L agrees, however, that the source term for the control room habitability system includes a component for leakage from the ECCS which circulates highly radioactive post accident fluid outside containment; these systems include the RHR, SI, and Containment Spray systems. Accordingly, we believe that it is more appropriate to focus on License Condition 3.G.2 which was specifically added to the license in response to TMI lessons learned and which requires the establishment of "a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluid during a serious transient or accident to as low as practical levels." Implementation of this program includes the RHR, SI, and Containment Spray Systems. Although implementing procedures for this license condition have a "per component" acceptance criteria which, when totalled for all the individual components would exceed 4 gph, the program has historically maintained the leakage well below 4 gph. The accompanying tabulations provide total system leakage test results for the RHR, SI, and Containment Spray Systems back to November 1984. These results, along with license conditions 3.G.2, indicate that leakage is maintained as low as practical and that the 4 gph leakage assumption, which is used in the basis for the Control Room Habitability Dose Calculation, is conservative without a change to Technical Specification 4.4.3.

RHR System Leakage Test Results

<u>Test Date</u>	<u>Cumulative System Leakage</u>
12/18/89	0 gph
01/28/89	.01 gph
03/02/88	.34 gph
08/12/87	0 gph
08/27/86	.06 gph
09/23/85	0 gph
11/15/84	14.58 gph (1)

- (1) Leakage was estimated for seven separate valves to total this value. Significant improvement in valve maintenance practices have been made

since 1984 including a "live load" packing program on motor operated valves. Improved valve maintenance throughout the plant has minimized the number of packing failures with none to date in 1990 and only three in 1989. Therefore, this result is discounted in the overall conclusion.

SI System Leakage Test Results

<u>Test Date</u>	<u>Cumulative System Leakage</u>
07/12/90	603 cc/hr.
07/13/89	3,000 cc/hr.
07/14/88	6,010 cc/hr. (2)
08/12/87	48 cc/hr.
07/10/86	150 cc/hr. (3)
07/10/85	0 cc/hr.
01/04/85	1,860 cc/hr.

- (2) Valve contributing 6,000 cc/hr. was tested in the open position; however, it is normally a locked closed valve, and it did not leak when closed.
- (3) Additional leakage exceeding 4 gph was identified during test on relief valve SI-857A. Leakage was attributed to gag plug on bonnet installed for test purposes which does not represent a valve integrity problem during normal system operation. Valve was retested in December 1986 with result of 24 cc/hr.

Containment Spray System Leakage Test Results

<u>Test Date</u>	<u>Cumulative System Leakage</u>
08/02/89	0 cc/hr.
08/05/88	0 cc/hr.
08/06/87	624 cc/hr.
08/06/86	0 cc/hr.
07/04/85	0 cc/hr.
11/18/84	(4)

- (4) Leakage not quantified in a manner which allows evaluation. See also (1).

NOTE: 4 gph = 15120 cc/hr.