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Carolina Power & Light Co. STARKEY, R.B. RECIPIENT AFFILIATION RECIP. NAME

Region 2, Atlanta, Office of the Director

SUBJECT: LER 81-007/01T-0:on 810213, shift in peak clad temps was determined from preliminary analysis of ECCS model used for LOCA analysis. Caused by potential modeling error by Westinghouse. Complete reanalysis of event will be made.

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	AEOD	3	- 3	ASLBP/J.HARD	1 1
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	LIC GUID BR	30. 1	1	MATL ENG BR 32	1 1
	MECH ENG BR		1	MPA	3 3
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	RAD ASSESS BR	39. 1.	1	REACT: SYS BR 40	1 1
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NRC FOR	M 366 U. S. NUCLEAR REGULATORY COMMISSION
(7-77)	LICENSEE EVENT REPORT
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CON'T 0 1 7 8	REPORT L 6 0 5 0 0 0 2 6 1 7 0 0 2 1 1 3 8 1 8 0 2 2 7 8 1 9 EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10
0 2	On January 22, 1981, Westinghouse notified Carolina Power and Light of a potential
0 3	modeling error in the ECCS model used for LOCA analysis. This error concerns the
0 4	injection point of the low head safety injection system and results in changes to some pressures and flows used in H. B. Robinson Unit 2's fuel reload LOCA analysis.
0 5	On February 12, 1981, a preliminary analysis determined that although a shift in peak clad temperatures occurred, this shift is more than adequately compensated for
0 6	by margins demonstrated in a previously submitted analysis. Therefore, although this event is reportable pursuant to Technical Specification 6.9.3.a.8, it is concluded
0 7	that this error will not result in any adverse impact to the health and safety of the public nor in any restriction to current operation, and does not constitute an
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1 0	The ECCS modeling errors described results in an effect in the LOCA analysis used for
11	fuel reloads. The correlation between this effect and the low head safety injection
1 2	discharge point had not previously been realized. A complete reanalysis of the LOCA
1 3	event considering the aforementioned effect will be made and the results reported as
1 4	a supplement to this LER.
1 5	FACILITY STATUS % POWER OTHER STATUS (30) DISCOVERY DISC
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1 9	TYPE DESCRIPTION N/A
7 8	9 PUBLICITY ISSUED DESCRIPTION 45 IN 144
810	3050558 R. B. Starkey, Jr. PHONE: (803) 383-4524

SUPPLEMENTAL INFORMATION

FOR

LICENSEE EVENT REPORT 81-007

- Cause Description and Analysis: On January 22, 1981, Westinghouse 1. notified Carolina Power and Light about a potential modeling error in the ECCS model used for LOCA analysis. The error was caused by an incorrect assumption of where the low head safety injection system discharges to the RCS. The current model assumes injection directly into the RCS cold leg. H. B. Robinson Unit 2's low head safety injection is actually into the accumulator lines which then inject into the RCS cold legs. H. B. Robinson Unit 2's fuel vendor, Exxon, was informed of the assumed injection point and responded that their model used values of pressure and flow that assumed direct RCS cold leg injection. Exxon then performed a preliminary reanalysis using the values of pressure and flow that correspond to low head safety injection into the accumulator legs. The results were reported to Carolina Power and Light on February 12, 1981. These results showed an increase in peak clad temperature during a LOCA. However, this increase is well within the margins available and demonstrated in previously submitted analyses. For this reason, it is concluded that this error will not result in any adverse impact to the public health and safety nor in any restriction to current plant operation and does not constitute an unresolved safety issue.
- 2. Corrective Action: Exxon performed a preliminary reanalysis of the LOCA event using the pressures and flows that occur when low head safety injection is assumed to inject into the accumulator legs. This reanalysis showed there was no safety concern.
- Corrective Action to Prevent Recurrence: Exxon will perform a complete reanalysis of the LOCA event. The results of this analysis will be reported in a supplement to the LER.