

LICENSEE EVENT REPORT

CONTROL BLOCK: \_\_\_\_\_ (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | S | C | H | B | R | 2 | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | \_\_\_\_\_ | 5  
 7 8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

CON'T  
 0 1 | L | 6 | 0 | 5 | 0 | 0 | 0 | 2 | 6 | 1 | 7 | 0 | 2 | 1 | 3 | 8 | 1 | 8 | \_\_\_\_\_ | 9  
 7 8 REPORT SOURCE 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | On January 22, 1981, Westir house notified Carolina Power and Light of a potential  
 0 3 | modeling error in the ECCS model used for LOCA analysis. On February 12, 1981, a  
 0 4 | preliminary analysis determined that although this error resulted in a shift in peak  
 0 5 | clad temperatures, this shift was more than adequately compensated for by margins  
 0 6 | demonstrated in a previously submitted analysis. This event is reportable pursuant  
 0 7 | to Technical Specification 6.9.3.a.8.  
 0 8 | \_\_\_\_\_

0 9 | S | F | 11 | B | 12 | A | 13 | Z | Z | Z | Z | Z | Z | 14 | Z | 15 | Z | 16  
 7 8 SYSTEM CODE 9 10 CAUSE CODE 11 12 CAUSE SL. CODE 13 COMPONENT CODE 14 CO-OP. SUBCODE 15 VALVE SUBCODE 16

17 | 8 | 1 | \_\_\_\_\_ | 0 | 0 | 7 | \_\_\_\_\_ | 0 | 1 | T | \_\_\_\_\_ | 1 |  
 21 22 EVENT YEAR 23 SEQUENTIAL REPORT NO. 24 OCCURRENCE CODE 25 REPORT TYPE 26 REVISION NO.

Z | 18 | F | 19 | Z | 20 | Z | 21 | 0 | 0 | 0 | 0 | Y | 23 | W | 24 | N | 25 | E | 3 | 6 | 0 | 26  
 33 34 ACTION TAKEN 35 FUTURE ACTION 36 EFFECT ON PLANT 37 SHUTDOWN METHOD 38 HOURS 39 ATTACHMENT SUBMITTED 40 NPRD-4 FORM SUB. 41 PRIME COMP. SUPPLIER 42 COMPONENT MANUFACTURER 43

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | A new ECCS analysis was performed in August, 1981, which showed that the new ECCS  
 1 1 | injection locations do not require any change to the reactor safety limits currently  
 1 2 | in use at HBR2. It is, therefore, concluded that this error did not result in any  
 1 3 | potential adverse impact to the public health and safety.  
 1 4 | \_\_\_\_\_

1 5 | E | 28 | 0 | 9 | 6 | 29 | N/A | D | 31 | Notification From NSSS  
 7 8 9 FACILITY STATUS 10 % POWER 11 OTHER STATUS 12 METHOD OF DISCOVERY 13 DISCOVERY DESCRIPTION 14

1 6 | Z | 33 | Z | 34 | N/A | \_\_\_\_\_ | N/A  
 7 8 9 ACTIVITY CONTENT 10 AMOUNT OF ACTIVITY 11 LOCATION OF RELEASE 12

1 7 | 0 | 0 | 0 | 37 | Z | 38 | N/A  
 7 8 9 PERSONNEL EXPOSURES 10 NUMBER 11 TYPE 12 DESCRIPTION 13

0 | 0 | 0 | 40 | N/A  
 8 9 PERSONNEL INJURIES 10 NUMBER 11 DESCRIPTION 12

1 9 | Z | 42 | N/A  
 7 8 9 LOSS OF OR DAMAGE TO FACILITY 10 TYPE 11 DESCRIPTION 12

2 0 | N | 44 | N/A  
 7 8 9 PUBLICITY 10 ISSUED DESCRIPTION 11 NRC USE ONLY 12

GPO 817-926

Item 10

On January 22, 1981, Westinghouse notified Carolina Power and Light of a potential modeling error in the ECCS model used for LOCA analysis. On February 12, 1981, a preliminary analysis determined that although this error resulted in a shift in peak clad temperatures, this shift was more than adequately compensated for by margins demonstrated in a previously submitted analysis. This event is reportable pursuant to Technical Specification 6.9.3.3.8.

Item 27

A new ECCS analysis was performed in August, 1981, which showed that the new ECCS injection locations do not require any change to the reactor safety limits currently in use at HBR2. It is, therefore, concluded that this error did not result in any potential adverse impact to the public health and safety.

SUPPLEMENTAL INFORMATION

FOR

LICENSEE EVENT REPORT 81-007, UPDATE REPORT

1. Cause Description and Analysis: On January 22, 1981, Westinghouse 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 model used at that time assumed 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 was concluded that this error would not result in any adverse impact to the public health and safety nor in any restriction to current plant operation and did not constitute an unreviewed safety question.
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.
3. Corrective Action to Prevent Recurrence: Exxon completed a new ECCS analysis in August, 1981, which showed that the new ECCS injection locations do not require any change to the reactor safety limits currently in use at HBR2. It is, therefore, concluded that this error did not result in any adverse impact to the public health and safety.