



Carolina Power & Light Company

September 9, 1977

Central File
50-261

FILE: NG-3516 (R)

SERIAL: NG-77-1011

Mr. James P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II, Suite 1217
230 Peachtree Street, N.W.
Atlanta, Georgia 30303

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT 77-20

Dear Mr. O'Reilly:

In accordance with Section 6.9.2.a of the Technical Specifications for the H. B. Robinson Steam Electric Plant, Unit 2, the attached Licensee Event Report is submitted. This report fulfills the requirement for a written report within fourteen (14) days of a reportable occurrence and is in accordance with the format set forth in Regulatory Guide 1.16, Revision 4.

Yours very truly,

H. R. Banks

Manager

Nuclear Generation

WH:dr

Attachment

cc: Messrs. W. G. McDonald
E. Volgenau

CONTROL BLOCK: 1 2 3 4 5 6

(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME S C H B R 2														LICENSE NUMBER 0 0 - 0 0 0 0 0 0 - 0 0										LICENSE TYPE 4 1 1 1 0					EVENT TYPE 0 1	
CATEGORY 57 58		REPORT TYPE T		REPORT SOURCE L		DOCKET NUMBER 0 5 0 - 0 2 6 1										EVENT DATE 0 8 2 5 7 7					REPORT DATE 0 9 0 9 7 7									

EVENT DESCRIPTION

CP&L was notified by Westinghouse that an error existed in a chemical procedure, supplied to CP&L for determination of sodium hydroxide concentration in the SI Spray Additive Tank. Although the procedure resulted in a non-conservative error of 30-35%, true concentration within the tank was determined to be above Technical Specification limits. (HBR-RO-77-20)

SYSTEM CODE S C		CAUSE CODE D		COMPONENT CODE A C C U M U					PRIME COMPONENT SUPPLIER A		COMPONENT MANUFACTURER 0 0 1 5					VIOLATION Y	
10		11		12					43		44					48	

CAUSE DESCRIPTION

The incorrect procedure resulted from an error in the Westinghouse Standard Information Package SIP 5-2 supplied to CP&L. Upon notification by Westinghouse, the plant procedure was corrected.

FACILITY STATUS E		% POWER 0 3 8			OTHER STATUS N/A			METHOD OF DISCOVERY D		DISCOVERY DESCRIPTION Notified by NSSS Supplier				
9		10			12			44		46				
FORM OF ACTIVITY RELEASED Z		CONTENT OF RELEASE Z			AMOUNT OF ACTIVITY N/A					LOCATION OF RELEASE N/A				
9		10			11					44				

PERSONNEL EXPOSURES

NUMBER 0 0 0			TYPE Z		DESCRIPTION N/A				
9			11		12				

PERSONNEL INJURIES

NUMBER 0 0 0			DESCRIPTION N/A				
9			11				

OFFSITE CONSEQUENCES

N/A							
9							

LOSS OR DAMAGE TO FACILITY

TYPE Z		DESCRIPTION N/A					
9		10					

PUBLICITY

N/A							
9							

ADDITIONAL FACTORS

Supplemental Information Attached							
9							

SUPPLEMENTAL INFORMATION
FOR
REPORTABLE OCCURRENCE 77-20

1. REPORT NO.: 50-261/77-20
- 2a. REPORT DATE:
- 2b. OCCURRENCE DATE: August 25, 1977
3. FACILITY: H. B. Robinson Unit No. 2
Hartsville, South Carolina
4. IDENTIFICATION OF OCCURRENCE:

Westinghouse Electric Corporation notified Carolina Power and Light Company that a probable error existed in the chemical procedure used at Robinson for determining the sodium hydroxide concentration in the SI Spray Additive Tank solution. This procedure was provided to CP&L via the Westinghouse Standard Information Package SIP 5-2. This procedural error constitutes a reportable occurrence as defined by plant Technical Specification 6.9.2.a.6.

5. CONDITIONS PRIOR TO OCCURRENCE:

At the time of notification, the reactor was operating at 38% of rated power, with the plant supplying 200 MWe to the system grid.

6. DESCRIPTION OF OCCURRENCE:

On August 25, 1977, Westinghouse notified the H. B. Robinson Plant staff of a probable error in the calculations used in the chemical procedure for determining sodium hydroxide (NaOH) concentration in the Spray Additive Tank. This procedure was provided to the plant via the Westinghouse Standard Information Package SIP 5-2. Procedure 4.24, within the package, includes a calculation for percent by weight of

6. DESCRIPTION OF OCCURRENCE - Continued

sodium hydroxide in aqueous solution as shown below:

$$\text{NaOH (\%)} = \frac{4.0 \times N \times V}{S}$$

Where: N = Normality of Acid
V = Volume of Acid Titrated
S = Volume of Sample

The error was made by presenting the quantity of sample taken for titration in terms of volume; instead, the quantity of sample should be given as sample mass. Use of sample volume instead of sample mass in this calculation creates a non-conservative error of 30-35%.

Plant Technical Specification 3.3.2.1.a requires that the sodium hydroxide (NaOH) concentration in the Spray Additive Tank be maintained not less than 30% by weight. In view of this requirement, the error above was determined to be reportable under Specification 6.9.2.a.6.

7. DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

The reportable occurrence resulted from a non-conservative error in a vendor document used as source information in preparing a plant procedure.

8. ANALYSIS OF OCCURRENCE:

Following notification of the error, the plant procedure was revised to reflect the corrected calculation. On August 26, 1977, the Spray Additive Tank was sampled to determine the NaOH concentration using the corrected procedure. The analysis resulted in a concentration of 31.5% by weight which is in compliance with the Technical Specification limit.

As a result of this analysis, it is believed that no limiting condition for operation has been violated. This conclusion is based on the fact that the Spray Additive Tank was filled in 1970 with the proper concentration of NaOH. Since that filling no additions or dilutions of the solution within the tank have occurred. Since this concentration, as measured above, remains within specified limits, it seems certain that the actual concentration could not have fallen below the minimum specified limit.

9. CORRECTIVE ACTION:

As indicated above, the plant procedure was revised to reflect the corrected calculation. The tank was sampled to ensure compliance with safety analysis requirements. As an added margin, NaOH concentration was increased from 31.5% to 37% by weight.

10. FAILURE DATA:

No incidents of this nature have previously occurred.