

C 3/22/78

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50-261

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SUBJECT:

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LICENSEE EVENT REPT (RD 50-261/78-05) ON 03/17/78 CONCERNING THREE BLAW KNOX
UNITS FAILED TO OPERATE PROPERLY DURING THE FUNCTIONAL TEST PORTION OF THE
PERIODIC TEST DEALING WITH HYDRAULIC SHOCK AND SWAY SUPPRESSORS.

PLANT NAME: H B ROBINSON - UNIT 2

REVIEWER INITIAL: XJM
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(DISTRIBUTION CODE A002)

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THE END

C 3/22/78

3231

Carolina Power & Light Company

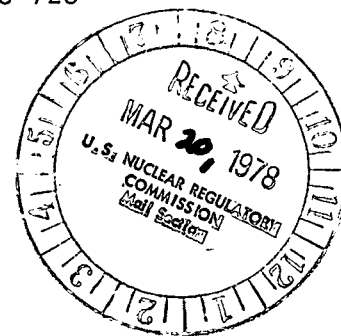
March 15, 1978

REGULATORY DOCKET FILE COPY

FILE: NG-3516 (R)

SERIAL: GD-78-728

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 78-05

Dear Mr. O'Reilly:

In accordance with Section 6.9.2 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 NUREG-0161, July, 1977.

Yours very truly,

H. R. Banks
Manager
Nuclear Generation

DCS:tme*

Attachment

cc: Messrs. R. A. Hartfield
E. Volgenau

780810033

A002/ 5 *
0/40

LICENSEE EVENT REPORT

CONTROL BLOCK: ①

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	S	C	H	B	R	2	0	0	-	0	0	0	0	-	0	0	3	4	1	1	1	1	4		5					
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33					
LICENSEE CODE														LICENSE NUMBER										LICENSE TYPE						CAT 58	

CON'T

0	1	L	0	5	0	0	0	2	6	1	0	3	0	1	7	8	0	3	1	5	7	8	9		
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
REPORT SOURCE		DOCKET NUMBER										EVENT DATE						REPORT DATE							

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

0 2 | While performing the refueling periodic test which deals with hydraulic shock and

0 3 | sway suppressors (PT-31.0), three Blaw Knox units failed to operate properly during

0 4 | the functional test portion of the PT. The snubbers failed because they did not lock

0 5 | up when exposed to excessive piston movement. These snubbers had been installed on

0 6 | the chemical and volume control piping system prior to performance of the PT. This

0 7 | event is a reportable occurrence in accordance with Section 6.9.2.a.9 of the Technical

0 8 | Specifications.

0	9	C	G	11	E	12	X	13	S	U	P	O	R	T	14	D	15	Z	16
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE						COMP. SUBCODE		VALVE SUBCODE					
LER/RO REPORT NUMBER		EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.									
17		7 8		0 0 5		0 1		T		0									
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NPRD-4 FORM SUB.		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER			
A 18		G 19		Z 20		Z 21		0 0 0 0		Y 23		Y 24		X 25		P 3 1 7 26			
33		34		35		36		37		40		41		42		43			

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ②7

1 0 | The three snubbers failed due to the hydraulic medium being too thin to permit

1 1 | proper lock up. The snubbers were rebuilt with new seals and with the addition of

1 2 | hydraulic fluid which provides proper snubber operation. All safety-related snubbers

1 3 | which are subject to the functional test in accordance with Technical Specifications

1 4 | will be functionally tested prior to startup after the refueling outage. Test results

9 will be filed with the PT-31.0 results for the 1978 refueling outage.

1	5	H	28	0	0	0	29	NA	B	31	Refueling Periodic Test	32
7	8	9	10	11	12	13	14	15	16	17	18	19
FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION				
1		0		NA		B		Refueling Periodic Test				
7		8		9		10		11				
ACTIVITY		CONTENT		AMOUNT OF ACTIVITY		LOCATION OF RELEASE						
1		Z		NA		NA						
7		8		9		10						
PERSONNEL EXPOSURES		NUMBER		TYPE		DESCRIPTION						
1		0		Z		NA						
7		8		9		10						
PERSONNEL INJURIES		NUMBER		TYPE		DESCRIPTION						
1		0		NA		NA						
7		8		9		10						
LOSS OF OR DAMAGE TO FACILITY		TYPE		DESCRIPTION		DESCRIPTION						
1		Z		NA		NA						
7		8		9		10						
PUBLICITY		ISSUED		DESCRIPTION		DESCRIPTION						
2		N		NA		NA						
7		8		9		10						

NAME OF PREPARER R. B. Starkey, Jr.

PHONE: (803) 332-1351

NRC USE ONLY

Supplemental Information For
Reportable Occurrence 78-5

1. Report No.: 50-261/78-5
- 2a. Report Date: March 13, 1978
- 2b. Occurrence Date: March 1, 1978
3. Facility: H. B. Robinson SEG Plant, Hartsville, South Carolina 29550
4. Identification of Occurrence: While performing the hydraulic snubber periodic test (PT-31.0) during the refueling outage, three snubbers were functionally tested and failed to lock up properly. This constitutes a reportable occurrence as defined by Technical Specification Paragraph 6.9.2.a(9).
5. Conditions Prior to Occurrence: The reactor was in cold shutdown due to the refueling outage. The three Blaw Knox snubbers made by Power Piping Company were removed from the chemical and volume control system piping for functional testing. The snubbers appeared in good condition with proper reservoir fluid levels and no signs of seal leakage.
6. Description of Occurrence: During the afternoon of March 1, the three snubbers were being functionally tested for proper piston movement, lock up, and bleed. The snubbers exhibited proper piston movement, but none would lock up. Since the bleeding of the snubbers can only be checked following lock up, the bleeding mode could not be verified either. The snubbers' fluid reservoirs were checked and the fluid was found to be at the proper level. Also the needle valves which control both the lock up and bleed rate were in the proper position.
7. Designation of Apparent Cause of Occurrence: The hydraulic fluid (Texaco Regal R&O) in each reservoir appeared to be extremely thin. After determining that the snubber seals were in good condition, it was concluded that the fluid's viscosity was not sufficient to cause proper lock up although Regal R&O was recommended as the fluid to be used. Previous to this year, these snubbers had not been selected as a percentage of snubbers for functional testing, but had been periodically visually inspected.
8. Analysis of Occurrence: The inability of the snubbers to lock up was apparently due to the use of a hydraulic fluid with too low of a viscosity. The fluid's viscosity affects the operating characteristics of the snubbers by governing the velocity at which the piston can move before lock up occurs. The locking velocity will decrease as the viscosity of the fluid is increased and vice versa. In this case, the fluid resulted in a locking velocity greater than the range of the test machine.

Supplemental Information For
Reportable Occurrence 78-5
Page 2

9. Corrective Action: All safety-related snubbers of the type tested (four total) were rebuilt with new seals and filled with a new approved more viscous fluid, General Electric SF-1154. These snubbers will be retested to insure proper operation prior to startup after the refueling outage. In addition, all other safety-related snubbers subject to the same testing requirements will be rebuilt as necessary and tested satisfactorily prior to reinstallation.
10. Failure Data: No previous failures of this type have occurred with any safety-related snubbers.

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CONTROL DESK

1978 MAR 22 PM 3 46

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