

A 06/14/78

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)
DISTRIBUTION FOR INCOMING MATERIAL

50-261

REC: OREILLY J P
NRC

ORG: BANKS H R
CAROLINA PWR & LIGHT

DOCDATE: 06/07/78
DATE RCVD: 06/13/78

DOCTYPE: LETTER NOTARIZED: NO
SUBJECT:

COPIES RECEIVED
LTR 1 ENCL 1

FORWARDING LICENSEE EVENT REPT (RO 50-261/78-012) ON 05/09/78 CONCERNING
ANALYSIS OF BIT SAMPLE REVEALED BORON CONCENTRATION IN TANK OF 19,638 LESS
THAN ALLOWED BY TECH SPEC... OCCURANCE CAUSED BY LEAKAGE PAST INLET VALVES ON
THE BIT DURING SI PERIODIC TEST

PLANT NAME: H B ROBINSON -- UNIT 2

REVIEWER INITIAL: XJM
DISTRIBUTOR INITIAL: *we*

***** DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS *****

INCIDENT REPORTS
(DISTRIBUTION CODE A002)

FOR ACTION: BR CHIEF ORB#1 BC**W/4 ENCL

INTERNAL: REG FILE**W/ENCL
I & E**W/2 ENCL
I & C SYSTEMS BR**W/ENCL
NOVAK/CHECK**W/ENCL
AD FOR ENG**W/ENCL
HANAUER**W/ENCL
AD FOR OPER TECH**W/ENCL
ENGINEERING BR**W/ENCL
KREGER/J. COLLINS**W/ENCL
K SEYFRIT/IE**W/ENCL

NRC PDR**W/ENCL
MIPC**W/3 ENCL
EMERGENCY PLAN BR**W/ENCL
EEB**W/ENCL
PLANT SYSTEMS BR**W/ENCL
AD FOR PLANT SYSTEMS**W/ENCL
REACTOR SAFETY BR**W/ENCL
VOLLMER/BUNCH**W/ENCL
POWER SYS BR**W/ENCL

EXTERNAL: LPDR'S
HARTSVILLE, SC**W/ENCL
TIC**W/ENCL
NSIC**W/ENCL
ACRS CAT B**W/16 ENCL

A0/24

DISTRIBUTION: LTR 45 ENCL 45
SIZE: 1P+1P+2P

CONTROL NBR: 781650072

***** THE END *****

T

NRC-3031305-006

UNITED STATES NUCLEAR REGULATORY COMMISSION
DDC DAILY ACCESSION LIST

05/04/78

FILE LEVELS DOC. DATE

50-471 BOSTON EDISON COMPANY PILGRIM #2

50 04/24/78

471

C

ACCESSION NBR: 78121-0025

DOCUMENT TYPE: OTHERS

DOCUMENT SIZE: 2P

DOCKET DATE: 04/25/78

REPORT NBR:

RECP:

ORG: COUFAL F J

TASK NBR:

FICHE NBR:

NOTARIZED:

LPDR:

RECP AFFIL

ORG AFFILI

SUBJECT: ORDER CHANGING EXHIBITS 21 AND 22
ON SUBJECT FACILITY UNIT 2) TO NU

50

05/02/78

471

C

ACCESSION NBR: 77346-0224

DOCUMENT TYPE: MEMO

DOCUMENT SIZE: 1P

DOCKET DATE:

REPORT NBR:

RECP: REGAN W

ORG: BUNCH D F

TASK NBR:

FICHE NBR:

NOTARIZED:

LPDR:

RECP AFFIL

ORG AFFILI

SUBJECT: PILGRIM ALTERNATIVE SITE REVIEW -

50

05/03/78

471

C

ACCESSION NBR: 77346-0206

DOCUMENT TYPE: MEMO

DOCUMENT SIZE: 1P

DOCKET DATE:

REPORT NBR:

RECP: NORRIS J A

SCALETTE D C

ORG: SAMWORTH R B

TASK NBR:

FICHE NBR:

NOTARIZED:

LPDR:

RECP AFFIL

ORG AFFILI

SUBJECT: QUESTIONS FOR PILGRIM 2 ALTERNATE



Carolina Power & Light Company
June 7, 1978

FILE: NG-3516 (R)

SERIAL: GD-78-1555

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 78-12

Dear Mr. O'Reilly:

In accordance with Section 6.9.2.b 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 thirty (30) 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:jpw*

Attachment

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

781650072

A002/s*
1/1

LICENSEE EVENT REPORT

(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	LICENSEE CODE						14	15	LICENSE NUMBER										25	LICENSE TYPE					30	57	CAT	58

REPORT
SOURCE

0	1	REPORT SOURCE										DOCKET NUMBER										EVENT DATE										REPORT DATE									
7	8	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																			
		L	6	0	5	0	0	0	2	6	1	7	0	5	0	9	7	8	8	0	6	0	7	7	8	9															

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | At 2300 hours, May 9, 1978, analysis of BIT sample revealed boron concentration in
0 3 | the tank of 19,638 PPM, less than the minimum allowed by Technical Specification
0 4 | 3.3.1.1.b of 20,000 PPM. This was found during sampling after completion of the
0 5 | monthly SI System Component Test. This constitutes a reportable occurrence under
0 6 | Technical Specification 6.9.2.b(2) as operation in degraded condition allowed by
0 7 | Technical Specification 3.3.1.2.f. BIT concentration was brought back above minimum
0 8 | by recirculation with "A" BAST. Concentration was 21,821 PPM at 0330, May 10, 1978.
7 8 9 | No adverse consequences resulted from this occurrence.

SYSTEM CODE [0] [9] 7 8		CAUSE CODE [S] [F] (11) 9 10		CAUSE SUBCODE [E] (12) 11		COMPONENT CODE [V] [A] [L] [V] [E] [X] (14) 12 13 14 15 16 17 18						COMP. SUBCODE [F] (15) 19		VALVE SUBCODE [D] (16) 20			
(17) LER/RO REPORT NUMBER [7] [8] 21 22		EVENT YEAR [—] 23		SEQUENTIAL REPORT NO. [0] [1] [2] 24 25 26		OCCURRENCE CODE [/] 27		[0] [3] 28 29		REPORT TYPE [L] 30		[—] 31		REVISION NO. [0] 32			
ACTION TAKEN [G] (18) 33		FUTURE ACTION [B] (19) 34		EFFECT ON PLANT [Z] (20) 35		SHUTDOWN METHOD [Z] (21) 36		HOURS (22) [0] [0] [0] [0] 37 38 39 40		ATTACHMENT SUBMITTED [Y] (23) 41		NPRD-4 FORM SUB. [N] (24) 42		PRIME COMP. SUPPLIER [N] (25) 43		COMPONENT MANUFACTURER [D] [0] [2] [0] (26) 44 45 46 47	

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Occurrence was caused by leakage past the inlet valves (SI-867 A&B) on the BIT during
1 1 | performance of the SI Periodic Test. BIT was recirculated with the "A" BAST after
1 2 | analysis of a sample of BAST revealed proper boron concentration. The tanks were left
1 3 | with the following concentrations at 0330, May 10, 1978: BIT - 21,821 PPM, "A" BAST -
1 4 | 21,951 PPM, "B" BAST - 21,602 PPM.

8 9
FACILITY STATUS (28) 1 5 E
% POWER 1 0 0 (29) NA
OTHER STATUS (30)
METHOD OF DISCOVERY (31) B
DISCOVERY DESCRIPTION (32) Routine Sampling
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 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

ACTIVITY CONTENT
RELEASED OF RELEASE AMOUNT OF ACTIVITY (35)
1 6 Z (33) Z (34) NA
7 8 9 10 11 44

LOCATION OF RELEASE (36)
NA
45 80

PERSONNEL EXPOSURES									
NUMBER			TYPE	DESCRIPTION					
1	7	0	0	0	(37) Z (38) NA	(39)			

PERSONNEL INJURIES		DESCRIPTION	
NUMBER			
1	8	0	0
		(40)	NA

8		9		11		12	
		LOSS OF OR DAMAGE TO FACILITY					
TYPE		DESCRIPTION					
1	9	Z	42	NA			

ISSUED		PUBLICITY		DESCRIPTION		NRC USE ONLY	
2	0	N	44	NA			

R. B. Starkey, Jr.

PHONE: (803) 332-1351

SUPPLEMENTAL INFORMATION
FOR
REPORTABLE OCCURRENCE 78-12

1. Report No.: 50-261/78-12
- 2a. Report Date:
- 2b. Occurrence Date: May 9, 1978
3. Facility: H. B. Robinson Unit No. 2, Hartsville, South Carolina 29550
4. Identification of Occurrence: At 2300 hours on May 9, 1978 after completion of the monthly Safety Injection System Component Test, analyses of samples of the Boron Injection Tank revealed a boron concentration of 19,638 PPM. This is below the minimum required concentration of 20,000 PPM as specified in Technical Specification 3.3.1.1.b but is within the limits for continued operation in a degraded condition for 24 hours of greater than 15,000 PPM as defined by Technical Specification 3.3.1.2.f. This constitutes a reportable occurrence in accordance with Technical Specification 6.9.2.b(2).
5. Conditions Prior to Occurrence: The plant was at 100% full power. Quarterly interval Periodic Test 2.7B, Safety Injection System Component Test, had been completed. Latest boron concentrations of the BIT and A&B BAST were 21,859 PPM, 21,773 PPM and 21,515 PPM, respectively, as recorded during routine sampling on May 8, 1978.
6. Description of Occurrence: At 2300 hours on May 9, 1978, after completion of the Safety Injection System Component Test, samples of the Boron Injection Tank taken from the top and bottom of the tank revealed boron concentrations of 19,981 PPM and 19,638 PPM, respectively. This was outside the limits of Technical Specification 3.3.1.1.b. "A" Boric Acid Storage Tank was immediately checked and found to be within acceptable specifications (21,343 PPM). The BIT was recirculated with "A" BAST and concentration was returned to within specifications. The boron concentration of the BIT at 0330 May 10, 1978 was 21,821 PPM. "A" BAST at 0600 May 10, 1978 was 21,951 PPM and "B" BAST at 0830 was 21,602 PPM.
7. Designation of Apparent Cause of Occurrence: The apparent cause of the dilution was leakage past the inlet valves of the BIT (SI-867 A&B) during the running of the Safety Injection Pumps as part of the Safety Injection System Component Test. Investigation is continuing to designate the exact mechanism which caused the dilution. It is believed that refueling water (2121 PPM boron) leaked past 867 A&B and exited through either 841 A&B to the BAST or past relief valve SI-857 to the RWST.
8. Analysis of Occurrence: The Boron Injection Tank is designed to provide a sufficient supply of negative reactivity to mitigate the consequences of a steam break accident. Safety analyses show that the consequences of the steam line break accident is successfully mitigated with a Boron Injection Tank boron concentration of 15,000 PPM. Since the minimum concentration is maintained at 20,000 PPM for additional margin, no adverse impact to the health and safety of the public occurred or would have occurred with the BIT concentration at 19,638 PPM.

SUPPLEMENTAL INFORMATION
FOR
REPORTABLE OCCURRENCE 78-12

Page 2

9. Corrective Action: The "A" Boric Acid Storage Tank's boron concentration was analyzed and found to be 21,343 PPM. With this information the BIT was recirculated with the "A" BAST. At 0330 hours May 10, 1978 the BIT was sampled and found to be within specification limits. Actual BIT boron concentration was 21,821 PPM. In addition to the immediate action, to try to avoid recurrence, appropriate maintenance and adjustments will be made to the leaking valves to assure appropriate seating. This action will be taken at the next scheduled cold shutdown after exact identification of the leaking valves. Until then the BIT will be sampled for boron concentration after the running of each SI pump during the monthly Periodic Tests.
10. Failure Data: Boron Injection Tank dilutions below the 20,000 PPM are listed below:
- January 3, 1974 - Resulted from a level change in BAST due to flushing of line between concentrates holding tank and BAST. Reported in H. B. Robinson Unit No. 2 Incident Report No. 74-1.
 - October 16, 1972 - Resulted from a leaking valve on the Safety Injection System. Reported in H. B. Robinson Unit No. 2 Incident Report No. 48.
 - July 16, 1972 - Resulted from a valve malfunction. Reported in H. B. Robinson Unit No. 2 Incident Report No. 45.
 - May 4, 1971 - Resulted from an improper valve lineup. Reported in H. B. Robinson Unit No. 2 Incident Report No. 22.