

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8906300093 DOC.DATE: 89/06/23 NOTARIZED: NO DOCKET #
 FACIL:50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
 AUTH.NAME AUTHOR AFFILIATION
 BAUCOM,C.T. Carolina Power & Light Co.
 MORGAN,R.E. Carolina Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-009-00:on 890525,relative humidity exceeding TS
 limits w/CV purge in progress.

W/8 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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PD2-1 LA	1 1	PD2-1 PD	1 1
LO,R	1 1		
INTERNAL: ACRS MICHELSON	1 1	ACRS MOELLER	2 2
ACRS WYLIE	1 1	AEOD/DOA	1 1
AEOD/DSP/TPAB	1 1	AEOD/ROAB/DSP	2 2
DEDRO	1 1	IRM/DCTS/DAB	1 1
NRR/DEST/ADE 8H	1 1	NRR/DEST/ADS 7E	1 0
NRR/DEST/CEB 8H	1 1	NRR/DEST/ESB 8D	1 1
NRR/DEST/ICSB 7	1 1	NRR/DEST/MEB 9H	1 1
NRR/DEST/MTB 9H	1 1	NRR/DEST/PSB 8D	1 1
NRR/DEST/RSB 8E	1 1	NRR/DEST/SGB 8D	1 1
NRR/DLPQ/HFB 10	1 1	NRR/DLPQ/PEB 10	1 1
NRR/DOEA/EAB 11	1 1	NRR/DREP/RPB 10	2 2
NUDOCS-ABSTRACT	1 1	REG FILE 02	1 1
RES/DSIR/EIB	1 1	RES/DSR/PRAB	1 1
RGN2 FILE 01	1 1		

EXTERNAL: EG&G WILLIAMS,S	4 4	FORD BLDG HOY,A	1 1
L ST LOBBY WARD	1 1	LPDR	1 1
NRC PDR	1 1	NSIC MAYS,G	1 1
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Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT
POST OFFICE BOX 790
HARTSVILLE, SOUTH CAROLINA 29550
JAN. 23 1980

Robinson File No: 13510C

Serial: RNP/89-2168
(10 CFR 50.73)

United States Nuclear Regulatory Commission
Attn: Document Control Desk
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT 89-009-00

Gentlemen:

The enclosed Licensee Event Report (LER) is submitted in accordance with 10 CFR 50.73 and NUREG-1022 including Supplements No. 1 and 2.

Very truly yours,



R. E. Morgan
General Manager
H. B. Robinson S. E. Plant

CTB:bah

Enclosure

cc: Mr. S. D. Ebnetter
Mr. L. W. Garner
INPO

8906300093 890623
PDR ADOCK 05000261
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2										DOCKET NUMBER (2) 0 5 0 0 0 2 6 1				PAGE (3) 1 OF 0 4												
TITLE (4) RELATIVE HUMIDITY EXCEEDING TECH. SPEC. LIMITS WITH CV PURGE IN PROGRESS																										
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)													
0	5	2	5	8	9	8	9	—	0	0	9	—	0	0	0	6	2	3	8	9					0 5 0 0 0	
OPERATING MODE (9) N			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																							
POWER LEVEL (10) 0 0 0			20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)											
			20.405(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)											
			20.405(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)											
			20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)															
			20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)															
20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)																		
LICENSEE CONTACT FOR THIS LER (12)																										
NAME C. T. BAUCOM, SENIOR SPECIALIST										TELEPHONE NUMBER 8 0 3 3 8 3 - 1 2 5 3																
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS																	
X	I K	M I	0 0 4 5	N																						
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR												
YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO <input type="checkbox"/>																										

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

In April of 1989, based on notification that a Certified Omega Humitemp Relative Humidity Standard was out-of-tolerance, plant personnel initiated a historical review to determine possible implications. This review established that an Abbeon Hygrometer used in containment (CV) for refueling operations had been calibrated using the out-of-tolerance Standard. The review further established that on November 27, 1988, from 1153 hours to 1210 hours, the CV purge fans were in operation with fuel movement in progress while CV relative humidity (R.H.) was 79% (indicated R.H. of 69% plus approximately 10% calibration error). This condition, which was confirmed on May 25, 1989, was in violation of the 70% maximum R.H. required by Technical Specification 3.8.2.d. The inaccuracy of the Standard was attributed to normal use. The annual calibration frequency which had been followed for the Standard will be increased to a semi-annual interval. Also, additional Standards have been purchased so that each can periodically be compared to the others. This will facilitate timely detection of an out-of-tolerance Standard so that it can be removed from use and calibrated. This Licensee Event Report is submitted pursuant to the requirements of 10CFR50.73(a)(2)(i).

NRC Form 366A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
H. B. ROBINSON PLANT, UNIT NO. 2	0500026189	—	009	—	00	02	OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

I. Description of Event

In April of 1989, Carolina Power and Light (CP&L) personnel received notice from an offsite calibration laboratory that a Certified Omega Humitemp Relative Humidity Standard was out-of-tolerance.^{1,2} This Standard is used by plant personnel to calibrate an Abbeon Hygrometer which is used in containment to indicate containment relative humidity. This, in turn, provides a means of ensuring compliance with Technical Specification 3.8.2.d which states, "During fuel handling operations, the relative humidity (R.H.) of air processed by the refueling filter systems shall be \leq 70 percent." Also, the basis for Technical Specification 4.12 states in part, "The relative humidity of the Containment atmosphere ... shall be monitored at least hourly to assure that the R.H. is less than 70 percent during fuel handling and Containment Purge filter system operation."

As such, notification that the Standard was out-of-tolerance (by 10.4% at 75.4% R.H. set point) prompted plant personnel to evaluate the conditions of relative humidity, fuel assembly movement, and containment purge fan status over the duration of the latest refueling outage (Refueling Outage 12). This evaluation was completed on May 25, 1989. Based on this review, it was determined that on November 27, 1988, from 1153 hours to 1210 hours, the containment purge fans were in operation with fuel movement in progress while the containment relative humidity was 79% (indicated R.H. of 69% plus approximately 10% calibration error). This was in violation of Technical Specification 3.8.2.d. No other instances were identified in which plant conditions and equipment configurations were in violation of the Technical Specifications.

II. Cause of Event

The Relative Humidity Standard is sent offsite on an annual basis for testing, calibration and certification. This Standard is then used in conjunction with plant Process Instrument Calibration Procedure, PIC-702, "Abbeon Certified Hygrometer," to calibrate the containment relative humidity monitor. This calibration is required as a Refueling preparation step within plant General Procedure, GP-010, "Refueling." All existing procedural requirements relating to the calibration of the Standard and the Abbeon Hygrometer were verified to have been met.

¹ H. B. Robinson Steam Electric Plant, Unit No. 2 is a Westinghouse 700 MW pressurized water reactor power plant, in commercial operation since March 1971.

² EIIIS Codes: System - IK; Component - MI; Manufacturer 0045.

NRC Form 366A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 9	0 0 9	0 0	0 3	OF 0 4

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Based on this procedural review, and an investigation into the history of the Standard since its last calibration, no conclusive determination can be made regarding the cause of the degradation to the accuracy of the instrument. It has been concluded that the Standard was properly calibrated when it reached the plant site following its last calibration (completed March 28, 1988), i.e., adverse effects due to shipping has been eliminated as a possible cause. Apparently, normal use may have resulted in the Standard becoming out-of-tolerance.

III. Analysis of Event

As stated in the basis to Technical Specification 3.8, "The relative humidity (R.H.) of the air processed by the refueling filter systems should be less than the R.H. used during the testing of the charcoal adsorbers in order to assure that the adsorbers will perform under accident conditions as predicted by the test results." The criteria for this testing is stated in part by Technical Specification 3.8.2.b which further states the requirement of "Verification by way of laboratory carbon sample analysis from the ... Containment Purge filter system carbon to show \geq 90 percent radioactive methyl iodide removal in accordance with test 5.b of Table 5-1 of ANSI/ASME N509-1976 except that \geq 70 percent relative humidity air is required."

As stated previously, the containment purge fans were in operation for a period of 17 minutes with containment R.H. greater than 70 percent. To assess the impact of this period of operation on the charcoal adsorbers, a review of the laboratory carbon sample analyses was performed. This test is routinely performed on each of two samples. The results of a test completed on May 19, 1988 prior to the event are provided below:

	<u>Temperature</u>	<u>R.H.</u>	<u>Methyl Iodide Removal Efficiency</u>
Sample 1	80°C	95%	96.517%
Sample 2	80°C	95%	96.392%

Tests performed after the event on January 9 and 10, 1989 provided the following results:

	<u>Temperature</u>	<u>R.H.</u>	<u>Methyl Iodide Removal Efficiency</u>
Sample 1	80°C	70%	99.993%
Sample 2	80°C	70%	99.791%

As can be seen from the above test results, there is no indication that operation of the containment purge system for 17 minutes with R.H. at 79% resulted in any degradation of the performance of the charcoal adsorbers.

NRC Form 366A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
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H. B. ROBINSON PLANT, UNIT NO. 2	0 5 0 0 0 2 6 1	8 9	— 0 0 9	— 0 0	0 4	OF	0 4

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Also, in the unlikely event of a fuel handling accident, certain automatic functions and procedural requirements assure that operation of the containment purge system is secured. These actions are taken irrespective of the containment relative humidity and provide a reasonable degree of confidence that any potential release of radioactive material would be minimal.

This Licensee Event Report is submitted pursuant to the requirements of 10CFR50.73(a)(2)(i) as an operation or condition prohibited by the plant's Technical Specifications.

IV. Corrective Actions

To help ensure that the Relative Humidity Standard is maintained within tolerance, the frequency of calibration will be increased from annually to semi-annually. Also, additional Standards have been purchased and will be maintained such that these instruments can be periodically compared to one another to verify proper performance. In this way, a Standard which is found to be out-of-tolerance will be identified in a timely manner, and can be removed from use and sent offsite for testing and calibration. These actions should ensure proper operation of relative humidity instrumentation which will, in turn, help to ensure compliance with the Technical Specifications.

V. Additional Information

A. Failed Component Identification

None

B. Previous Similar Events

None