

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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SUBJECT: Forwards page changes constituting Rev 1 to facility  
 NUREG-0737, Suppl 1 compliance rept transmitted on 841231.  
 Changes pertain to Reg Guide 1.97 section of rept & reflect  
 reclassification of variables.

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NOTES: 05000261  
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Director of Nuclear Reactor Regulation  
Attention: Mr. Steven A. Varga, Chief  
Operating Reactors Branch No. 1  
Division of Licensing  
United States Nuclear Regulatory Commission  
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/LICENSE NO. DPR-23  
NUREG-0737 SUPPLEMENT 1  
REVISION 1 TO COMPLIANCE REPORT FOR REGULATORY GUIDE 1.97, REVISION 3

Dear Mr. Varga:

#### SUMMARY

This transmittal provides a number of changes which constitute Revision 1 to the H. B. Robinson Steam Electric Plant Unit 2 (HBR2) NUREG-0737 Supplement 1 Compliance Submittal originally transmitted on December 31, 1984. Specifically, these changes pertain to the Regulatory Guide 1.97 section of the report and reflect a reclassification of certain variables with regard to their "Type" and/or "Category" designations.

#### DISCUSSION

All of the changes addressed herein are the result of a reclassification of the Containment Area Radiation (Hi-Range) variable from Categories A1, B1, C1, and E2 to Categories B3, C3, and E2 and reclassification of the Steam Generator Blowdown Radiation Level variables from Categories A1, B1, C1, D3, E3, and E2 to Categories B3, C3, D3, E3, and E2. The affected pages of the original compliance submittal have been revised to reflect these changes and are included as an enclosure with this transmittal. Changes are identified by a bar in the right margin with a R1 designation beside it.

The following listing identifies the affected pages and the changes made on each page.

1. Page A-10 - DELETED whole page
2. Page A-11 - DELETED whole page
3. Table A; page 2 of 4
  - a. Containment Area Radiation Sensor R-32A & R-32B - DELETED
  - b. SG Blowdown Radiation Sensor R-19 - DELETED
4. Table A; page 4 of 4
  - a. Footnote (4) - DELETED

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5. Table B; page 2 of 12
  - a. SG Blowdown Radiation Sensor R-19 - Changed to Category 3; environmental, seismic, power, redundancy, and recorder criteria changed.
  - b. Containment Area Radiation Sensor R-32A and R-32B - Changed to Category 3; environmental, seismic, power, redundancy, and recorder criteria changed.
6. Page B-5a - Add New Page
7. Page B-5b - Add New Page
8. Table C; page 1 of 7
  - a. Containment Area Radiation variable changed to Category 3; environmental, seismic, power, redundancy, and recorder criteria changed.
9. Table C; page 2 of 7
  - a. SG Blowdown Radiation Level changed to Category 3; environmental, seismic, power, redundancy, and recorder criteria changed.

Please incorporate these Revision 1 changes into each copy of the original Compliance Submittal under your control. If you have any questions regarding this matter, please contact Merv Marshall at (919) 836-6739.

Yours very truly,



S. R. Zimmerman  
Manager  
Nuclear Licensing Section

MM/crs (1571NLU)

Enclosure

cc: Dr. J. Nelson Grace (NRC-RII)  
Mr. G. Requa (NRC)  
Mr. H. Krug (NRC Resident Inspector - RNP)

ENCLOSURE

AFFECTED PAGES

OF

NUREG-0737

SUPPLEMENT 1

COMPLIANCE SUBMITTAL

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TYPE A

Safety Function	Variable	Sensor	Cat	RG 1.97 or HBR	Range	EQ	SQ	Power	Redun- dant	Sensor Location	Display	Recorder	Comments
RCS Integrity	Containment Water Level	LT-801 LT-802	1	RG 1.97 HBR	Plant Specific 3.5-423.5"	Yes 79-01B	Yes (1)	Standby LT-801=BB LT-802=DB PT957=BB	Yes Yes	-- CV	Continuous RTGB	Yes Yes	Instruments span both the sump and the bottom of containment.
RCS Integrity	Containment Pressure	PT-956 PT-957	1	RG 1.97 HBR	Plant Specific -5-126 psig	Yes Yes	Yes (1)	Standby PT956=DB PT957=BB	Yes Yes	-- AB	Continuous RTGB	Yes Yes	Mild environment
RCS Integrity	DELETED												
RCS Integrity	DELETED												
RCS Integrity	Steam Gener- ator Level (NR)	LT-474 LT-475 LT-476 LT-484 LT-485 LT-486 LT-494 LT-495 LT-496	1	RG 1.97 HBR	Plant Specific 0-100%	Yes 79-01B	Yes (1)	Standby Ch.1=DB Ch.2,3 =BB	Yes Yes	-- CV	Continuous RTGB	Yes Yes	Channel 1 = LT-474, -484, -494 Channel 2 = LT-475, -485, -495 Channel 3 = LT-476, -486, -496

TYPE A FOOTNOTES

- (1) Information is available that discusses the instrument's generic qualification; however, no specific comparison has been made with the HBR-specific profiles or parameters.
- (2) A RTGB recorder is available for the operator to record any 2 of 8 NIS channels. Recorder is on a diesel-backed power supply.
- (3) 51 core thermocouples provided to monitor a representative cross section of the 157 fuel assemblies.
- (4) Deleted.

R1



TYPE B													
Safety				RG 1.97					Redun-	Sensor			
Function	Variable	Sensor	Cat	or HBR	Range	EQ	SQ	Power	dant	Loca-	Display	Recorder	Comments
Core Cooling	Reactor Vessel Water Level	LT-511AA	3	RG 1.97	Bottom of hot leg to top of vessel	NR	NR	NR	NR	--	On Demand	NR	System is being installed.
		LT-511AB											
		LT-511BA											
		LT-511BB		HBR	Bottom to top of vessel	NR	NR	BB	Yes	AB	RTGB	Yes	
		LT-511BC											
		LT-511AC											
Core Cooling	RCS Subcooling Margin	CCM-520	3	RG 1.97	200°F sub-cooling to 35°F superheat	NR	NR	NR	NR	--	On Demand	NR	PT-456=Ch.1 PT-457=Ch.2
		CCM-521		HBR	200°F sub-cooling to 2250° F superheat	NR	NR	Ch.1=BB Ch.2=DB	Yes	CV	RTGB	NR	
RCS Integrity	RCS Pressure (WR)	PT-402	1	RG 1.97	0-3000 psig	Yes	Yes	Standby	Yes	--	Continuous	Yes	Recorder has DB power supply.
				HBR	0-3000 psi	79-01B	(1)	DB	No	CV	RTGB	Yes	
RCS Integrity	SG Blowdown Radiation Level	R-19	3	RG 1.97	NR	NR	NR	NR	NR	--	On Demand	NR	Mild environment.
				HBR	$4 \times 10^{-5}$ - $3.5 \times 10^{-2}$ $\mu\text{Ci/cc}$	NR	NR	BB	No	AB	RTGB	Yes(4)	
RCS Integrity	Containment Area Radiation (Hi Range)	R-32A	3	RG 1.97	NR	NR	NR	NR	NR	--	On Demand	NR	
		R-32B		HBR	$1-10^7 \text{ R/hr}$	NR	NR	R-32A=DB R-32B=BB	Yes	CV	RTGB	Yes	
RCS Integrity	Containment Pressure	PT-956	3	RG 1.97	0-design pressure	NR	NR	NR	NR	--	On Demand	NR	Design pressure = 42 psig
		PT-957		HBR	0-120 psig	NR	NR	PT956=DB PT957=BB	Yes	AB	RTGB	Yes	

Table B  
Page 2 of 12

Variable: Containment Area Radiation (Hi-Range)

Category: B3, C3, E2

R1

Compliance: For the Type E variables, the containment area radiation (hi-range) variable provides primary indication of the containment radiation safety function. Thus, per the guidelines of RG 1.97 which states that key variables for Type E be assigned as Category 2, the containment area radiation (hi-range) variable is a Category 2.

The existing design of this variable does not meet the requirements of RG 1.97 Category 2 in the area of environmental qualification. Environmental qualification may be determined to be acceptable following a comparison of the instrument's test results to HBR specific profiles.

R1

CP&L Position: The environmental qualification data for the transmitters is being evaluated against the HBR profiles. If the results are unacceptable, the detectors will be replaced with environmentally qualified detectors.

R1

Variable: Steam Generator Blowdown Radiation Level

Category: B3, C3, D3, E3, E2

R1

Compliance: The existing design of this variable does not meet the requirements of RG 1.97 Category 2 in the area of range.

R1

CP&L Position: The existing steam generator blowdown monitor will be replaced under the Radiation Monitoring System TAR (84-036). The new steam generator blowdown monitor will meet the requirements of RG 1.97 Category 2.

R1

TYPE C													
Safety Function	Variable	Sensor	Cat	RG 1.97 or HBR	Range	EQ	SQ	Power	Redun- dant	Sensor Loca- tion	Display	Recorder	Comments
Fuel Cladding Integrity	Core Exit	T1 thru	1	RG 1.97	200-2300°F	Yes	Yes	Standby	Yes	--	Continuous	Yes	Diverse indication provided by the 51 channels - all T/Cs have same power supply.
	Temperature	T51		HBR	100-700°F	No	No	DB	Yes(3)	CV	On Demand	No	
Fuel Cladding Integrity	RCS Activity & Coolant Analysis		3	RG 1.97	Activity: 1/2-100 X Tech Spec Analysis: 10 $\mu$ Ci/ml- 10 Ci/ml or TID-14844 source term in coolant volume	NR	NR	NR	NR	--	On Demand	NR	Provided by PASS or other samples.
				HBR	Activity: 1/2- 100 X Tech Spec Analysis: 1 $\mu$ Ci/ml- 10 Ci/ml	NR	NR	NR	NR	AB	None	NR	
Fuel Cladding Integrity	Letdown Radiation Level	R-9	3	RG 1.97	NR	NR	NR	NR	NR	--	On Demand	NR	
				HBR	0-100K mr/hr	NR	NR	DB	NR	AB	KTGB	NR	
RCS Integrity	RCS Pressure (WR)	PT-402	1	RG 1.97	0-3000 psig	Yes	Yes	Standby	Yes	--	Continuous	Yes	
				HBR	0-3000 psi	79-01B	(1)	DB	No	CV	RTGB	Yes	
RCS Integrity	Containment Area Radiation (Hi Range)	R-32A	3	RG 1.97	1-10 <sup>4</sup> R/hr	NR	NR	NR	NR	--	On Demand	NR	
		R-32B		HBR	1-10 <sup>7</sup> R/hr	NR	NR	R-32A=DB R-32B=BB	Yes	CV	RTGB	Yes	

Table C  
Page 1 of 7

R1

TYPE C													
Safety Function	Variable	Sensor	Cat	RG 1.97 or HBR	Range	EQ	SQ	Power	Redun-dant	Sensor Loca-tion	Display	Recorder	Comments
RCS Integrity	SG Blowdown Radiation Level	R-19	3	RG 1.97 HBR	$10^{-6}$ - $10^{-2}$ Ci/cc $4 \times 10^{-5}$ - 3.5 $\times 10^{-2}$ $\mu$ Ci/cc	NR	NR	NR	NR	--	On Demand	NR	Mild environment
						NR	NR	BB	No	AB	RTGB	Yes(4)	
RCS Integrity	Containment Water Level	LT-801 LT-802	3	RG 1.97 HBR	Plant Specific 3.5-423.5"	NR	NR	NR	NR	--	On Demand	NR	Instrument covers both narrow and wide range.
						NR	NR	LT-801=BB LT-802=DB	Yes	CV	RTGB	Yes	
RCS Integrity	Containment Pressure	PT-956 PT-957	3	RG 1.97 HBR	-5 psig - 3 x design pressure -5-126 psig	NR	NR	NR	NR	--	On Demand	NR	Design pressure = 42 psig; 3 x 42 = 126 psig
						NR	NR	PT-956=DB PT-957=DB	Yes	AB	RTGB	Yes	
RCS Integrity	Primary PORV Position	PCV-455C PCV-456	3	RG 1.97 HBR	NR Open-Closed	NR	NR	NR	NR	--	On Demand	NR	
						NR	NR	BB	NR	CV	RTGB	NR	
RCS Integrity	Primary Safety Valve Position	RC-551A RC-551B RC-551C	3	RG 1.97 HBR	NR 0-120%	NR	NR	NR	NR	--	On Demand	NR	
						NR	NR	BB	NR	CV	RTGB	NR	

R1