



# Nebraska Public Power District

GENERAL OFFICE  
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NLS8900302  
August 21, 1989

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Subject: NUREG-0737, Supplement 1 - Regulatory Guide 1.97 Response,  
Revision VIII

- References:
- 1) Letter from J. M. Pilant to R. M. Bernero, dated December 4, 1985, NUREG-0737, Supplement 1 - Regulatory Guide 1.97 Response, Revision VII
  - 2) Letter from W. O. Long to J. M. Pilant, dated October 27, 1986, Emergency Response Capability - Conformance to Regulatory Guide 1.97, Revision 2

Gentlemen:

Attached is Revision VIII of the Regulatory Guide 1.97 instrumentation list. It is the District's belief that the changes reflected in this revision are only enhancements to the instruments originally proposed to meet Regulatory Guide 1.97 (RG 1.97) requirements. The District does not consider any of the changes in Revision VIII to impact the favorable safety evaluation report (Reference 2), which found Cooper Nuclear Station to be in compliance with the requirements of RG 1.97.

The purpose of this revision to the RG 1.97 response is to reflect the actual instrumentation used to comply with the requirements of the regulatory guide, and to fulfill a commitment made during Inspection 89-19 to update the instrument list.

Should you have any questions regarding this issue, please contact this office.

Sincerely,

G. A. Trevors  
Division Manager  
Nuclear Support

GAT/mtb:jw  
Attachment (34 pages)

cc: U.S. Nuclear Regulatory Commission  
Region IV - Arlington, TX

NRC Resident Inspector  
Cooper Nuclear Station

*Acc 3*  
*11*

VARIABLE	RANGE REQUIRED IN P.C. 1.07	TYPE CATEGORY	PURPOSE	COOPER CIC NUMBER	ITEM NO.	INSTALLED RANGE	EC STATUS
<u>Reactivity Control</u>							
Neutron Flux	10 <sup>-5</sup> to 100% Full Power (SPM, APRM)	B-1	Function Detention; Accomplishment of Mitigation	SPM's, LPRM's	1-1	10 <sup>-5</sup> to 125% Full Power	N/A
Control Rod Position	Full In or Not Full In	B-3	Verification	RPIS	3-1	Full In or Not Full In 0" - 144"	N/A
RCS Soluble Boron Concentration (Sample)	0 to 1,000 ppm	B-3	Verification	PASS	3-2	0-1000 PPM Grab Sample	N/A
Coolant Level in Reactor	Bottom of Core Support Plate to Lesser of Top of Vessel or Centerline of Main Steam Line	A-1 B-1	Function Detection; Accomplishment of Mitigation; Long-Term Surveillance	MBI-LI-59A, B, C MBI-LR-85A, B MBI-LI-85A, B, C MBI-LE-59A, 91A, C MBI-SC-59A, B	1-2 1-3 1-4 1-151 1-152	10" - +225" (-150" - +60")	Qualified Mild Environment Mild Environment Mild Environment Mild Environment
SWR Core Thermocouples	200°F to 2300°F		To Provide Diverse Indication of Water Level	MBI-LI-92 MBI-LI-92 MBI-LE-92 MBI-LI-91A, B, C MBI-LR-91A, B, C MBI-LE-91A, B MBI-LE-91A, B MBI-SC-91A, B	1-5 1-6 1-153 1-7 1-8 1-154 1-155 1-156	160" - +340" (0" - +170") -150 - +225" (-314" - +61")	Qualified Mild Environment Mild Environment Qualified Mild Environment Mild Environment Mild Environment Mild Environment

ITEM NO.	SEISMIC STATUS <sup>1</sup>	OR STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR EDF	INPUT TO PMS	DEVIATIONS AND JUSTIFICATIONS
1-1	A	B	Yes <sup>4</sup>	RPS	Indicators	SRM	SRM Alarm Only	Yes Alarm Only	Implemented as Category 3. SRM's Indict's 3 counts per second which meets the lower risk requirement of P.B. 1.97. The District will follow industry development of Category 1 neutron flux instrumentation, evaluate newly developed equipment and install Category 2 instrumentation upon the demonstration of reliable, functional and obtainable equipment.
3-1	N/A	3	N/A	RPS	Indicators	Yes	Yes	Yes	None
3-2	N/S	3	N/A	LPP-CA	None	No	No	No	None
1-2	C	2	Yes	EE-PRI-CPP1A(20)/ EE-PRI-CPP(26)	Indicator/ Recorder	Yes	Yes	Yes	WPP provides 12 fuel zone water level (instrumentatic) 0.150" which is 6" below the bottom of active fuel.
1-3	C	2	Yes						WPP supplies only one qualified channel for the upper water range, from top of fuel (0 inches) to the center of the steam line at 428.5 inches.
1-4	C	2	Yes						Deference SER.
1-151	C	2	Yes						
1-152	C	2	Yes						
1-5	C	2	No		Indicator	Yes	Yes	Yes	
1-6	C	2	No						
1-153	C	2	No						
1-7	C	2	Yes	EE-PRI-CPP1A(20)/ EE-PRI-CPP(26)	Indicator/ Recorder	Yes	Yes	Yes	
1-8	C	2	Yes						
1-154	C	2	Yes						
1-155	C	2	Yes						
1-156	C	2	Yes						
1-157	C	2	Yes						
1-158	C	2	Yes						
N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	Not implemented. Reference SEROG Position, Appendix A.

VARIABLE	RANGE REQUIRED IN P.S. I.G.	TYPE CATEGORY	PURPOSE	COOPER C.I.C. NUMBER	ITEM NO.	INSTALLED RANGE	EB STATUS
<u>Maintaining Reactor Coolant System Integrity</u>							
RCS Pressure	0 psia to 1500 psig	A-1 B-1 C-1	Function Detection; Accomplishment of Mitigation; Verification	MB1-PT-5A,B PC-TE-3A,3B PC-SC-2A,2B MB1-PN-2A,2B	1-9 1-10 1-11 1-12	0 - 1500 psig	Qualified Mild Environment Mild Environment Mild Environment
Drywell Pressure	0 to Design Pressure (D.P. = 56 psig)	A-1 B-1	Function Detection; Accomplishment of Mitigation; Verification	PC-PT-512A,B PC-TE-5A,B PC-SC-4A,B PC-PN-2A,B	1-13 1-14 1-15 1-157	-5 - 70 psig	Qualified Mild Environment Mild Environment Mild Environment
Drywell Sump Level	Top to Bottom	B-1	Function Detection; Accomplishment of Mitigation; Verification	PC-PT-4A1,4B2 PC-TE-3A,3B PC-SC-3A,3B PC-PN-1A,1B ANN-ANN-19-4-1/6,3) ANN-ANN-19-4-1/7,3) ANN-ANN-19-1/5-4)	1-14 1-17 1-18 1-19 1-20	0 - 250 psig	Qualified Mild Environment Mild Environment Mild Environment Mild Environment
<u>Maintaining Containment Integrity</u>							
Primary Containment Pressure	-5 psig to Design Pressure (D.P. = 56 psig)	B-1	Function Detection; Accomplishment of Mitigation; Verification	PC-PT-512A,B PC-TE-5A,B PC-SC-4A,B PC-PN-2A,B	1-21 1-22 1-23 1-158	-5-70 psig	Qualified Mild Environment Mild Environment Mild Environment

ITEM NO.	SEISMIC STATUS	OR STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIR'D FOR ISC	REQUIRED FOR EDF	INPUT TO PMIS	DEVIATIONS AND JUSTIFICATIONS
1-9	C	A	Yes <sup>4</sup>	EE-PNL-CCP1A(20)/ EE-PNL-CCP(23)	Recorder Both Channels	Yes	Yes	Yes	None
1-10	C	A							
1-11	C	A							
1-12	C	A							
1-13	C	A	Yes <sup>4</sup>	EE-PNL-CCP1A(20)/ EE-PNL-CCP(26)	Recorder Both Channels	Yes	Yes	Yes	None
1-14	C	A							
1-15	C	A							
1-157	C	A							
1-16	C	A	Yes <sup>4</sup>	EE-PNL-CCP1A(20)/ EE-PNL-CCP(26)	Recorder Both Channels	Yes	Yes	Yes	None
1-17	C	A							
1-18	C	A							
1-19	C	A							
1-20		B			Annunciators	Yes	Yes	Yes	Implemented as Category 3. Reference SER.
1-21	C	A	Yes <sup>4</sup>	EE-PNL-CCP1A(20)/ EE-PNL-CCP(26)	Recorder Both Channels	Yes	Yes	Yes	None
1-22	C	A							
1-23	C	A							
1-158	C	A							

VARIABLE	RANGE REQUIRED IN R.G. 1.97	TYPE-CATEGORY	PURPOSE	COOPER CIC NUMBER	ITEM NO.	INSTALLED RANGE	ED. STATUS
Primary Containment Isolation Valve Position (Excluding Check Valves)	Closed - Not Closed	B	Accomplishment of Isolation	PC-PT-231-4B2	1-24	0 - 250 psig	Qualified
				PC-IE-3A, 3B	1-25		Mild Environment
				PC-SC-3A, 3B	1-26		Mild Environment
				PC-PR-1A, 1B	1-27		Mild Environment
				PC-PT-30A, B	1-28		Qualified
				PC-IE-5A, B	1-29		Mild Environment
				PC-SC-6A, B	1-30		Mild Environment
				PC-PR-2A, B	1-31		Mild Environment
				PC-IWS-237AV(O), (C)	1-32		Qualified
				PC-AO-237AV	1-33		Mild Environment
				Indicating Lights			
				PC-IWS-238AV(O), (C)	1-32		Qualified
				PC-AO-238AV	1-33		Mild Environment
				Indicating Lights			
				PC-IWS-243AV(O), (C)	1-34		Qualified
PC-AO-243AV	1-35		Mild Environment				
Indicating Lights							
PC-IWS-244AV(O), (C)	1-36		Qualified				
PC-AO-244AV	1-37		Mild Environment				
Indicating Lights							
PC-IWS-245AV(O), (C)	1-38		Qualified				
PC-AO-245AV	1-39		Mild Environment				
Indicating Lights							
PC-IWS-246AV(O), (C)	1-40		Qualified				
PC-AO-246AV	1-41		Mild Environment				
Indicating Lights							
PC-IWS-250AV	1-42		Qualified				
PC-AO-250AV	1-43		Mild Environment				
Indicating Lights							
PC-IWS-251AV	1-44		Qualified				
PC-AO-251AV	1-45		Mild Environment				
Indicating Lights							
PC-IWS-252AV	1-46		Qualified				
PC-AO-252AV	1-47		Mild Environment				
Indicating Lights							
PC-IWS-253AV(O), (C)	1-48		Qualified				
PC-AO-253AV	1-49		Mild Environment				
Indicating Lights							
PC-IWS-255AV(O), (C)	1-50		Qualified				
PC-AO-255AV	1-51		Mild Environment				
Indicating Lights							
PC-IWS-262AV(O), (C)	1-52		Qualified				
PC-AO-262AV	1-53		Mild Environment				
Indicating Lights							
PC-IWS-263AV(O), (C)	1-54		Qualified				
PC-AO-263AV	1-55		Mild Environment				
Indicating Lights							
PC-IWS-264AV	1-56		Qualified				
PC-AO-264AV	1-57		Mild Environment				
Indicating Lights							
PC-IWS-265AV(O), (C)	1-58		Qualified				
PC-AO-265AV	1-59		Mild Environment				

ITEM NO.	SEISMIC STATUS	GA STATUS	REBUILT CHANNEL	POWER SUPPLY	ER DISPLAY	REQUIRED FOR ISL	REQUIRED FOR EDF	INPUT TO PHIS	DEVIATIONS AND JUSTIFICATIONS
1-24	C	A	Yes	EE-PNL-CCP1A(20)/ EE-PNL-CP(26)	Recorder Both Channels	Yes	Yes	Yes	None
1-25	C	A	Yes	EE-PNL-CCP1A(20)/ EE-PNL-CP(26)	Recorder Single Channel	Yes	Yes	Yes	None
1-26	C	A	Yes <sup>a</sup>	EE-PNL-CCP1B(7)	Indicator Lights	Yes	Yes	Yes	None
1-27	C	A	Yes <sup>a</sup>	EE-PNL-CCP1B(7)	Indicator Lights	Yes	Yes	Yes	None
1-28	C	A	Yes <sup>a</sup>	EE-PNL-CCP1A(9)	Indicator Lights	Yes	Yes	Yes	None
1-29	C	A	No <sup>d</sup>	EE-PNL-CCP1A(9)	Indicator Lights	Yes	Yes	Yes	None
1-159	C	A	Yes <sup>b</sup>	EE-PNL-CCP1B(7)	Indicator Lights	Yes	Yes	Yes	None
1-160	C	A	Yes <sup>b</sup>	EE-PNL-CCP1B(7)	Indicator Lights	Yes	Yes	Yes	None
1-30	C	A	Yes <sup>b</sup>	EE-PNL-CCP1B(7)	Indicator Lights	Yes	Yes	Yes	None
1-31	C	A	Yes <sup>b</sup>	EE-PNL-CCP1B(7)	Indicator Lights	Yes	Yes	Yes	None
1-32	C	A	Yes <sup>b</sup>	EE-MCC-RA(2A)	Indicator Lights	Yes	Yes	Yes	None
1-33	C	A	Yes <sup>b</sup>	EE-MCC-RA(2B)	Indicator Lights	Yes	Yes	Yes	None
1-34	C	A	Yes <sup>b</sup>	EE-MCC-RA(2C)	Indicator Lights	Yes	Yes	Yes	None
1-35	C	A	Yes <sup>b</sup>	EE-PNL-EPSP1A(3)	Indicator Lights	Yes	Yes	Yes	None
1-36	C	A	Yes <sup>b</sup>	EE-PNL-EPSP1B(3)	Indicator Lights	Yes	Yes	Yes	None
1-37	C	A	Yes <sup>b</sup>	EE-PNL-EPSP1A(3)	Indicator Lights	Yes	Yes	Yes	None
1-38	C	A	Yes <sup>b</sup>	EE-PNL-EPSP1B(3)	Indicator Lights	Yes	Yes	Yes	None
1-39	C	A	Yes <sup>b</sup>	EE-MCC-RA(2D)	Indicator Lights	Yes	Yes	Yes	None
1-40	C	A	Yes <sup>b</sup>	EE-MCC-RA(2E)	Indicator Lights	Yes	Yes	Yes	None
1-41	C	A	Yes <sup>b</sup>	EE-MCC-RA(2F)	Indicator Lights	Yes	Yes	Yes	None
1-42	C	B	Yes <sup>b</sup>	EE-MCC-RA(2A)	Indicator Lights	Yes	Yes	Yes	None
1-43	C	B	Yes <sup>b</sup>	EE-MCC-RA(2B)	Indicator Lights	Yes	Yes	Yes	None
1-44	C	B	Yes <sup>b</sup>	EE-MCC-RA(2C)	Indicator Lights	Yes	Yes	Yes	None
1-45	C	B	Yes <sup>b</sup>	EE-MCC-RA(2D)	Indicator Lights	Yes	Yes	Yes	None
1-46	C	B	Yes <sup>b</sup>	EE-MCC-RA(2E)	Indicator Lights	Yes	Yes	Yes	None
1-47	C	B	Yes <sup>b</sup>	EE-MCC-RA(2F)	Indicator Lights	Yes	Yes	Yes	None
1-48	C	B	Yes <sup>b</sup>	EE-MCC-RA(2G)	Indicator Lights	Yes	Yes	Yes	None
1-49	C	B	Yes <sup>b</sup>	EE-MCC-RA(2H)	Indicator Lights	Yes	Yes	Yes	None
1-50	C	B	Yes <sup>b</sup>	EE-MCC-RA(2I)	Indicator Lights	Yes	Yes	Yes	None
1-51	C	B	Yes <sup>b</sup>	EE-MCC-RA(2J)	Indicator Lights	Yes	Yes	Yes	None
1-52	C	B	Yes <sup>b</sup>	EE-MCC-RA(2K)	Indicator Lights	Yes	Yes	Yes	None
1-53	C	B	Yes <sup>b</sup>	EE-MCC-RA(2L)	Indicator Lights	Yes	Yes	Yes	None
1-54	C	B	Yes <sup>b</sup>	EE-MCC-RA(2M)	Indicator Lights	Yes	Yes	Yes	None
1-55	C	B	Yes <sup>b</sup>	EE-MCC-RA(2N)	Indicator Lights	Yes	Yes	Yes	None
1-56	C	B	Yes <sup>b</sup>	EE-MCC-RA(2O)	Indicator Lights	Yes	Yes	Yes	None
1-57	C	B	Yes <sup>b</sup>	EE-MCC-RA(2P)	Indicator Lights	Yes	Yes	Yes	None
1-58	C	B	Yes <sup>b</sup>	EE-MCC-RA(2Q)	Indicator Lights	Yes	Yes	Yes	None

VARIABLE	RANGE REQUIRED IN R.G. 1.97	TYPE- CATEGORY	PURPOSE	COOPER C.I.C. NUMBER	ITEM NO.	INSTALLED RANGE	EO STATUS
				MS-MO-A080A, B, C, D Indicating Lights	1-59	Closed - Not Closed	Mild Environment
				MS-LMS-A086A, B, C, D (A), (F)	1-60	Closed - Not Closed	Qualified
				MS-MO-A086A, B, C, D Indicating Lights	1-61	Closed - Not Closed	Mild Environment
				MS-MO-M074	1-62	Closed - Not Closed	Qualified
				MS-MO-M074	1-63	Closed - Not Closed	Mild Environment
				MS-MO-M077	1-64	Closed - Not Closed	Qualified
				MS-MO-M077	1-65	Closed - Not Closed	Mild Environment
				Indicating Lights	1-66	Closed - Not Closed	Qualified
				RPCI-MO-M015	1-67	Closed - Not Closed	Mild Environment
				Indicating Lights	1-68	Closed - Not Closed	Qualified
				RPCI-MO-M016	1-69	Closed - Not Closed	Mild Environment
				Indicating Lights	1-70	Closed - Not Closed	Qualified
				RCIC-MO-M015	1-71	Closed - Not Closed	Mild Environment
				Indicating Lights	1-72	Closed - Not Closed	Qualified
				RCIC-MO-M016	1-73	Closed - Not Closed	Mild Environment
				Indicating Lights	1-74	Closed - Not Closed	Qualified
				PC-MO-305MV	1-75	Closed - Not Closed	Mild Environment
				Indicating Lights	1-76	Closed - Not Closed	Qualified
				PC-MO-306MV	1-77	Closed - Not Closed	Mild Environment
				Indicating Lights	1-78	Closed - Not Closed	Qualified
				RUCU-MO-M015	1-79	Closed - Not Closed	Mild Environment
				Indicating Lights	1-80	Closed - Not Closed	Qualified
				RUCU-MO-M015	1-81	Closed - Not Closed	Mild Environment
				Indicating Lights	1-82	Closed - Not Closed	Qualified
				RHR-MO-M017	1-83	Closed - Not Closed	Mild Environment
				Indicating Lights	1-84	Closed - Not Closed	Qualified
				RHR-MO-M018	1-85	Closed - Not Closed	Mild Environment
				Indicating Lights	1-86	Closed - Not Closed	Qualified
				RHR-MO-M025A	1-87	Closed - Not Closed	Mild Environment
				Indicating Lights	1-88	Closed - Not Closed	Qualified
				RHR-MO-M025B	1-89	Closed - Not Closed	Mild Environment
				Indicating Lights	1-90	Closed - Not Closed	Qualified
				RHR-MO-M027A			



ITEM NO.	SEISMIC STATUS	OR STATUS	REDUNDANT CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR EOF	INPUT TO PHIS	DEVIATIONS AND JUSTIFICATIONS
1-59	C	A			Indicator Lights	Yes	Yes	Yes	None
1-60	C	B	Yes <sup>a</sup>	EE-PN(-BB2(P))	Indicator Lights	Yes	Yes	Yes	None
1-61	C	A			Indicator Lights	Yes	Yes	Yes	None
1-62	C	B	Yes <sup>b</sup>	EE-MCC-R(4C)	Indicator Lights	Yes	Yes	Yes	None
1-63	C	A			Indicator Lights	Yes	Yes	Yes	None
1-64	C	B	Yes <sup>c</sup>	EE-STR-125RX (M077)	Indicator Lights	Yes	Yes	Yes	None
1-65	C	A			Indicator Lights	Yes	Yes	Yes	None
1-66	C	B	Yes <sup>a</sup>	EE-MCC-R(5A)	Indicator Lights	Yes	Yes	Yes	None
1-67	C	A			Indicator Lights	Yes	Yes	Yes	None
1-68	C	B	Yes <sup>b</sup>	EE-STR-125MPCI (M016)	Indicator Lights	Yes	Yes	Yes	None
1-69	C	A			Indicator Lights	Yes	Yes	Yes	None
1-70	C	B	Yes <sup>a</sup>	EE-MCC-Y(10B)	Indicator Lights	Yes	Yes	Yes	None
1-71	C	A			Indicator Lights	Yes	Yes	Yes	None
1-72	C	B	Yes <sup>a</sup>	EE-STR-125RCIC (M016)	Indicator Lights	Yes	Yes	Yes	None
1-73	C	A			Indicator Lights	Yes	Yes	Yes	None
1-74	C	B	Yes <sup>c</sup>	EE-MCC-K(1C)	Indicator Lights	Yes	Yes	Yes	None
1-75	C	A			Indicator Lights	Yes	Yes	Yes	None
1-76	C	B	Yes <sup>a</sup>	EE-MCC-RA(5D)	Indicator Lights	Yes	Yes	Yes	None
1-77	C	A			Indicator Lights	Yes	Yes	Yes	None
1-78	C	B	Yes <sup>a</sup>	EE-MCC-R(5C)	Indicator Lights	Yes	Yes	Yes	None
1-79	C	A			Indicator Lights	Yes	Yes	Yes	None
1-80	C	B	Yes <sup>b</sup>	EE-STR-125RX (M01B)	Indicator Lights	Yes	Yes	Yes	None
1-81	C	A			Indicator Lights	Yes	Yes	Yes	None
1-82	C	B	Yes <sup>a</sup>	EE-STR-125MPCI (RHR-M017)	Indicator or Lights	Yes	Yes	Yes	None
1-83	C	A			Indicator Lights	Yes	Yes	Yes	None
1-84	C	B	Yes <sup>a</sup>	EE-MCC-R(7A)	Indicator Lights	Yes	Yes	Yes	None
1-85	C	A			Indicator Lights	Yes	Yes	Yes	None
1-86	C	B	Yes <sup>b</sup>	EE-STR-250 DIVI(M025A)	Indicator Lights	Yes	Yes	Yes	None
1-87	C	A			Indicator Lights	Yes	Yes	Yes	None
1-88	C	B	Yes <sup>b</sup>	EE-STR-250 DIVII(M025B)	Indicator Lights	Yes	Yes	Yes	None
1-89	C	A			Indicator Lights	Yes	Yes	Yes	None
1-90	C	B	Yes <sup>b</sup>	EE-MCC-CA(3E)	Indicator Lights	Yes	Yes	Yes	None

VARIABLE	RANGE REQUIRED IN R.G. 1.57	TYPE- CATEGORY	PURPOSE	COOPER CIC NUMBER	ITCM NO.	INSTALLED RANGE	ED STATUS
				RHE-MO-M027A Indicating Lights	1-91		Mild Environment
				RRA-MO-M027B Indicating Lights	1-92	Closed - Not Closed	Qualified
				RHP-MO-M027C Indicating Lights	1-93		Mild Environment
				CS-MO-M012A Indicating Lights	1-94	Closed - Not Closed	Qualified
				CS-MO-M012B Indicating Lights	1-95		Mild Environment
				CS-MO-M012C Indicating Lights	1-96	Closed - Not Closed	Qualified
				CS-MO-M011A Indicating Lights	1-97		Mild Environment
				CS-MO-M011B Indicating Lights	1-98	Closed - Not Closed	Qualified
				CS-MO-M011C Indicating Lights	1-99		Mild Environment
				CS-MO-M011D Indicating Lights	1-100	Closed - Not Closed	Qualified
				CS-MO-M011E Indicating Lights	1-101		Mild Environment
				RR-LMS-740AV(D), (C) Indicating Lights	1-102	Closed - Not Closed	Qualified
				RR-AD-740AV Indicating Lights	1-103		Mild Environment
				RR-LMS-741AV(D), (C) Indicating Lights	1-104	Closed - Not Closed	Qualified
				RR-AD-741AV Indicating Lights	1-105		Mild Environment
				RHR-MO-M057 Indicating Lights	1-106	Closed - Not Closed	Qualified
				RHR-MO-M057 Indicating Lights	1-107		Mild Environment
				RHR-MO-M067 Indicating Lights	1-108	Closed - Not Closed	Qualified
				RHR-MO-M067 Indicating Lights	1-109		Mild Environment
				ACAD-MO-1301MV Indicating Lights	1-110	Closed - Not Closed	Qualified
				ACAD-MO-1301MV Indicating Lights	1-111		Mild Environment
				ACAD-MO-1302MV Indicating Lights	1-112	Closed - Not Closed	Qualified
				ACAD-MO-1302MV Indicating Lights	1-113		Mild Environment
				ACAD-MO-1303MV Indicating Lights	1-114	Closed - Not Closed	Qualified
				ACAD-MO-1303MV Indicating Lights	1-115		Mild Environment
				ACAD-MO-1304MV Indicating Lights	1-116	Closed - Not Closed	Qualified
				ACAD-MO-1304MV Indicating Lights	1-117		Mild Environment
				ACAD-MO-1305MV Indicating Lights	1-118	Closed - Not Closed	Qualified

ITEM NO.	SEISMIC STATUS <sup>1</sup>	CA STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR EDF	INPUT TO PHIS	DEVIATIONS AND JUSTIFICATIONS
1-91	C	A							
1-92	C	B	Yes <sup>b</sup>	EE-MCC-RB(3C)	Indicator Lights	Yes	Yes	Yes	None
1-93	C	A							
1-94	C	A	Yes <sup>c</sup>	EE-MCL-9(6A)	Indicator Lights	Yes	Yes	Yes	None
1-95	C	A							
1-96	C	A	Yes <sup>c</sup>	EE-MCC-Y(5C)	Indicator Lights	Yes	Yes	Yes	None
1-97	C	A							
1-98	C	A	Yes <sup>c</sup>	EE-MCC-0(5D)	Indicator Lights	Yes	Yes	Yes	None
1-99	C	A							
1-100	C	A	Yes <sup>c</sup>	EE-MCC-Y(5B)	Indicator Lights	Yes	Yes	Yes	None
1-101	C	A							
1-102	C	A	Yes <sup>b</sup>	EE-PNL-CCP18(2)	Indicator Lights	Yes	Yes	Yes	None
1-103	C	A							
1-104	C	A	Yes <sup>b</sup>	EE-PNL-CP1A(2)	Indicator Lights	Yes	Yes	Yes	None
1-105	C	A							
1-106	C	B	Yes <sup>b</sup>	EE-MCC-0(3B)	Indicator Lights	Yes	Yes	Yes	None
1-107	C	A							
1-108	C	B	Yes <sup>b</sup>	EE-PNL-RB3(3)	Indicator Lights	Yes	Yes	Yes	None
1-109	C	A							
1-110	C	C	Yes <sup>b</sup>	EE-MCC-CB(3A)	Indicator Lights	Yes	Yes	Yes	None
1-111	C	A							
1-112	C	C	Yes <sup>b</sup>	EE-PNL-2C(1)	Indicator Lights	Yes	Yes	Yes	None
1-113	C	A							
1-114	C	C	Yes <sup>b</sup>	EE-PNL-CR(1)	Indicator Lights	Yes	Yes	Yes	None
1-115	C	A							
1-116	C	C	Yes <sup>b</sup>	EE-MCC-CA(2A)	Indicator Lights	Yes	Yes	Yes	None
1-117	C	A							
1-118	C	C	Yes <sup>b</sup>	EE-PNL-CR(2)	Indicator Lights	Yes	Yes	Yes	None

VARIABLE	RANGE REQUIRED IN 3.1.1.97	TYPICAL CATEGORY	PURPOSE	COOPER CLC NUMBER	ITEM NO.	INSTALLED RANGE	EQ STATUS				
Zearcor Coolant Pressure Boundary	1 R/hr to 10 <sup>5</sup> R/hr	C-3	Detection of Breach; Verification	ACAD-MD-1308MV Indicating Lights	1-119		Mild Environment				
				ACAD-MD-1309MV	1-120	Closed - Not Closed	Qualified				
				ACAD-MD-1306MV Indicating Lights	1-121		Mild Environment				
				ACAD-MD-1308MV	1-122	Closed - Not Closed	Qualified				
				ACAD-MD-1308MV Indicating Lights	1-123		Mild Environment				
				ACAD-MD-1310MV	1-124	Closed - Not Closed	Qualified				
				ACAD-MD-1310MV Indicating Lights	1-125		Mild Environment				
				ACAD-MD-1311MV	1-126	Closed - Not Closed	Qualified				
				ACAD-MD-1311MV Indicating Lights	1-127		Mild Environment				
				ACAD-MD-1312MV	1-128	Closed - Not Closed	Qualified				
				ACAD-MD-1312MV Indicating Lights	1-129		Mild Environment				
				Primary Containment Area Radiation	1 R/hr to 10 <sup>5</sup> R/hr	C-3	Detection of Breach; Verification	RSA-RE-40A,B	3-3	10/hr to 10 <sup>7</sup> R/hr	N/A
								RSA-RE-40A,B	3-4		N/A
RSA-RE-40A,B (RSA-RR-40 for A & B)	3-5 3-6		N/A								
Drywell Drain Sumps Level (Identified and Unidentified Leakage)	Top to Bottom	U-1	Detection of Breach; Accomplishment of Mitigation; Verification Long- Term Surveillance	ANN-ANN-(9-A-174-3)	1-130		Mild Environment				
				ANN-ANN-(9-L-175-3) ANN-ANN-(S-175-2)							

ITEM NO.	SEISMIC STATUS	DA STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	POWER SUPPLY	CF DISPLAY	REQUIRED FOR TSC	REQUIRED FOR ECF	INPUT TO PRIS	DEVIATIONS AND JUSTIFICATIONS
1-119	C	A							
1-120	C	C	Yes <sup>2</sup>	EE-MLC-CA(2B)	Indicator Lights	Yes	Yes	Yes	None
1-121	C	A							
1-122	C	C	Yes <sup>2</sup>	EE-PNL-CA(2)	Indicator Lights	Yes	Yes	Yes	None
1-123	C	A							
1-124	C	C	Yes <sup>2</sup>	EE-PNL-CR(3)	Indicator Lights	Yes	Yes	Yes	None
1-125	C	A							
1-126	C	C	Yes <sup>2</sup>	EE-PNL-CA(3)	Indicator Lights	Yes	Yes	Yes	None
1-127	C	A							
1-128	C	C	Yes <sup>2</sup>	EE-MCC-CR(3C)	Indicator Lights	Yes	Yes	Yes	None
1-129	C	A							
3-3	N/A	A	N/A	EE-PNL-CCP1A(19)	Common Recorder	Yes	Yes	Yes	None
3-4	N/A			EE-NL-CCP1B(1)					
3-5	N/A								
3-6	N/A								
1-150		B		...	Annunciators	Yes	Yes	Yes	Implemented as Category 3. Reference SER.

VARIABLE	RANGE REQUIRED IN R.C. 1.97	TYPE CATEGORY	PURPOSE	COOPER CIC NUMBER	ITEM NO.	INSTALLED RANGE	EQ STATUS
Suppression Pool Water Level	Bottom of ECSS Suction Line to 5' Above Normal Water Level	A-1 C-1	Detection of Breach; Accomplishment of Mitigation; Verification Long Term Surveillance	PC-DPT-3A1,3B2 PC-IE-2A,2B PC-SC-1A,1B PC-LR-1A,1B	1-131 1-132 1-133 1-134	0 - 30' (866' - 896')	Qualified Mild Environment Mild Environment Mild Environment
<u>Containment</u>							
Primary Containment Pressure	-5 psig to 4 Times Design Pressure D.P. = 56 psig	C-1	Detection of Potential for or Actual Breach; Accomplishment of Mitigation	PC-PT-4A1,4B2 PC-IE-3A,3B PC-SC-3A,3B PC-PR-1A,1B	1-135 1-136 1-137 1-138	0 - 250 psia	Qualified Mild Environment Mild Environment Mild Environment
Effluent Radioactivity-Mobile Gases	$10^{-6}$ uCi/cc to $10^{-2}$ uCi/cc	C-2	Indication of Breach	ERP Hi-range Effluent Monitor RMP-RM-3A,8 RMP-CBK-(3A-1,2) RMP-CBK-(3A-1,2) RMP-RR-3	2-1 2-2 2-162 2-163	$5 \times 10^{-7}$ uCi/cc to $1 \times 10^6$ uCi/cc (Note 4)	Qualified Mild Environment Mild Environment Mild Environment
Containment and Drywell Hydrogen Concentration	0 - 30% (Capability of Operating from .5 psig to Design Pressure)	C-1	Detection of Potential for Breach; Accomplishment of Mitigation	PC-AH-42/021 PC-AH-42/0211 PC-R-H21 PC-R-H211 PC-R-H211	1-139 1-140 1-141 1-142	0-30%	Qualified Qualified Mild Environment Mild Environment
Containment and Drywell Oxygen Concentration (for Inerted Containment Plants)	0 - 10% (Capability of Operating from .5 psig to Design Pressure)	C-1	Detection of Potential for Breach; Accomplishment of Mitigation	PC-AH-42/021,11 PC-R-021,11	1-143 1-144	0-30%	Qualified Mild Environment
<u>Condensate and Feedwater System</u>							
Main Feedwater Flow	0 - 110% Design Flow (0. F. = $9.52 \times 10^6$ lb/hr total, $6.4 \times 10^6$ lb. r per pump)	D-3	Detection of Operation, Analysis of Cooling	RFC-FI-50A,8 RFC-ES-93 RFC-SORT-110A,8 RFC-FI-89A,8	3-7 3-8 3-9 3-10	0-7.0 x $10^6$ lb/hr per Pump	N/A N/A N/A N/A
Condensate Storage Tank Level	Top to Bottom	D-3	Indication of Available Water for Cooling	CM-LI-5 Computer PI F001 ES-ES-1 CM-LIC-5	3-11 3-12 3-13 3-14	0 - 100% (0' - 40')	N/A N/A N/A N/A
Emergency Storage Tank Level	Bottom to Top	D-3	Indication of Available Water for Cooling	CM-LI-650A CM-LI-652 CM-LI-651A,8 CM-LI-651A,8 CM-ES-6	3-15 3-16 3-17 3-18 3-19	2.0% - 100% (1' - 36')	N/A N/A N/A N/A N/A



VARIABLE	RANGE REQUIRED IN R.G. 1.97	TYPE- CATEGORY	PURPOSE	COOPER C.I.C. NUMBER	ITEM NO.	INSTALLED RANGE	EQ. STATUS
<u>Fuel Cladding</u>							
radioactivity concentration or Radiation level in Circulating Primary Coolant	1/2 Tech Spec Limit to 150 Times Tech Spec Limit	C-1	Detection or Breach	Post-Accident Sample System	1-165	Grab Sample	N/A
<u>Ventilation Systems</u>							
Emergency Ventilation Damper Position	Open - Closed Status	D-2	To Monitor Operation				
				RV-LMS-257AV(O), (C)	2-3	Open-Closed	Mild Environment
				HV-ADV-257AV	2-4	Open-Closed	Mild Environment
				Indicating Lights			
				HV-MO-272MV	2-5	Open-Closed	Mild Environment
				HV-MO-272MV	2-6	Open-Closed	Mild Environment
				Indicating Lights			
				HV-LMS-259AV(O), (C)	2-7	Open-Closed	Mild Environment
				HV-ADV-259AV	2-8	Open-Closed	Mild Environment
				Indicating Lights			
				HV-MO-258MV	2-9	Open-Closed	Mild Environment
				HV-MO-258MV	2-10	Open-Closed	Mild Environment
				Indicating Lights			
				HV-MO-260MV	2-11	Open-Closed	Mild Environment
				HV-MO-260MV	2-12	Open-Closed	Mild Environment
				Indicating Lights			
				HV-LMS-261AV(O), (C)	2-13	Open-Closed	Mild Environment
				HV-ADV-261AV	2-14	Open-Closed	Mild Environment
				Indicating Lights			
				HV-MO-262MV	2-145	Open-Closed	Mild Environment
				HV-MO-262MV	2-146	Open-Closed	Mild Environment
				Indicating Lights			
				HV-MO-2642V	2-147	Open-Closed	Mild Environment
				HV-MO-264MV	2-148	Open-Closed	Mild Environment
				Indicating Lights			
				HV-MO-266MV	2-149	Open-Closed	Mild Environment
				HV-MO-266MV	2-150	Open-Closed	Mild Environment
				Indicating Lights			
				HV-MO-268MV	2-151	Open-Closed	Mild Environment
				HV-MO-268MV	2-152	Open-Closed	Mild Environment
				Indicating Lights			
				HV-LMS-263AV(O), (C)	2-153	Open-Closed	Mild Environment
				HV-ADV-263AV	2-154	Open-Closed	Mild Environment
				Indicating Lights			
				HV-LMS-265AV(O), (C)	2-155	Open-Closed	Mild Environment
				HV-ADV-265AV	2-156	Open-Closed	Mild Environment
				Indicating Lights			
				HV-LMS-267AV(O), (C)	2-157	Open-Closed	Mild Environment
				HV-ADV-267AV	2-158	Open-Closed	Mild Environment
				Indicating Lights			
				HV-LMS-269AV(O), (C)	2-159	Open-Closed	Mild Environment
				HV-ADV-269AV	2-160	Open-Closed	Mild Environment
				Indicating Lights			



ITEM NO.	SEMIC STATUS	DA STATUS	REDUNDANT CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR ECI	INPUT TO PWS	DEVIATIONS AND JUSTIFICATIONS
1-145	None	C	No	LPRV-2A	None	N/A	MC	No	Implemented as Category 3, Reference SER.
2-3	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	None
2-4	N/A	B	Yes <sup>a</sup>	EE-MCI-RA(3A)	Indicator Lights	Yes	Yes	Yes	
2-5	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-6	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(3B)	Indicator Lights	Yes	Yes	Yes	
2-7	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(3C)	Indicator Lights	Yes	Yes	Yes	
2-8	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-9	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(3B)	Indicator Lights	Yes	Yes	Yes	
2-10	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(3C)	Indicator Lights	Yes	Yes	Yes	
2-11	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-12	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(3B)	Indicator Lights	Yes	Yes	Yes	
2-13	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(3C)	Indicator Lights	Yes	Yes	Yes	
2-14	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-14S	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(3D)	Indicator Lights	Yes	Yes	Yes	
2-146	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(4A)	Indicator Lights	Yes	Yes	Yes	
2-147	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(4B)	Indicator Lights	Yes	Yes	Yes	
2-148	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(4C)	Indicator Lights	Yes	Yes	Yes	
2-149	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-150	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-151	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(4C)	Indicator Lights	Yes	Yes	Yes	
2-152	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-153	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-154	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-155	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(4B)	Indicator Lights	Yes	Yes	Yes	
2-156	N/A	B	Yes <sup>a</sup>	EE-MCC-RA(4C)	Indicator Lights	Yes	Yes	Yes	
2-157	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-158	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-159	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	
2-160	N/A	B	Yes <sup>a</sup>	EE-PNL-CCP1B(16)	Indicator Lights	Yes	Yes	Yes	



ITEM NO.	SEISMIC STATUS	DR STATUS	REDUNDANT CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR TSC	REQUIRED FOR EOC	INPUT TO PMLS	DEVIATIONS AND JUSTIFICATIONS
2-15	N/A	B	Yes <sup>a</sup>	001 & 002 PT's & CT's	Indicators	Yes	Yes	Yes	None
2-16	N/A	B	Yes <sup>a</sup>		Both Channels	Yes	Yes	Yes	
2-17	N/A	B	Yes <sup>a</sup>			Yes	Yes	Yes	
2-18	N/A	B	Yes <sup>a</sup>			Yes	Yes	Yes	
2-19	N/A	B	Yes <sup>a</sup>			Yes	Yes	Yes	
2-20	N/A	B							
2-21	N/A	B							
2-22	N/A	B							
2-23	N/A	B							
2-24	N/A	B							
2-25	N/A	B							
2-26	N/A	B							
2-27	N/A	B							
2-28	N/A	B							
2-29	N/A	B							
2-30	N/A	B							
2-31	N/A	B							
2-32	N/A	B	No	ES-ES-1 EE-PML-CCP1A(16)		Yes	Yes	Yes	None
2-33	N/A	B							
2-34	N/A	B							
2-35	N/A	B	N/A	250 VDC Batt. 1A	Indicator	Yes	Yes	Yes	None

VARIABLE	RANGE REQUIREC IN R.G. 1.97	TYPE CATEGORY	PURPOSE	COOPER CIC NUMBER	ITEM NO.	INSTALLED RANGE	ENV. STATUS
				EE-VI-250A1	2-36	0 - 300 Volts	Mild Environment
				EE-AI-250A2	2-37	0 - 300 Amps	Mild Environment
				EE-AI-250B1	2-38	200 - 0 Amps 0 - 1000 Amps	Mild Environment
				EE-AI-250C2	2-39	0 - 300 Amps	Mild Environment
				EE-VI-250B1	2-40	0 - 300 Volts	Mild Environment
				EE-AI-125A1	2-41	200 - 0 Amps 0 - 1000 Amps	Mild Environment
				EE-AI-125A2	2-42	0 - 200 Amps	Mild Environment
				EE-VI-125A1	2-43	0 - 150 Volts	Mild Environment
				EE-AI-125B1	2-44	200 - Amps 0 - 1000 Amps	Mild Environment
				EE-AI-125B2	2-45	0 - 200 Amps	Mild Environment
				EE-VI-125B1	2-46	0 - 150 Volts	Mild Environment
				AC BUS STATUS	2-47		
				None	2-48	N/A	N/A
Primary Containment - Related Systems							
Suppression Chamber Spray Flow	0 - 110% Design Flow	D-2	To Monitor Operation		2-49 2-50	0 - +2.0 psic	Qualified Mild Environment
Drywell Pressure	-5 psig to 5 psig 0 - 110% Design Pressure	D-2	To Monitor Operation	PC-PT-512A,B PC-TE-5A,B PC-SC-4A,B PC-PR-2A,B PC-PT-4A1,4B2 PC-TE-3A,3B PC-SC-3A,3B PC-PR-1A,1B	2-51 2-52 2-53 2-54 2-55 2-56 2-57	-5 - 70 psig 0 - 25.0 psig	Qualified Mild Environment Mild Environment Mild Environment Qualified Mild Environment Mild Environment Mild Environment
Suppression Pool Water	Top of Vent to Top of Hair Yell	D-2	To Monitor Operation	PC-DPT-3A1,3B2 PC-TE-2A,2B PC-SC-1A,1B PC-LR-1A,1B	2-58 2-59 2-60 2-61	0 - 50' (866'-866')	Qualified Mild Environment Mild Environment Mild Environment

ITEM NO.	SEISMIC STATUS <sup>1</sup>	OR STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	USER SUPPLY	CR LIST <sup>4</sup>	REQUIRED FOR ISC	RED-TRED FOR 20'	INPUT TO P.H.S.	DEVIATIONS AND JUSTIFICATIONS
2-36	N/A	B	N/A	250 VDC BUS 1A	Indicator	Yes	Yes	Yes	None
2-37	N/A	B	N/A	250 VDC CRG. 1A	Indicator	Yes	Yes	Yes	None
2-38	N/A	B	N/A	250 VDC Batt. 1B	Indicator	Yes	Yes	Yes	None
2-39	N/A	B	N/A	250 VDC CRG. 1B	Indicator	Yes	Yes	Yes	None
2-40	N/A	B	N/A	250 VDC BUS 1B	Indicator	Yes	Yes	Yes	None
2-41	N/A	B	N/A	125 VDC Batt. 1A	Indicator	Yes	Yes	Yes	None
2-42	N/A	B	N/A	125 VDC CRG. 1A	Indicator	Yes	Yes	Yes	None
2-43	N/A	B	N/A	125 VDC BUS 1A	Indicator	Yes	Yes	Yes	None
2-44	N/A	B	N/A	125 VDC Batt. 1B	Indicator	Yes	Yes	Yes	None
2-45	N/A	B	N/A	125 VDC CRG. 1B	Indicator	Yes	Yes	Yes	None
2-46	N/A	B	N/A	125 VDC BUS 1B	Indicator	Yes	Yes	Yes	None
2-47									Not implemented as status can be derived from other sources.
2-48	N/A	N/A	N/A	N/A	N/A	No	No	No	Not implemented. Reference SER.
2-49	N/A	B	N/A	FE-PNL-CCP1A(7)	Recorder - Single Channel	Yes	Yes	Yes	None
2-50	N/A	B	N/A	EE-PNL-CCP1A(20)	Recorder - Both Channels	Yes	Yes	Yes	None
2-51	N/A	A	N/A	EE-PNL-CCP1A(20)	Recorder - Both Channels	Yes	Yes	Yes	None
2-52	N/A	A	N/A	EE-PNL-CCP(26)	Recorder - Both Channels	Yes	Yes	Yes	None
2-53	N/A	A	N/A	EE-PNL-CCP(26)	Recorder - Both Channels	Yes	Yes	Yes	None
2-54	N/A	A	N/A	EE-PNL-CCP1A(20)	Recorder - Both Channels	Yes	Yes	Yes	None
2-55	N/A	A	N/A	EE-PNL-CCP(26)	Recorder - Both Channels	Yes	Yes	Yes	None
2-56	N/A	A	N/A						
2-57	N/A	A	N/A						
2-58	N/A	A	N/A	EE-PNL-CCP1A(20)	Recorder - Both Channels	Yes	Yes	Yes	None
2-59	N/A	A	N/A	EE-PNL-CCP(26)	Recorder - Both Channels	Yes	Yes	Yes	None
2-60	N/A	A	N/A						
2-61	N/A	A	N/A						

VARIABLE	RANGE REQUIRED (K R. G. I. C.)	TYPE CATEGORY	PURPOSE	PROPER CIC NUMBER	ITEM NO.	INSTALLED RANGE	EQ. STATUS
Suppression Pool Water Temperature	30°F to 230°F	A-1 D-2	To Monitor Operation	PC-TE-1A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z PC-TR-24 PC-TR-25	1-146 1-147 1-159	0 - 250°F	Qualified Mild Environment Mild Environment
Atmospheric	40°F to 440°F	D-2	To Monitor Operation	PC-TE-505A-E PC-RI-505A-E PC-11-505A-E	2-62 2-63 2-64	50° - 600°F	Qualified Mild Environment Mild Environment
				PC-TE-510A-E PC-RI-510A-E PC-TR-510A-E PC-AM-510A, B, C	2-65 2-66 2-67 2-161	50° - 350°F	Qualified Mild Environment Mild Environment Mild Environment
Drywell Spray Flow	0 to 110% Design Flow	D-2	To Monitor Operation	None	2-68		
<u>Main Steam System</u>							
Main Steamline Isolation: Valves Leakage Control System Procedure	0 to 15" of Water 0 to 5 psig	D-2	To Provide Indication of Pressure Boundary Maintenance	S/A to VWR 4	2-69		
Primary System Safety Relief Valve Positions, Including ADS or Pressure in Valve Lines	Closed - Not Closed 0 - 50 psig	D-2	Detection of Accident; Boundary Integrity Indication	MS-PS-300A-B (L-V) MS-TE-112A, B, C (SV)	2-70 2-71	30 psig (0-30 psig) 0 - 600°F	Qualified Qualified
Isolation Condenser System Shellside Water Level	Top to Bottom	D-2	To Monitor Operation	MS-TE-114A, B, C (SV) MS-TR-166	2-72 2-73	0 - 600°F	Qualified Mild Environment
Insulation Condenser System Valve Position	Open or Closed	D-2	To Monitor Operation	N/A to CMS	2-74		
RCIC Flow	0 - 110% Design Flow (D.F. = 416 GPM)	D-2	To Monitor Operation	N/A to CMS RCIC-FT-58 RCIC-FIC-91 RCIC-SORT-99	2-75 2-76 2-77 2-78	0 - 500 GPM	Qualified Mild Environment Mild Environment

ITEM NO.	SEISMIC STATUS	OR STATUS	REDUNDANT CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR EDT	INPUT TO PHS	DEVIATIONS AND JUSTIFICATIONS
1-146 C		A	Yes	EE-PNL-CCP1A(20) EE-PNL-CP(26) EE-PNL-CCP1A(16) EE-PNL-CP(14)	Recorder Both Channels	Yes	Yes	Yes	None
2-62 N/A		A	N/A	EE-PNL-CCP1A(16)	Indicator - Single Channel	Yes	Yes	Yes	None
2-63 N/A		B							
2-64 N/A		B							
2-65 N/A		A	N/A	EE-PNL-CCP1A(15)	Indicator - Single Channel	Yes	Yes	Yes	Expanded range not implemented. Reference SER.
2-66 N/A		A							
2-67 N/A		B							
2-161 N/A		A							
2-68									Not implemented. Reference SER.
2-69									Not applicable to CMS.
2-70 N/A		B	N/A	EE-PNL-RA2(6)	Indicator Lights	Yes	Yes	Yes	None
2-71 N/A		A	N/A	EE-PNL-CP(4)	Recorder - Single Channel Computer Pt.	Yes	Yes	Yes	
2-72 N/A		A	N/A						
2-73 N/A		B	N/A						
2-74									Not applicable to CMS.
2-75									Not applicable to CMS.
2-76 N/A		A	N/A	EE-PNL-NBPP(19)	Indicator - Single Channel	Yes	Yes	Yes	None
2-77 N/A		B	N/A	9-6(13A-F14)					
2-78 N/A		B	N/A						Not applicable to CMS.

VARIABLE	RANGE REQUIRED I.N.R.S. 1.97	TYPE- CATEGORY	PURPOSE	COOPER CIC NUMBER	ITEM NO.	INSTALLED RANGE	EQ. STATUS
LPCI Flow	0 - 110% Design Flow (D.F. = 4250 GPM)	D-2	To Monitor Operation	LPCI-FI-82 RPCI-FIC-108 RPCI-IVTR-110 RPCI-SORT-118	2-79 2-80 2-81 2-82	0 - 5000 GPM	Qualified Mild Environment Mild Environment Mild Environment
Core Spray System Flow	0 - 110% Design Flow (D.F. = 4720 GPM)	D-2	To Monitor Operation	CS-FI-60A,B CS-ES-52A&B CS-FI-50A&B	2-83 2-84 2-85	0 - 6000 GPM	Qualified Mild Environment Mild Environment
LPCI Flow	0 - 110% Design Flow (D.F. = 15,000 GPM)	D-2	To Monitor Operation	RHR-FI-109A,B RHR-ES-145A&B RHR-SORT-134A&B RHR-FI-133A&B	2-86 2-87 2-88 2-89	0 - 20,000 GPM	Qualified Mild Environment Mild Environment Mild Environment
SLCS Flow	0 - 110% Design Flow	D-2	To Monitor Operation	None	2-90		
SLCS Storage Tank Level	Top to Bottom	D-2	To Monitor Operation	SLC-LT-65 SLC-LI-66 SLC-ES-69	2-91 2-92 2-93	0 - 100% Level	Mild Environment Mild Environment Mild Environment
<u>Residual Heat Removal Systems</u>							
RNR System Flow	0 - 110% Design Flow (D.F. = 15,000 GPM)	D-2	To Monitor Operation	RNR-FI-109A,B RNR-ES-145A&B RNR-SORT-134A&B RNR-FI-133A&B	2-94 2-95 2-96 2-97	0 - 20,000 GPM	Qualified Mild Environment Mild Environment Mild Environment
RHR Heat Exchanger Outlet Temperature	60°F to 350°F	D-2	To Monitor Operation	RHR-TE-94C,D RHR-TR-131	2-98 2-99	0 - 600°F	Qualified Mild Environment



ITEM NO.	SEISMIC STATUS	QA STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR EGF	INPUT TO PHIS	DEVIATIONS AND JUSTIFICATIONS
2-79	N/A	A	N/A	EE-PNL-BB2(1B)	Indicator -	Yes	Yes	Yes	None
2-80	N/A	B	N/A	9-4(23A-F25 & 23A-F26)	Single Channel				
2-81	N/A	B	N/A						
2-82	N/A	B	N/A						
2-83	N/A	A	N/A	EE-PNL-CCP1A(3)	Indicators -	Yes	Yes	Yes	None
2-84	N/A	B	N/A	9-19(14-F52AV)	Double Channel				
2-85	N/A	B	N/A	EE-PNL-CP(9)					
				9-18(14A-F3)					
2-86	N/A	A	N/A	EE-PNL-CCP1A(3)	Indicator -	Yes	Yes	Yes	None
2-87	N/A	B	N/A	9-18(14A-F16A)	Double Channel				
2-88	N/A	B	N/A	EE-PNL-CCP1B(3)					
2-89	N/A	B	N/A	9-18(10A-F16B)					
2-90									Not implemented. Reference SER.
2-91	N/A	B	N/A	EE-PNL-CP(9)	Indicator -	Yes	Yes	Yes	Implemented as Category 3. Reference SER.
2-92	N/A	B	N/A	(11A-F2)	Single Channel				
2-93	N/A	B	N/A						
2-94	N/A	A	N/A	EE-PNL-CCP1A(3)	Indicators -	Yes	Yes	Yes	None
2-95	N/A	B	N/A	EE-PNL-CCP1B(3)	Double Channels				
2-96	N/A	B	N/A						
2-97	N/A	B	N/A						
2-98	N/A	A	N/A	EE-PNL-CCP(4)	Common	Yes	Yes	Yes	None
2-99	N/A	B	N/A		Recorder				

VARIABLE	RANGE REQUIRED IN R.G. 1.57	TYPE CATEGORY	PURPOSE	COOPER C.I.C. NUMBER	ITEM NO.	INSTALLED RANGE	EQ. STATUS
<u>Boiling Water System</u>							
Cooling Water Temperature to ESF System Components	40°F to 200°F	D-2	To Monitor Operation	SV-TE-96A,B RHR-TE-131 (RHR Hx Outlet) SV-TE-388A,B (REC Hx Outlet) SV-TE-390A,B (RHR Hx Inlet) SV-TE-387A,B (REC Hx Inlet)	2-100 2-101 2-102 2-103 2-104	0 - 600°F 0°F - 200°F	N/A Mild Environment N/A N/A N/A
<u>Cooling Water Flow to ESF System Components</u>	0 - 110% Design Flow	D-2	To Monitor Operation	SW-FI-97A,B (RHR Hx) RHR-ES-145A,B SW-SORT-132A,B SW-FI-132A,B SW-FI-387A,B (REC Hx) SW-SORT-387A,B SW-FI-387A,B REC-ES-101A REC-ES-9(B)	2-105 2-106 2-107 2-118 2-109 2-110 2-111 2-112 2-113	0 - 10,000 GPM	Qualified Mild Environment Mild Environment Mild Environment Qualified Mild Environment Mild Environment Mild Environment Mild Environment
<u>Redwaste Systems</u>							
High Radioactivity Liquid Tank Level	Top to Bottom	D-3	To Monitor Operation	RW-LT-620 (FLR DRN COLL TK) RW-LY-369 (WASTE COLL TK)	3-20 3-21	0 - 100% 0 - 100%	N/A N/A
<u>Containment Radiation</u>							
Primary Containment Area Radiation High Range	1R/hr to 10 <sup>3</sup> R/hr	E-1	Detection of Significant Releases; Release Assessment; Long-Term Surveillance Emergency Plan Actuation	RMA-RE-60A,B RMA-AM-60A,B RMA-RE-60	1-148 1-149 1-150	1R/hr to 10 <sup>3</sup> R/hr	Qualified Mild Environment Mild Environment
Secondary Containment Area Radiation High Range	10 <sup>1</sup> R/hr for Mark I Containments	E-2	Detection of Significant Releases; Release Assessment; Long-Term Surveillance	Fuel Pool Area- RMA-RE-1 RMA-AM-AU1 RMA-RA-1 RPCI Room- RMA-RE-10 RMA-RE-10	2-114 2-115 2-116 2-117 2-188	10 <sup>1</sup> R/hr to 10 <sup>3</sup> R/hr 10 <sup>5</sup> R/hr to 10 <sup>7</sup> R/hr	N/A N/A Mild Environment N/A Mild Environment

ITEM NO.	SEISMIC STATUS	QA STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR TCC	REQUIRED FOR EOF	INPUT TO PMS	DEVIATIONS AND JUSTIFICATIONS
2-100	N/A	B	N/A	EE-PNL-CCP(4)	Common Recorder	Yes	Yes	Yes	Implemented as Category 3 for the following reasons: 1) Heat exchanger operation is monitored via qualified instrumentation for cooling water flow to ESP system components (R.G. 1.97 Items 2-105 thru 2-113). 2) Indication of Heat Exchanger outlet temperature on the RHB side is provided by qualified instrumentation (R.G. 1.97 Items 2-98 and 2-99). 3) The river temperature does not significantly change over a short period of time and is indicated by other instrumentation in mild environments.
2-101	N/A	B	N/A		Computer Pts	Yes	Yes	Yes	
2-102	N/A	B	N/A		Computer Pts	Yes	Yes	Yes	
2-103	N/A	B	N/A		Computer Pts	Yes	Yes	Yes	
2-104	N/A	B	N/A			Yes	Yes	Yes	None
2-105	N/A	A	N/A	EE-PNL-CCP1A(3)		Yes	Yes	Yes	None
2-106	N/A	B	N/A	EE-PNL-CCP1B(3)		Yes	Yes	Yes	
2-107	N/A	B	N/A			Yes	Yes	Yes	
2-108	N/A	S	N/A			Yes	Yes	Yes	
2-109	N/A	A	N/A	EE-PNL-CCP1A(20)		Yes	Yes	Yes	None
2-110	N/A	B	N/A	EE-PNL-CCP1B(17)		Yes	Yes	Yes	
2-111	N/A	B	N/A			Yes	Yes	Yes	
2-112	N/A	C	N/A			Yes	Yes	Yes	
2-113	N/A	B	N/A			Yes	Yes	Yes	None
3-20	N/A	None	N/A	EE-PNL-NBPP(5) 25-17-(20A-F1)	Radwaste C.R. Only	No	No	No	No direct indication in Control Room. Monitored every two hours by Operations Personnel.
3-21	N/A	None	N/A	EE-PNL-NBPP(5) 25-17-(20A-F1)		No	No	No	
1-168	C	A	Yes <sup>a</sup>	EE-PNL-CCP1A(19)	Common Recorder	Yes	Yes	Yes	The recorder is isolated from the readout modules by an optical isolator. Indication is also provided by the IE readout modules (R.G. 1.97 Item 1-169). WFPD does not intend to qualify this recorder.
1-169	C	A		EE-PNL-CCP1B(1)		Yes	Yes	Yes	
1-150	None (See Deviations)	A	No	EE-PNL-CCP1A(19)		Yes	Yes	Yes	
2-114	N/A	B	N/A	EE-PNL-CCP(5)	Indicator - Single Channel	Yes	Yes	Yes	Not implemented as a Reg. Guide 1.97 parameter. Reference SER.
2-115	N/A	B	N/A	EE-PNL-CCP(5)		Yes	Yes	Yes	See Above
2-116	N/A	B	N/A	EE-PNL-CCP(5)		Yes	Yes	Yes	
2-117	N/A	B	N/A	EE-PNL-CCP(5)	Indicator - Single Channel	Yes	Yes	Yes	See Above
2-118	N/A	B	N/A	EE-PNL-CCP(5)		Yes	Yes	Yes	



TEM NO.	SEISMIC STATUS	QA STATUS	REDUNDANT CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR IGF	INPUT TO PNIS	DEVIATIONS AND JUSTIFICATIONS
2-119	N/A	B	N/A	EE-PNL-CPP(5)	Indicator - Single Channel	Yes	Yes	Yes	See Above
2-120	N/A	B		EE-PNL-CPP(5)					
2-121	N/A	C		EE-PNL-CPP(5)					
2-122	N/A	B	N/A	EE-PNL-CPP(5)	Indicator - Single Channel	Yes	Yes	Yes	See Above
2-123	N/A	B		EE-PNL-CPP(5)					
2-124	N/A	B		EE-PNL-CPP(5)					
2-125	N/A	B	N/A	EE-PNL-CPP(5)	Indicator - Single Channel	Yes	Yes	Yes	See Above
2-126	N/A	B		EE-PNL-CPP(5)					
2-127	N/A	B	N/A	EE-PNL-CPP(5)	Indicator - Single Channel	Yes	Yes	Yes	See Above
2-128	N/A	B		EE-PNL-CPP(5)					
2-129	N/A	B		EE-PNL-CPP(5)					
2-130	N/A	C	N/A	480 VAC from PPGR1 120 VAC from LPGB1 EE-PNL-MBPP(15)	Indicator and Recorder - Single Channel	Yes	Yes	Yes	None
2-131	N/A	C				No	No	No	None
2-132	N/A	C	N/A	EE-PNL-CCP1B (19)					
2-164	N/A	C		EE-PNL-LPGB1 (12)					
2-165	N/A	C		EE-PNL-CCP1B (19)					
2-166	N/A	C							
2-133	N/A	C	N/A	480 VAC from PCC-DG1 120 VAC from CCP2B(7)	Indicator and Recorder - Single Channel	Yes	Yes	Yes	None
2-134	N/A	C		HV-ES-4002A,B					
2-135	N/A	C		HV-ES-4102A,B					
2-136	N/A	C		SC-PNL-CPP(22)					
2-137	N/A	C		480 VAC from	Indicator	Yes	Yes	Yes	None
2-138	N/A	C	N/A	EE-PNL-CCP-R (19)					
2-167	N/A	C	N/A	EE-PNL-CCP2R (7)					
2-168	N/A	C		EE-PNL-CCP1B (19)					
2-169	N/A	C							

Implemented as Category 3  
with the range of 10<sup>5</sup> R/hr to  
10<sup>7</sup> R/hr for the HPCI Room, BRR SU QUAD,  
BRR MW QUAD, ECIC RW and CS SE RW and a  
range of 10<sup>4</sup> R/hr to 10<sup>6</sup> R/hr for the  
fuel pool areas. Reference SER.

VARIABLE	RANGE REQUIRED IN R.S. 1.97	TYPE CATEGORY	DESCRIPTION	COOPER C.I. NUMBER	ITEM NO.	INSTALLED RANGE	EO STATUS
Auxiliary Building	10 <sup>6</sup> uCi/cc to 10 <sup>3</sup> uCi/cc 0 - 110% Design Flow	E-2 C-3	Detection of Significant Releases, Release Assessment	RV HI-range Effluent Monitor RVV-RM-30A,B RV-F1-4004 RV-SPT-4004 RV-FDPR-4003 RV-CBX-430A,B-1 RV-CBX-430A,B-2 RVV-RR-30	2-135 2-136 2-140 2-141 2-170 2-171 2-172	5-10 <sup>6</sup> uCi/cc to 1x10 <sup>3</sup> uCi/cc (Note 4) 0-81,600 cfm	Mild Environment Mild Environment Mild Environment Mild Environment Mild Environment Mild Environment
Common Plant Vent	10 <sup>6</sup> uCi/cc to 10 <sup>3</sup> uCi/cc 0 - 110% Design Flow (DF=6035)	E-2 C-3	Detection of Significant Releases, Release Assessment	ERP HI-range Effluent Monitor RRP-1-3A,B OG-FIT-4001 RV-F1-4004	2-142 2-143 2-144	5x10 <sup>7</sup> uCi/cc to 10 <sup>3</sup> uCi/cc (Note 4) 0-10,000 cfm	Mild Environment Mild Environment Mild Environment
Particulates and Helogens Common Plant Vent	10 <sup>3</sup> uCi/cc to 10 <sup>2</sup> uCi/cc 0 - 110% Design Flow (DF=6035)	E-3	Detection of Significant Releases, Release Assessment; Long-Term Surveillance	ERP HI-range Effluent Monitor RRP-RM-3A,B OG-F1-4001 RV-FR-4000	3-22 3-23 3-24	10 <sup>3</sup> uCi/cc to 1x10 <sup>2</sup> uCi/cc (Note 4) 0-10,000 cfm	N/A N/A N/A
Auxiliary Building Common Plant Vent	10 <sup>3</sup> uCi/cc to 10 <sup>2</sup> uCi/cc 0 - 110% Design Flow (DF=152, 130)	E-3	Detection of Significant Releases, Release Assessment; Long-Term Surveillance	T-0 HI-range Effluent Monitor RMV-RM-20A,B RV-F1-4004 RV-SPT-4004 RV-SORT-4002A,B,C,D RV-SUM-4002 RV-FR-4000	3-25 3-26 3-27 3-28 3-29	10 <sup>3</sup> uCi/cc to 10 <sup>2</sup> uCi/cc (Note 4) 0-250,000 cfm	N/A N/A N/A N/A N/A
Auxiliary Building Common Plant Vent	10 <sup>3</sup> uCi/cc to 10 <sup>2</sup> uCi/cc 0 - 110% Design Flow (DF=66, 870)	E-3	Detection of Significant Releases, Release Assessment; Long-Term Surveillance	RV HI-range Effluent Monitor RVV-RM-30A,B RV-F1-4004 RV-FDPR-4003	3-31 3-32 3-33	10 <sup>3</sup> uCi/cc to 10 <sup>2</sup> uCi/cc (Note 4) 0-81,600 cfm	N/A N/A N/A
Auxiliary Building Common Plant Vent	10 <sup>3</sup> uCi/cc to 10 <sup>2</sup> uCi/cc 0 - 110% Design Flow (DF=15,000 cfm)	E-3	Detection of Significant Releases, Release Assessment; Long-Term Surveillance	MPF HI-range Effluent Monitor RVV-RM-10 RV-F1-4004 RV-SORT-4006 RV-FE-4006	3-34 3-35 3-37 3-38	10 <sup>12</sup> to 10 <sup>6</sup> uCi/cc Particulate Monitor with Onsite Analysis to 10 <sup>2</sup> uCi/cc 0-20,000 cfm	N/A N/A N/A N/A

Low-Level Radiation and  
Airborne Radioisotopes and  
Particulates (portable  
sampling with onsite analysis  
capability)

10<sup>6</sup> uCi/cc to 10<sup>3</sup> uCi/cc

40-1

Release assessment; analysis

E-3

10<sup>6</sup> uCi/cc to 10<sup>3</sup> uCi/cc

10<sup>6</sup> uCi/cc to 10<sup>3</sup> uCi/cc

DEVIATIONS AND JUSTIFICATIONS

ITEM NO.	SEISMIC STATUS	OR STATUS	REDUNDANT CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR EOF	INPUT TO PMS
2-138	N/A	C	N/A	MCC-W 120 VAC from LPM3	and Recorder - Single Channel			
2-139	N/A	C		HV-ES-4000				
2-140	N/A	C		HV-ES-4000				
2-141	N/A	C		EE-PRL-CP(22)				
2-170	N/A	C		EE-PRL-CP(18) (19)				
2-171	N/A	C		EE-PRL-CP(22)				
2-172	N/A	C		EE-PRL-CP(18) (19)				
2-142	N/A	C	N/A	480 VAC from 1PGB1 120 VAC from LPM1	Indicator and Recorder - Single Channel	Yes	Yes	Yes
2-143	N/A	C		EE-PRL-RB(15)				
2-144	V/A	C						
3-22	N/A	C	N/A	480 VAC from PPSB1 120 VAC from 1PGB1	None	No	No	No
3-25	N/A	C		EE-PRL-MPP(15)				
3-26	N/A	C						
3-25	N/A	C	N/A	480 VAC from MCC-D21 120 VAC from CCP2B	None	No	No	No
3-27	N/A	C		HV-ES-4002A,B				
3-28	N/A	C		HV-ES-4002A,B				
3-29	N/A	C		EE-PRL-CP(22)				
3-30	N/A	C	N/A	480 VAC from MCC-W 120 VAC from LPM3	None	No	No	No
3-31	N/A	C		HV-ES-4000				
3-32	N/A	C		HV-ES-4000				
3-33	N/A	C		EE-PRL-CP(22)				
3-34	N/A	C	N/A	480 VAC from PPM2 120 VAC from PPM1	Indicator and Recorder - Single Channel	Yes	Yes	Yes
3-35	N/A	C		EE-PRL-CP(22)				
3-37	N/A	C		EE-PRL-CP(22)				
3-38	N/A	C		EE-PRL-CP(22)				
3-39	N/A	C	N/A	Portable-N/A	None	No	No	No

VARIABLE	RANGE REQUIRED IN R.C. 1.07	TYPE CATEGORY	PURPOSE	COOPER CIS NUMBER	ITEX NO.	INSTALLED RANGE	EQ. STATUS
Plant and Environs Radiation (portable instrumentation)	$10^3$ R/hr to $10^4$ R/hr, photons $10^3$ rads/hr to $10^4$ rads/hr, beta radiations and low-energy photons	E-3 E-3	Release assessment; analysis	MP-2 MP-3	3-60	$10^3$ R/hr to $10^3$ R/hr Gamma, $10^3$ rads/hr to 200 rads/hr Beta	N/A
Plant and Environs Radio- activity (portable instrumentation)	(Isotopic Analysis)	E-3	Release assessment; analysis	None	3-42	Iodine Analysis	N/A
Meteorology							
Wind Direction	0 - 260° (+5% accuracy with a deflection of 10°). Starting speed less than 0.4 mps (1.0 mph). Damping ratio greater than or equal to 0.4, delay distance less than or equal to 2 meters.	E-3	Release assessment	MI-T-MS4 MI-T-MS3 MI-T-MS2	3-63	0-540° + 3° thresh- hold 0.5B mph damping 0.4 at 1.13 meters	N/A
Wind Speed	0 - 22 mps (50 mph), ±2 mps (0.5) mph accuracy for speeds less than 2 mps (5 mph), 10% for speeds in excess of 2 mps (5 mph), with a starting thresh- hold of less than 0.4 mps (1.0 mph) and a distance constant not to exceed 2 meters.	E-3	Release assessment	MI-T-MS4 MI-T-MS3 MI-T-MS2	3-44	0-100 mph acc. ±0.15 mph or 1% threshold 0.6 mph, dist. const. equals 1.5 meters	N/A



ITEM NO.	SEISMIC STATUS <sup>1</sup>	OR STATUS <sup>2</sup>	REDUNDANT <sup>3</sup> CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR TSC	REQUIRED FOR EOP	INPUT TO PMIS	DEVIATIONS AND JUSTIFICATIONS
3-40	M/C		N/A	Portable-M/A	No	No	No	No	Reference SER.
3-42	N/A	C	N/A	N/A	No	No	No	No	Laboratory analysis is used as it is more accurate.
3-43	N/A	C	N/A	Normal-Offsite Emergency-MCC-1	SPDS	Yes	Yes	Yes	None
3-44	M/C	C	N/A	Normal-Offsite Emergency-MCC-1	SPDS	Yes	Yes	Yes	None

VARIABLE	RANGE REQUIRED IN R.S. 1.07	TYPE-CATEGORY	PURPOSE	COOPER S.C. NUMBER	ITEM NO.	INSTALLED RANGE	EQ. STATUS
Estimation of Atmospheric Stability	Based on vertical temperature difference from primary meteorological system, 5°C to 10°C (-9°F to 18°F) and ±0.15°C accuracy per 50-meter intervals (±0.3°F accuracy per 166-foot intervals) or analogous range for alternative stability estimates.	E-3	Release assessment	Met-005 Met-013 Met-021	3-45	-30 to +50°C ±5% Δ not to exceed 9.15°C	N/A
<p>Accident Sampling Capability (Analysis Capability on Site)</p> <p>Primary Coolant and Sump</p> <p>Gross Activity Gamma Spectrum Boron Content Chloride Content Dissolved Hydrogen or Total Gas Dissolved Oxygen pH</p>	<p>Grab Sample</p> <p>1 uCi/ml to 10 Ci/ml (Isotopic Analysis) 0 - 1000 ppm 0 to 20 ppm 0 to 2000 cc(STP)/kg 0 to 20 ppm 1 to 13</p>	E-3	Release assessment; verification; analysis	PASS	3-46	1 uCi/ml to 10 Ci/ml (Isotopic Analysis) 0 to 15 ppm (dilutable) 10 ppb to 10 ppm (dilutable) Not available-calculated 10 ppb to 1 ppm (dilutable) 1 to 16 ppm-line	N/A
<p>Containment Air</p> <p>Gamma Spectrum</p>	<p>Grab Sample</p> <p>(Isotopic analysis)</p>	E-3	Release assessment; verification; analysis	PASS	3-47	Isotopic Analysis	N/A

DEVIATIONS AND JUSTIFICATIONS

REQUIRED FOR EOP

REQUIRED FOR ISC

CR DISPLAY

POWER SUPPLY

REDUANT<sup>3</sup> CHANNEL

DA STATUS<sup>2</sup>

SEISMIC STATUS

INPUT TO THIS

ITEM NO.	SEISMIC STATUS	DA STATUS <sup>2</sup>	REDUANT <sup>3</sup> CHANNEL	POWER SUPPLY	CR DISPLAY	REQUIRED FOR ISC	REQUIRED FOR EOP	INPUT TO THIS	Justification
3-45	N/A	C	N/A	Normal-Offsite Emergency-MCC-1	SPDS	Yes	Yes	Yes	
3-46	N/A	C	N/A	EE-PRL-1PRU2	SO	No	No	No	Implement as Category 3 for primary coolant sampling only. Sump sample not implemented. Reference SER.
3-47	N/A	N/A	N/A	EE-PRL-1PRU2	N/A	Yes	No	No	

Note:  
<sup>1</sup>Seismic Status  
 A - Original Plant Criteria furnished by GE  
 B - Original Plant Criteria BOP  
 C - Qualified to R.G. 1.100  
<sup>2</sup>DA Status  
 A - 10 CFR 50 Appendix B  
 B - Original DA Design Criteria  
 C - High Quality  
<sup>3</sup>Redundant Channel  
 a - All redundant or diverse channels are electrically independent and are physically separated from each other although they do not always meet with the minimum separation distances as specified in Reg. Guide 1.75.  
 b - Although supplied by one division, one channel is supplied by a DC source and the other by an AC source.  
 c - Diverse circuits supplied by one division  
 d - Redundant valve is a check valve without indication.

Note:  
 Airborne radioactive releases will be achieved on the C.R. recorder channels with rates of 10<sup>3</sup> to 10<sup>4</sup> uCi/sec and 10<sup>2</sup> to 10<sup>3</sup> uCi/sec which are obtained by combining the radioactivity concentration (uCi/cc) and flow rate (cfm). This parameter (uCi/sec) is displayed since it is directly related to the off-site release limits.