DCD Markups for RAI 7.1-99

Table 7.1-1

I&C Systems Regulatory Requirements Applicability Matrix

System																													
Applicable Criteria Guidelines: SRP NUREG 0800, Section 7.1	Reference Standard	RPS (Q)	NMS (Q)	SPTM Function (Q)	ADS (Q)	GDCS (Q)	LD&IS (Q & N)	CRHS (Q)	SSLC /ESF (Q)	VB Isolation Function (Q)	SLC (Q)	RSS (Q & N)	RWCU /SDC (N)	ICS (Q)	PAM (Q & N)	CMS (Q &N)	PRMS (Q &N)	ARMS (N)	Interlock Systems (N)	NBS (Q & N)	RC&IS (N)	FWCS (N)	PAS (N)	SB&PC (N)	NMS (N)	CIS(N)	DPS(N) ATWS/SLC (Q)	Q DCIS (Q)	N DCIS (N)
10 CFR																													
50.55a(a)(1)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
50.55a(h)	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X							X	X	
50.34(f)(2)(v)(I.D.3)		X	X	X	X	X	X	X	X	X	X			X	X	X	X			X							X	X	
50.34(f)(2)(xvii)(II.F.1)															X	X	X	X											
50.34(f)(2)(xviii)(II.F.2)															X					X									
50.34(f)(2)(xiv)(II.E.4.2)					X	X	X	X	X	X																			
50.34(f)(2)(xix)(II.F.3)															X	X	X	X											
50.34(f)(2)(xxiv)(II.K.3.23)															X														
50.44(c)(4)																X													
50.62											X										X	X					X#	X	
52.47(a)(1)(iv)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
52.47(a)(1)(vi)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
52.47(a)(1)(vii)		N/A																											
52.47(a)(2)		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X							X	X	
52.47(b)(2)(i)		N/A																											
50.34(f)(2) xii [II.E.1.2]		N/A																											
50.34(f)(2) xx [II.G.1]		N/A																											
50.34(f)(2) xxii [II.K.2.9]		N/A																											
50.34(f)(2) xxiii [II.K.2.10]		X							X					X															
52.79(c)		N/A																											

Table 7.1-1

I&C Systems Regulatory Requirements Applicability Matrix

System																													
Applicable Criteria Guidelines: SRP NUREG 0800, Section 7.1	Reference Standard	RPS (Q)	NMS (Q)	SPTM Function (Q)	ADS (Q)	GDCS (Q)	LD&IS (Q & N)	CRHS (Q)	SSLC /ESF (Q)	VB Isolation Function (Q)	SLC (Q)	RSS (Q & N)	RWCU /SDC (N)	ICS (Q)	PAM (Q & N)	CMS (Q &N)	PRMS (Q &N)	ARMS (N)	Interlock Systems (N)	NBS (Q & N)	RC&IS (N)	FWCS (N)	PAS (N)	SB&PC (N)	NMS (N)	CIS(N)	DPS(N) ATWS/SLC (Q)	Q DCIS (Q)	N DCIS (N)
General Design Criteria																													
1		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X							X	X	X
2	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								X	X
4	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								X	X
13	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X			X														X	
21	IEEE Std. 603 & IEEE Std. 338	X	X	X	X	X	X	X	X	X	X			X														X	
22	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X			X														X	
23	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X			X														X	
24	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
25	IEEE Std. 603	X	X	X															X									X	
29	IEEE Std. 603	X	X	X																	X							X	
SRM on SECY 93-087																													
II.Q	BTP HICB 19	X	X	X	X	X	X	X	X	X	X			X						X							X	X	X
II.T															X	X	X											X	X
Regulatory Guides (RG)																													
1.22		X	X	X	X	X	X	X	X	X	X			X													X	X	
1.47	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X			X		X	X										X	X	
1.53	IEEE Std. 379 IEEE Std. 603	X	X	X	X	X	X	X	X	X	X	X		X		X	X										X	X	
1.62	IEEE Std. 603	X		X	X	X	X	X	X	X	X			X													X	X	

Table 7.1-1

I&C Systems Regulatory Requirements Applicability Matrix

System																													
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	Reference Standard	RPS (Q)	NMS (Q)	SPTM Function (Q)	ADS (Q)	GDCS (Q)	LD&IS (Q & N)	CRHS (Q)	SSLC /ESF (Q)	VB Isolation Function (Q)	SLC (Q)	RSS (Q & N)	RWCU /SDC (N)	ICS (Q)	PAM (Q & N)	CMS (Q &N)	PRMS (Q &N)	ARMS (N)	Interlock Systems (N)	NBS (Q & N)	RC&IS (N)	FWCS (N)	PAS (N)	SB&PC (N)	NMS (N)	CIS(N)	DPS(N) ATWS/SLC (Q)	Q DCIS (Q)	N DCIS (N)
1.75	IEEE Std. 384	X	X	X	X	X	X	X	X	X	X	X		X		X	X		X	X							X	X	
1.89	IEEE Std. 323	X	X	X	X	X	X	X	X	X	X			X						X							X	X	
1.97	IEEE Std. 497		X	X											X	X	X	X										X	X
1.100		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X							X	X	
1.105	ANSI/ISA S67.04.01	X	X	X	X	X	X	X	X	X	X			X		X	X		X	X							X	X	
1.118	IEEE Std. 338	X	X	X	X	X	X	X	X	X	X	X		X		X	X		X								X	X	
1.151	ANSI/ISA S67.02.01@					X					X		X	X		X			X	X		X				X	X		
1.152*	IEEE Std. 7-4.3.2	X	X	X	X	X	X	X	X	X	X			X		X	X			X							X	X	X
1.153	IEEE Std. 603	X	X	X	X	X	X	X	X	X	X	X		X		X	X			X							X	X	
1.168*	IEEE Std. 1012 IEEE Std. 1028	X	X	X	X	X	X	X	X	X	X			X		X	X			X							X	X	(1)
1.169*	IEEE Std. 828	X	X	X	X	X	X	X	X	X	X			X		X	X			X							X	X	(1)
1.170*	IEEE Std. 829	X	X	X	X	X	X	X	X	X	X			X		X	X			X							X	X	(1)
1.171*	IEEE Std. 1008	X	X	X	X	X	X	X	X	X	X			X		X	X			X							X	X	(1)
1.172*	IEEE Std. 830	X	X	X	X	X	X	X	X	X	X			X		X	X			X							X	X	(1)
1.173*	IEEE Std. 1074	X	X	X	X	X	X	X	X	X	X			X		X	X			X							X	X	(1)
1.180	IEEE Std. 1050	X	X	X	X	X	X	X	X	X	X	X‡‡	X‡‡	X	X‡‡	X‡‡	X‡‡	X‡‡	X‡‡	X	X‡‡	X‡‡	X‡‡	X‡‡	X‡‡	X‡‡	X‡‡	X	X‡‡
1.204	IEEE Std. 1050	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.209	IEEE Std. 323	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X							X	X	
Branch Technical Positions (BTP)																													
BTP HICB-1	IEEE Std. 603					X													X									X	
BTP HICB-3	IEEE Std. 603	N/A																											

~~Table 7.1-1~~

~~I&C Systems Regulatory Requirements Applicability Matrix~~

~~System~~																													
~~Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1~~	~~Reference Standard~~	~~RPS (Q)~~	~~NMS (Q)~~	~~SPTM Function (Q)~~	~~ADS (Q)~~	~~GDCS (Q)~~	~~LD&IS (Q & N)~~	~~CRHS (Q)~~	~~SSLC /ESF (Q)~~	~~VB Isolation Function (Q)~~	~~SLC (Q)~~	~~RSS (Q & N)~~	~~RWCU /SDC (N)~~	~~ICS (Q)~~	~~PAM (Q & N)~~	~~CMS (Q &N)~~	~~PRMS (Q &N)~~	~~ARMS (N)~~	~~Interlock Systems (N)~~	~~NBS (Q & N)~~	~~RC&IS (N)~~	~~FWCS (N)~~	~~PAS (N)~~	~~SB&PC (N)~~	~~NMS (N)~~	~~CIS(N)~~	~~DPS(N) ATWS/SLC (Q)~~	~~Q DCIS (Q)~~	~~N DCIS (N)~~
~~BTP HICB-4~~		~~N/A~~																											
~~BTP HICB-6~~	~~IEEE Std. 603~~	~~N/A~~																											
~~BTP HICB-8~~	~~Refer to RG 1.22~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~			~~X~~													~~X~~	~~X~~	
~~BTP HICB-9~~	~~Refer to RG 1.153~~	~~X~~																										~~X~~	
~~BTP HICB-10~~	~~Refer to RG 1.97~~		~~X~~	~~X~~											~~X~~		~~X~~	~~X~~										~~X~~	~~X~~
~~BTP HICB-11~~	~~Refer to RG1.75 RG 1.153~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~		~~X~~	~~X~~		~~X~~	~~X~~							~~X~~	~~X~~	~~X~~
~~BTP HICB-12~~	~~Refer to RG 1.105~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~			~~X~~		~~X~~	~~X~~			~~X~~							~~X~~	~~X~~	~~X~~
~~BTP HICB-13~~	~~Refer to RG 1.153~~	~~N/A~~																											
~~BTP HICB-14*~~	~~Refer to RG 1.152~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~		~~X~~	~~X~~			~~X~~							~~X~~	~~X~~	~~X~~
~~BTP HICB-16~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~
~~BTP HICB-17*~~	~~Refer to RG 1.22, 1.47, 1.53, 1.118, 1.152 & 1.153~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~		~~X~~	~~X~~		~~X~~	~~X~~							~~X~~	~~X~~	~~X~~
~~BTP HICB-18*~~	~~Refer to RG 1.152~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~		~~X~~	~~X~~		~~X~~	~~X~~							~~X~~	~~X~~	~~X~~
~~BTP HICB-19*~~	~~NUREG/CR-6303~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~			~~X~~						~~X~~		~~X~~					~~X~~	~~X~~	~~X~~
~~BTP HICB-21*~~	~~NUREG/CR-6083~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~		~~X~~	~~X~~			~~X~~							~~X~~	~~X~~	~~X~~

~~Notes:~~
~~Q=Safety-related, N=Nonsafety-related~~
~~X = The code or regulation is applicable to the specified system.~~
~~N/A = The code or regulation is not applicable to the ESBWR design.~~
~~(1) = Parts or all of this code or regulation are voluntarily invoked for the specified system..~~
~~*These criteria are addressed with the digital computer-related functions of the Q-DCIS~~
~~[##]N-DCIS hardware uses industrial methods for EMI/EMF compliance~~
~~[#]Initiates the 10 CFR 50.62 ARI, SLC and FW runback and trip functions as described in Section 7.8.~~
~~@ Sections of the ANSI/ISA standard that are not specific to safety-related systems, but provide guidance on design practices for tubing, vents, & drains apply to identified (N) systems.~~

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
10 CFR																							
50.55a(a)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
50.55a(h)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
50.34(f)(1)(v) [II.K.3.13]								X				X	X	X									
50.34(f)(1)(x) [II.K.3.28]												X											
50.34(f)(2)(iii) [I.D.1]	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
50.34(f)(2)(iv) [I.D.2]																				X			
50.34(f)(2)(v) [I.D.3]	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X
50.34(f)(2)(viii) [II.B.3]								X			X												
50.34(f)(2)(x) [II.D.1]								X			X												
50.34(f)(2)(xi) [II.D.3]								X				X											
50.34(f)(2)(xiv) [II.E.4.2]	X		X					X	X														

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
50.34(f)(2)(xv) [II.E.4.4]								X	X													X	
50.34(f)(2)(xvii) [II.F.1]								X		X	X												X
50.34(f)(2)(xviii) [II.F.2]							X	X				X											X
50.34(f)(2)(xix) [II.F.3]								X		X	X	X											X
50.34(f)(2)(xxi) [II.K.1.22]	X	X						X						X							X		
50.34(f)(2)(xxiii) [II.K.2.10]		X						X						X									
50.34(f)(2)(xxiv) [II.K.3.23]																							X
50.34(f)(2)(xxvi) [III.D.1.1]								X	X														X
50.34(f)(2)(xxvii) [III.D.3.3]								X		X	X												X
50.34(f)(2)(xxviii) [III.D.3.4]								X		X						X							
50.44(c)(4)								X			X												

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
50.49	Refer to Table 3.11-1 (Electrical and Mechanical Equipment for Environmental Qualification)																						
50.62							X	X						X					X	X	X	X	
50.63	X	X	X			X		X	X				X	X		X							
52.47(a)(21)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
52.47(b)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
52.47(a)(25)	NA																						
52.47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
52.47(c)(2)	NA																						
GENERAL DESIGN CRITERIA																							
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	X	X					X																
12	X	X					X													X			
13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15	X		X					X	X			X											
16	X		X					X	X									X					
19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
25	X	X					X													X			
26	X	X				X	X												X	X			
27	X	X				X	X												X	X			
28																	X			X			
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
30								X	X			X											
33								X				X	X	X							X		
34								X						X									
35								X				X	X	X	X				X				
37								X				X	X	X	X				X				

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
38																					X		
41								X			X											X	
42																						X	
43								X			X											X	
44														X									
63								X															X
64								X		X	X												X
SRM on SECY 93-087																							
II.Q	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
II.T								X												X			X
Regulatory Guides (RG)																							
1.22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
1.45								X	X	X	X												
1.47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
1.53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
1.62	X	X	X					X	X			X	X	X		X		X	X				
1.75	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
1.89	Refer to Table 3.11-1 (Electrical and Mechanical Equipment for Environmental Qualification)																						
1.97(10)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.100	Refer to Table 3.11-1 (Electrical and Mechanical Equipment for Environmental Qualification)																						
1.105	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
1.118	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
1.151 (8)		X		X	X	X			X		X	X	X	X	X				X		X	X	
1.152(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
1.153	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
1.168(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.169(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.170(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.171(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.172(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.173(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.180(9)	Refer to Table 3.11-1 (Electrical and Mechanical Equipment for Environmental Qualification)																						
1.204	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
1.209	Refer to Table 3.11-1 (Electrical and Mechanical Equipment for Environmental Qualification)																						
Branch Technical Positions (BTP)																							
BTP HICB-1								X					X								X		

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
BTP HICB-3	N/A																						
BTP HICB-6	N/A																						
BTP HICB-8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
BTP HICB-9	X	X				X																	
BTP HICB-10(10)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BTP HICB-11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
BTP HICB-12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
BTP HICB-13	N/A																						
BTP HICB-14(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
BTP HICB-16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BTP HICB-17(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
BTP HICB-18(7)	X	X					X	X										X	X				

Table 7.1-1

I&C Regulatory Requirements Applicability Matrix

	Q-DCIS																			N-DCIS			
	RTIF - NMS Platform							SSLC/ESF Platform										Independent Control Platform		Network Segments			
	RTIF						NMS																
Applicable Criteria Guidelines: SRP NUREG-0800, Section 7.1	RTIF	RPS	LD&IS (MSIV Only)(6)	CMS (includes SPTM)(6)	NBS(6)	CRD(6)	NMS	SSLC/ESF(3)	LD&IS (non-MSIV)(1)(6)	PRMS	CMS(6)	NBS (includes ADS)(6)	GDCS	ICS	SLC(6)	CBVS(2)	CRD(5)(6)	VBIF	ATWS/SLC(4)(6)	GENE	PIP A/B	BOP	PCF
BTP HICB-19(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BTP HICB-21(7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

Notes:

(1) LD&IS (non-MSIV) controls the safety-related actuators (for the isolation valves and dampers) associated with the following nonsafety-related systems: RWCU/SDC, FAPCS, EFDS, CIS, CWS, CMS, HPNSS, RBVS, and FBVS. RWCU/SDC provides safety-related sensor inputs to LD&IS (non-MSIV). The regulatory requirements associated with these actuators and sensors are addressed as part of LD&IS.

(2) CBVS includes the CRHS and CRHAVS subsystems and EFUs.

(3) SSLC/ESF includes RSS, MCRP and safety-related VDUs.

(4) Includes the NBS sensors associated with ATWS/SLC.

(5) SSLC/ESF platform column for CRD includes safety-related sensors associated with control rod separation detection.

(6) The following safety-related systems have logic implemented on multiple platforms in support of their protective functions: CMS, CRD, LD&IS, NBS and SLC. Refer to DCD Sections 7.2, 7.3, 7.4, and 7.5 for detailed descriptions of the system functions.

(7) These criteria are addressed with digital computer-related functions of the Q-DCIS and N-DCIS.

(8) Sections of the ANSI/ISA standard that are not specific to safety-related systems, but provide guidance on design practices for tubing, vents and drains apply to the systems associated with the N-DCIS network segments.

(9) Hardware associated with the N-DCIS network segments uses industrial methods for EMI/EMF/RFI/EMC compliance.

(10) The ESBWR I&C conforms to RG 1.97 and applies the guidance in IEEE std. 497. RG 1.97 endorses IEEE Std. 497 (with clarifications and exceptions stated in RG 1.97) and the use of the HFE development process to determine the human actions during and following accident scenarios. Specific instruments credited for RG 1.97 compliance are determined as part of the HFE development process as discussed in Section 7.5.