

NORTHEAST UTILITIES

THE CONNECTICUT LIGHT AND POWER COMPANY
 WESTERN MASSACHUSETTS ELECTRIC COMPANY
 NORTHEAST WATER POWER COMPANY
 NORTHEAST UTILITIES SERVICE COMPANY
 NORTHEAST NUCLEAR ENERGY COMPANY

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March 2, 1992

Docket No. 50-336
814034

Re: RG 1.97

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

Gentlemen:

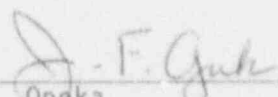
Millstone Nuclear Power Station, Unit No. 2
Compliance With Regulatory Guide 1.97, Revision 2

In a letter dated June 14, 1991,⁽¹⁾ Northeast Nuclear Energy Company committed to provide the U.S. Nuclear Regulatory Commission (NRC) Staff with an updated submittal listing postaccident instrumentation and its status of compliance with Regulatory Guide (RG) 1.97 for Millstone Unit No. 2 by December 15, 1991. Subsequent conversations with the NRC project manager for Millstone Unit No. 2 led to an adjustment in that schedule, as delineated in a December 12, 1991, letter,⁽²⁾ so that the RG 1.97 update could be submitted on or before March 2, 1992. Accordingly, attached is the above-referenced RG 1.97 update.

Please contact us if you have any questions.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



 J. F. Opeka
 Executive Vice President

cc: T. T. Martin, Region I Administrator
 G. S. Vissing, NRC Project Manager, Millstone Unit No. 2
 W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

(1) E. J. Mroczka letter to U.S. Nuclear Regulatory Commission, "Inspection Report 50-336/91-16, Compliance to Regulatory Guide 1.97," dated June 14, 1991.

(2) J. F. Opeka letter to U.S. Nuclear Regulatory Commission, "Inspection Report 50-336/91-16, Compliance with Regulatory Guide 1.97, Revision 2," dated December 12, 1991.

1003

Docket No. 50-336
B14034

Attachment

Millstone Nuclear Power Station, Unit No. 2
Compliance of Postaccident Instrumentation With
Regulatory Guide 1.97, Revision 2

March 1992

Regulatory Guide 1.97

Millstone Unit 2

Status of Compliance

Recommended

Type No.	Variable	Range	Attributes					Displays	Status	Reference/Notes
			Category	DA	EQ	SQ	REDUNDANT			
A	PLANT SPECIFIC	PLANT SPECIFIC	1	YES	YES	YES	YES	IE	IND. & REC.	
	1 PRESSURIZER PRESSURE	0-1600 PSIA	1	YES	YES	YES	YES	IE	PI-103, 133-1	C
	LR:P-103*, 103-1* HR:P-102A*, B*, C, D	1500-2500 PSIA							PI-102A, B, C, D ICC*, ICS OFIS, ERDS	
2	PRESSURIZER PRESSURE (WIDE RANGE)	0 - 3000 PSIG	1	YES	NO	YES	NO	IE	PR-102B-1 ICS OFIS, ERDS	C
3	RCS HOT LEG TEMPERATURE	150 - 750°F	1	YES	YES	YES	YES	IE	TI-111X, TI-121X RC101D ICC, ICS OFIS, ERDS	C
4	STEAM GENERATOR PRESSURE	0 - 1000 PSIA	1	YES	YES	YES	YES	IE	PI-1013A, B, C, D PI-1023A, B, C, D	C
5	STEAM GENERATOR LEVEL	0-100% TOP OF TUBE BUNDLES TO SEPARATORS	1	YES	YES	YES	YES	IE	LI-1113A, B, C, D LI-1123A, B, C, D ICS, ORIS, ERDS	A, P NRC ltr (TACT5776) dated 2/5/91
6	CONTAINMENT PRESSURE	0 - 250 PSIA	1	YES	YES	YES	YES	IE	P-823B, 8239 RC-101A, B ICS	C
7	HYDROGEN MONITOR	0 - 10%	1	YES	NO	YES	YES	IE		C
8	REFUELING WATER STORAGE TANK LEVEL	0 TO 100%	1	YES	NO	YES	YES	IE	LI-3001, 3002, 3003, 3004	A NPC ltr (TACT51107) dated 11/22/89 NRC ltr (TACT5776) dated 2/5/91
B-01	NEUTRON FLUX	10 ⁻⁶ TO 100% FULL POWER	1	YES	YES	YES	YES	IE	IND. & REC.	
	NEUTRON FLUX	DRWR&RCR	1	YES	YES	YES	YES	IE	WR-LOG-A, B, C, D JR-011	C
	WR-LOG-A, B, C, D	10 ⁻⁸ TO 150% FP M&B							JT-001, 002, 003, 00	
		10 ⁻⁸ TO 100% FP							ICS, OFIS, ERDS	
B-02	CONTROL ROD POSITION	FULL IN OR NOT	3	NO	NO	NO	NO	RELIABLE	Core Mimic ICS, OFIS, ERDS	C
	Control Rod Position	FULL IN								
	Control Rod Position	FULL IN OR NOT	3	NO	NO	NO	NO	RELIABLE	IND.	

1. Plus Key: A-Accepted per Reference; P-Pending per Reference; R-Rejected by Reference; C-Compliance with R.G. 1.97; U-Unauthorized by NRC
 Abbreviations: ICC-Intermittent Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERDS-Emergency Response Data System; DR-Log
 Range: RR-High Range; WR-Wide Range; MC-Main Control Board
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Regulatory Guide 1.97

Status of Compliance

Millstone Unit 2

Recommended

Actual

Type No.	Variable	Range	Attributes						Displays		Submittal		
			Category	QA	EQ	SD	REDUNDANT	PWR	CR & Other	Status		Reference/Notes	
B-03	RCS SOLUBLE BORON CONCENTRATION	0 - 6000 PPM	3	NO	NO	NO	NO	NO	RELIABLE	IND.			
	RCS SOLUBLE BORON CONCENTRATION	0 - 2050 PPM	3	NO	NO	NO	NO	NO	RELIABLE	AR-203		A.R. NUREG 0737, 11.B.3	NRC ltr dated 6/14/84
	A-203 PASS									ICS, OFIS, ERDS			NRC ltr (TAC 3776) dated 2/5/91
B-04	RCS COLD LEG TEMPERATURE	50° - 400° F	3	NO	NO	NO	NO	NO	REL	IND			
	RCS COLD LEG TEMPERATURE	0° - 750° F	1	YES	YES	YES	YES	YES	IE	TI-115, 125 TR-115, 125 ICC, ICS		A	NRC ltr (TAC75776) dated 2/5/91
	T-115 & T-125									OFIS, ERDS			
B-05	RCS HOT LEG TEMPERATURE	50° - 750° F	1	YES	YES	YES	YES	YES	IE	IND & REC			
	RCS HOT LEG TEMPERATURE	150° - 750° F	1	YES	YES	YES	YES	YES	IE	TI-111X, 121X RC-101D, TR-115 ICC, ICS		A	NRC ltr (TAC75776) dated 2/5/91
	T-111X & T-121X									OFIS, ERDS			
B-06	RCS COLD LEG TEMPERATURE	50° - 750° F	1	YES	YES	YES	YES	YES	IE	IND & REC			
	RCS COLD LEG TEMP' RATIO	0° - 750° F	1	YES	YES	YES	YES	YES	IE	TI-115, 125 TR-115, 125 ICC, ICS		A	NRC ltr (TAC75776) dated 2/5/91
	T-115 & T-125									OFIS, ERDS			
B-07	RCS PRESSURE	0-400 PSIG	1	YES	YES	YES	YES	YES	IE	IND & REC			
	RCS PRESSURE	LR:0-1600 PSIA HR:1500-2500 PSIA	1	YES	YES	YES	YES	YES	IE	PI-103, 103-1 PI-102A,B,C,D ICC*, ICS		R	NRC ltr (TAC75776) dated 2/5/91
	PRESSURIZER PRESSURE (WIDE RANGE)	0 - 3000 PSIG	1	YES	NO	YES	NO	YES	NO	PR-102B-1 ICS OFIS, ERDS		R	NRC ltr (TAC75776) dated 2/5/91
B-08	CORE EXIT TEMPERATURE	200 - 1650° F	3	NO	NO	NO	NO	NO	RELIABLE	IND.			
	CORE EXIT TEMPERATURE	200 - 2300° F	1	YES	YES	YES	YES	YES	IE	ICS ICC		A.R. NUREG 0737, 11.B.3	
	T-10 THRU T-450 (IC1)									OFIS, ERDS			

Status Key: A-Accepted per Reference; P-Referenced by Reference; C-Compliance with R.G. 1.97 is demonstrated by NRC
 Abbreviations: ICC-Integrated Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERDS-Emergency Response Data System; SD-Safety
 Range: 80-100 Range; MS-Main Control Board

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Regulatory Guide 1.97

Status of Compliance

Millstone Unit 2

Recommended

Actual

Type No.	Variable	Range	Attributes				Displays		Status	Reference/Notes
			Category	QA	EQ	SQ	REDUNDANT	PWR		
B-09	COOLANT LEVEL IN REACTOR	BOTTOM OF CORE TO 1 TOP OF VESSEL	YES	YES	YES	YES	IE	IND. & REC.		
	COOLANT LEVEL IN REACTOR	TOP OF CORE TO 1 TOP OF VESSEL	YES	YES	YES	YES	IE	ICS		A, R MPC ltr (TAC75776) dated 2/5/91
	HJTC-A, B	TOP OF VESSEL						ICC		MUREG 0739 II.B.3
B-10	DEGREE OF SUBCOOLING	200°F SUBCOOLING TO 35°F	As Req'd	YES	NO	NO	REL	IND		
	DEGREE OF SUBCOOLING	200°F SUBCOOLING TO 35°F SUPERHEATING	1 YL	YES	YES	YES	IE	ICS		C
	ICOM 21 & 22	SUPERHEATING						ICC		
B-11	RCS PRESSURE	0-4000 PSIG	1 YES	YES	YES	YES	IE	IND & REC		
A	RCS PRESSURE	LR: 0-1600 PSIA HR: 1500-2500 PSIA	1 YES	YES	YES	YES	IE	PI-103, 103-1 PI-102A, B, C, D IOC* ICS		R MPC ltr (TAC75776) dated 2/5/91 MUREG 0737, II.B.3 ATWS
B	PRESSURIZER PRESSURE (WIDE RANGE)	0 - 3000 PSIG	1 YES	NO	YES	NO	IE	FR-102B-1 ICS		R MPC ltr (TAC75776) dated 2/5/91 MUREG 0737, II.B.3 ATWS
B-12A	CONTAINMENT SUMP WATER LEVEL (WIDE RANGE)	BOTTOM OF CMT TO 1 600,000 GALLONS EQUIVALENT	1 YES	YES	YES	YES	IE	IND. & REC.		
	CONTAINMENT SUMP WATER LEVEL (WIDE RANGE)	0' TO 7'	1 YES	YES	YES	YES	IE	LIC-8242, 8243 RC-101A, B		A MPC ltr (TAC75776) dated 2/5/91
B-12B	CONTAINMENT SUMP WATER LEVEL (NARROW RANGE)	SUMP DEPTH	2 As Req'd	YES	NO	NO	RELIABLE	IND.		
	CONTAINMENT SUMP WATER LEVEL (NARROW RANGE)	0 - 100%	2 NO	NO	NO	NO	RELIABLE	LI-9155 ICS		A MPC ltr (TAC75776) dated 2/5/91
		L-8242, 8243						OFIS, ERDS		

Regulatory Guide 1.97

Millstone Unit 2

Status of Compliance

Type No.	Variable	Range	Attributes				Displays		Actual Submittal
			Category	OR	EQ	SD	REDUNDANT	PWR	

B-13	CONTAINMENT PRESSURE	0 - DESIGN PRESS 1 (PSIG)	1	YES	YES	YES	YES	YES	YES	IND & REC	
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CONTAINMENT PRESSURE											
P-8113, 8114, 8115, 8116											
PI-8113*, 8114, 8115, C											
2116											
UR-9#2*											
ICS											
CFIS, VPI'S											

B-14	CONTAINMENT ISOLATION VALVE POSITION	CLOSED - NOT CLOSED	1	YES	YES	YES	YES	YES	YES	IND. & REC.	
CONTAINMENT ISOLATION VALVE POSITION											
CLOSED - NOT CLOSED											
2S-.98, 505, 506, 516, 1060, 1062, 1064, 2525, 4246, 4248, 4250, 4251, 7311, 7312, 7690, 8121, 8122, 8124, 8150, 8151, 8377, 8378, 8379, 8380, 8656, 9015, 9016, 9125, 9126, 9150, 9151, 5230											
MCB VALVE POSITION A MPC 11E (CAC151776) dated 2/5/91											
INDICATION LIGHTS											
ICS											

B-15	CONTAINMENT PRESSURE	10 PSIA TO 4x DESIGN PRESSURE	1	YES	YES	YES	YES	YES	YES	IND. & REC.	
CONTAINMENT PRESSURE											
0 - 250 PSIA											
RC-101A, B											
ICS											

C-01	CORE EXIT TEMPERATURE	200° - 1650° F	1	YES	YES	YES	YES	YES	YES	IND & REC	
CORE EXIT TEMPERATURE											
200° - 2300° F											
ICS											
T-10 THRU T-450 (IC1)											
ICC											

Status Key: A=Accepted per Reference; P=Pending per Reference; F=Failed by Reference; C=Compliance with A.S. 1.97 Underscored by MPC
 Abbreviations: ICS-Inadequate Core Coolity; IC-1A, IC-1B, IC-1C - Instrumentation System; ERS-Emergency Response Data System; L-Log Range; M-Shift Range; MCB-Main Control Board
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Millstone Unit 2

Status of Compliance

Regulatory Guide 1.97

Recommended

Actual

Type No.	Variable	Range	Attributes					Displays		Status	Reference/Notes
			Category	QA	5Q	SQ	REDUNDANT	FWR	CR		
C-02	RADIOACTIVITY CONCENTRATION OR RADIATION LEVEL IN CIRCULATING PRIMARY COOLANT	1/2 TECH. SPEC. LIMIT TO 100 TIMES TECH SPEC LIMIT, P/HR	1	YES	YES	YES	YES	YES	1E	IND. & REC.	A, R NUREG 0737, II.B.3 NRC ltr dated 6/14/84 NRC ltr dated 2/5/91.
	RADIOACTIVITY CONCENTRATION OR RADIATION LEVEL IN CIRCULATING PRIMARY COOLANT	None PASS									
C-03	ANALYSIS OF PRIMARY COOLANT (GAMMA SPECTRUM)	10mCi/gm to 10Ci/gm OR TID-14844 SOURCE TER IN COOLANT VOLUME	3	NO	NO	NO	NO	NO		RELIABLE IND.	
	ANALYSIS OF PRIMARY COOLANT (GAMMA SPECTRUM)	None PASS									R NRC letter dated 2/5/91 (TAC 75776)
C-04	RCS PRESSURE	0-4000 PSIG	1	YES	YES	YES	YES	YES	1E	IND & REC	
A	RCS PRESSURE LR:P-103*, 103-1* HR: P102A*, B*, C, D	LR:0-1600 PSIA HR:1500-2500 PSIA	1	YES	YES	YES	YES	YES	1E	PI-103/103-1 P1102A,B,C,D ICC*, ICS OFIS, ERDS	R NRC ltr (TAC75776) dated 2/5/91 NUREG 0737, II.B.3 ATWS
B	PRESSURIZER PRESSURE (WIDE RANGE) P-102B-1	0 - 3000 PSIG	1	YES	NO	YES	NO	YES	NO	PR-102B-1 ICS OFIS, ERDS	R NRC ltr (TAC75776) dated 2/5/91 NUREG 0737, II.B.3 ATWS
C-05	CONTAINMENT PRESSURE	10 PSIA TO DESIGN 1 PRESSURE	1	YES	YES	YES	YES	YES	1E	IND & REC	
	CONTAINMENT PRESSURE P-8238 & 8239	0-250 PSIA	1	YES	YES	YES	YES	YES	1E	RC-101A, B ICS	C

Status Rev: A-Accepted per Reference; B-Pending per Reference; C-Deferred by Reference; D-Compliance with R.G. 1.97; E-Overlooked by NRC
 Abbreviations: ICC-Inadequate Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERDS-Emergency Response Data System; LR-Log
 Range: HR-High Range; WR-Wide Range; NCS-Main Control Board
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Millstone Unit 2

Status of Compliance

Regulatory Guide 1.97

Recommended

Type No.	Variable	Range	Attributes				Displays		Status	Reference/Notes		
			Category	QA	EQ	SQ	REDUNDANT	FWR			CR & Other	
C-06	CONTAINMENT SUMP WATER LEVEL	MR: SUMP WR: BOTTOM OF CTMT 1 TO 500,000 GAL LEVEL	2	MR:	MR:	MR:	MR:	MR:	MR:	MR:	IND & REC	A MPC ltr (TAC75776)dated 2/5/91
			1	NO	YES	NO	NO	RELIABLE				
	CONTAINMENT SUMP WATER LEVEL	See Variables B-12A, B-12B		WR:	WR:	WR:	WR:	WR:	WR:	WR:		
			YES	YES	YES	YES	YES	YES	YES	YES		
C-07	CONTAINMENT AREA RADIATION RM-8240 & 8241	1 R/HR TO 10 ⁴ R/HR	3	NO	NO	NO	NO	NO	REL		IND & REC	RIT-8240, 8241 RC-131C ICS OFIS, ERDS
			1	YES	YES	YES	YES	IE				
C-08	EFFLUENT RADIOACTIVITY- NOBLE GAS EFFLUENT FROM CONDENSER AIR REMOVAL SYSTEM EXHAUST	10 ⁻⁶ µCi/cc TO 10 ⁻² µCi/cc	3	NO	NO	NO	NO	NO	RELIABLE		IND	RIT-5099 RR-9373 ICS OFIS
			1	YES	YES	YES	YES	IE				
C-09	ACS PRESSURE	0-4000 PSIG	1	YES	YES	YES	YES	YES	IE		IND & REC	R MPC ltr (TAC75776)dated 2/5/91 MUREG 0737, II.B.3 ATWS
			1	YES	YES	YES	YES	IE				
			1	YES	YES	YES	YES	IE				
			1	YES	YES	YES	YES	IE				
B	PRESSURIZER PRESSURE (WIDE RANGE)	0 - 3000 PSIG	1	YES	NO	YES	NO	YES	NO	IE	PR-102B-1 ICS OFIS, ERDS	R MPC ltr (TAC75776)dated 2/5/91 MUREG 0737, II.B.3 ATWS
			1	YES	NO	YES	NO	IE				

Status key: A-Accepted per Reference; P-Pending per Reference; R-Referenced by Reference; C-Compliance with R.G. 1.97; U-Unreviewed by NRC
 Abbreviations: ICS-Integrated Core Cr 11mg; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERDS-Emergency Response Data System; B-Low Range; H-High Range; M-Wide Range; MCB-Main Control Board
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Regulatory Guide 1.97

Status of Compliance

Millstone Unit 2

Recommended

Type No.	Variable	Range	Attributes					Displays		Actual	
			Category	QA	EQ	5Q	REDUNDANT	PWR	CR & Other	Status	Reference/Notes
C-10	CONTAINMENT HYDROGEN CONCENTRATION	0 - 10% (CAPABLE OF OPERATING FRG TO 10 PSIA TO MAXIMUM DESIGN PRESSURE)	1	YES	YES	YES	1E	IND. & REC.			
	CONTAINMENT HYDROGEN CONCENTRATION	0 - 10% (CAPABLE OF OPERATING UP TO 10 PSIG MAXIMUM)	1	YES	NO	YES	1E	RC-101A, B ICS OFIS, ERDS	A	NRC ltr (TAC75776) dated 2/5/91 NUREG-0737, ITEM IIF.1, ATT 6	
C-11	CONTAINMENT PRESSURE	10 PSIA PRESSURE TO 3 TIMES DESIGN PRESSURE FOR CONCRETE	1	YES	YES	YES	1E	IND. & REC.			
	CONTAINMENT PRESSURE	0 - 250 PSIA	1	YES	YES	YES	1E	RC-101A, B ICS	C		
C-12	CONTAINMENT EFFLUENT RADIOACTIVITY- NOBLE GASES FROM IDENTIFIED RELEASE POINTS	10 ⁻⁵ µCi/cc TO 10 ⁻² µCi/cc	2	As	Yes	No	No	Reliable Ind & Rec			
	CONTAINMENT EFFLUENT RADIOACTIVITY - NOBLE GASES FROM IDENTIFIED RELEASE POINTS	SEE VARIABLE C-14									
C-13	RADIATION EXPOSURE RATE (INSIDE BLDGS OR AREAS, WHICH ARE IN DIRECT CONTACT WITH PRIMARY CTMI WHERE PENETRATIONS AND HATCHES ARE LOCATED)	10 ⁻¹ TO 10 ⁴ R/HR	2	As	YES	NO	No	RELIABLE IND.			
	RADIATION EXPOSURE RATE	Deleted in R.G. 1.97, Rev. 3						None	A	NRC ltr (TAC75776) dated 2/5/91	

Regulatory Guide 1.97
Recommended

Status of Compliance

Millstone Unit 2

Type No.	Variable	Range	Attributes				Displays		Actual		
			Category	QA	EQ	SQ	REDUNDANT	PWR	CR & Other	Status	Reference/Notes
C-14	EFFLUENT RADIOACTIVITY- NOBLE GASES (FROM BUILDINGS AS INDICATED ABOVE)	1 X 10 ⁻⁶ TO 10 ³ µCi/cc	2	As	YES	NO	NO	RELIABLE	IND. & REC.		
			2	Req'd	NO	NO	NO	NO	NO	NO	C
D-01	EFFLUENT RADIOACTIVITY- NOBLE GASES PM-8168 RM-8132B	1 X 10 ⁻⁶ TO 10 ³ µCi/cc	2	YES	NO	NO	NO	RELIABLE	RIC-8168* RIT-8132B PR-8132 ICS OFIS*, ERDS* RIC-1705-79		
			2	NO	NO	NO	NO	NO	NO	NO	
D-02	RHR SYSTEM FLOW RHR SYSTEM FLOW F-306	0 - 110% OF DESIGN FLOW 0 - 7000 GPM	2	As	YES	NO	NO	RELIABLE	IND.		
			2	Req'd	NO	NO	NO	NO	NO	NO	A
D-03A	RHR HEAT EXCHANGER OUTLET RHR HEAT EXCHANGER OUTLET T-303X,Y T-351Y	32 - 350°F 0 - 400°F	2	As	YES	NO	NO	RELIABLE	IND.		
			2	Req'd	NO	NO	NO	NO	NO	NO	A
D-03B	ACCUMULATOR TANK LEVEL ACCUMULATOR TANK LEVEL L-311,321,331,341	10% TO 90% VOLUME 0-100%	2	As	YES	NO	NO	RELIABLE	IND.		
			2	Req'd	NO	NO	NO	NO	NO	NO	P
D-04	ACCUMULATOR TANK PRESSURE ACCUMULATOR TANK PRESSURE P-311,321,331,341	0 - 750 PSIG 0 - 250 PSIG	2	As	YES	NO	NO	RELIABLE	IND.		
			2	Req'd	NO	NO	NO	NO	NO	NO	A,P
D-04	ACCUMULATOR ISOLATION VALVE POSITION ACCUMULATOR ISOLATION VALVE POSITION Z-614,624,634,644	CLOSED OR OPEN CLOSED OR OPEN	2	As	YES	NO	NO	RELIABLE	IND.		
			2	Req'd	YES	NO	NO	NO	NO	NO	C

Status Key: A-Accepted per Reference; B-Flagged per Reference; C-Compliance with R.G. 1.97; D-Overlooked by NRC
 ICS-Inadequate Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERDS-Emergency Response Data System; IS-Ins
 Range: RA-Risk Range; MB-Mid Range; MCA-Main Control Board
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Regulatory Guide 1.97
Recommended

Status of Compliance

Millstone Unit 2

Type No.	Variable	Range	Attributes				Displays	Actual			
			Category	QA	EQ	SQ		REDUNDANT	PWR	CR & Other	Status
D-05	BORIC ACID CHARGING FLOW	0 - 110% OF DESIGN FLOW	2	NO	YES	NO	NO	RELIABLE	IND.		
	BORIC ACID CHARGING FLOW F-212	0 - 140 GPM	2	NO	NO	NO	NO	RELIABLE	FI-212 ICS OFIS	A	NRC ltr (TAC75776) dated 2/5/91
D-06	FLOW IN HPI SYSTEM	0 - 110% OF DESIGN FLOW	2	As Req'd	YES	NO	NO	RELIABLE	IND.		
	FLOW IN HPI SYSTEM F-311,321,331,341	0 - 300 GPM	2	NO	NO	NO	NO	RELIABLE	FI-311,321,331,341 ICS OFIS, ERDS	A	NRC ltr (TAC75776) dated 2/5/91
D-07	FLOW IN LPI SYSTEM	0 - 110% OF DESIGN FLOW	2	As Req'd	YES	NO	NO	RELIABLE	IND.		
	FLOW IN LPI SYSTEM F-312,322,332 & 342	0 - 2000 GPM	2	NO	NO	NO	NO	RELIABLE	FI-312,322,332 & 342 ICS OFIS, ERDS	A	NRC ltr (TAC75776) dated 2/5/91
D-08	REFUELING WATER STORAGE TANK LEVEL	TOP TO BOTTOM	2	NO	YES	NO	NO	RELIABLE	IND.		
	REFUELING WATER STORAGE TANK LEVEL L-3001,3002,3003,3004	0 - 100%	1	YES	NO	YES	YES	1E	L1-3001, 3002, 3003, 3004	A	NRC ltr(TAC51107) dated 11/22/89 NRC ltr (TAC75776) dated 2/5/91
D-09	REACTOR COOLANT PUMP STATUS	MOTOR CURRENT	3	NO	NO	NO	NO		IND.		
	REACTOR COOLANT PUMP STATUS P40A, B, C, D	0 - 500 AMPS	3	NO	NO	NO	NO		MA030, MB019, MA031, MB020 ICS OFIS(START/STOP)	C	

Status Key: A-Accepted per Reference; P-Pending per Reference; C-Compliance with R.G. 1.97; U-Underreviewed by NRC
 ICS-Integrated Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; CAS-Emergency Response Data System; ER-COM
 Range: 99-High Range; MCB-High Control Board
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Regulatory Guide 1.97

Status of Compliance

Millstone Unit 2

Recommended

Actual

Type No.	Variable	Range	Attributes				Displays	Status	Reference/Notes
			CA	EQ	SQ	REDUNDANT			
D-10	PRIMARY SYSTEM SAFETY RELIEF VALVE POSITIONS (INCLUDING PORV AND CODE VALVES) OR FLOW THROUGH PRESSURE IN RELIEF VALVE LINES	CLOSED - NOT CLOSED	2	As Req'd	YES	NO	NO	RELIABLE IND.	
			2	YES	YES	NO	1E	VM-200, 201, 402, 404	C
								ICS OFIS (PORV)	
D-11	PRESSURIZER LEVEL	BOTTOM TO TOP	1	YES	YES	YES	1E	IND. & REC.	
		0-100%	1	YES	YES	YES	1E	LI-110X, Y	C
								LR-110	
								ICS OFIS, ERDS	
D-12	PRESSURIZER HEATER STATUS	ELECTRIC CURRENT	2	As Req'd	YES	NO	NO	RELIABLE IND.	
		On-Off	2	NO	NO	NO	NO	RELIABLE Lights	A NRC ltr (TAC75776) dated 2/5/91
		0 - 250 AMPS						AM-B0504, AM-B0609	
								ICS OFIS	
D-13	QUENCH TANK LEVEL	TOP TO BOTTOM	3	NO	NO	NO	NO	IND.	
		0 - 100%	3	NO	NO	NO	NO	RELIABLE LI-116	A NRC ltr (TAC75776) dated 2/5/91
								ICS OFIS	
D-14	QUENCH TANK TEMPERATURE	50°F TO 750°F	3	NO	NO	NO	NO	IND.	
		0 - 300°F	3	NO	NO	NO	NO	RELIABLE TI-116	A NRC ltr (TAC75776) dated 2/5/91
								ICS OFIS	

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Status of Compliance

Recommended

Type No.	Variable	Range	Attributes			Displays	Actual			
			Category	QA	EQ		SQ	REDUNDANT	PWR	Status
D-15	QUENCH TANK PRESSURE	0 - DESIGN PRESSURE	3	NO	NO	NO	NO	IND.		
	QUENCH TANK PRESSURE	0 - 100PSIG	3	NO	NO	NO	NO	RELIABLE	PI-116	C
									ICS	
									OFIS	
D-16	STEAM GENERATOR LEVEL	FROM TUBE SHEET TO SEPARATORS	1	YES	YES	YES	YES	IE	IND. & REC.	
	STEAM GENERATOR LEVEL	0-100%	1	YES	YES	YES	YES	IE	LI-1113A,B,C,D	A,P NRC ltr (TAC75776) dated 2/5/91
		TOP OF TUBE BUNDLES TO SEPARATORS							LI-1123A,B,C,D	
									ICS	
									OFIS, ERDS	
D-17	STEAM GENERATOR PRESSURE	FROM ATMOSPHERIC PRESSURE TO 20% ABOVE THE LOWEST SAFETY VALVE SETTING	2	As	YES	NO	NO	RELIABLE	IND.	
	STEAM GENERATOR PRESSURE	0 - 1200 PSIA	1	YES	YES	YES	YES	IE	IP-4223, 4224	C
									ICS	
D-18	SRV POSITION	CLOSED - NOT CLOSED	2	As	YES	NO	NO	RELIABLE	IND.	
	SRV POSITION	Open - Closed	2	YES	YES	NO	NO	RELIABLE	ICS	C
									Annunciator per each S/G	
D-19	MAIN FEEDWATER FLOW	0 - 1104 OF DESIGN FLOW	3	NO	NO	NO	NO	RELIABLE	IND.	
	MAIN FEEDWATER FLOW	0 - 63 X 10 ⁵ lbs/hr	3	NO	NO	NO	NO	RELIABLE	FR-5301, 5302	C
									ICS	
									OFIS, ERDS	

Status Key: A-Accepted per Reference; P-Pending per Reference; S-Self-test by Reference; C-Compliance with R.C. 1.97; U-Underreviewed by NRC
 Abbreviations: ICS-Integrated Core Cooling; ICS-Integrated Computer System; OF-Off-site Facilities Information System; ERDS-Emergency Response Data System; LI-Line
 Range: SR-High Range; RR-Mid Range; NCB-Main Control Board
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Status of Compliance

Recommended

Type No.	Variable	Range	Attributes				Displays	Actual		
			Category	QA	EQ	SQ		REDUNDANT	PWR	Status
D-20	AXILIARY FEEDWATER FLOW	0 - 110% OF DESIGN FLOW	2	As	YES	NO	NO	RELIABLE	IND.	
	AUXILIARY FEEDWATER FLOW	0 - 600 GPM	1	YES	YES	YES	IE			FI-5277A-1,2 FI-5277B-1 FI-5278A-1,2 FI-5278B-1 ICS OFIS, ERDS
	F-5277A, B F-5278A, B									C
D-21	CONDENSATE STORAGE TANK LEVEL	PLANT SPECIFIC	1	YES	YES	YES	IE			IND & REC.
	CONDENSATE STORAGE TANK LEVEL	0 - 100% Level Low Alarm	1	YES	NO	YES	IE			LI-5282, LR-5282 U Sensors located in a RELIABLE Annunciator (LIS-5489 non-harsh environment ICS OFIS, ERDS)
D-22	CONTAINMENT SPRAY FLOW	0 - 110% OF DESIGN FLOW	2	As	YES	NO	NO	RELIABLE	IND.	
	CONTAINMENT SPRAY FLOW	0 - 5000 GPM	2	NO	NO	NO	NO	RELIABLE	FI-3023, 3024 ICS	A NRC ITR (TACT5776) dated 2/5/91
D-23	HEAT REMOVAL BY CONTAINMENT FAN HEAT REMOVAL SYSTEM	PLANT SPECIFIC	2	As	YES	NO	NO	RELIABLE	IND.	
	HEAT REMOVAL BY CONTAINMENT FAN HEAT REMOVAL SYSTEM	0 - 200° F	2	NO	NO	NO	NO	RELIABLE	TI-6082, 6086, 6090, 6093	A NRC ITR (TACT5776) dated 2/5/91
	HEAT REMOVAL BY CONTAINMENT FAN HEAT REMOVAL SYSTEM	40 - 400° F	2	As	YES	NO	NO	RELIABLE	IND.	
D-24	CONTAINMENT ATMOSPHERE TEMPERATURE	0 - 350° F	3	NO	NO	NO	NO	RELIABLE	TI-8096 ICS OFIS	A NRC ITR (TACT5776) dated 2/5/91
	CONTAINMENT ATMOSPHERE TEMPERATURE	8095, 8096, 8097, 8098, 8108, 8109 & 8110								
	CONTAINMENT ATMOSPHERE TEMPERATURE									

Status Key: A-Accepted per Reference; P-Pending per Reference; R-Referred by Reference with R.C. 1.81; U-Discovered by SRC
 ICS-Integrated Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERDS-Emergency Response Data System; SR-Low Range; HR-High Range; WR-Wide Range; MCB-Main Control Board

Millstone Unit 2

Status of Compliance

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Recommended

Type No.	Variable	Range	Attributes				Displays	Submittal					
			Category	QA	EQ	SQ			REDUNDANT	PWR	CR & Other	Status	Reference/Notes
D-25	CONTAINMENT SUMP WATER TEMPERATURE	50 - 250°F	2	As	YES	NO	NO	RELIABLE	IND.				
	CONTAINMENT SUMP WATER TEMPERATURE			Req'd						None		P	NU ltr A09330 dated 5/15/91
	None									None			NRC ltr (TAC75776) dated 2/5/91
D-26	MAKE UP FLOW-IN	0 - 1104 OF DESIGN FLOW	2	As	YES	NO	NO	RELIABLE	IND.				
	MAKE UP FLOW-IN (Charging)	0 - 140 GPM	2	NO	NO	NO	NO	RELIABLE	FI-212	ICS		A	NRC ltr (TAC75776) dated 2/5/91
	F-212									OFIS			
D-27	LETDOWN FLOW-OUT	0 - 1104 OF DESIGN FLOW	2	As	YES	NO	NO	RELIABLE	IND.				
	LETDOWN FLOW-OUT	0 - 140 GPM	2	NO	NO	NO	NO	RELIABLE	FI-202	ICS		A	NRC ltr (TAC75776) dated 2/5/91
	F-202									ICS			
D-28	VOLUME CONTROL TANK LEVEL	TOP TO BOTTOM	2	As	YES	NO	NO	RELIABLE	IND.				
	VOLUME CONTROL TANK LEVEL	0 - 100%	2	NO	NO	NO	NO	RELIABLE	LI-226	ICS		A	NRC ltr (TAC75776) dated 2/5/91
	L-226									OFIS			
D-29	COMPONENT COOLING WATER TEMPERATURE TO ESF SYSTEM	32 - 200°F	2	As	YES	NO	NO	RELIABLE	IND.				
	COMPONENT COOLING WATER TEMPERATURE TO ES1 SYSTEM	0 - 200°F	2	NO	NO	NO	NO	RELIABLE	TI-6031, 6032, 6033	ICS		P	NU ltr A09330 dated 5/15/91
	T-6031, 6032, 6033									ICS			NRC ltr (TAC75776) dated 2/5/91
E-30	COMPONENT COOLING WATER FLOW TO ES1 SYSTEM	0 - 1104 OF DESIGN FLOW	2	As	YES	NO	NO	RELIABLE	IND.				
	COMPONENT COOLING WATER FLOW TO ESF SYSTEM	0 - 10,000 GPM	2	NO	NO	NO	NO	RELIABLE	FI-6034, 6035	ICS		A	NRC ltr (TAC75776) dated 2/5/91
	F-6034, 6035									ICS			

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Status of Compliance

Millstone Unit 2

Type No.	Variable	Range	Attributes					Displays	Actual		
			Category	QA	EQ	SQ	REDUNDANT		PWR	Status	Reference/Notes
D-31	HIGH LEVEL RADIOACTIVE	TOP TO BOTTOM	3	NO	NO	NO	NO	RELIABLE	IND.		
	LIQUID TANK LEVEL										
	LIQUID TANK LEVEL (PDT) L-9051	0 - 100%	3	NO	NO	NO	NO	RELIABLE	LI-9051 ICS	C	
D-32	RADIOACTIVE GAS HOLDUP TANK PRESSURE	0 - 150# OF DESIGN PRESSURE	3	NO	NO	NO	NO	RELIABLE	IND.		
	RADIOACTIVE GAS HOLDUP TANK PRESSURE P-9128	0 - 25 PSIG	3	NO	NO	NO	NO	RELIABLE	ICS	A	MRC ltr (TAC75776) dated 2/5/91
	EMERGENCY VENTILATION DAMPER POSITION	OPEN - CLOSED	2	As	YES	NO	NO	RELIABLE	IND.		
D-33	EMERGENCY VENTILATION DAMPER POSITION	OPEN - CLOSED	2	YES	NO	YES	NO	RELIABLE	IND.		
	EMERGENCY VENTILATION ZS-8000, 8001, 8002, 8003A, 8003B, 8005C, 8004 8005, 8006, 8007, 8009, 8009, 8010, 8161	Req'd	2	YES	NO	YES	NO	RELIABLE	ICS	C	
	STATUS OF STANDBY POWER AND OTHER ENERGY SOURCES IMPORTANT TO SAFETY, (HYDRAULIC, PNEUMATIC)	VOLTS, AMPS, PRESSURES	2	As	YES	NO	NO	RELIABLE	IND.		
	STATUS OF STANDBY POWER AND OTHER ENERGY SOURCES IMPORTANT TO SAFETY, (HYDRAULIC, PNEUMATIC)	VOLTS, AMPS, PRESSURES	2	NO	NO	NO	NO	RELIABLE	MCB Voltage, Current, 4 Power Meters, Annunciators Breaker Status Light on MCB Bus Mimics ICS	A	MRC ltr (TAC75776) dated 2/5/91
	CONTAINMENT AREA RADIATION (HIGH RANGE)	R/HR	1	YES	YES	YES	YES	YES	IE	IND. & REC.	
E-01	CONTAINMENT AREA RADIATION (HIGH RANGE)	1 to 10 ⁶ R/HR	1	YES	YES	YES	YES	YES	IE	IND. & REC.	
	CONTAINMENT AREA RADIATION (HIGH RANGE)	RM-8240, 8241	1	YES	YES	YES	YES	YES	IE	RM-8240, 8241 RC-101C ICS OFIS, ERDS	C

Status Key: A-Accepted per Reference; P-Pending per Reference; I-Interfered by Reference; C-Compliance with R.G. 1.97; U-Overruled by REC
 Abbreviations: ICC-Transquair Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERDS-Emergency Response Data System; LR-Low
 Range: HR-High Range; MB-Mid Range; MCB-Main Control Board
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Status of Compliance

Recommended

Type No.	Variable	Range	Attributes				Displays	Status	Reference/Notes
			Category	OA	EQ	SQ			
E-02	RADIATION EXP. RATE (INSIDE) 10 ⁻¹ R/HR TO 10 ⁴ 2 As BLDGS OR AREAS WHERE ACCESS IS REQ. TO SERVICE SAFETY EQUIPMENT).	1 x 10 ⁻¹ to 10 ⁴ mR/hr	NO	NO	NO	NO	NO	RELIABLE	IND.
	RADIATION EXP. RATE RM-7890, 7891, 7892, 7894, 7895, 7896, 7897, 7899, 8139, 8142, 8156, 8157							RIT-7890, 7891, 7892 & NRC ltr (TAC75776) dated 2/5/91 7894, 7895, 7896, 7897, 7899, 8139, 8142, 8156, 8157 ICS	
E-03A	COMMON PLANT VENT - NOBLE GAS	10 ⁻⁶ µCi/cc to 10 ³ µCi/cc	2	As	Yes	No	No	Reliable	Ind & Rec
	COMMON VENT - NOBLE GAS	SEE VARIABLE C-14							
	SEE VARIABLE C-14								
E-03B	PLANT VENT FLOW	G - 1104 OF DESIGN FLOW	2	NO	YES	NO	NO	RELIABLE	IND.
	PLANT VENT FLOW	MP2:0 - 10 ⁵ SCFM	2	NO	NO	NO	NO	RELIABLE	MP2:RR-8.12
	MP2:F-8412	MP1:0 - 223,000 SCFM							MP1:OFIS
	MP:F-20-34								
E-03C	VENT FROM STEAM GENERATOR OR STEAM DUMP	10 ⁻¹ µCi/cc to 10 ³ µCi/cc	2	As	YES	NO	NO	RELIABLE	IND. & REC.
	VENT FROM STEAM GENERATOR OR STEAM DUMP	1 x 10 ⁻¹ - 1 x 10 ⁴ µCi/cc	2	YES	NO	YES	NO	RELIABLE	RIT-4299A,B,C
	RM-4299A,B & C								RR-4495 ICS OFIS

Status Key: A-Accepted per Reference; P-Pending per Reference; R-Referenced by Reference; C-Compliance with R.G. 1.97; U-Not reviewed by NRC
 Abbreviations: SCC-Inadequate Core Cooling; ICS-Integrated Computer System; OFIS-Offsite Facilities Information System; ERS-Emergency Response Data System; IS-Low Range; HR-High Range; MR-Main Control Room
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Millstone Unit 2

Recommended

Type No.	Variable	Range	Attributes										Displays CR & Other	Status	Reference/Notes
			Category	QA	EQ	SQ	REDUNDANT	PWR							

Actual

Submittal

E-04	(PARTICULATES AND HALOGENS) ALL IDENTIFIED PLANT RELEASE POINTS (EXCEPT S/G RELIEF VALVES) ATMOSPHERIC STEAM DUMPS AND CONDENSER AIR REMOVAL SYSTEM EXHAUST)	10 ⁻³ µCi/cc TO 10 ² µCi/cc	3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	Ind & Rec	
	(PARTICULATES AND HALOGENS) ALL IDENTIFIED PLANT RELEASE POINTS RM-8132A/B RM-8168 RM-1705-79	Sampler Particulate & Iodine filters are used for laboratory analysis 1x10 ⁻³ to 1x10 ² µCi/cc	3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	RELIABLE	None

E-05A	RADIATION EXPOSURE METERS (CONTINUOUS INDICATION AT FIXED LOCATIONS)	Per NUREG 0654														
	RADIATION EXPOSURE METERS NONE (CONTINUOUS INDICATION AT FIXED LOCATIONS) NONE Deleted on R.G. 1.97 Rev 3 Also, not cost effective per NUREG /CR 2644.															A MSC ltr (TAC75776) dated 2/5/91

E-05B	AIRBORNE RADIO-HALOGENS AND PARTICULATES (PORTABLE SAMPLING WITH ONSITE ANALYSIS CAPABILITY)	10 ⁻⁹ to 10 ⁻³ µCi/cc	3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	IND	
	AIRBORNE RADIO-HALOGENS AND PARTICULATES	Portable instruments are used to monitor this variable per R.G. 1.97, Rev. 2.														A MSC ltr (TAC75776) dated 2/5/91

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Millstone Unit 2

Status of Compliance

Recommended

Actual

Type No.	Variable	Range	Attributes								Displays	Status	Reference/Notes
			QA	EQ	SQ	REDUNDANT	PWR	CR	& Other				
E-05C	PLANT AND ENVIRONS RADIATION	ISOTOPIC ANALYSIS 3	NO	NO	NO	NO	NO	NO	NO	IND		A	NRC ltr (TAC75776) dated 2/5/91
	PLANT AND ENVIRONS RADIATION	1 x 10 ³ to 10 ⁴ Rad/hr, gamma & beta											
	NONE	Portable instruments are used to monitor this variable per R.G. 1.97, Rev. 2.											
E-05D	PLANT AND ENVIRONS RADIOACTIVITY	Multichannel Gamma-ray spectrometer											
	PLANT AND ENVIRONS RADIOACTIVITY	Isotopic analysis via various on-site and off-site gamma (GeLi) spectrometers.											
E-06	WIND DIRECTION	0-360°	3	NO	NO	NO	NO	NO	NO	IND.			
	WIND SPEED	0-67mph											
	WIND TEMPERATURE	(-9) - (+18) °F											
	WIND DIRECTION	0-360°	3	NO	NO	NO	NO	NO	NO	RELIABLE			
	WIND SPEED	0-100mph								OFIS, ENDS			
	WIND TEMPERATURE	(-10) - (+18) °F											
	Various												
E-07	ACCIDENT SAMPLING CAPABILITY (ANALYSIS CAPABILITY ON SITE)	AS SPECIFIED IN RG 1.97 REV.2	3	NO	NO	NO	NO	NO	NO	RELIABLE			
	ACCIDENT SAMPLING CAPABILITY (ANALYSIS CAPABILITY ON SITE)	AS SPECIFIED IN RG 1.97 REV.2											
	ACCIDENT SAMPLING CAPABILITY (ANALYSIS CAPABILITY ON SITE)	AS SPECIFIED IN RG 1.97 REV.2	3	NO	NO	NO	NO	NO	NO	RELIABLE			R, A NUREG 0737, II, B.3 NRC ltr dated June 14, 1984.
	ACCIDENT SAMPLING CAPABILITY (ANALYSIS CAPABILITY ON SITE)	AS SPECIFIED IN RG 1.97 REV.2											