

# NORTHEAST UTILITIES



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

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February 28, 1986

Docket No. 50-336

A05353

B12010

Office of Nuclear Reactor Regulation  
Attn: Mr. Ashok C. Thadani, Director  
PWR Project Directorate #8  
Division of PWR Licensing - B  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2  
Inservice Testing of Emergency Diesel Generator Auxiliary Systems

In our December 31, 1985 letter<sup>(1)</sup> Northeast Nuclear Energy Company (NNECO) advised the staff that NNECO would place the emergency diesel generator (EDG) auxiliary systems into the Millstone Unit No. 2 Inservice Testing Program.

Accordingly, NNECO hereby submits additional information pertaining to the Millstone Unit No. 2 Inservice Inspection and Testing Program as submitted June 27, 1985<sup>(2)</sup>, August 30, 1985<sup>(3)</sup>, and December 16, 1985<sup>(4)</sup>. Attachment No. 1 provides valve and pump listings and requests for relief which incorporate the EDG auxiliary systems into the Inservice Inspection and Testing Program. Three updated sets of plant boundary diagrams for the added systems have been included to assist your Staff in their review of this submittal.

NNECO plans to implement this addition to the Inservice Testing Program by April 30, 1986 in accordance with relief granted by the Staff on October 31, 1985<sup>(5)</sup>. Therefore, a response concerning Staff acceptability is requested as soon as possible, but no later than April 30, 1986.

- (1) J. F. Opeka letter to A. C. Thadani, dated December 31, 1985.
- (2) J. F. Opeka letter to E. J. Butcher, dated June 27, 1985, submitting the Millstone Unit No. 2 Inservice Inspection and Testing Program for the second ten-year inspection interval.
- (3) J. F. Opeka letter to E. J. Butcher, dated August 30, 1985.
- (4) J. F. Opeka letter to A. C. Thadani, dated December 16, 1985.
- (5) H. R. Denton letter to J. F. Opeka, dated October 31, 1985.

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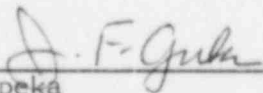
Pursuant to the requirement of 10CFR170.12(c), enclosed is the application fee of \$150.00.

Additionally, NNECO offers comments on the supplemental safety evaluation provided by the Staff in their October 31, 1985<sup>(5)</sup> letter as provided in Attachment No. 2.

We trust you will find the enclosed information and comments satisfactory by April 30, 1986.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
\_\_\_\_\_  
J. F. Opeka  
Senior Vice President

Docket No. 50-336

Attachment No. 1

Millstone Nuclear Power Station, Unit No. 2

Additional Information concerning  
the Inservice Inspection and Testing Program

February, 1986

Relief Request  
In-Service Test Program (IWV)  
Emergency Diesel Generator Auxiliary Systems  
Millstone Unit 2

SYSTEM: Fuel Oil

AFFECTED VALVES: 2-FO-67A; 67B; 67C; 67D and 2-FO-85A; 85B; 85C; 85D.

CATEGORY: C

CLASS: Noncode Class Valves

TEST REQUIREMENT: Article IWV-3521 - Check valves shall be exercised at least once every three months. Article IWV-3522(b) - Valves that are normally closed during plant operation and whose function is to open, shall be tested by proving that the disk moves promptly away from the seat when flow through the valve is initiated.

RELIEF REQUESTED: Relief from all testing is requested.

BASIS FOR RELIEF: There is no instrumentation on the piping or associated pumps and tanks. Thus, there is no way to verify that the valves open on demand.

ALTERNATE TESTING: The clean oil system will be monitored during diesel engine operation to assure satisfactory performance.

Relief Request  
In-Service Test Program (IWV)  
Emergency Diesel Generator Auxiliary Systems  
Millstone Unit 2

SYSTEM: Fuel Oil

AFFECTED VALVES: 2-FO-79; 80, 2-DG-91A; 91B; 92A, 92B, 27A; 27B; 95A;  
95B and 96A; 96B.

CATEGORY: B

CLASS: Noncode Class Valves

TEST REQUIREMENT: Article IWV-3413(b) - The stroke time of all power-operated valves shall be measured to the nearest second, for stroke times 10 seconds or less, or 10 percent of the specified limiting stroke time for full stroke times longer than 10 seconds whenever such a valve is full-stroke tested.

RELIEF REQUESTED: Relief is requested from measuring stroke time of these valves.

BASIS FOR RELIEF: These valves have stroke times less than 0.5 seconds. Measurement of these times provides no realistic information for evaluation of valve condition.

ALTERNATE TESTING: The valves will be stroke tested as required by Article IWV-3412. In addition, diesel engine starts will be monitored to assure the engine starts within designated time limits.

Relief Request #1  
In-Service Test Program (IWP)  
Emergency Diesel Generator Auxiliary Systems  
Millstone Unit 2

SYSTEM: Fuel Oil, Lube Oil and Jacket Water Cooling

AFFECTED PUMPS: Diesel Engine Fuel Oil Pumps  
Lube Oil Pumps  
Jacket Water Cooling Pumps

TEST REQUIREMENT: Article IWP-3100, the resistance of the system shall be varied until either the measured differential pressure or the measured flow rate equals the corresponding reference value. The test quantities shown in Table IWP-3100-1 shall then be measured or observed and recorded as directed in this subsection. Each measured test quantity shall then be compared with the reference value of the same quantity.

RELIEF REQUESTED: Relief is requested from the requirement to establish reference values of flow and differential pressure. Relief is requested from the requirement to measure and record flow and differential pressure readings. Relief is requested from the requirement to measure inlet pressure.

BASIS FOR RELIEF: These pumps are engine-driven. There is no instrumentation installed on the diesel engine which will provide this information. All bearings are internal to the engine and are lubricated by the engine lubrication system. No individual monitoring is possible.

ALTERNATE TESTING: Measure pump discharge pressure while the diesel engine has been running at an essentially constant, procedurally specified load for at least fifteen minutes. Compare these values to reference pump discharge pressure values obtained under the same conditions.

Relief Request #2  
In-Service Test Program (IWP)  
Emergency Diesel Generator Auxiliary Systems  
Millstone Unit 2

SYSTEM: Diesel Engine Air Cooling

AFFECTED PUMPS: Diesel Engine Air Cooling Pumps

TEST REQUIREMENT: Article IWP-3100, the resistance of the system shall be varied until either the measured differential pressure or the measured flow rate equals the corresponding reference value. The test quantities shown in Table IWP-3100-1 shall then be measured or observed and recorded as directed in this subsection. Each measured test quantity shall then be compared with the reference value of the same quantity.

RELIEF REQUESTED: Relief is requested from measuring and recording all required parameters.

BASIS FOR RELIEF: There is no instrumentation which can be used to measure inlet pressure, differential pressure, or flow. The unit is engine driven. All bearings are internal to the engine and are lubricated by the engine lubrication system. No individual monitoring is possible.

ALTERNATE TESTING: The diesel engine air intercooler outlet temperature will be monitored to verify that the air cooling system is operating properly.

Relief Request #3  
In-Service Test Program (IWP)  
Emergency Diesel Generator Auxiliary Systems  
Millstone Unit 2

SYSTEM: Diesel Engine Clean Oil

AFFECTED PUMPS: Diesel Engine Clean Oil Pumps

TEST REQUIREMENT: Article IWP-3100, the resistance of the system shall be varied until either the measured differential pressure or the measured flow rate equals the corresponding reference value. The test quantities shown in Table IWP-3100-1 shall then be measured or observed and recorded as directed in this subsection. Each measured test quantity shall then be compared with the reference value of the same quantity.

RELIEF REQUESTED: Relief is requested from measuring and recording all required parameters.

BASIS FOR RELIEF: There is no instrumentation which can be used to measure inlet pressure, differential pressure, or flow. The units have no accessible bearings. The unit is mounted on the diesel engine structure. No meaningful vibration readings can be taken. There is no separate lubrication supply to the unit.

ALTERNATE TESTING: The clean oil system will be monitored during diesel engine operation to assure satisfactory performance.



Relief Request #4  
In-Service Test Program (IWP)  
Emergency Diesel Generator Auxiliary Systems  
Millstone Unit 2

SYSTEM: Emergency Diesel Generator Engine-Driven Pumps

AFFECTED PUMPS: All Engine-Driven Pumps

TEST REQUIREMENT: Article IWP-4510, at least one displacement vibration amplitude (peak-to-peak composite) shall be read during each in-service test.

RELIEF REQUESTED: No vibration measurements will be taken.

BASIS FOR RELIEF: Meaningful vibration measurements cannot be taken on engine mounted pumps. The overall engine vibration completely overwhelms any vibration generated by the pump. Thus, vibration measurements on these units would not identify potential or actual degradation of the pump.

ALTERNATE TESTING: No alternative testing of the pumps is proposed. Vibration measurements will be taken on the diesel engine during in-service tests.

FUEL OIL SYSTEM (FOS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-FO-11	*/B Passive	Fuel Oil Supply Tank Isolation	1½"	Gate	M	O	None	-	-
2-FO-12	*/B Passive	Fuel Oil Cross-Connect	1½"	Gate	M	LC	None	-	-
2-FO-14	*/C	Fuel Oil Check	1½"	CK	-	C	Q	-	-
2-FO-17	*/B Passive	Fuel Oil Pump Isolation	1½"	Gate	M	O	None	-	-
2-FO-27	*/B Passive	Fuel Oil Supply Tank Isolation	1½"	Gate	M	O	None	-	-
2-FO-29	*/C	Fuel Oil Check	1½"	CK	-	C	Q	-	-
2-FO-33	*/B Passive	Fuel Oil Pump Isolation	1½"	Gate	M	O	None	-	-
2-FO-65A	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-65B	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-65C	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-65D	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-66A	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-66B	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-66C	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-66D	*/B Passive	Clean Oil Storage Tank Inlet Isolation	3/4"	Gate	M	O	None	-	-
2-FO-67A	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-
2-FO-67B	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-

\*Noncode Class Valves.

FUEL OIL SYSTEM (FOS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-FO-67C	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-
2-FO-67D	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-
2-FO-68A	*/B Passive	Clean Oil Transfer Pump Discharge Isolation	3/4"	Gate	M	O	None	-	-
2-FO-68B	*/B Passive	Clean Oil Transfer Pump Discharge Isolation	3/4"	Gate	M	O	None	-	-
2-FO-68C	*/B Passive	Clean Oil Transfer Pump Discharge Isolation	3/4"	Gate	M	O	None	-	-
2-FO-68D	*/B Passive	Clean Oil Transfer Pump Discharge Isolation	3/4"	Gate	M	O	None	-	-
2-FO-69	*/B Passive	Clean Oil Cross-Connect	3/4"	Gate	M	O	None	-	-
2-FO-70	*/B Passive	Clean Oil Cross-Connect	3/4"	Gate	M	O	None	-	-
2-FO-71	*/C	Fuel Oil Relief	1/2"	Rel	-	C	SRV	-	-
2-FO-72	*/C	Fuel Oil Relief	1/2"	Rel	-	C	SRV	-	-
2-FO-79	*/B	Fire Shutoff	1 1/2"	Gate	Thermally Fused	O	Q	X	Note 2
2-FO-80	*/B	Fire Shutoff	1 1/2"	Gate	Thermally Fused	O	Q	X	Note 2
2-FO-84	*/B Passive	Fuel Oil Cross-Connect	1 1/2"	Gate	M	LC	None	-	-
2-FO-85A	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-
2-FO-85B	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-
2-FO-85C	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-
2-FO-85D	*/C	Clean Oil Transfer Pump Discharge Check	3/4"	CK	-	C	Q	X	-

Note 2: Stroke Test Only, No Stroke Time Measurement.

\*Noncode Class Valves.

DIESEL AIR STARTING SYSTEM (DASS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-DG-27A	*/B	Air Bleed Cutoff	1½"	SOV	SO	O/Fail Closed	Q/Ft	-	-
2-DG-27B	*/B	Air Bleed Cutoff	1½"	SOV	SO	O/Fail Closed	Q/Ft	-	-
2-DG-29A	*/C	Check	2"	CK	-	C	Q	-	-
2-DG-29B	*/C	Check	2"	CK	-	C	Q	-	-
2-DG-29C	*/C	Check	2"	CK	-	C	Q	-	-
2-DG-29D	*/C	Check	2"	CK	-	C	Q	-	-
2-DG-30A	*/B Passive	Starting Air Isolation	1½"	Globe	M	O	None	-	-
2-DG-30B	*/B Passive	Starting Air Isolation	1½"	Globe	M	O	None	-	-
2-DG-30C	*/B Passive	Starting Air Isolation	1½"	Globe	M	O	None	-	-
2-DG-30D	*/B Passive	Starting Air Isolation	1½"	Globe	M	O	None	-	-
2-DG-31A	*/B Passive	Starting Air Tank Isolation	2"	Globe	M	O	None	-	-
2-DG-31B	*/B Passive	Starting Air Tank Isolation	2"	Globe	M	O	None	-	-
2-DG-31C	*/B Passive	Starting Air Tank Isolation	2"	Globe	M	O	None	-	-
2-DG-31D	*/B Passive	Starting Air Tank Isolation	2"	Globe	M	O	None	-	-
2-DG-32A	*/C	Check Valves - Internals Removed	2"	None	-	-	None	-	-
2-DG-32B	*/C	Check Valve - Internals Removed	2"	None	-	-	None	-	-
2-DG-32C	*/C	Check Valve - Internals Removed	2"	None	-	-	None	-	-
2-DG-32D	*/C	Check Valve - Internals Removed	2"	None	-	-	None	-	-
2-DG-35A	*/C	Charging Air Inlet Check Valve	1½"	Check	-	C	Q	-	-

\*Noncode Class Valves.

DIESEL AIR STARTING SYSTEM (DASS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-DG-43	*/B Passive	Starting Air Cross-Connect to Station Air	2½"	Gate	M	C	None	-	-
2-DG-44	*/B Passive	Starting Air Cross-Connect to Station Air	2½"	Gate	M	C	None	-	-
2-DG-45	*/B Passive	Starting Air Cross-Connect to Station Air	2½"	Gate	M	C	None	-	-
2-DG-46	*/B Passive	Starting Air Cross-Connect to Station Air	2½"	Gate	M	C	None	-	-
2-DG-47	*/B Passive	Starting Air Cross-Connect	2½"	Globe	M	C	None	-	-
2-DG-48	*/B Passive	Starting Air Cross-Connect	2½"	Globe	M	C	None	-	-
2-DG-54	*/C	Starting Air Tank Relief	½"	Rel	Self	C	SRV	-	-
2-DG-55	*/C	Starting Air Tank Relief	½"	Rel	Self	C	SRV	-	-
2-DG-56	*/C	Starting Air Tank Relief	½"	Rel	Self	C	SRV	-	-
2-DG-57	*/C	Starting Air Tank Relief	½"	Rel	Self	C	SRV	-	-
2-DG-86A	*/B Passive	Starting Air Isolation	1½"	Gate	M	LO	None	-	-
2-DG-86B	*/B Passive	Starting Air Isolation	1½"	Gate	M	LO	None	-	-
2-DG-87A	*/B Passive	Starting Air Isolation	1½"	Gate	M	LO	None	-	-
2-DG-87B	*/B Passive	Starting Air Isolation	1½"	Gate	M	LO	None	-	-
2-DG-88A	*/B Passive	Starting Air Bleed Isolation	1½"	Gate	M	LO	None	-	-
2-DG-88B	*/B Passive	Starting Air Bleed Isolation	1½"	Gate	M	LO	None	-	-
2-DG-91A	*/B	Air Start	1½"	AOV	AO	C/Fail Open	Q/Ft	X	Note 2
2-DG-91B	*/B	Air Start	1½"	AOV	AO	C/Fail Open	Q/Ft	X	Note 2
2-DG-92A	*/B	Air Start	1½"	AOV	AO	C/Fail Open	Q/Ft	X	Note 2
2-DG-92B	*/B	Air Start	1½"	AOV	AO	C/Fail Open	Q/Ft	X	Note 2

\*Noncode Class Valves.

Note 2: Stroke Test Only. No Stroke Time Measurement.

DIESEL AIR STARTING SYSTEM (DASS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-DG-35B	*/C	Charging Air Inlet Check Valve	1½"	Check	-	C	Q	-	-
2-DG-35C	*/C	Charging Air Inlet Check Valve	1½"	Check	-	C	Q	-	-
2-DG-35D	*/C	Charging Air Inlet Check Valve	1½"	Check	-	C	Q	-	-
2-DG-93A	*/C	Starting Air Actuation Bleed	½"	3-Way	Self	C	Q	-	-
2-DG-93B	*/C	Starting Air Actuation Bleed	½"	3-Way	Self	C	Q	-	-
2-DG-94A	*/C	Starting Air Actuation Bleed	½"	3-Way	Self	C	Q	-	-
2-DG-94B	*/C	Starting Air Actuation Bleed	½"	3-Way	Self	C	Q	-	-
2-DG-95A	*/B	Air Start Solenoid	½"	SOV	SO	C/Fail Open	Q/Ft	-	-
2-DG-95B	*/B	Air Start Solenoid	½"	SOV	SO	C/Fail Open	Q/Ft	-	-
2-DG-96A	*/B	Air Start Solenoid	½"	SOV	SO	C/Fail Open	Q/Ft	-	-
2-DG-96B	*/B	Air Start Solenoid	½"	SOV	SO	C/Fail Open	Q/Ft	-	-

\*Noncode Class Valves.

## DIESEL LUBE OIL SYSTEM (DLOS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-DG-51A	*C	Check Valve	1½"	CK	-	C	Q	-	-
2-DG-51B	*C	Check Valve	1½"	CK	-	C	Q	-	-
2-DG-65	*C	Safety Relief	½"	Rel	-	C	SRV	-	-
2-DG-66	*C	Safety Relief	½"	Rel	-	C	SRV	-	-
2-DG-71A	*/(Note 1)	Lube Oil Temperature Control	4"	3-Way	System	-	None	-	-
2-DG-71B	*/(Note 1)	Lube Oil Temperature Control	4"	3-Way	System	-	None	-	-

Note 1: Control valves are exempt from testing per paragraph IWV1200, of the ASME Section XI, BPGV. Code 1980 Edition, including the Winter 1981 Addenda.

\*Noncode Class Valves.

AIR COOLING SYSTEM (ACS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-DG-3A	*/C	Check Valve	4"	CK	-	C	Q	-	-
2-DG-3B	*/C	Check Valve	4"	CK	-	C	Q	-	-
2-DG-19A	*/C	Check Valve	1½"	CK	-	C	Q	-	-
2-DG-19B	*/C	Check Valve	1½"	CK	-	C	Q	-	-
2-DG-69A	*/(Note 1)	Air Cooling Temperature Control	4"	3-Way	System	-	None	-	-
2-DG-69B	*/(Note 1)	Air Cooling Temperature Control	4"	3-Way	System	-	None	-	-

Note 1: Control valves are exempt from testing per paragraph IWV1200, of the ASME Section XI, BP&V. Code 1980 Edition, including the Winter 1981 Addenda.

\*Noncode Class Valves.



JACKET COOLING SYSTEM (JCS)

Valve Number	Class/ Category	Function	Size	Valve Type	Actuation	Normal Position	Test Required	Relief Requested	Test Alternate
2-DG-14A	*/C	Check Valve	6"	CK	-	C	Q	-	-
2-DG-14B	*/C	Check Valve	6"	CK	-	C	Q	-	-
2-DG-70A	*/(Note 1)	Jacket Cooling Temperature Control	6"	3-Way	System	-	None	-	-
2-DG-70B	*/(Note 1)	Jacket Cooling Temperature Control	6"	3-Way	System	-	None	-	-
2-DG-75A	*/B Passive	Turbo Charger Cooling Isolation	1"	Gate	M	O	None	-	-
2-DG-75B	*/B Passive	Turbo Charger Cooling Isolation	1"	Gate	M	O	None	-	-
2-DG-76A	*/B Passive	Turbo Charger Cooling Isolation	1"	Gate	M	O	None	-	-
2-DG-76B	*/B Passive	Turbo Charger Cooling Isolation	1"	Gate	M	O	None	-	-
2-DG-77A	*/B Passive	Turbo Charger Cooling Isolation	1"	Gate	M	O	None	-	-
2-DG-77B	*/B Passive	Turbo Charger Cooling Isolation	1"	Gate	M	O	None	-	-

Note 1: Control valves are exempt from testing per paragraph IWV1200, of the ASME Section XI, BP&V. Code 1980 Edition, including the Winter 1981 Addenda.

\*Noncode Class Valves.

IWP PUMP TABLE

Pump	Flow Resistance	Speed Control	Inlet Pressure	Differential Pressure	Flow	Vibration	Lubrication	Bearing Temperature	Frequency
<u>Fuel Oil System</u>									
Fuel Oil Pump A	Fixed	Variable*	RR#1	RR#1	RR#1	RR#4	RR#1	RR#1	Quarterly
Fuel Oil Pump B	Fixed	Variable*	RR#1	RR#1	RR#1	RR#4	RR#1	RR#1	Quarterly
<u>Lube Oil System</u>									
P48A Lube Oil Pump	Fixed	Variable*	RR#1	RR#1	RR#1	RR#4	RR#1	RR#1	Quarterly
P48B Lube Oil Pump	Fixed	Variable*	RR#1	RR#1	RR#1	RR#4	RR#1	RR#1	Quarterly
<u>Jacket Cooling Water System</u>									
P49A Cooling Pump	Fixed	Variable*	RR#1	RR#1	RR#1	RR#4	RR#1	RR#1	Quarterly
P49B Cooling Pump	Fixed	Variable*	RR#1	RR#1	RR#1	RR#4	RR#1	RR#1	Quarterly
<u>Air Cooling System</u>									
P127A Air Cooler Coolant Pump	Fixed	Variable*	RR#2	RR#2	RR#2	RR#4	RR#2	RR#2	Quarterly
P127B Air Cooler Coolant Pump	Fixed	Variable*	RR#2	RR#2	RR#2	RR#4	RR#2	RR#2	Quarterly
<u>Clean Oil System</u>									
P128A - Clean Oil Pump	Fixed	Fixed	RR#3	RR#3	RR#3	RR#3	RR#3	RR#3	Quarterly
P128B - Clean Oil Pump	Fixed	Fixed	RR#3	RR#3	RR#3	RR#3	RR#3	RR#3	Quarterly
P128C - Clean Oil Pump	Fixed	Fixed	RR#3	RR#3	RR#3	RR#3	RR#3	RR#3	Quarterly
P128D - Clean Oil Pump	Fixed	Fixed	RR#3	RR#3	RR#3	RR#3	RR#3	RR#3	Quarterly

\*Varies with engine speed.

RR#x = Relief Requested. (x = Relief Request No.)

LEGEND FOR VALVE TESTING

- Q - Exercise valve full stroke for operability every three (3) months. If applicable, take stroke time measurements and compare to the stroke time limiting value per Section XI, Article IWV-3410.
  
- QP - Exercise valve part stroke for operability every three (3) months.
  
- QCS - Exercise valve full stroke for operability during cold shutdowns. If applicable, take stroke time measurements and compare to the stroke time limiting value per Section XI, Article IWV-3410.
  
- QPCS - Exercise valve part stroke for operability during cold shutdowns.
  
- QR - Exercise valve full stroke for operability during refueling. If applicable, take stroke time measurements and compare to the stroke time limiting value per Section XI, Article IWV-3410.
  
- QPR - Exercise valve part stroke for operability during refueling.
  
- PI - Visually observe, at least once every two years, actual valve position to confirm that remote valve position indications accurately reflect valve operation.

- FT - Remove actuator power from valves with fail-safe actuators to confirm that the valve travels to its fail-safe position every three (3) months.
  
- LT - Leak test valve per Section XI, Article IWV-3420, or applicable relief request.
  
- LLRT - Leak test valve in conformance with the criteria specified in Appendix J of 10CFR50.
  
- SRV - Test safety and relief valves per Section XI, Article IWV-3510.
  
- FTCS - Remove actuator power from valves with fail-safe actuators to confirm that the valve travels to its fail-safe position during cold shutdowns.

Docket No. 50-336

Attachment No. 2

Millstone Nuclear Power Station, Unit No. 2

Comments on October 31, 1985 Supplemental  
Safety Evaluation

February, 1986

NRC Comment:

The system testing being done by the licensee did not measure stroke time. The following valves should be exercised/timed to the requirements of IWV-3410.

FV 6341 (2-SW-231A)  
FV 6389 (2-SW-89A)

FV 6342 (2-SW-231B)  
FV 6397 (2-SW-89B)

Resolution:

These valves have been included in the service water valve section of the second 10-year Inservice Inspection and Testing Program. Valves 2-SW-89(A&B) were included in the first 10-year Inservice Inspection and Testing Program.

NRC Comment:

The following relief valves were not being testing. These valves should be tested to meet IWV-3510.

PSV 7016 (2-FO-71)  
PSV 8952 (2-DG-54)  
PSV 8997 (2-DG-65)  
PSV 8743 (2-DG-81A)

PSV 7017 (2-FO-72)  
PSV 8953 (2-DG-55)  
PSV 8978 (2-DG-66)  
PSV 8744 (2-DG-81B)

Resolution:

All of the above valves except 2-DG-81(A&B) are included in the enclosed submittal. In addition, valves 2-DG-56 and 2-DG-57 are also included in the submittal. Valves 2-DG-81(A&B) are thermal reliefs, not system relief valves. These valves are not installed as operating system protection. Their only function is to protect the piping during the time it is isolated from the expansion tank, thus these valves are not required to be tested.

NRC Comment:

The following check valves were not being testing for seat leakage. The valves should be tested to meet IWV-3420.

2-FO-14	2-FO-85C	2-FO-85D	2-FO-67A	2-FO-67B
2-FO-29	2-FO-67C	2-FO-67D	2-FO-85A	2-FO-85B
2-DG-29A	2-DG-29B	2-DG-29C	2-DG-29D	2-DG-35A
2-DG-35B	2-DG-35C	2-DG-35D		

Resolution:

Seal Leakage testing is not required for any of these valves. The ASME boiler and pressure vessel code, Section II, Article IWV-2200(a) states:

"Category A - Valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their function."

None of the listed valves are required to limit leakage to a specific amount to fulfill their function. Their function is to prevent gross backflow during off-normal conditions. These valves are included in the test program as Category B and Category C valves and will be tested as such.

NRC Comment:

The following thermally fusible valves were not being exercised. The valves should be exercised per IWV-3410.

2-FO-79

2-FO-80

Resolution:

These valves are included in the enclosed submittal. Relief is requested from measurement of stroke time since the closing time is less than 0.5 seconds.

NRC Comment:

Valve FO-70 should be position verified per IWV-3300.

Resolution:

Article IWV-3300 is not applicable to this manually operated gate valve. Article IWV-3300 states:

"Valves with remote position indicators shall be observed at least once every 2 years to verify that valve operation is accurately indicated."

The valve is included in the submittal but no testing is required.

NRC Comment:

The Staff further concludes that the (air supply to EDG service water valves) should be included in the IST program.

Resolution:

The air supply to the service water valves is not a safety-related system and is not included in the test program. All air operated valves are designed to fail to a position which will allow the safety related system to fulfill its safety related function.

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