Docket No. 50-423
B15162

Attachment 1

Millstone Nuclear Power Station, Unit No. 3

Proposed Revision to Technical Specifications
24-Month Fuel Cycle

Marked-Up Pages

May 1995

Millstone Unit No. 3

Proposed Revision to Technical Specifications
24-Month Fuel Cycle

Section	Title	Page Number and Amendment Number
Table 1-1	Frequency Notation	1-8, January 1986
3.1.2.2	Reactivity Control Systems – Flow Path Operating	3/4 1-14, Amendment No. 60
3.1.3.3	Reactivity Control Systems – Position Indication System – Shutdown	3/4 1-24, Amendment No. 60
3.1.3.4	Reactivity Control Systems – Rod Drop Time	3/4 1-25, Amendment No. 60
3.3.3.3	Instrumentation – Seismic Instrumentation	3/4 3-47* Amendment No. 57 3/4 3-48* Amendment No. 77 3/4 4-49* Amendment No. 100
3.3.3.8	Instrumentation-Loose-Part Detection System	3/4 3-68, Amendment No. 100
3.6.2.1	Containment Systems - Depressurization and Cooling Systems – Containment Quench Spray System	3/4 6-12, Amendment No. 100
3.6.2.2	Containment Systems – Recirculation Spray System	3/4 6-13, Amendment No. 100
3.6.3	Containment Systems – Containment Isolation Valves	3/4 6-15, Amendment No. 96
3/4.0	Applicability – Bases	B3/4 0-4, Amendment No. 57

*No changes are required. These pages are provided for information only.

TABLE 1.1

FREQUENCY NOTATION

NOTATION	FREQUENCY
S	At least once per 12 hours.
D	At least once per 24 hours.
W	At least once per 7 days.
M	At least once per 31 days.
Q	At least once per 92 days.
SA	At least once per 184 days.
~~R~~	~~At least once per 18 months.~~
S/U	Prior to each reactor startup.
N.A.	Not applicable.
P	Completed prior to each release.
REFUELING INTERVAL, R	At least once per 24 months

REACTIVITY CONTROL SYSTEMS

FLOW PATHS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2 At least two* of the following three boron injection flow paths shall be OPERABLE:

a. The flow path from the boric acid storage system via a boric acid transfer pump and a charging pump to the Reactor Coolant System (RCS), and

b. Two flow paths from the refueling water storage tank via charging pumps to the RCS.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one of the above required boron injection flow paths to the RCS OPERABLE, restore at least two boron injection flow paths to the RCS to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to at least the limits as shown in Figure 3.1-4 at 200°F within the next 6 hours; restore at least two flow paths to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.2 At least two of the above required flow paths shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that the Boric Acid Transfer Pump Room temperature and the boric acid storage tank solution temperature are greater than or equal to 67°F when it is a required water source;

b. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position,

c. At least once ~~per 18 months during shutdown~~ each REFUELING INTERVAL by verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal; and

d. At least once ~~per 18 months~~ each REFUELING INTERVAL by verifying that the flow path required by Specification 3.1.2.2a. delivers at least 33 gpm to the RCS.

*Only one boron injection flow path is required to be OPERABLE whenever the temperature of one or more of the RCS cold legs is less than or equal to 350°F.

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REACTIVITY CONTROL SYSTEMS

POSITION INDICATION SYSTEM - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.3.3 One digital rod position indicator (excluding demand position indication) shall be OPERABLE and capable of determining the control rod position within ±12 steps for each shutdown or control rod not fully inserted.

APPLICABILITY: MODES 3* **, 4* **, and 5* **.

ACTION:

With less than the above required position indicator(s) OPERABLE, immediately open the Reactor Trip System breakers.

SURVEILLANCE REQUIREMENTS

4.1.3.3 Each of the above required digital rod position indicator(s) shall be determined to be OPERABLE by verifying that the digital rod position indicators agree with the demand position indicators within 12 steps when exercised over the full-range of rod travel at least once per 18 months.

each REFUELING INTERVAL.

*With the Reactor Trip System breakers in the closed position.
**See Special Test Exceptions Specification 3.10.5.

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REACTIVITY CONTROL SYSTEMS

ROD DROP TIME

LIMITING CONDITION FOR OPERATION

3.1.3.4 The individual full-length (shutdown and control) rod drop time from the fully withdrawn position shall be less than or equal to 2.7 seconds from beginning of decay of stationary gripper coil voltage to dashpot entry with:

a. T_{avg} greater than or equal to 551°F, and

b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With the drop time of any full-length rod determined to exceed the above limit, restore the rod drop time to within the above limit prior to proceeding to MODE 1 or 2.

b. With the rod drop times within limits but determined with three reactor coolant pumps operating, operation may proceed provided THERMAL POWER is restricted to less than or equal to 65% of RATED THERMAL POWER with the reactor coolant stop valves in the nonoperating loop closed.

SURVEILLANCE REQUIREMENTS

4.1.3.4 The rod drop time of full-length rods shall be demonstrated through measurement prior to reactor criticality:

a. For all rods following each removal of the reactor vessel head,

b. For specifically affected individual rods following any maintenance on or modification to the Control Rod Drive System which could affect the drop time of those specific rods, and

c. At least once ~~per 18 months.~~ each REFUELING INTERVAL.

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NO CHANGE REQUIRED
INFO ONLY

INSTRUMENTATION

SEISMIC INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more of the above required seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.3.1 Each of the above required seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION, and ANALOG CHANNEL OPERATIONAL TEST at the frequencies shown in Table 4.3-4.

4.3.3.3.2 Each of the above required seismic monitoring instruments actuated during a seismic event shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 10 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 14 days describing the magnitude, frequency spectrum, and resultant effect upon facility features important to safety.

NO CHANGE REQUIRED - INFO ONLY

03/08/93

TABLE 3.3-7
SEISMIC MONITORING INSTRUMENTATION

INSTRUMENTS AND SENSOR LOCATIONS	MEASUREMENT RANGE	MINIMUM INSTRUMENTS OPERABLE
1. Triaxial Time-History Accelerographs		
a. NBE20A Containment Mat. (-24'3")	± 1g (5v/g)	1
b. NBE20B Containment Wall (40'6")	± 1g (5v/g)	1
c. NBE21 Emer. Generator Enclosure Located on Mat in Diesel Fuel Oil Vault (4'6")	± 1g (5v/g)	1
d. NBE22 Aux. Bldg. F-Line Wall Near The Charging Pumps Cooling Surge Tank (46'6")	± 1g (5v/g)	1
2. Triaxial Peak Accelerographs		
a. P/A1 Containment Safety Injection Accum. Tank (-4'7")	± 2g	1
b. P/A2 Safety Injection Accum Disch. Line (-22'10")	± 2g	1
c. P/A3 Aux. Bldg. Charging Pumps Cooling Surge Tank (46'6")	± 1g	1
3a. Triaxial Seismic Trigger		
Horizontal (Control Room)	.01g	1*
Vertical (Control Room)	.006g	1*
3b. Triaxial Seismic Switch		
Horizontal (Control Room)	.09g	1**
Vertical (Control Room)	.06g	1**
4. Triaxial Response-Spectrum Recorders		
a. RSA-50 Spectrum Analyzer (Control Room)	1-32 Hz Peak Acceleration in Gs (Max of 1g)	1*
b. Self-Contained Recorder Steam Generator Support (51'4")	0-30 Hz at ± 2g	1

*With reactor control room indicator. This unit is activated by signals from the NBE20A Triaxial Accelerograph.

**This unit is activated by signals from the NBE20A Triaxial Accelerograph and is connected to an annunciator in the reactor control room.

NO CHANE REQUIRED – INFO ONLY

January 3, 1995

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENTS AND SENSOR LOCATIONS	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST
1. Triaxial Time-History Accelerographs			
a. NBE20A Containment Mat (-24'3")	M	R	SA
b. NBE20B Containment Wall (40'6")	M	R	SA
c. NBE21 Emer. Generator Enclosure Located on Mat in Diesel Fuel Oil Vault (4'6")	M	R	SA
d. NBE22 Aux. Bldg. F-Line Wall Near The Charging Pumps Cooling Surge Tank (46'6")	M	R	SA
2. Triaxial Peak Accelerographs			
a. P/A1 Containment Safety Injection Accum. Tank (-4'7")	N.A.	R	N.A.
b. P/A2 Safety Injection Accum. Disch. Line (-22'10")	N.A.	R	N.A.
c. P/A3 Aux. Bldg. Charging Pumps Cooling Surge Tank (46'6")	N.A.	R	N.A.
3a. Triaxial Seismic Trigger			
Horizontal (Control Room)	M	R	SA
Vertical (Control Room)	M	R	SA
3b. Triaxial Seismic Switch			
Horizontal (Control Room)	M	R	SA
Vertical (Control Room)	M	R	SA
4. Triaxial Response-Spectrum Recorders			
a. RSA-50 Spectrum Analyzer (Control Room)	M	R	SA
b. Self-Contained Recorder Steam Generator Support (51'4")	N.A.	R	N.A.

INSTRUMENTATION

LOOSE-PART DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.3.8 The Loose-Part Detection System shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With one or more Loose-Part Detection System channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 Each channel of the Loose-Part Detection Systems shall be demonstrated OPERABLE by performance of:

a. A CHANNEL CHECK at least once per 24 hours,

b. An ANALOG CHANNEL OPERATIONAL TEST at least once per 31 days, and

c. A CHANNEL CALIBRATION at least once per 18 months. Each REFUELING INTERVAL

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CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT QUENCH SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent Containment Quench Spray subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Containment Quench Spray subsystem inoperable, restore the inoperable system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Quench Spray subsystem shall be demonstrated OPERABLE:

a. At least once per 31 days:

1) Verifying that each valve (manual, power operated, or automatic) in the flow path is not locked, sealed, or otherwise secured in position, is in its correct position; and

2) Verifying the temperature of the borated water in the refueling water storage tank is between 40°F and 50°F.

b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 114 psid when tested pursuant to Specification 4.0.5;

c. At least once per 18 months during shutdown, by: each REFUELING INTERVAL,

1) Verifying that each automatic valve in the flow path actuates to its correct position on a CDA test signal, and

2) Verifying that each spray pump starts automatically on a CDA test signal.

d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

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CONTAINMENT SYSTEMS

RECIRCULATION SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.2 Two independent Recirculation Spray Systems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Recirculation Spray System inoperable, restore the inoperable system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Recirculation Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.2 Each Recirculation Spray System shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is not locked, sealed, or otherwise secured in position, is in its correct position;

b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 130 psid when tested pursuant to Specification 4.0.5;

c. At least once per 18 months each REFUELING INTERVAL by verifying that on a CDA test signal, each recirculation spray pump starts automatically after a 660 ±20 second delay;

d. At least once per 18 months during shutdown each REFUELING INTERVAL, by verifying that each automatic valve in the flow path actuates to its correct position on a CDA test signal; and

e. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

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3/4.6.3 CONTAINMENT ISOLATION VALVES

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LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves shall be OPERABLE with isolation times less than or equal to the required isolation times.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one or more of the isolation valve(s) inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 Each isolation valve shall be demonstrated OPERABLE* prior to returning the valve to service after maintenance, repair, or replacement work is performed on the valve or its associated actuator, control, or power circuit by performance of a cycling test and verification of isolation time.

4.6.3.2 Each isolation valve shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once ~~per 18 months~~ each REFUELING INTERVAL by:

a. Verifying that on a Phase "A" Isolation test signal, each Phase "A" isolation valve actuates to its isolation position,

b. Verifying that on a Phase "B" Isolation test signal, each Phase "B" isolation valve actuates to its isolation position, and

c. Verifying that on a Containment High Radiation test signal, each purge supply and exhaust isolation valve actuates to its isolation position.

4.6.3.3 The isolation time of each power-operated or automatic valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

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*The provisions of Specification 4.0.4 are not applicable for main steam line isolation valves entry into MODE 3 and MODE 4.

3/4.0 APPLICABILITY

BASES

"Surveillance requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

Specification 4.0.1 establishes the requirement that surveillances must be performed during the OPERATIONAL MODES or other conditions for which the requirements of the Limiting Conditions for Operation apply unless otherwise stated in an individual Surveillance Requirement. The purpose of this specification is to ensure that surveillances are performed to verify the operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in a MODE or other specified condition for which the associated Limiting Conditions for Operation are applicable. Surveillance requirements do not have to be performed when the facility is in an OPERATIONAL MODE for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to th requirements of a specification.

Specification 4.0.2 This specification establishes the limit for which the specified time interval for surveillance requirements may be extended. It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are performed at each refueling outage and are specified with an 18-month surveillance interval. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillances that are not performed during refueling outage. The limitation of 4.0.2 is based on engineering judgment and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the surveillance requirements. This provision is sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

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Specification 4.0.3 establishes the failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, as a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when the Surveillance Requirements have not

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Bases 3/4.0 Applicability, Page B 3/4 0-4

It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are specified to be performed at least once each REFUELING INTERVAL. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillance that are not performed once each REFUELING INTERVAL. Likewise, it is not the intent that REFUELING INTERVAL surveillances be performed during power operation unless it is consistent with safe plant operation.

Docket No. 50-423
B15162

Attachment 2

Millstone Nuclear Power Station, Unit No. 3

Proposed Revision to Technical Specifications
24-Month Fuel Cycle

Retyped Pages

May 1995

TABLE 1.1

FREQUENCY NOTATION

NOTATION	FREQUENCY
S	At least once per 12 hours.
D	At least once per 24 hours.
W	At least once per 7 days.
M	At least once per 31 days.
Q	At least once per 92 days.
SA	At least once per 184 days.
REFUELING INTERVAL, R	At least once per 24 months.
S/U	Prior to each reactor startup.
N.A.	Not applicable.
P	Completed prior to each release.

FLOW PATHS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2 At least two* of the following three boron injection flow paths shall be OPERABLE:

a. The flow path from the boric acid storage system via a boric acid transfer pump and a charging pump to the Reactor Coolant System (RCS), and

b. Two flow paths from the refueling water storage tank via charging pumps to the RCS.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one of the above required boron injection flow paths to the RCS OPERABLE, restore at least two boron injection flow paths to the RCS to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to at least the limits as shown in Figure 3.1-4 at 200°F within the next 6 hours; restore at least two flow paths to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.2 At least two of the above required flow paths shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that the Boric Acid Transfer Pump Room temperature and the boric acid storage tank solution temperature are greater than or equal to 67°F when it is a required water source;

b. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position,

c. At least once each REFUELING INTERVAL by verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal; and

d. At least once each REFUELING INTERVAL by verifying that the flow path required by Specification 3.1.2.2a. delivers at least 33 gpm to the RCS.

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*Only one boron injection flow path is required to be OPERABLE whenever the temperature of one or more of the RCS cold legs is less than or equal to 350°F.

POSITION INDICATION SYSTEM - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.3.3 One digital rod position indicator (excluding demand position indication) shall be OPERABLE and capable of determining the control rod position within ±12 steps for each shutdown or control rod not fully inserted.

APPLICABILITY: MODES 3* **, 4* **, and 5* **.

ACTION:

With less than the above required position indicator(s) OPERABLE, immediately open the Reactor Trip System breakers.

SURVEILLANCE REQUIREMENTS

4.1.3.3 Each of the above required digital rod position indicator(s) shall be determined to be OPERABLE by verifying that the digital rod position indicators agree with the demand position indicators within 12 steps when exercised over the full-range of rod travel at least once each REFUELING INTERVAL.

*With the Reactor Trip System breakers in the closed position.

**See Special Test Exceptions Specification 3.10.5.

ROD DROP TIME

LIMITING CONDITION FOR OPERATION

3.1.3.4 The individual full-length (shutdown and control) rod drop time from the fully withdrawn position shall be less than or equal to 2.7 seconds from beginning of decay of stationary gripper coil voltage to dashpot entry with:

a. T_{avg} greater than or equal to 551°F, and

b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With the drop time of any full-length rod determined to exceed the above limit, restore the rod drop time to within the above limit prior to proceeding to MODE 1 or 2.

b. With the rod drop times within limits but determined with three reactor coolant pumps operating, operation may proceed provided THERMAL POWER is restricted to less than or equal to 65% of RATED THERMAL POWER with the reactor coolant stop valves in the nonoperating loop closed.

SURVEILLANCE REQUIREMENTS

4.1.3.4 The rod drop time of full-length rods shall be demonstrated through measurement prior to reactor criticality:

a. For all rods following each removal of the reactor vessel head,

b. For specifically affected individual rods following any maintenance on or modification to the Control Rod Drive System which could affect the drop time of those specific rods, and

c. At least once each REFUELING INTERVAL.

INSTRUMENTATION

LOOSE-PART DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.3.8 The Loose-Part Detection System shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With one or more Loose-Part Detection System channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 Each channel of the Loose-Part Detection Systems shall be demonstrated OPERABLE by performance of:

a. A CHANNEL CHECK at least once per 24 hours,

b. An ANALOG CHANNEL OPERATIONAL TEST at least once per 31 days, and

c. A CHANNEL CALIBRATION at least once each REFUELING INTERVAL.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT QUENCH SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent Containment Quench Spray subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Containment Quench Spray subsystem inoperable, restore the inoperable system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Quench Spray subsystem shall be demonstrated OPERABLE:

a. At least once per 31 days:

   1) Verifying that each valve (manual, power operated, or automatic) in the flow path is not locked, sealed, or otherwise secured in position, is in its correct position; and

   2) Verifying the temperature of the borated water in the refueling water storage tank is between 40°F and 50°F.

b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 114 psid when tested pursuant to Specification 4.0.5;

c. At least once each REFUELING INTERVAL, by:

   1) Verifying that each automatic valve in the flow path actuates to its correct position on a CDA test signal, and

   2) Verifying that each spray pump starts automatically on a CDA test signal.

d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

RECIRCULATION SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.2 Two independent Recirculation Spray Systems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Recirculation Spray System inoperable, restore the inoperable system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Recirculation Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.2 Each Recirculation Spray System shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is not locked, sealed, or otherwise secured in position, is in its correct position;

b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 130 psid when tested pursuant to Specification 4.0.5;

c. At least once each REFUELING INTERVAL by verifying that on a CDA test signal, each recirculation spray pump starts automatically after a 660 ±20 second delay;

d. At least once each REFUELING INTERVAL, by verifying that each automatic valve in the flow path actuates to its correct position on a CDA test signal; and

e. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves shall be OPERABLE with isolation times less than or equal to the required isolation times.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one or more of the isolation valve(s) inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 Each isolation valve shall be demonstrated OPERABLE* prior to returning the valve to service after maintenance, repair, or replacement work is performed on the valve or its associated actuator, control, or power circuit by performance of a cycling test and verification of isolation time.

4.6.3.2 Each isolation valve shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once each REFUELING INTERVAL by:

a. Verifying that on a Phase "A" Isolation test signal, each Phase "A" isolation valve actuates to its isolation position,

b. Verifying that on a Phase "B" Isolation test signal, each Phase "B" isolation valve actuates to its isolation position, and

c. Verifying that on a Containment High Radiation test signal, each purge supply and exhaust isolation valve actuates to its isolation position.

4.6.3.3 The isolation time of each power-operated or automatic valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

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*The provisions of Specification 4.0.4 are not applicable for main steam line isolation valves entry into MODE 3 and MODE 4.

"Surveillance requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

Specification 4.0.1 establishes the requirement that surveillances must be performed during the OPERATIONAL MODES or other conditions for which the requirements of the Limiting Conditions for Operation apply unless otherwise stated in an individual Surveillance Requirement. The purpose of this specification is to ensure that surveillances are performed to verify the operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in a MODE or other specified condition for which the associated Limiting Conditions for Operation are applicable. Surveillance requirements do not have to be performed when the facility is in an OPERATIONAL MODE for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to the requirements of a specification.

Specification 4.0.2 This specification establishes the limit for which the specified time interval for surveillance requirements may be extended. It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are specified to be performed at least once each REFUELING INTERVAL. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillances that are not performed once each REFUELING INTERVAL. Likewise, it is not the intent that REFUELING INTERVAL surveillances be performed during power operation unless it is consistent with safe plant operation. The limitation of 4.0.2 is based on engineering judgment and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the surveillance requirements. This provision is sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

Specification 4.0.3 establishes the failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, as a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when the Surveillance Requirements have not

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Attachment 3

Millstone Nuclear Power Station, Unit No. 3

Description of the Proposed Technical
Specification Changes

May 1995

Millstone Unit No. 3

Description of the Proposed Technical Specification Changes

Introduction

Beginning with Cycle 6, Millstone Unit No. 3 will operate utilizing a 24-month fuel cycle. Currently, the plant is shut down for a refueling outage. To take advantage of this longer fuel cycle, NNECO is proposing to modify the frequency of a number of the surveillance requirements existing in the Millstone Unit No. 3 Technical Specifications. The proposed changes are described below:

Description of the Proposed Changes

1. Table 1.1, "Frequency Notation" and Bases Section 4.0.2

   NNECO hereby proposes technical specification changes to accommodate a 24-month fuel cycle by modifying 18-month surveillances to indicate that they are to be performed "...at least once each REFUELING INTERVAL." In addition, the proposed change modifies the surveillance interval notation in Table 1.1 in the Definitions section of the Millstone Unit No. 3 Technical Specifications to include the term "REFUELING INTERVAL" along with the 'R' notation to define the frequency for surveillances that are specified to be performed once each refueling interval. Capitalization of the term "refueling interval" will be used in the technical specifications to designate a defined term. The proposed technical specification change will modify the frequency for this surveillance interval notation from "At least once per 18 months" to "At least once per 24 months" to define the nominal frequency for surveillances that are specified to be performed each refueling interval or with the 'R' notation. The bounding time interval for these surveillances would be 30 months under the provision of Technical Specification 4.0.2. Technical Specification 4.0.2 allows a surveillance to be extended by 25 percent of the specified interval.

   In addition, the Bases Section 4.0.2 is proposed to be revised to include the recommendation of Generic Letter (GL) 91-04. It is noted that NNECO has already included the recommendations of GL 87-09 into the Bases of the Millstone Unit No. 3 Technical Specifications Section 4.0.2.

2. Section 4.1.2.2., Reactivity Control System - Flow Paths — Operating, Surveillance Requirements

Surveillance Requirement 4.1.2.2.c verifies the operability of each automatic valve in the boron injection flow path to ensure that the flow path is available from the boric acid storage pump to the reactor coolant system (RCS). This surveillance is required to be performed once per 18 months. NNECO is proposing to extend the frequency of Surveillance Requirement 4.1.2.2.c from at least once per 18 months to at least once each refueling interval (i.e., 24 months). In addition, the phrase, "during shutdown" in surveillance requirement 4.1.2.2.c is being deleted. Because the terms "HOT SHUTDOWN" and "COLD SHUTDOWN" are defined in the Millstone Unit No. 3 Technical Specifications as operating modes or conditions, the added restriction to perform certain surveillances during shutdown may be misinterpreted. This change is consistent with the recommendations of GL 91-04.

Surveillance Requirement 4.1.2.2.d verifies that the flow path required by Technical Specification Section 3.1.2.2.a delivers at least 33 gpm to the RCS. This surveillance is required to be performed once per 18 months. NNECO is proposing to extend the frequency of Surveillance Requirement 4.1.2.2.d from at least once per 18 months to at least once each refueling interval (i.e., 24 months).

3. Section 4.1.3.3, Reactivity Control Systems — Position Indication System — Shutdown, Surveillance Requirement

Surveillance Requirement 4.1.3.3 requires that the digital rod position indicators be determined operable by verifying that the digital rod position indicators agree with the demand position within 12 steps when exercised over the full-range of rod travel at least once per 18 months. NNECO is proposing to extend the frequency of Surveillance Requirement 4.1.3.3 from at least once per 18 months to at least once each refueling interval (i.e., 24 months).

4. Section 4.1.3.4, Reactivity Control Systems — Rod Drop Time, Surveillance Requirement

Surveillance Requirement 4.1.3.4.c requires that the rod drop time of the full-length rods be demonstrated through measurement prior to criticality at least once per 18 months. NNECO is proposing to extend the frequency of Surveillance Requirement 4.1.3.4.c from at least once per 18 months to at least once each refueling interval (i.e., 24 months).

5. Section 4.3.3.3.1, Seismic Instrumentation, Surveillance Requirement

Surveillance Requirement 4.3.3.3.1 requires that the seismic monitoring instruments be demonstrated operable by performing a channel check once per 31 days, channel calibration once per 18 months, and analog channel operational test once per six months where applicable. The channel calibration frequency of once per 18 months is identified as "R" on Table 4.3-4. NNECO is proposing to change the frequency of performance of the channel calibration from once per 18 months to at least once each refueling (i.e., 24 months). No word changes to Surveillance Requirement or Table 4.3-4 are required because the term 'R' is defined in Definition Section 1 and is changed via another change proposed to be modified via item 1 above.

6. Section 4.3.3.8, Loose-Part Detection System, Surveillance Requirement

Surveillance Requirement 4.3.3.8 contains three requirements for demonstrating the operability of the loose-part detection system. They are a channel check at least once per 24 hours, an analog channel operational test at least once per 31 days, and a channel calibration at least once per 18 months. NNECO is proposing to change the frequency of performance of the channel calibration to at least once each refueling interval (i.e., 24 months).

7. Surveillance Sections 4.6.2.1.c, 4.6.2.2.c and d,

The proposed change to Sections 4.6.2.1.c, 4.6.2.2.c and d, will increase the interval for the Quench Spray, and Recirculation Spray testing from 18 months once each REFUELING INTERVAL. The term REFUELING INTERVAL is defined in Table 1.1 as "At least once per 24 months." This proposed change is being made in accordance with the guidance contained in GL 91-04. Since the Bases sections are not affected by these changes, no changes are proposed to Bases Sections 3/4 6.2.1, 3/4 6.2.2., and 3/4 6.3.

8. Surveillance Section 4.6.3.2

At present, Section 4.6.3.2 requires that each containment isolation valve shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months. NNECO hereby proposes to change that frequency to state as "once each REFUELING INTERVAL." The term REFUELING INTERVAL is defined in Table 1.1 as "At least once per 24 months."

This proposed change is being made in accordance with the guidance contained in GL 91-04. Since the BASES section is not affected by the proposed change, no changes are proposed to Bases 3/4.6.3, "Containment Isolation Valves."

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Attachment 4

Millstone Nuclear Power Station, Unit No. 3

Proposed Revision to Technical Specifications
24 Month Fuel Cycle
Safety Assessment and Significant Hazards Consideration for:

I. Safety Assessment and Significant Hazards Consideration for Changes to:

- Table 1.1, Frequency Notation, and Bases 3/4.0, Applicability.
- Containment Isolation Valves Surveillance Requirements

II. Safety Assessment and Significant Hazards Consideration for Changes to:

- Containment Quench Spray System Surveillance Requirements
- Recirculation Spray System Surveillance Requirements

III. Safety Assessment and Significant Hazards Consideration for Changes to:

- Reactivity Control System — Flow Paths - Operating
- Position Indicating System - Shutdown
- Rod Drop Time
- Seismic Instrumentation
- Loose-Part Detection System

May 1995

Millstone Unit No. 3

I. Safety Assessment and Significant Hazards Consideration for Changes to Table 1.1, Frequency Notation, and Bases 3/4.0, Applicability, and Containment Isolation Valve, Surveillance Requirements

Background

Beginning with Cycle 6 (scheduled to begin in July 1995), Millstone Unit No. 3 will operate utilizing a 24-month fuel cycle. Currently, the plant is in a scheduled refueling outage. To take advantage of this longer fuel cycle, NNECO will be proposing to modify the frequency of a number of the Surveillance Requirements existing in the Millstone Unit No. 3 Technical Specifications.

This request modifies the frequency of Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications. This Surveillance Requirement deals with verification of the operability of the containment isolation valves. In the near future, NNECO will be proposing additional changes to prepare for the conversion to 24-month fuel cycles.

The changes being proposed for Table 1.1 and Bases Section 3/4.0 do not stand-alone. They are dependent upon future proposals to change the Millstone Unit No. 3 Technical Specifications. Thus, no separate analysis for their acceptability will be given.

Description of Change

NNECO is proposing to modify Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 by extending its frequency from at least once per 18 months to at least once each refueling interval (24 months).

Additionally, this request modifies:

1) Table 1.1 of the Millstone Unit No. 3 Technical Specifications by including the term "REFUELING INTERVAL" with the "R" notation, and by changing the frequency for the "R" notation from "at least once per 18 months" to "at least once per 24 months." "REFUELING INTERVAL" will be used throughout the Millstone Unit No. 3 Technical Specifications to designate a defined term; and

2) Bases Section 3/4.0 of the Millstone Unit No. 3 Technical Specifications to include the recommendations of Generic Letter 91-04.[1]

The changes to Table 1.1 and Bases Section 3/4.0 do not stand alone. They have been submitted in advance. Future proposals will provide justification for changing each of surveillances with a frequency of 18-months.

Safety Assessment

The containment isolation system isolates piping lines which penetrate the containment boundary to minimize the release of radioactive materials to the environment from postulated design basis accidents (DBA) within the containment. The valve arrangements ensure containment integrity, assuming a single failure, by providing at least two barriers between the atmosphere outside the containment and the atmosphere within the containment, the reactor coolant system, or systems that would become connected to the containment atmosphere or the reactor coolant system as a result of, or subsequent to, a DBA.

The Millstone Unit No. 3 Technical Specifications contain requirements whose purpose is to verify the operability of the containment isolation valves. They are Surveillance Requirements 4.6.3.1, 4.6.3.2, and 4.6.3.3. The components covered by these surveillances are shown on the Millstone Unit No. 3 Final Safety Analysis Report (FSAR) Table 6.2-65.

Surveillance Requirement 4.6.3.2 requires that each containment isolation valve be demonstrated operable by verifying that each containment isolation valve actuates to its required position in response to a Phase A and B isolation test signal. Surveillance Requirement 4.6.3.2 also requires that the containment purge supply and exhaust valves actuate to their required position in response to a containment high radiation signal. Currently, these tests are required to be performed at least once per 18 months. NNECO is proposing to change this frequency to at least once each refueling interval (24 months).

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.6.3.2. This evaluation included a

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(1) J. G. Partlow letter to All Holders of Operating Licenses or Construction Permits for Nuclear Power Reactors, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle (Generic Letter 91-04)," dated April 2, 1991.

review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance.

During the last four operating cycles, six surveillances have been performed on containment isolation valves that actuate in response to a Phase A isolation signals, and five surveillances have been performed on containment isolation valves that actuate to a Phase B isolation signal. In these tests, only three failures of the valves to actuate to their design position have occurred. Valve 3SSR*CTV32 (solenoid-operated, globe valve used to isolate a 3/4" safety injection accumulator sample line) failed during the test conducted in May 1988, and valves 3RSS*MOV23A and 3RSS*MOV23B (motor-operated, butterfly valve used to isolate a 12" containment recirculation pump suction line) failed during the test conducted in October 1993 and March 1991, respectively. Given the number of tests, the reliability of the containment isolation valves is considered high.

Valve 3SSR*CTV32 is a 3/4" valve in the reactor plant sampling (SSR) system. The valves in the SSR system are often affected by boron precipitation due to small clearances. When failure occurs these valves are replaced.

The failure of valve 3RSS*MOV23A to actuate was attributed to a blown fuse on the secondary side of the control power transformer. The valve was replaced during the fourth refueling outage due to excessive seat leakage. During valve installation, the wire in the limit switch was pinched and grounded. This resulted in a fuse blowing during the valve actuation test. 3RSS*MOV23B failed to stroke completely closed during the March 1991 test. The valve was tested satisfactorily after the limit switch adjustments were performed.

Additionally, 31 operability tests of the containment purge and exhaust isolation valves have been performed. For the tests regarding the containment purge and exhaust isolation valves, four failures of the valves to close within their specified time (three seconds) have occurred. In these four cases, the valves did actuate to their required position, thus, they are not included in the total of failures discussed above. For these four cases, the valve closing time exceeded the closing time acceptance criterion by a fraction of a second. This delay in closing had no significant impact on plant safety.

Periodic preventive maintenance for the containment isolation valves is scheduled at various intervals as discussed below:

- The containment isolation valves that have a preventive maintenance scheduled each 18-month interval are motor-operated valves equipped with Limitorque operators. The periodic maintenance principally involves visual inspection of the overall valve condition, including electrical connections, limit switches, torque switches, and verification of the grease presence and its condition in the valve gear compartment, lubricating of the valve stem and limit switches, etc.

  A visual inspection of the grease condition in the valve gear case is performed to identify water, dirt, particulates, metal chips, or hardened grease globules. Because the containment purge supply and exhaust valves have a very short operation time acceptance criterion (3 seconds), lubrication of the upper and lower roller bearings is required. Grease, because of its consistency, is not likely to leak out of the gear compartment or dry out. Maintenance experience indicates that some oil separation over time can be observed due to intermittent use, but an EPRI report has concluded that these changes are cosmetic and do not affect functionality. Also, the review did not identify any instances where grease was absent from the gear compartment. Limit switch lubrication is not critical, as the limit switches are needed for position indication only.

  The review of the preventive maintenance records did not identify that any of these tasks were critical to valve performance. Also, there is no indication that the proposed extension could cause deterioration in the condition of any containment isolation valve, the condition of the lubricants, or prevent the containment isolation valves from performing their safety function. The review concluded that the frequency of the preventive maintenance procedures could be extended without adversely affecting the ability of the containment isolation valves to perform their safety-related function.

- Breaker maintenance for some of the motor-operated valves is conducted at intervals of 36 months. These can be performed with the plant on-line, because containment entry is not required.

- Other containment isolation valves have maintenance intervals longer than 18 months, e.g., multiple refueling outages or 10-year periods. These maintenance intervals would not be impacted by extending the frequency of Surveillance Requirement 4.6.3.2.

The corrective maintenance performed on the containment isolation valves has involved seat leakage, air leakage in the air operators, oil leakage in motor-operated valves, and replacement of various components, e.g., gaskets, packing, solenoid valves, and pressure regulators for air-operated valves. The review did not uncover any evidence of any generic valve problem. The feedwater isolation valves had the highest number of corrective maintenance actions. This can be explained by their complexity, relative to the other valves. The maintenance on the feedwater isolation valves mainly involve the peripheral equipment, such as the nitrogen accumulators, pressure regulators, and hydraulic systems. The corrective maintenance actions reviewed could be performed with the plant on-line.

Additional assurance of containment isolation valve operability is provided by Surveillance Requirements 4.6.3.1 and 4.6.3.3. Also, Surveillance Requirements 4.3.2.1 and 4.3.3.1 provide assurance regarding the operability of the automatic actuation logic for the containment isolation valves.

Surveillance Requirement 4.6.3.1 requires that each containment isolation valve be demonstrated operable prior to returning the valve to service after maintenance, repair, or replacement work is performed on the valve or its associated actuator, control, or power circuit. This testing assures that a containment isolation valve will be restored to an operable status following the performance of work on the containment isolation valve or its ancillaries.

Surveillance Requirement 4.6.3.3 requires that each containment isolation valve's response time be verified to be within its limit pursuant to Technical Specification 4.0.5. Technical Specification 4.0.5 provides the requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components. The inservice testing program ensure the continued availability of the containment isolation valves, by verifying the mechanical operability of the containment isolation valves. Approximately 75 percent of the containment isolation valves are tested quarterly during on-line testing.

Additionally, the automatic actuation logic for Phase A and B isolation are tested monthly (each train is required to be tested at least every 62 days on a staggered test basis) per Surveillance Requirement 4.3.2.1 of the Millstone Unit No. 3 Technical Specifications, and the containment purge supply and exhaust valves isolation logic is tested monthly (analog channel operational test) per Surveillance Requirement 4.3.3.1 of the Millstone Unit No. 3 Technical Specifications.

Based on the above, NNECO concludes that extending the frequency of Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications is reasonable, and will not significantly impact public health and safety.

Significant Hazards Consideration

NNECO has reviewed the proposed change in accordance with 10CFR50.92 and concluded that the change does not involve a significant hazards consideration. The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed change does not involve a SHC because the change would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

   The proposed change to Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications extends the frequency for verifying that each containment isolation valve actuates to its required position in response to Phase A and Phase B isolation test signals, and for verifying that each containment purge supply and exhaust isolation valve actuates to its required position in response to a containment high radiation test signal. The proposal would extend the frequency from at least once per 18 months to at least once per refueling interval (24 months).

   The proposed change to Surveillance Requirement 4.6.3.2 does not alter the intent or method by which the surveillances are conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change to the frequency of Surveillance Requirement 4.6.3.2 will not degrade the ability of the containment isolation valves to perform their safety function. Also, the containment isolation valve arrangements are not vulnerable to single failures, because they provide at least two barriers between the atmosphere outside the containment and the atmosphere within the containment, the reactor coolant system, or systems that would become connected to the containment atmosphere or the reactor coolant system as a result of, or subsequent to, a DBA.

   Additional assurance of containment isolation valve operability is provided by Surveillance Requirements 4.6.3.1 and 4.6.3.3. Surveillance Requirement 4.6.3.1 requires that a containment isolation valve will be restored to an operable status following the performance of work on the

containment isolation valve or its ancillaries. Surveillance Requirement 4.6.3.3 requires the confirmation of the mechanical operability of the containment isolation valves by the inservice inspection program. The proposed change does not modify these requirements.

Additionally, Surveillance Requirements 4.3.2.1 and 4.3.3.1 assure the operability of the automatic isolation logic (Phase A and Phase B isolation signals and containment high radiation signal) for the containment isolation valves by performing tests on a monthly basis. This proposed change does not modify these Surveillance Requirements.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.6.3.2. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance. It has been concluded that the containment isolation valves are highly reliable, and that there is no indication that the proposed extension could cause deterioration in valve condition or performance.

Based on the above, the proposed change to Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications does not involve a significant increase in the probability or consequences of an accident previously analyzed.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

The proposed change to Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications extends the frequency for verifying that each containment isolation valve actuates to its required position in response to Phase A and Phase B isolation test signals, and for verifying that each containment purge supply and exhaust isolation valve actuates to its required position in response to a containment high radiation test signal. The proposal would extend the frequency from at least once per 18 months to at least once per refueling interval (24 months).

The proposed change does not alter the intent or method by which the surveillances are conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change in the frequency of Surveillance Requirement 4.6.3.2 will not degrade the ability of the

containment isolation valves to perform their safety function. Also, the containment isolation valve arrangements are not vulnerable to single failures, because they provide at least two barriers between the atmosphere outside the containment and the atmosphere within the containment, the reactor coolant system, or systems that would become connected to the containment atmosphere or the reactor coolant system as a result of, or subsequent to, a DBA.

Based on the above, the proposed change to Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications will not create the possibility of a new or different kind of accident from any previously evaluated.

3. Involve a significant reduction in the margin of safety.

The proposed change to Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications extends the frequency for verifying that each containment isolation valve actuates to its required position in response to Phase A and Phase B isolation test signals, and for verifying that each containment purge supply and exhaust isolation valve actuates to its required position in response to a containment high radiation test signal. The proposal would extend the frequency from at least per 18 months to at least once per refueling interval (24 months).

The proposed change does not alter the intent or method by which the surveillances are conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change in the frequency of Surveillance Requirement 4.6.3.2 will not degrade the ability of the containment isolation valves to perform their safety function. Also, the containment isolation valve arrangements are not vulnerable to single failures, because they provide at least two barriers between the atmosphere outside the containment and the atmosphere within the containment, the reactor coolant system, or systems that would become connected to the containment atmosphere or the reactor coolant system as a result of, or subsequent to, a DBA.

Additional assurance of the operability of the containment isolation valves is provided by Surveillance Requirements 4.6.3.1 and 4.6.3.2. Also, assurance of the operability of the automatic actuation logic of the containment isolation

valves is provided by Surveillance Requirements 4.3.2.1 and 4.3.3.1.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.6.3.2. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance. It has been concluded that the containment isolation valves are highly reliable, and that there is no indication that the proposed extension could cause deterioration in valve condition or performance.

Based on the above, the proposed change to Surveillance Requirement 4.6.3.2 of the Millstone Unit No. 3 Technical Specifications does not involve a significant reduction in the margin of safety.

II. Safety Assessment and Significant Hazards Consideration for Changes to Containment Quench Spray System and Recirculation Spray System Surveillance Requirements

Background

Beginning with Cycle 6 (scheduled to begin in June 1995), Millstone Unit No. 3 will operate utilizing a 24-month fuel cycle. Currently, the plant is shut down for refueling. To take advantage of this longer fuel cycle, NNECO will be proposing to modify the frequency of a number of the Surveillance Requirements existing in the Millstone Unit No. 3 Technical Specifications.

This request modifies the frequency of Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d of the Millstone Unit No. 3 Technical Specifications from at least once per 18 months to at least once each refueling interval. These surveillance requirements demonstrate the operability of the quench spray system (QSS) and recirculation spray system (RSS) by verifying that each automatic valve in the QSS and RSS flow paths actuates to its correct position, each QSS pump starts automatically, and each RSS pump starts after a time delay of 660 ± 20 seconds on a containment depressurization actuation (CDA) test signal.

Table 1 provides a listing of the equipment tested by Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d.

In the near future, NNECO will be proposing additional changes to the Millstone Unit No. 3 Technical Specifications to prepare for the conversion to 24-month fuel cycles. Each of these submittals will contain submittals that are independent and which stand-alone.

Safety Assessment

Quench Spray System and Recirculation Spray System

The Millstone Unit No. 3 QSS, in conjunction with the containment recirculation system (CRS), limits the peak pressure in the containment following a design basis accident inside the containment. Heat is transferred from the containment atmosphere to the QSS and RSS (a spray subsystem of the CRS). The spray water goes to the containment sump, where the CRS transfers the heat to the service water system via its heat exchangers. Additionally, the QSS, currently in conjunction with the spray additive system, is responsible for the removal of iodine from the containment atmosphere following a design basis accident (DBA) in containment.

The QSS consists of two 360° spray headers inside the containment that are fed via two full capacity pumps and automatic valves. The suction source for the QSS pumps is the refueling water storage tank. The pumps and automatic valves in the QSS are activated by a CDA signal on high containment pressure. The QSS is capable of performing its intended safety function even with a single failure of an active component.

The CRS is comprised of two redundant subsystems. Each of these subsystems possess two 50 percent capacity coolers, two 50 percent capacity pumps, automatic isolation valves, and share two 360° spray headers. The four pumps take suction from a common containment sump, and pump water through the coolers, up the risers, to the spray headers. The two pumps in each subsystem are connected to different spray headers, but share the same emergency bus. Failure of one emergency bus will not prevent the delivery of sufficient containment recirculation flow, because only one subsystem would be lost. Each spray header is fed by two risers which take suction from one of the coolers in each of the subsystems.

The QSS and the CRS are not normally operated during reactor operation. During normal operation, the QSS and CRS are dry. The systems are isolated and the pumps are on standby.

In the event of a loss of coolant accident or high energy line break within the containment, a CDA signal causes the motor-operated isolation valves in the QSS and RSS to open automatically, the QSS pumps to start automatically, and the RSS pumps to start automatically after a time delay.

Complete tests of these systems cannot be performed while the plant is operating, because a safety injection signal would cause a reactor trip, feedwater isolation, and containment isolation. Therefore, a piecemeal approach is taken to demonstrate operability of the containment spray subsystems. Normally, the system tests are conducted during refueling outages, and select components (i.e., motor-operated valves and pumps) are tested during operation. Additionally, the actuation logic for the containment spray subsystems is checked periodically during reactor operation.

Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d of the Millstone Unit No. 3 Technical Specifications verify that each automatic valve in the QSS and RSS flow paths actuates to its correct position, that each QSS pump starts automatically, and that each RSS pumps starts after a time delay of 660 ± 20 seconds on a CDA test signal. Currently, these verifications are required to be performed at least once per 18 months during shutdown. NNECO is proposing to change the frequency of these

surveillances to at least once each refueling interval (i.e., 24 months).

In addition, the phrase "during shutdown" in Surveillance Requirements 4.6.2.1.c and 4.6.2.2.d is being deleted. Because the terms "HOT SHUTDOWN" and "COLD SHUTDOWN" are defined in the Millstone Unit No. 3 Technical Specifications as operating modes or conditions, the added restriction to perform certain surveillances may be misinterpreted. The proposed deletion of the term "during shutdown" is consistent with the recommendation of Generic Letter (GL) 91-04.

In GL 91-04, the NRC has concluded that the technical specifications need not restrict surveillances as only being performed during shutdown. However, the NRC indicated that if the performance of a refueling interval surveillance during plant operation would adversely affect safety, the licensee should postpone the surveillance until the plant is shut down for refueling or in a condition or mode consistent with safe conduct of that surveillance. NNECO agrees with the NRC in its conclusion. NNECO believes that the deletion of the words "during shutdown" has no safety impact as long as the surveillances are conducted in any mode or condition without impacting the plant safety.

Changing the frequency of Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d from at least once per 18 months during shutdown to at least once each refueling interval does not change the basis for the frequency. The frequency was chosen because of the need to perform these verifications under the conditions that apply during a plant outage, and to avoid the potential of an unplanned transient if the surveillance were conducted with the plant at power.

Surveillance Requirements 4.6.2.1.a, b, and d of the Millstone Unit No. 3 Technical Specifications provide additional assurance of the operability of the QSS. They require that each QSS subsystem be demonstrated operable: 1) by verifying at least once per 31 days that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position; 2) by verifying at least once per 31 days that the temperature of the borated water in the refueling water storage is between 40°F and 50°F; 3) by verifying that each pump develops a differential pressure of greater than or equal to 114 psid when tested pursuant to Technical Specification 4.0.5; and 4) verifying at least once per ten years that each spray header and spray nozzle is unobstructed by performing an air or smoke flow test.

Surveillance Requirements 4.6.2.2.a, b, and e provide additional assurance of the operability of the RSS. They require that each RSS subsystem be demonstrated operable: 1) by verifying at least once per 31 days that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position; 2) by verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 130 psid when tested pursuant to Technical Specification 4.0.5; and 3) verifying at least once per ten years that each spray header and spray nozzle is unobstructed by performing an air or smoke flow test.

Also, the automatic actuation logic and relays responsible for starting the QSS and RSS pumps and for actuating the QSS and RSS isolation valves (i.e., CDA signal) are required to be tested by Surveillance Requirement 4.3.2.1 of the Millstone Unit No. 3 Technical Specifications. Surveillance Requirement 4.3.2.1 requires monthly actuation logic tests and master relay tests and quarterly slave relay tests for the containment spray (i.e., CDA signal) automatic actuation logics and relays be conducted.

The QSS and CRS are designated Safety Class 2. They are required to be tested in accordance with ASME Section XI. This inservice testing provides additional assurance of the mechanical operability of the components of the QSS and CRS.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance.

The reviews determined that no significant equipment failures for the QSS have occurred in the last four cycles. The automatic valves for the QSS have actuated as required and the QSS pumps have started automatically in response to a CDA test signal.

There have been two failures of RSS motor-operated valves to actuate in response to a CDA test signal during the tests conducted for the last four cycles. 3RSS*MOV23A failed to actuate during the October 1993 test, due to an improper wiring connection. 3RSS*MOV23B failed to stroke completely closed during the March 1991 test. 3RSS*MOV23B was tested satisfactorily after limit switch adjustments were performed. Additionally, during the October 1993 test, 3RSS*MOV23C actuated but the limit switches gave an incorrect position indication.

The RSS pumps have started as required, except during the tests conducted in June 1987. During the June 1987 tests, the CDA signal was reset prior to the RSS pumps being sequenced to test.

The only preventive maintenance that is scheduled on an 18-month frequency for the QSS and RSS are lubrication of the motor-operated valves, breaker maintenance, and hypot testing of the motors and cables. Extending the frequency for lubricating of the motor-operated valves is acceptable based on the surveillance history, the low frequency of operation, and the moderate ambient environmental conditions. Extending the maintenance interval for the breakers is acceptable, because the extensions will not result in any additional wear since the breakers are normally in the open position. Extending the frequency for the hypot testing is acceptable, because experience has shown a very low failure rate in general when testing at 18-month intervals and no failures in the RSS system.

Corrective maintenance performed on the QSS motor-operated valves involved minor packing, gasket, and seat leakage, position indication adjustments, and adjustments to valve motor operator tripper fingers. Also, there have been repairs to rusty pins in the actuator linkage of motor-operated valves located outdoors. For the RSS motor-operated valves, corrective maintenance has involved seat leaks, flange leaks, and limit and torque switch adjustments.

Corrective maintenance performed on the QSS and RSS pumps during the last four cycles involved minor leaks and oil level adjustments. In each of these cases, the appropriate repair was made. Also, there was one incident of high vibration on the "B" train QSS pump in May 1989. This vibration was determined to be due to improper greasing of the motor inboard bearing. The problem was resolved and the pump was retested satisfactorily.

Based on the engineering review of equipment performance, preventive, and corrective maintenance history and the availability of quarterly inservice testing, the proposed changes are considered acceptable.

The Millstone Unit No. 3 Probabilistic Risk Assessment (PRA) models the QSS and RSS systems. The proposed changes to the surveillance frequency has no effect on the PRA availability models for the subject systems. The quarterly pump starts are credited in determining the pump failure to start probability. The quarterly valve tests are credited in determining the motor-operated valve failure to open or close probabilities. Thus, the system component failure probabilities are not affected by the proposed changes. The availability model of the engineered safety feature actuation system for CDA component actuation is

unaffected by the 24-month fuel cycle, since the constituent components (i.e., bistables, logic circuits, output relays) are tested more frequently.

Significant Hazards Consideration

NNECO has reviewed the proposed changes in accordance with 10CFR50.92 and concluded that the changes do not involve a SHC. The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed changes do not involve a SHC because the changes would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

   The proposed changes to Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d of the Millstone Unit No. 3 Technical Specifications extend the frequency for verifying that each QSS and RSS isolation valve actuates to its required position and that each QSS and RSS pump starts in response to a CDA signal. The proposal would extend the frequency from at least once per 18 months to at least once each refueling interval (24 months).

   Since the proposed changes only affect the surveillance frequency for safety systems that are used to mitigate accidents, the proposed changes cannot affect the probability of any previously analyzed accident. While the proposed changes lengthen the intervals between surveillances, the extensions have no significant impact on the reliability or availability of these safety systems and consequently, there is no impact on the consequences of any analyzed accident.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

   The proposed changes do not alter the intent or method by which the surveillances are conducted, do not involve any physical changes to the plant, do not alter the way any structure, system, or component functions, and do not modify the manner in which the plant is operated. As such, the proposed changes in the frequency of Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d will not degrade the ability of the QSS and RSS from performing their safety functions.

   Since the proposed changes to Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d of the Millstone Unit No. 3 Technical Specifications only affects surveillance

frequencies and does not alter the intent or method by which the surveillances are conducted, the proposed changes will not create the possibility of a new or different kind of accident from any previously evaluated.

3. Involve a significant reduction in the margin of safety.

Changing the frequency of Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d from at least once per 18 months during shutdown to at least once each refueling interval does not change the basis for the frequency. The frequency was chosen because of the need to perform the verifications under the conditions that apply during a plant outage, and to avoid the potential of an unplanned transient if the surveillance were conducted with the plant at power.

The proposed changes do not alter the intent or method by which the surveillances are conducted, do not involve any physical changes to the plant, do not alter the way any structure, system, or component functions, and do not modify the manner in which the plant is operated. As such, the proposed changes in the frequency of Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d will not degrade the ability of the QSS and RSS from performing their safety functions. Additional assurance of the operability of the QSS and RSS is provided by the design of the systems; they are capable of performing their intended safety functions even with a single failure of an active component.

Surveillance Requirements 4.6.2.1.a, b, and d and 4.6.2.2.a, b and e of the Millstone Unit No. 3 Technical Specifications provide additional assurance of the operability of the QSS and RSS.

The QSS and RSS are designated Safety Class 2, thus, they are required to be tested in accordance with ASME Section XI. Inservice testing provides additional assurance of the mechanical operability of the components of the QSS and RSS.

Also, the automatic actuation logic and relays responsible for starting the QSS and RSS pumps and for actuating the QSS and RSS isolation valves (i.e., CDA signal) are required to be tested by Surveillance Requirement 4.3.2.1 of the Millstone Unit No. 3 Technical Specifications.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d. This evaluation included a review of surveillance results, preventive maintenance records, and

the frequency and type of corrective maintenance. The results of the tests conducted during the last four cycles demonstrates that the pumps and motor-operated valves for the QSS and RSS are very reliable.

The Millstone Unit No. 3 PRA models the QSS and RSS systems. The proposed changes to the surveillance frequency has no effect on the PRA availability models for the subject systems. The quarterly pump starts are credited in determining the pump failure to start probability. The quarterly valve tests are credited in determining the motor-operated valve failure to open or close probabilities. Thus, the system component failure probabilities are not affected by the proposed changes. The availability model of the engineered safety feature actuation system for CDA component actuation is unaffected by the 24-month fuel cycle, since the constituent components (i.e., bistables, logic circuits, output relays) are tested more frequently.

Based on the above, the proposed changes to Surveillance Requirements 4.6.2.1.c, 4.6.2.2.c, and 4.6.2.2.d of the Millstone Unit No. 3 Technical Specifications do not involve a significant reduction in the margin of safety.

III. Safety Assessment and Significant Hazards Consideration for Changes to Flow Paths - Operating, Position Indicating System - Shutdown, Rod Drop Time, Seismic Instrumentation, and Loose-Part Detection System

Background

Beginning with Cycle 6 (scheduled to begin in June 1995), Millstone Unit No. 3 will operate utilizing a 24-month fuel cycle. Currently, the plant is shut down for a refueling outage. To take advantage of this longer fuel cycle, NNECO will be proposing to modify the frequency of a number of the surveillance requirements existing in the Millstone Unit No. 3 Technical Specifications.

This request modifies the frequency of Surveillance Requirements 4.1.2.2.c, 4.1.2.2.d, 4.1.3.3, 4.1.3.4.c, 4.3.3.3.1, and 4.3.3.8.c of the Millstone Unit No. 3 Technical Specifications. These surveillance requirements deal with the verification of the operability of digital rod position indicators, the verification of the rod drop time for full-length rods, the verification of the operability of the loose parts detection (monitoring) system (LPMS), the verification of the operability of the seismic monitoring instrumentation system and the operability of the automatic valves in the boron injection flow paths, and verification of the capability of a boric acid transfer pump and a charging pump to deliver 33 gallons per minute (gpm) through the required path to the reactor coolant system (RCS).

In the near future, NNECO will be proposing additional changes to the Millstone Unit No. 3 Technical Specifications to prepare for the conversion to 24-month fuel cycles. Each of these submittals will contain evaluations that are independent and which stand-alone.

A. Reactivity Control Systems — Flow Paths - Operating

Safety Assessment

Surveillance Requirement 4.1.2.2.c verifies the operability of each automatic valve in two boron injection flow paths and Surveillance Requirement 4.1.2.2.d verifies that the flow paths required by Technical Specification 3.1.2.2.a deliver at least 33 gpm to the RCS. These surveillances are required to be performed at least once per 18 months. NNECO is proposing to extend the frequency of Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d from at least once per 18 months to at least once each refueling interval (i.e., 24 months).

The proposed changes to Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d do not alter the intent or method by which the surveillances are conducted, do not involve any physical changes to the plant, do not alter the way any structure, system, or component functions, and do not modify the manner in which the plant is operated. As such, the proposed changes to the frequency of Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d will not degrade the ability of each automatic valve in the boron injection flow paths to ensure that the applicable flow path is available for boron injection, and will not degrade the ability of the flow paths to deliver at least 33 gpm to the RCS.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance. The components covered by these surveillances are shown on Table 2.

The review indicated that the automatic valves in the 'A' and 'B' trains actuated as required in response to the safety injection test signal in each case, except two. These two failures were attributed to "procedural deficiencies." The results of the retests, after correction of the procedural deficiencies, were deemed satisfactory.

A review of past surveillances indicated that, in each of the cases, the pumps delivered at least 33 gpm of flow to the RCS. Based on the results of a review of the preventive maintenance on these components, there is no reason to believe that increasing the preventive maintenance activities, such as lubrication and breaker maintenance, beyond the 18-month period will result in any problems. Also, no mechanical preventive maintenance associated with the components required to be tested per Surveillance Requirement 4.1.2.2.d is required on an 18-month basis.

Corrective maintenance work performed on the valves during the last four cycles involved minor packing leaks, actuation coil overheating/aging, actuator overthrust, and relay failure. In each of the cases, repairs were able to be performed with no adverse impact on plant operation. In addition, the types of failures that were observed and the number of occurrences were not indicative of a recurring problem. Surveillance Requirement 4.1.2.2.b provides additional assurance that the boron injection flow paths to the RCS will be operable.

Corrective maintenance work performed on the pumps during the last four cycles involved low oil levels, oil leaks, and breaker linkage bent. In each of the cases, repairs were able to be performed with no adverse impact on plant operation. In addition, the types of failures that were observed and the number of occurrences were not indicative of a recurring problem.

The proposed changes to the RCS boration flowpath test intervals (4.1.2.2.c and 4.1.2.2.d) will have a minor effect on the Millstone Unit No. 3 Probabilistic Risk Assessment (PRA). To quantify the effect, the fault exposure factor (FEF) of numerous component basic events were revised from six to eight to reflect the change to a 24-month fuel cycle (this assumes component demand failures are linear with surveillance interval). Additionally, the fault factors of certain common cause basic event were revised.

The revisions have the following effect on the listed functions:

- Charging Pump unavailability for Safety Injection: 7 percent increase
- Charging Pump unavailability for Sump Recirculation: 23 percent increase
- RCS Emergency Boration unavailability for ATWS: 6 percent increase

The above changes are expected to result in a core melt frequency increase of approximately 1 percent. This change is considered insignificant.

On the basis of the above evaluation, there is a reasonable assurance that the frequency of Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d can be extended from at least once per 18 months to once each refueling interval (i.e., 24 months).

Significant Hazards Consideration

NNECO has reviewed the proposed changes in accordance with 10CFR50.92 and concluded that the changes do not involve a significant hazards consideration (SHC). The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed changes do not involve an SHC because the changes would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

   The proposed changes to Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d extend the frequency for demonstrating the operability of each automatic valve in the boron injection flow paths to the RCS and the capability of the flow path required by Technical Specification 3.1.2.2.a to deliver 33 gpm to the RCS. The frequency is extended from at least once per 18 months to at least once each refueling interval (i.e., 24 months). In addition, the phrase "during shutdown" in Surveillance Requirement 4.1.2.2.c is being deleted.

   The proposed changes to Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d do not alter the intent or method by which the surveillances are conducted. In addition, the acceptance criteria for each of the surveillances are unchanged. As such, the proposed changes to the frequency of Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d will not degrade the ability of the reactivity control system to perform its function. Surveillance Requirement 4.1.2.2.b provides an additional assurance that the required flow paths will be operable.

   An evaluation of past surveillances, preventive maintenance records, and the frequency and type of corrective maintenance concluded that decreasing the surveillance frequency will have little impact on safety.

   The changes cannot affect the probability of any previously analyzed accident, since the proposed changes only affect the surveillance frequency. While the proposed changes can lengthen the intervals between surveillances, the increases in intervals have been evaluated and it is concluded that there is no significant impact on the reliability or availability of these safety systems and consequently, there is no impact on the consequences on any analyzed accident.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

   The proposed changes to Surveillance Requirements 4.1.2.2.c and 4.1.2.2.d do not change the design or operation of any plant system. The proposed changes do not alter the intent or method by which the surveillances are conducted other than increasing the interval from 18 months to 24 months (nominal). The proposed changes do not involve any physical changes to the plant, do not alter the way any structure, system, or component functions, and do not modify the manner

in which the plant is operated. The proposed changes do not introduce a new failure mode. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously analyzed.

3. Involve a significant reduction in the margin of safety.

The evaluation of past surveillances, preventive maintenance records, and the frequency and type of corrective maintenance concluded that decreasing the surveillance frequency will have little impact on safety. The other surveillance (e.g., Surveillance Requirement 4.1.2.2.b) performed on-line helps ensure the operability of the system. Since decreasing the surveillance frequency does not involve a significant increase in the consequences of a design basis accident previously analyzed, there is no reduction in the margin of safety.

B. **Position Indication System - Shutdown**

Safety Assessment

Surveillance Requirement 4.1.3.3 requires that the digital rod position indicators be determined operable by verifying that they agree with the demand position indicators within 12 steps when exercised over the full-range of rod travel at least once per 18 months. NNECO is proposing to extend the frequency of Surveillance Requirement 4.1.3.3 from at least once per 18 months to at least once each refueling interval (i.e., 24 months).

The proposed change to Surveillance Requirement 4.1.3.3 does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change to the frequency of Surveillance Requirement 4.1.3.3 will not degrade the ability of the rod position indication system to perform its function.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.1.3.3. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance. A review indicated that the results of the surveillances for the digital rod position indicators were within the acceptance criterion. Also, no

major corrective maintenance actions and no major preventive maintenance activities associated with the digital rod position indication system have been performed. However, during last operating cycle (6-19-94) a rod deviation card failure occurred and corrective maintenance was performed for this card. In this case, the type of failure that was observed and the number of occurrences (only one) was not indicative of recurring problems and had no impact on the proposed fuel extension.

The proposed change to Surveillance Requirement 4.1.3.3 does not adversely affect plant safety. Our reviews have determined that no significant equipment failures have occurred during the previous four operating cycles and the proposed change does not affect the design or operation of the digital rod position indication system.

The digital rod position indicators do not have an accident mitigation function. The PRA group has evaluated the proposed change and concludes that it has a negligible effect on plant risk.

Significant Hazards Consideration

NNECO has reviewed the proposed change in accordance with 10CFR50.92 and concluded that the change does not involve an SHC. The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed change does not involve an SHC because the change would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

   The proposed change to Surveillance Requirement 4.1.3.3 of the Millstone Unit No. 3 Technical Specifications extends the frequency for determining the operability of the digital rod position indicators. The proposal would extend the frequency from at least once per 18 months to at least once per refueling interval (24 months).

   The proposed change to Surveillance Requirement 4.1.3.3 does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change to the frequency of Surveillance Requirement 4.1.3.3 will not degrade the ability of the rod position indication system to perform its function.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.1.3.3. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance. The review indicated that the results of the surveillances for the digital rod position indicators were within the acceptance criterion. Also, no corrective maintenance actions and no preventive maintenance activities associated with the digital rod position indication system have been performed.

The proposed change to Surveillance Requirement 4.1.3.3 does not adversely affect plant safety. Our reviews have determined that no significant equipment failures have occurred during the previous four operating cycles and the proposed change does not affect the design or operation of the digital rod position indication system.

The change cannot affect the probability of any previously analyzed accident, since the proposed change only affects the surveillance frequency. While the proposed changes can lengthen the intervals between surveillances, the increases in intervals have been evaluated and it is concluded that there is no significant impact on the reliability or availability of the digital rod position indication system. Consequently, there is no impact on the consequences on any analyzed accident.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

The proposed change to Surveillance Requirement 4.1.3.3 does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the change cannot create the possibility of a new or different kind of accident from any previously evaluated.

3. Involve a significant reduction in the margin of safety.

The proposed change to the surveillance frequency is consistent with the basis for the frequency. Also, the proposed change does not change the method of performing the intent of the surveillance. Further, the current inservice testing requirements and the previous history of reliability of the system provide assurance that the change will not affect the reliability of the digital rod position

indicators. Thus, the proposed change has no impact on the margin of safety.

C. **Rod Drop Time**

Safety Assessment

Surveillance Requirement 4.1.3.4.c requires that the rod drop time for the full-length control rods be demonstrated through measurement prior to reactor criticality at least once per 18 months. NNECO is proposing to extend the frequency of Surveillance Requirement 4.1.3.4.c from at least once per 18 months to at least once each refueling interval (i.e., 24 months).

The proposed change to Surveillance Requirement 4.1.3.4.c does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change to the frequency of Surveillance Requirement 4.1.3.4.c will not degrade the ability of the control rods to perform their safety function.

Surveillance Requirements 4.1.3.4.a and 4.1.3.4.b provide additional assurance that the drop time for each of the full-length control rods is within the acceptance criterion. These surveillance requirements will not be impacted by this proposal; they will continue to require that the rod drop time for the full-length control rods be demonstrated through measurement prior to reactor criticality after removal of the reactor vessel head and following maintenance on or modification to the control rod drive system which could affect the drop time of a control rod(s).

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.1.3.4.c. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance.

The review of the surveillance results indicated that the results for each test to verify rod drop time in compliance with Surveillance Requirement 4.1.3.4.c have been within the acceptance criterion. Also, the review did not identify any corrective maintenance concerning the drop time measurements for the control rods.

The only preventive maintenance activities that are conducted on a refueling outage frequency are calibration of the rod drop computer and the remote units, and an inspection, cleaning, and check of the power sources. Extending the frequency of these activities is acceptable because of the demonstrated reliability of the systems.

The PRA group has evaluated the proposed change and concludes that it has a negligible effect on plant risk.

Significant Hazards Consideration

NNECO has reviewed the proposed change in accordance with 10CFR50.92 and concluded that the change does not involve an SHC. The basis for this conclusion is that the criteria of 10CFR50.92(c) are not compromised. The proposed change does not involve an SHC because the change would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

   The proposed change to Surveillance Requirement 4.1.3.4.c of the Millstone Unit No. 3 Technical Specifications extends the frequency for demonstrating the rod drop time for full length rods. The proposal would extend the frequency from at least once per 18 months to at least once per refueling interval (24 months).

   The proposed change to Surveillance Requirement 4.1.3.4.c does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change to the frequency of Surveillance Requirement 4.1.3.4.c will not degrade the ability of the control rods to perform their safety function.

   Surveillance Requirements 4.1.3.4.a and 4.1.3.4.b provide additional assurance that the drop time for each of the full-length control rods is within the acceptance criteria. These surveillance requirements will not be impacted by this proposal, they will continue to require that the rod drop time for the full-length control rods be demonstrated through measurement prior to reactor criticality after removal of the reactor vessel head and following maintenance on or modification to the control rod drive system which could affect the drop time of a control rod(s).

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.1.3.4.c. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance.

The review of the surveillance results indicated that each test to verify rod drop time in compliance with Surveillance Requirement 4.1.3.4.c had results within the acceptance criterion. Also, the review did not identify any corrective maintenance activities concerning the drop time measurements for the control rods.

The change cannot affect the probability of any previously analyzed accident, since the proposed change only affects the surveillance frequency. While the proposed change can lengthen the intervals between surveillances, the increases in intervals have been evaluated and we have concluded that there is no significant impact on the reliability or availability of the full-length control rods. Consequently, there is no impact on the consequences on any analyzed accident.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

The proposed change to Surveillance Requirement 4.1.3.4.c does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change cannot create the possibility of a new or different kind of accident from any previously evaluated.

3. Involve a significant reduction in the margin of safety.

The proposed change to the surveillance frequency is consistent with the basis for the frequency. The method of performing, and the intent of the surveillance is unchanged. Further, the previous history of reliability of the control rod system provides assurance that the change will not affect the reliability of the control rod system. Thus, the proposed change has no impact on the margin of safety.

D. **Seismic Instrumentation**

Safety Assessment

The seismic monitoring instrumentation system provides a mechanism by which both the amplitude (acceleration) and the frequency content of a seismic event (earthquake) can be measured and recorded for future analyses. These capabilities are utilized to compare the design basis requirements of systems, structures, and components within the amplitude and frequency content of a seismic event measured directly at Millstone Unit No. 3. This allows the determination as to whether or not design basis requirements and constraints have been exceeded. Both mechanical and electronic measuring and recording devices are utilized to accomplish these functions. The seismic monitoring instrumentation system is not a safety-related system with regard to plant operations and shutdown, but it serves to inform the plant operators of conditions which could be limiting with regard to continued plant operation following a seismic event and/or restart following a seismic event. The seismic monitoring instrumentation system is a normally passive/inactive system. The system functions automatically upon the detection of a seismic event.

Surveillance Requirement 4.3.3.3.1 requires that the seismic monitoring instrumentation system be demonstrated operable by performing a channel check once per 31 days, an analog channel operational test once per six months, and a channel calibration at least once per 18 months (i.e., identified by a notation 'R' in Table 4.3-4). NNECO is proposing to change the frequency of performance of the channel calibration to at least once each refueling interval (i.e., 24 months). This is defined in Table 1.1 of the Millstone Unit No. 3 Technical Specifications.

The proposed change to Surveillance Requirement 4.3.3.3.1 does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change to the frequency of Surveillance Requirement 4.3.3.3.1 will not degrade the ability of the seismic monitoring instrumentation system to perform its function.

Additional assurance of the operability of the seismic monitoring instrumentation system is provided by the monthly channel check and the semi-annual analog channel operational

test during power operations. The frequencies of performance for these tests are not affected by the proposed change to Surveillance Requirement 4.3.3.3.1.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.3.3.3.1. Seismic instrumentation covered under this surveillance requirement is shown in Table 2. The evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance.

A review of surveillance data indicate that in all cases, the triaxial time-history accelerographs, triaxial peak accelerographs, triaxial seismic triggers/switches and triaxial response spectrum records responded as required when tested in accordance with the appropriate surveillance procedure. There have been no significant corrective maintenance activities performed with respect to this equipment.

This is a non-safety related system that does not play an active role in accident mitigation. The PRA group has evaluated the proposed change and concludes that it has a negligible effect on plant risk.

On the basis of the above evaluation, there is a reasonable assurance that the frequency of Surveillance Requirement 4.3.3.3.1 (i.e., the channel calibration) can be extended from at least once per 18 months to once each refueling interval (i.e., 24 months).

Significant Hazards Consideration

NNECO has reviewed the proposed change in accordance with 10CFR50.92 and concluded that the change does not involve an SHC. The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed change does not involve an SHC because the change would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

   The proposed change to Surveillance Requirement 4.3.3.3.1 extends the frequency for demonstrating the operability of the seismic monitoring instrumentation system. The proposal would extend the frequency from at least once per 18 months to at least once each refueling interval (i.e., 24 months). The seismic monitoring instrumentation system is not a safety-related system with regard to plant operations, plant

transients, or shutdown. It is a passive system which functions automatically upon detection of a seismic event. It serves to inform the plant operators of conditions which could be limiting with regard to continued plant operation following a seismic event and/or restart following a seismic event. The seismic monitoring instrumentation system has no safety function nor is credited in any design basis accident analyses. Therefore, the proposed changes would not involve a significant increase in the probability or consequences of an accident previously analyzed.

The change cannot affect the probability of any previously analyzed accident, since the proposed change only affects the surveillance frequency. While the proposed change can lengthen the intervals between surveillances, the increases in intervals have been evaluated and it is concluded that there is no significant impact on the reliability or availability of the seismic monitoring instrumentation system. Consequently, there is no impact on the consequences on any analyzed accident.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

The proposed change to Surveillance Requirement 4.3.3.3.1 does not change the design or operation of any plant system. The proposed change does not alter the intent or method by which the surveillance is conducted other than increase the interval from 18 months to 24 months (nominal). The proposed change does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. In addition, the seismic monitoring instrumentation system is not a safety-related system. The failure of this system has no impact on any other safety-related system. The proposed change does not introduce any new failure modes.

3. Involve a significant reduction in the margin of safety.

The evaluation of past surveillances, preventive maintenance records, and the frequency and type of corrective maintenance concluded that decreasing the surveillance frequency will have little impact on safety. The other surveillances (monthly channel checks and semi-annual analog channel operational tests) performed on line help ensure the operability of the system. Moreover, the seismic monitoring instrumentation system is not a safety system and is a passive system which is not credited in any design basis

accident analyses. Therefore, there is no reduction in the margin of safety.

E. **Loose-Part Detection System**

Safety Assessment

The Millstone Unit No. 3 loose-part detection (monitoring) system (LPMS) monitors the RCS for the presence of metallic loose parts. While the LPMS is not a safety-related system, it does provide information to the operators regarding conditions which could impact plant operations and which could lead to a reactor shutdown or reactor trip.

The LPMS is an impact monitoring system which functions by detecting the accelerations caused by the impact of foreign objects (vibrations) on the reactor vessel internal structure or on associated piping. The location of the sensor, the amplitude of the sensor output signal when the impact of a foreign object is detected and the zero crossing frequency of the signal all provide information as to the nature of the foreign object and its probable location on impact. This information facilitates an analysis of the potential consequences of the presence of a foreign object in the reactor pressure vessel, steam generators, and the associated piping, and it assists in the determination of a course of action should the presence of a foreign object be detected or suspected. The LPMS is not a safety-related system and is not credited in any design basis accident analysis.

Surveillance Requirement 4.3.3.8 of the Millstone Unit No. 3 Technical Specifications contains three requirements for demonstrating the operability of the LPMS. They are a channel check at least once per 24 hours, an analog channel operational test at least once per 31 days, and a channel calibration at least once per 18 months. NNECO is proposing to change the frequency of performance for the channel calibration to at least once each refueling interval (i.e., 24 months).

The proposed change to Surveillance Requirement 4.3.3.8.c does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the

proposed change to the frequency of Surveillance Requirement 4.3.3.8.c will not degrade the ability of the LPMS to perform its function.

Additional assurance of the operability of the LPMS is provided by the daily channel check and monthly analog channel operational test which are conducted during power operations. The frequencies of performance for these tests are not affected by the proposed change to Surveillance Requirement 4.3.3.8.c.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.3.3.8.c. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance.

The calibration and operability of each channel of the LPMS is verified by ensuring that the sensor channels are within the limits established by the applicable surveillance procedure with regard to the maximum peak signal and zero crossing frequency. An evaluation of the past surveillance results did not indicate any evidence of differences in the data which could be attributed to instrument drift nor were there any indication of drift related surveillance test failures.

Besides from the surveillance testing required by the Millstone Unit No. 3 Technical Specifications, there are no regularly scheduled maintenance or calibration activities associated with the maximum peak signal and the zero crossing frequency. Cleaning and inspecting the LPMS panel are the only regularly scheduled preventive maintenance activities for the LPMS which is conducted on a refueling outage interval. Extending the frequency for this activity is acceptable.

A review of historical corrective maintenance activities indicates that some failures occurred, none of which were attributed to the instrument drift. These failures were related to amplifiers, alarms and actuation functions and due to cable/wiring degradation. These failures resulted in a channel to be inoperable for a long duration. However, due to redundancy, the LPMS was in operation with the other channel available to detect a loose part in the primary loop (i.e., the reactor vessel, steam generators).

The existing LPMS is scheduled to be replaced during the next refueling outage. The replacement system will be

provided by the equipment manufacturer who supplied the currently installed system. The replacement system is an upgraded, state of the art, impact monitoring system, similar in operation to the currently installed system. Based on the maintenance history associated with the existing LPMS, there is no reason to conclude that the replacement system would not be as reliable as the currently installed system.

This is a non-safety related system that does not play an active role in accident mitigation. The PRA group has evaluated the proposed change and concludes that it has a negligible effect on plant risk.

Significant Hazards Consideration

NNECO has reviewed the proposed change in accordance with 10CFR50.92 and concluded that the change does not involve an SHC. The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed change does not involve an SHC because the change would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

   The proposed change to Surveillance Requirement 4.3.3.8.c of the Millstone Unit No. 3 Technical Specifications extends the frequency for verifying the operability of the LPMS via a channel calibration. The proposal would extend the frequency from at least once per 18 months to at least once per refueling interval (24 months).

   The proposed change does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the proposed change to the frequency of Surveillance Requirement 4.3.3.8.c will not degrade the ability of the LPMS to perform its function. The function of the LPMS is to provide information to the operators regarding conditions which could impact plant operations and which could lead to a reactor shutdown or reactor trip. While this function is important, the LPMS is not a safety-related system (it is not considered in any design basis accident analysis).

   Surveillance Requirements 4.3.3.8.a. and 4.3.3.8.b of the Millstone Unit No. 3 Technical Specifications require the performance of daily channel checks and monthly analog channel operational tests to verify the operability of the

LPMS. The frequencies of these surveillances are not affected by the proposed change to Surveillance Requirement 4.3.3.8.c. These surveillances provide assurance of the operability of the LPMS during power operations.

Equipment performance over the last four operating cycles was evaluated to determine the impact of extending the frequency of Surveillance Requirement 4.3.3.8.c. This evaluation included a review of surveillance results, preventive maintenance records, and the frequency and type of corrective maintenance. The evaluation did not discover any evidence of any drift-related errors associated with the surveillance procedure. Also, the review of the historical corrective maintenance activities did not identify any significant maintenance activities. It concluded that extending the frequency for Surveillance Requirement 4.3.3.8.c would have an insignificant impact on safety, because no correlation between the surveillance interval and the results of the surveillance testing existed.

The change cannot affect the probability of any previously analyzed accident, since the proposed changes only affects the surveillance frequency. While the proposed change can lengthen the intervals between surveillances, the increases in intervals have been evaluated and it is concluded that there is no significant impact on the reliability or availability of the LPMS. Consequently, there is no impact on the consequences on any analyzed accident.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

The proposed change does not alter the intent or method by which the surveillance is conducted, does not involve any physical changes to the plant, does not alter the way any structure, system, or component functions, and does not modify the manner in which the plant is operated. As such, the change cannot create the possibility of a new or different kind of accident from any previously analyzed. The function of the LPMS is to provide information to the operators regarding conditions which could impact plant operations and which could lead to a reactor shutdown or reactor trip. While this function is important, the LPMS is not a safety-related system (it is not considered in any design basis accident analysis).

3. Involve a significant reduction in the margin of safety.

The proposed change to the surveillance frequency is consistent with the basis for the frequency. Additionally,

the method of performing the surveillance is unchanged. Further, the previous history of reliability of the LPMs provide assurance that the change will not affect the reliability of the LPMS. Thus, the proposed change has no impact on the margin of safety.

TABLE 1

Equipment Tested by Surveillance Requirement 4.6.2.1.c(1) and (2)

EQUIPMENT	DESCRIPTION
3QSS*P3A	Train 'A' Quench Spray Pump
3QSS*MOV34A	Train 'A' Header Isolation Valve
3QSS*AOV27	Train 'A' RWST Recirc Line Isolation Valve
3QSS*P3B	Train 'B' Quench Spray Pump
3QSS*MOV34B	Train 'B' Header Isolation Valve
3QSS*AOV28	Train 'B' RWST Recirc Line Isolation Valve

Equipment Test by Surveillance Requirement 4.6.2.2.c.

EQUIPMENT	DESCRIPTION
3RSS*P1A	'A' Recirculation Spray Pump
3RSS*P1B	'B' Recirculation Spray Pump
3RSS*P1C	'C' Recirculation Spray Pump
3RSS*P1D	'D' Recirculation Spray Pump

Equipment Tested by Surveillance Requirement 4.6.2.2.d.

EQUIPMENT	DESCRIPTION
3RSS*MOV23A	'A' Recirculation Spray Pump Suction Isolation Valve
3RSS*MOV23B	'B' Recirculation Spray Pump Suction Isolation Valve
3RSS*MOV23C	'C' Recirculation Spray Pump Suction Isolation Valve
3RSS*MOV23D	'D' Recirculation Spray Pump Suction Isolation Valve
3RSS*MOV20A	'A' Recirculation Spray Pump Containment Isolation Valve
3RSS*MOV20B	'B' Recirculation Spray Pump Containment Isolation Valve
3RSS*MOV20C	'C' Recirculation Spray Pump Containment Isolation Valve
3RSS*MOV20D	'D' Recirculation Spray Pump Containment Isolation Valve

TABLE 2

Equipment Tested by
Surveillance Requirement 4.1.2.2.c

EQUIPMENT	DESCRIPTION
3CHS*LCV112B	Train 'A' VCT Outlet Isolation
3CHS*LCV112D	Train 'A' RWST to Charging Pump Suction
3CHS*P3A	Train 'A' Charging Pump
3CHS*P3C	Train 'A/B' Charging Pump
3CHS*MV8511A	Train 'A' Charging Pump Mini Flow Isolation
3CHS*MV8110	Train 'A' Charging Pump Mini Flow Isolation
3CHS*MV8112	Train 'A' RCP Seal Water Isolation
3CHS*MV8105	Train 'A' Charging Pump to RCS
3CHS*CV8160	Train 'A' Letdown Isolation
3CHS*LCV112C	Train 'B' VCT Outlet Isolation
3CHS*LCV112E	Train 'B' RWST to Charging Pump Suction
3CHS*P3B	Train 'B' Charging Pump
3CHS*MV8511B	Train 'GB' Charging Pump Mini Flow Isolation
3CHS*MV8111C	Train 'A/B' Charging Pump 'C' Recirculation
3CHS*MV8111A	Train 'A' Charging Pump 'A' Recirculation
3CHS*MV8111B	Train 'B' Charging Pump 'B' Recirculation
3CHS*MV8100	Train 'B' RCP Seal Water Isolation
3CHS*MV8106	Train 'B' Charging Pump to RCS
3CHS*CV8152	Train 'B' Letdown Isolation

Equipment Tested by
Surveillance Requirement 4.1.2.2.d

EQUIPMENT	DESCRIPTION
3CHS*P2A	Train 'A' Boric Acid Transfer Pump
3CHS*P2B	Train 'B' Boric Acid Transfer Pump

TABLE 2

Equipment Tested by
Surveillance Requirements 4.1.3.3 and 4.1.3.4

EQUIPMENT	DESCRIPTION
A7, B4, B6, B8, B10, B12, C5, C7, C9, C11, D2, D4, D8, D12, D14, E3, E5, E11, E13, F2, F6, F8, F10, F14, G3, G13, G15, H2, H4, H6, H8, H10, H12, H14, J1, J3, J13, K2, K6, K8, K10, K14, L3, L5, L11, L13, M2, M4, M8, M12, M14, N5, N7, N9, N11, P4, P6, P8, P10, P12, R9	Shutdown and Control Rods Arranged in 5 Shutdown Banks and 4 Control Banks with a Total of 61 Rods

Equipment Tested by
Surveillance Requirement 4.3.3.3.1

EQUIPMENT	DESCRIPTION
NBE20A, NBE20B, NBE21 & NBE22	Triaxial Time-History Accelerograph
PA/1, PA2 7 PA/3	Triaxial Peak Accelerograph
—	Triaxial Seismic Trigger — Control Room
—	Triaxial Seismic Switch — Control Room
RSA-50 SPECTRUM ANALYZER	Triaxial Response-Spectrum Recorder
Self-Contained Recorder SG Support (51'4")	Triaxial Response-Spectrum Recorder

TABLE 2

Equipment Tested by
Surveillance Requirement 4.3.3.8.c

EQUIPMENT	DESCRIPTION
3CES-PNLLPM	Loose Parts Monitoring Panel
Channel 1	Lower Reactor Vessel
Channel 2	Lower Reactor Vessel
Channel 3	Upper Reactor Vessel
Channel 4	Upper Reactor Vessel
Channel 5	Steam Generator "A"
Channel 6	Steam Generator "B"
Channel 7	Steam Generator "C"
Channel 8	Steam Generator "D"
Channel 9	Steam Generator "A"
Channel 10	Steam Generator "B"
Channel 11	Steam Generator "C"
Channel 12	Steam Generator "D"