TABLE 1

LIST OF THE 18-MONTH SURVEILLANCES THAT
REQUIRE A ONE-TIME EXTENSION TO SEPTEMBER 30, 1993

NO.	SURVEILLANCE SECTION	TYPE OF SURVEILLANCE	18-MONTH PLUS +25% ALLOWANCE EXPIRES ON
1	Section 4.2.3.1.4 (RCS Total Flow Rate)	Channel Calibration	June 13, 1993
2	Section 4.2.3.2.4 (RCS Total Flow Rate)	Channel Calibration	June 13, 1993
3	Table 4.3-1 Function Unit 1: Manual Reactor Trip	Trip Actuating Device Operational Test (TADOT)	June 25, 1993
4	Table 4.3-1 Functional Unit 2: Power Range, Neutron Flux, a) High Set Point, b) Low Set Point	Channel Calibration	August 21, 1993
5	Table 4.3-1 Functional Unit 3: Power Range, Neutron Flux, High Positive Rate	Channel Calibration	August 21, 1993
6	Table 4.3-1 Functional Unit 4: Power Range, Neutron Flux, High Negative Rate	Channel Calibration	August 21, 1993
7	Table 4.3-1 Functional Unit 9: Pressurizer Pressure-Low	Channel Calibration	July 3, 1993
8	Table 4.3-1 Functional Unit 10: Pressurizer Pressure-High	Channel Calibration	July 3, 1993

NO.	SURVEILLANCE SECTION	TYPE OF SURVEILLANCE	18-MONTH PLUS +25% ALLOWANCE EXPIRES ON
9	Table 4.3-1 Functional Unit 11: Pressurizer Water Level-High	Channel Calibration	June 30, 1993
10	Table 4.3-1 Functional Unit 12: Reactor Coolant Flow-Low	Channel Calibration	June 30, 1993
11	Table 4.3-1 Functional Unit 13: Steam Generator Water Level-Low-Low	Channel Calibration	June 28, 1993
12	Table 4.3-1 Functional Units 17.a, 17.c, 17.d, 17.e: Reactor Trip System Interlocks	Channel Calibration	August 21, 1993
13	Table 4.3-1 Functional Unit 20: Three Loop Operation Bypass Circuitry	TADOT	June 25, 1993
14	Section 4.3.1.2 RTS Channel "B"	Response Time Testing	July 24, 1993
15	Table 4.3-2 Functional Unit 1.a: Safety Injection-Manual Initiation	TADOT	June 25, 1993
16	Table 4.3-2 Functional Unit 1.d: Safety Injection-Pressurizer Pressure-Low	Channel Calibration	July 3, 1993
17	Table 4.3-2 Functional Unit 1.e: Safety Injection-Steam Line Pressure-Low	Channel Calibration	July 26, 1993

NO.	SURVEILLANCE SECTION	TYPE OF SURVEILLANCE	18-MONTH PLUS +25% ALLOWANCE EXPIRES ON
18	Table 4.3-2 Functional Unit 2.a: Containment Spray-Manual Initiation	TADOT	June 25, 1993
19	Functional Unit 3.a.1, 3.b.1: Containment Isolation-Phase "A" and "B" Isolation Manual Initiation	TADOT	June 25, 1993
20	Table 4.3-2 Functional 3.a.3: Containment Isolation-Safety Injection See items 15, 16, 17 of this table	See items 15, 16, 17 of this table	June 25, 1993
21	Table 4.3-2 Functional Unit 4.a: Steam Line Isolation Manual Initiation-System	TADOT	June 25, 1993
22	Table 4.3-2 Functional Unit 4.d: Steam Line Isolation-Steam Line Pressure-Low	Channel Calibration	July 26, 1993
23	Table 4.3-2 Functional Unit 4.e: Steam Line Isolation Steam Line Pressure-Negative Rate-High	Channel Calibration	July 26, 1993
24	Table 4.3-2 Functional Unit 5.b: Turbine Trip and Feedwater Isolation-Steam Generator Water Level-High-High	Channel Calibration	June 28, 1993

NO.	SURVEILLANCE SECTION	TYPE OF SURVEILLANCE	18-MONTH PLUS +25% ALLOWANCE EXPIRES ON
25	Table 4.3-2 Functional Unit 5.c: Turbine Trip and Feedwater Isolation-Safety Injection Actuation Logic	TADOT	June 25, 1993
26	Table 4.3-2 Functional Unit 6.c: Auxiliary Feedwater-Steam Generator Water Level-Low-Low	Channel Calibration	June 28, 1993
27	Table 4.3-2 Functional Units 7.a and 7.b: Control Building Isolation	TADOT	June 25, 1993
28	Table 4.3-2 Functional Unit 9.a: ESFAS Interlocks-Pressurizer Pressure, P-11	Channel Calibration	July 3, 1993
29	Table 4.3-2 Functional Unit 9.c: ESFAS Interlocks Reactor Trip, P-4	TADOT	June 25, 1993
30	Section 4.3.2.2 ESFAS Channel "B"	Time Response Testing	July 24, 1993
31	Table 4.3-3 Functional Unit 1.a: Containment Area Purge and Exhaust Isolation	Channel Calibration	June 27, 1993
32	Table 4.3-4 All Functional Units listed in the table	Channel Calibration	July 9, 1993

NO.	SURVEILLANCE SECTION	TYPE OF SURVEILLANCE	18-MONTH PLUS +25% ALLOWANCE EXPIRES ON
33	Table 4.3-6 Remote Shutdown Monitoring Instrumentation-Instruments		
	2. Pressurizer Pressure	Channel Calibration	July 3, 1993
	3. Pressurizer Level	Channel Calibration	June 30, 1993
	4. Steam Generator Pressure	Channel Calibration	July 26, 1993
	5. Steam Generator Water Level	Channel Calibration	June 28, 1993
	6. Auxiliary Feedwater Flow Rate	Channel Calibration	June 27, 1993
	9. Reactor Coolant System Pressure (Wide Range)	Channel Calibration	September 3, 1993
34	Section 4.3.3.5.2: Transfer Switch, Power and Control Circuits	Operability	June 28, 1993
35	Table 4.3-7 Accident Monitoring Instrumentation-Instruments		
	4. Reactor Coolant Pressure-Wide Range	Channel Calibration	September 3, 1993
	5. Pressurizer Water Level	Channel Calibration	June 30, 1993
	6. Steam Line Pressure	Channel Calibration	July 26, 1993
	7. Steam Generator Water Level-Narrow Range	Channel Calibration	June 28, 1993

NO.	SURVEILLANCE SECTION	TYPE OF SURVEILLANCE	18-MONTH PLUS +25% ALLOWANCE EXPIRES ON
	8. Steam Generator Water Level-Wide Range	Channel Calibration	July 9, 1993
	11. Auxiliary Feedwater Flow Rate	Channel Calibration	June 27, 1993
	12. Reactor Coolant System-Subcooling Margin Monitor	Channel Calibration	August 30, 1993
	13. Containment Water Level-Wide Range	Channel Calibration	July 3, 1993
	14. Core Exit Thermocouples	Channel Calibration	August 30, 1993
	16. Containment Area-High Range Radiation Monitor	Channel Calibration	July 4, 1993
36	Section 4.3.3.8.c: Loose-Part-Detection System	Channel Calibration	August 21, 1993
37	Section 4.4.6.1.b: Containment Drain Sump Level and Pumped Capacity Monitoring System	Channel Calibration	June 25, 1993
38	Section 4.4.9.3.1.b: PORV Actuation Channel	Channel Calibration	September 3, 1993
39	Section 4.4.11.2: RCS Vent System	Valve Operability, System Line Up	September 23, 1993
40	Section 4.5.2.d.1: RHR Permissive Interlock	Verify Automatic Interlock Action	September 3, 1993
41	Section 4.8.1.1.2.g.12: Automatic Load Sequence Timer	Operability	September 10, 1993

NO.	SURVEILLANCE SECTION	TYPE OF SURVEILLANCE	18-MONTH PLUS +25% ALLOWANCE EXPIRES ON
42	Sections 4.8.2.1.c, 4.8.2.1.d, 4.8.2.1.e, 4.8.2.1.f	Battery and Battery Charger Operability Test	June 18, 1993
43	Section 4.8.4.1: Containment Penetration Overcurrent Protection Device	Operability	July 12, 1993

TABLE 2

	FUNCTIONAL UNIT	BASIS FOR CONCLUSION
1.	Reactor Trip System Interlock P-6 (RTS Unit 17a)	Function is not risk significant
2.	Reactor Trip System Interlock P-10 (RTS Unit 17e)	Function is not risk significant
3.	Reactor Trip System Interlock P-9 (RTS Unit 17d)	Δ CMF is of the order of 10^{-8}/yr or less
4.	Reactor Trip System Interlock P-8 (RTS Unit 17c)	Δ CMF is less than 10^{-8}/yr
5.	ESFAS Interlock P-11 (ESFAS Unit 9a)	a. Function is not risk significant b. Low probability of operator error
6.	ESFAS Interlock P-4 (ESFAS Unit 9c)	Δ CMF is of the order of 10^{-7}/yr or less
7.	Manual Reactor Trip (RTS Unit 1)	Diversity/Redundancy
8.	Steamline Isolation (ESFAS Unit 4.a.2)	Diversity/Redundancy
9.	Safety Injection Manual Initiation (ESFAS Unit 1.a)	Diversity/Redundancy
10.	Containment Spray, Manual Initiation (ESFAS Unit 2.a)	a. Diversity/Redundancy b. Function relatively low risk significance
11.	Containment Isolation (ESFAS Unit 3.a.1)	a. Diversity/Redundancy b. Function relatively low risk significance
12.	Containment Isolation (ESFAS Unit 3.a.3)	a. Diversity/Redundancy b. Function relatively low risk significance

FUNCTIONAL UNIT	BASIS FOR CONCLUSION
13. Containment Area Purge Isolation (RMS Unit 1.a)	a. Function relatively low risk significance b. Diversity/Redundancy
14. Control Building Isolation (ESFAS Units 7a, 7b)	Diversity/Redundancy
15. Turbine Trip and FW Isolation (ESFAS Unit 5c)	Diversity/Redundancy

Docket No. 50-423
B14409

ATTACHMENT 1

MILLSTONE NUCLEAR POWER STATION UNIT NO. 3
PROPOSED REVISION TO TECHNICAL SPECIFICATIONS
VARIOUS 18-MONTH SURVEILLANCES
MARKED-UP PAGES OF TECHNICAL SPECIFICATIONS

MARCH 1993

Proposed Changes to the Millstone Unit No. 3
Technical Specifications

Technical Specification Section	Pages and Amendment Number
4.2.3.1.4	3/4 2-20, Amendment #60
4.2.3.2.4	3/4 2-23, Amendment #60
3/4.3.1	3/4 3-1, Amendment #45
Table 4.3-1	3/4 3-10, 11, 14, Amendment #70
Table 4.3-1	3/4 3-12, Amendment #60
3/4.3.2	3/4 3-16, Amendment #45
Table 4.3-2	3/4 3-36, 37, 38, 39, 40, Amendment #70
Table 4.3-2	3/4 3-41, Amendment #74
Table 4.3-3	3/4 4-45, Amendment #65
Table 4.3-4	3/4 3-49, January 1986
Table 4.3.3.5.2	3/4 3-53 , Amendment #57
Table 4.3-6	3/4 3-58, Amendment #56
Table 4.3-7	3/4 3-62, Amendment #46
Table 4.3-7	3/4 3-63, Amendment #76
4.3.3.8	3/4 3-68, Amendment #57
4.4.6.1.b	3/4 4-21, Amendment #17
4.4.9.3.1	3/4 4-39, January 1986
4.4.11.2	3/4 4-43, January 1986
4.5.2.d.1	3/4 5-4, Amendment #60
4.8.1.1.2.g.12	3/4 8-7, Amendment #64
4.8.2.1.c, d, e, & f	3/4 8-12, Amendment #64
4.8.4.1.a	3/4 8-19, Amendment #64

POWER DISTRIBUTION LIMITS

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

b. Within 24 hours of initially being outside the above limits, verify through incore flux mapping and RCS total flow rate that $F^N_{\Delta H}$ and RCS total flow rate are restored to within the above limits, or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

c. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced THERMAL POWER limit required by ACTION a.2. and/or b., above; subsequent POWER OPERATION may proceed provided that $F^N_{\Delta H}$ and indicated RCS total flow rate are demonstrated, through incore flux mapping and RCS total flow rate comparison, to be within the region of acceptable operation prior to exceeding the following THERMAL POWER levels:

1. A nominal 50% of RATED THERMAL POWER,

2. A nominal 75% of RATED THERMAL POWER, and

3. Within 24 hours of attaining greater than or equal to 95% of RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.2.3.1.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.1.2 RCS total flow rate and $F^N_{\Delta H}$ shall be determined to be within the acceptable range:

a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading, and

b. At least once per 31 Effective Full Power Days.

4.2.3.1.3 The indicated RCS total flow rate shall be verified to be within the acceptable range at least once per 12 hours when the most recently obtained value of $F^N_{\Delta H}$, obtained per Specification 4.2.3.1.2, is assumed to exist.

4.2.3.1.4 The RCS total flow rate indicators shall be subjected to a CHANNEL CALIBRATION at least once per 18 months*. The measurement instrumentation shall be calibrated within 7 days prior to the performance of the calorimetric flow measurement.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

POWER DISTRIBUTION LIMITS

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

b. Within 24 hours of initially being outside the above limits, verify through incore flux mapping and RCS total flow rate that $F^N_{\Delta H}$ and RCS total flow rate are restored to within the above limits, or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

c. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced THERMAL POWER limit required by ACTION a.2. and/or b., above; subsequent POWER OPERATION may proceed provided that $F^N_{\Delta H}$ and indicated RCS total flow rate are demonstrated, through incore flux mapping and RCS total flow rate comparison, to be within the region of acceptable operation prior to exceeding the following THERMAL POWER levels:

1. A nominal 32% of RATED THERMAL POWER, and

2. A nominal 50% of RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.2.3.2.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2.2 RCS total flow rate and $F^N_{\Delta H}$ shall be determined to be within the acceptable range at least once per 31 Effective Full Power Days.

4.2.3.2.3 The indicated RCS total flow rate shall be verified to be within the acceptable range at least once per 12 hours when the most recently obtained value of $F^N_{\Delta H}$, obtained per Specification 4.2.3.2.2, is assumed to exist.

4.2.3.2.4 The RCS total flow rate indicators shall be subjected to a CHANNEL CALIBRATION at least once per 18 months.* The measurement instrumentation shall be calibrated within 7 days prior to the performance of the calorimetric flow measurement.

4.2.3.2.5 The RCS total flow rate shall be determined by precision heat balance measurement at least once per 18 months. Within 7 days prior to performing the precision heat balance, the instrumentation used for determination of steam pressure, feedwater pressure, feedwater temperature, and feedwater venturi ΔP in the calorimetric calculations shall be calibrated.

4.2.3.2.6 If the feedwater venturis are not inspected at least once per 18 months, an additional 0.1% will be added to the total RCS flow measurement uncertainty.

* → INSERT 'A'

Millstone Unit NO. 3 Technical Specification

INSERT A' To page 3/4 2-23

Except that the surveillance requirement due no later than June 13, 1993 may be deferred until the next refueling outage, but no later than September 30, 1993.

February 2, 1990

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the Reactor Trip System instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE with RESPONSE TIMES as shown in Table 3.3-2.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each Reactor Trip System instrumentation channel and interlock and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

4.3.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each Reactor trip function shall be demonstrated to be within its limit at least once per 18 months.* Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel (to include input relays to both trains) per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific Reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier

C120

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	N.A.	R(14), 20	N.A.	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux						
a. High Setpoint	S	D(2, 4), M(3, 4), Q(4, 6), R(4, 5), 20	Q	N.A.	N.A.	1, 2
b. Low Setpoint	S	R(4), 20	S/U(1)	N.A.	N.A.	1***, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4), 20	Q	N.A.	N.A.	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4), 20	Q	N.A.	N.A.	1, 2
5. Intermediate Range	S	R(4, 5)	S/U(1)	N.A.	N.A.	1***, 2
6. Source Range, Neutron Flux	S	R(4, 5)	S/U(1), Q(9)	N.A.	N.A.	2**, 3, 4, 5
7. Overtemperature ΔT	S	R	Q	N.A.	N.A.	1, 2
8. Overpower ΔT	S	R	Q	N.A.	N.A.	1, 2
9. Pressurizer Pressure--Low	S	R (20)	Q(18)	N.A.	N.A.	1
10. Pressurizer Pressure--High	S	R (20)	Q(18)	N.A.	N.A.	1, 2
11. Pressurizer Water Level--High	S	R (20)	Q	N.A.	N.A.	1
12. Reactor Coolant Flow--Low	S	R (20)	Q	N.A.	N.A.	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	MODES FOR WHICH ACTUATION LOGIC TEST	SURVEILLANCE IS REQUIRED
13. Steam Generator Water Level--Low-Low	S	R (20)	Q(18)	N.A.	N.A.	1, 2
14. Low Shaft Speed - Reactor Coolant Pumps	N.A.	R(13)	Q	N.A.	N.A.	1
15. Turbine Trip						
a. Low Fluid Oil Pressure	N.A.	R	N.A.	S/U(1, 10)****	N.A.	1
b. Turbine Stop Valve Closure	N.A.	R	N.A.	S/U(1, 10)****	N.A.	1
16. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R	N.A.	1, 2
17. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	N.A.	R(4), 20	R	N.A.	N.A.	2**
b. Low Power Reactor Trips Block, P-7	N.A.	R(4)	R	N.A.	N.A.	1
c. Power Range Neutron Flux, P-8	N.A.	R(4), 20	R	N.A.	N.A.	1
d. Power Range Neutron Flux, P-9	N.A.	R(4), 20	R	N.A.	N.A.	1
e. Power Range Neutron Flux, P-10	N.A.	R(4), 20	R	N.A.	N.A.	1, 2
f. Turbine Impulse Chamber Pressure, P-13	N.A.	R	R	N.A.	N.A.	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	MODES FOR WHICH ACTUATION LOGIC TEST	SURVEILLANCE IS REQUIRED
18. Reactor Trip Breaker	N.A.	N.A.	N.A.	M(7, 11)	N.A.	1, 2, 3*, 4*, 5*
19. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	M(7)	1, 2, 3*, 4*, 5*
20. Three Loop Operation Bypass Circuitry	N.A.	N.A.	N.A.	R (20)	N.A.	1, 2
21. Reactor Trip Bypass Breakers	N.A.	N.A.	N.A.	M(15) R(16)	N.A.	1, 2, 3*, 4*, 5*
22. Shutdown Margin Monitor	N.A.	N.A.	Q(19)	N.A.	N.A.	3, 4, 5

TABLE 4.3-1 (Continued)

TABLE NOTATIONS (Continued)

(10) Setpoint verification is not applicable.

(11) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.

(12) (not used)

(13) Reactor Coolant Pump Shaft Speed Sensor may be excluded from CHANNEL CALIBRATION.

(14) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).

(15) Local manual shunt trip prior to placing breaker in service.

(16) Automatic undervoltage trip.

(17) (not used).

(18) The surveillance frequency and/or MODES specified for these channels in Table 4.3-2 should be reviewed for applicability.

(19) Quarterly surveillance shall include verification that the Shutdown Margin Monitor is set per the CORE OPERATING LIMITS REPORT (COLR).

(20) Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel and interlock and the automatic actuation logic and relays shall be demonstrated OPERABLE by performance of the ESFAS Instrumentation Surveillance Requirements specified in Table 4.3-2.

4.3.2.2 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months.* Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel (to include input relays to both trains) per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" column of Table 3.3-3.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Safety Injection (Reactor Trip, Feedwater Isolation, Control Building Isolation (Manual Initiation Only), Start Diesel Generators, and Service Water)								
a. Manual Initiation	N.A.	N.A.	N.A.	R (4)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-1	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Pressurizer Pressure-Low	S	R (4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Low	S	R (4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2. Containment Spray								
a. Manual Initiation	N.A.	N.A.	N.A.	R (4)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation								
a. Phase "A" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R (4)	N.A.	N.A.	N.A	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements. (4)							
b. Phase "B" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R (4)	N.A.	N.A.	N.A	1, 2, 3, 4
2) Automatic Actuation Logic Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Containment Pressure-High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
4. Steam Line Isolation								
a. Manual Initiation								
1) Individual	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
2) System	N.A.	N.A.	N.A.	R (4)	N.A.	N.A.	N.A.	1, 2, 3, 4

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. Steam Line Isolation (Continued)								
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-2	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
d. Steam Line Pressure-Low	S	R(4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Negative Rate-High	S	R(4)	Q	N.A.	N.A.	N.A.	N.A.	3
5. Turbine Trip and Feedwater Isolation								
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2
b. Steam Generator Water Level-High-High	S	R(4)	Q	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Safety Injection Actuation Logic	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2
d. T_{ave} Low Coincident with Reactor Trip (P-4)	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
6. Auxiliary Feedwater								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation and Actuation Relays	N.A.	N.A	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Steam Generator Water Level-Low-Low	S	R(4)	Q	N.A.	N.A.	N.A	N.A	1, 2, 3
d. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
e. Loss-of-Offsite Power	See Item 8 below for all Loss of Power Surveillance.							
f. Containment Depressurization Actuation (CDA)	See Item 2. above for all CDA Surveillance Requirements.							
7. Control Building Isolation								
a. Manual Actuation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	All
b. Manual Safety Injection Actuation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2, 3, 4
c. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
d. Containment Pressure-- High-1	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
7. Control Building Isolation (Continued)								
e. Control Building Inlet Ventilation Radiation	S	R	Q	N.A.	N.A.	N.A.	N.A.	All
8. Loss of Power								
a. 4 kV Bus Undervoltage (Loss of Voltage)	N.A.	R	N.A	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. 4 kV Bus Undervoltage (Grid Degraded Voltage)	N.A.	R	N.A.	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
9. Engineered Safety Features Actuation System Interlocks								
a. Pressurizer Pressure, P-11	N.A.	R (4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
b. Low-Low T_{avg}, P-12	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	N.A.	R (4)	N.A.	N.A.	N.A.	1, 2, 3
10. Emergency Generator Load Sequencer	N.A.	N.A.	N.A.	N.A.	Q(1, 2)	N.A.	N.A.	1, 2, 3, 4

TABLE 4.3-2 (Continued)

TABLE NOTATION

(1) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(2) This surveillance may be performed continuously by the emergency generator load sequencer auto test system as long as the EGLS auto test system is demonstrated operable by the performance of an ACTUATION LOGIC TEST at least once per 92 days.

(3) On a monthly basis, a loss of voltage condition will be initiated at each undervoltage monitoring relay to verify individual relay operation. Setpoint verification and actuation of the associated logic and alarm relays will be performed as part of the channel calibration required once per 18 months.

(4) Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Containment				
a. Containment Area Purge and Exhaust Isolation	S	R **	M	5, 6
b. RCS Leakage Detection				
1) Particulate Radioactivity	S	R	M	1, 2, 3, 4
2) Gaseous Radioactivity	S	R	M	1, 2, 3, 4
2. Fuel Storage Pool Area Monitors				
a. Radiation Level	S	R	M	*

TABLE NOTATIONS

* With fuel in the fuel storage pool area.

** Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-4

JAN 31 1986

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.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

October 25, 1990

INSTRUMENTATION

REMOTE SHUTDOWN INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.5 The Remote Shutdown Instrumentation transfer switches, power, controls and monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With the number of OPERABLE remote shutdown monitoring channels less than the Minimum Channels OPERABLE as required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

b. With one or more Remote Shutdown Instrumentation transfer switches, power, or control circuits inoperable, restore the inoperable switch(s)/circuit(s) to OPERABLE status within 7 days, or be in HOT STANDBY within the next 12 hours.

c. Entry into an OPERATIONAL MODE is permitted while subject to these ACTION requirements.

SURVEILLANCE REQUIREMENTS

4.3.3.5.1 Each remote shutdown monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-6.

4.3.3.5.2 Each Remote Shutdown Insirumentation transfer switch, power and control circuit including the actuated components, shall be demonstrated OPERABLE at least once per 18 months.*

* Except that the Surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Reactor Trip Breaker Indication	M	N.A.
2. Pressurizer Pressure	M	R **
3. Pressurizer Level	M	R **
4. Steam Generator Pressure	M	R **
5. Steam Canerator Water Level	M	R **
6. Auxiliary Feedwater Flow Rate	M	R **
7. Loop Hot Leg Temperature	M	R
8. Loop Cold Leg Temperature	M	R
9. Reactor Coolant System Pressure (Wide Range)	M	R **
10. DWST Level	M	R
11. RWST Level	M	R
12. Containment Pressure	M	R
13. Emergency Bus Voltmeters	M	R
14. Source Range Count Rate	M*	R
15. Intermediate Range Amps	M	R
16. Boric Acid Tank Level	M	R

* When below P-6 (intermediate range neutron flux interlock setpoint).

** Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure		
a. Normal Range	M	R
b. Extended Range	M	R
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R ***
5. Pressurizer Water Level	M	R ***
6. Steam Line Pressure	M	R ***
7. Steam Generator Water Level - Narrow Range	M	R ***
8. Steam Generator Water Level - Wide Range	M	R ***
9. Refueling Water Storage Tank Water Level	M	R
10. Demineralized Water Storage Tank Water Level	M	R
11. Auxiliary Feedwater Flow Rate	M	R ***
12. Reactor Coolant System Subcooling Margin Monitor	M	R ***
13. Containment Water Level (Wide Range)	M	R ***
14. Core Exit Thermocouples	M	R ***
15. DELETED		

TABLE 4.3-7 (Continued)

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
16. Containment Area - High Range Radiation Monitor	M	R*, ***
17. Reactor Vessel Water Level	M	R**
18. Containment Hydrogen Monitor	M	R
19. Neutron Flux	M	R

*CHANNEL CALIBRATION may consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/h and a one point calibration check of the detector below 10 R/h with an installed or portable gamma source.

**Electronic calibration from the ICC cabinets only.

*** Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier

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 Specification 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.*

* Except that the surveillance requirement due no later than June 13, 1993 may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

a. Either the Containment Atmosphere Gaseous or Particulate Radioactivity Monitoring System, and

b. The Containment Drain Sump Level or Pumped Capacity Monitoring System

APPLICABILITY: MODES 1, 2, 3, and 4

ACTION:

a. With both the Containment Atmosphere Gaseous and Particulate Radioactivity Monitors INOPERABLE, operation may continue for up to 30 days provided the Containment Drain Sump Level or Pumped Capacity Monitoring System is OPERABLE and gaseous grab samples of the containment atmosphere are obtained at least once per 12 hours and analyzed for gross noble gas activity within the subsequent 2 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the Containment Drain Sump Level or Pumped Capacity Monitoring System INOPERABLE, operation may continue for up to 30 days provided either the Containment Atmosphere Gaseous or Particular Radioactivity Monitoring System is OPERABLE; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Radioactivity Monitoring Systems-performance of CHANNEL CHECK, CHANNEL CALIBRATION, and ANALOG CHANNEL OPERATIONAL TEST at the frequencies specified in Table 4.3-3, and

b. Containment Drain Sump Level and Pumped Capacity Monitoring System-performance of CHANNEL CALIBRATION at least once per 18 months.*

* Except that the surveillance requirement due no later than June 13, 1993 may be deferred until the next refueling outage but no later than September 30, 1993, whichever is earlier.

4.4.9.3.1 Each PORV shall be demonstrated OPERABLE by:

a. Performance of an ANALOG CHANNEL OPERATIONAL TEST on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required OPERABLE and at least once per 31 days thereafter when the PORV is required OPERABLE;

b. Performance of a CHANNEL CALIBRATION on the PORV actuation channel at least once per 18 months;** and

c. Verifying the PORV isolation valve is open at least once per 72 hours when the PORV is being used for overpressure protection.

4.4.9.3.2 Each RHR suction relief valve shall be demonstrated OPERABLE when the RHR suction relief valves are being used for cold overpressure protection as follows:

a. For RHR suction relief valve 3RHS*RV8708A, by verifying at least once per 12 hours that 3RHS*MV8701A and 3RHS*MV8701C are open;

b. For RHR suction relief valve 3RHS*RV8708B, by verifying at least once per 12 hours that 3RHS*MV8702B and 3RHS*MV8702C are open; and

c. Testing pursuant to Specification 4.0.5.

4.4.9.3.3 The RCS vent(s) shall be verified to be open at least once per 12 hours* when the vent(s) is being used for overpressure protection.

---

*Except when the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify these valves open at least once per 31 days.

** Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier

3/4.4.11 REACTOR COOLANT SYSTEM VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System vent path consisting of two vent valves(s) and one block valve powered from emergency busses shall be OPERABLE and closed at each of the following locations:

a. Reactor vessel head, and

b. Pressurizer steam space.

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

ACTION:

a. With one of the above Reactor Coolant System vent paths inoperable, STARTUP and/or POWER OPERATION may continue provided the inoperable vent path is maintained closed with power removed from the valve actuator of all the vent valves and block valves in the inoperable vent path; restore the inoperable vent path to OPERABLE status within 30 days, or, be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With both Reactor Coolant System vent paths inoperable; maintain the inoperable vent paths closed with power removed from the valve actuators of all the vent valves and block valves in the inoperable vent paths, and restore at least one of the vent paths to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.11.1 Each Reactor Coolant System vent path block valve not required to be closed by ACTION a. or b., above, shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel from the control room.

4.4.11.2 Each Reactor Coolant System vent path shall be demonstrated OPERABLE at least once per 18 months* by:

a. Verifying all manual isolation valves in each vent path are locked in the open position,

b. Cycling each vent valve through at least one complete cycle of full travel from the control room, and

c. Verifying flow through the Reactor Coolant System vent paths during venting.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

Valve Number	Valve Function	Valve Position
3SIH*MV8806	RWST Supply to SI Pumps	OPEN
3SIH*MV8802A	SI Pump A to Hot Leg Injection	CLOSED
3SIH*MV8802B	SI Pump B to Hot Leg Injection	CLOSED
3SIH*MV8835	SI Cold Leg Master Isolation	OPEN
3SIH*MV8813	SI Pump Master Miniflow Isolation	OPEN
3SIL*MV8840	RHR to Hot Leg Injection	CLOSED
3SIL*MV8809A	RHR Pump A to Cold Leg Injection	OPEN
3SIL*MV8809B	RHR Pump B to Cold Leg Injection	OPEN

b. At least once per 31 days by:

1) Verifying that the ECCS piping, except for the RSS pump, heat exchanger and associated piping, is full of water by venting the ECCS pump casings and accessible discharge piping high points, and

2) 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. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1) For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

2) Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

d. At least once per 18 months* by:

1) Verifying automatic interlock action of the RHR System from the Reactor Coolant System by ensuring that with a simulated or actual Reactor Coolant System pressure signal greater than or equal to 390 psia the interlocks prevent the valves from being opened.

* Except that the Surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993.

8) Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 5335 kW;

9) Verifying the diesel generator's capability to:

a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,

b) Transfer its loads to the offsite power source, and

c) Be restored to its standby status.

10) Verifying that with the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;

11) Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the day tank of each diesel via the installed cross-connection lines;

12) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within ± 10% of its design interval; and

13) Verifying that the following diesel generator lockout features prevent diesel generator starting:

a) Engine overspeed,

b) Lube oil pressure low (2 of 3 logic),

c) Generator differential, and

d) Emergency stop.

h. At Teast once per 10 years or after any modifications which could affect diesel generator interdependence by starting both diesel generators simultaneously, during shutdown, and verifying that both diesel generators accelerate to at least 508 rpm in less than or equal to 11 seconds; and

i. At least once per 10 years by:

1) Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and

* Except that the surveillance ~~requirement~~ requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993 or whichever is earlier.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:

1) The parameters in Table 4.8-2a meet the Category B limits,

2) There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohm, and

3) The average electrolyte temperature of six connected cells is above 60°F.

c. At least once per 18 months* by verifying that:

1) The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration,

2) The cell-to-cell and terminal connections are clean, tight, and coated with anticorrosion material,

3) The resistance of each cell-to-cell and terminal connection is less than or equal to 150×10^{-6} ohm, and

4) Each battery charger will supply at least the amperage indicated in Table 4.8-2b at 125 volts for at least 24 hours.

d. At least once per 18 months,* during shutdown, by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual or simulated emergency loads for the design duty cycle when the battery is subjected to a battery service test;

e. At least once per 60 months,* during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. Once per 60-month interval this performance discharge test may be performed in lieu of the battery service test required by Specification 4.8.2.1d.; and

f. At least once per 18 months,* during shutdown, by giving performance discharge tests of battery capacity to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

* Except that the surveillance requirement due no later than ~~January~~ June 13, 1993 may be deferred until the next refueling outage but no later than September 30, 1993 whichever is earlier.

ELECTRICAL POWER SYSTEMS

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.1 All containment penetration conductor overcurrent protective devices shall be OPERABLE.

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

ACTION:

With one or more of the containment penetration conductor overcurrent protective device(s) inoperable:

a. Restore the protective device(s) to OPERABLE status or deenergize the circuit(s) by tripping the associated backup circuit breaker or racking out or removing the inoperable circuit breaker within 72 hours, declare the affected system or component inoperable, and verify the backup circuit breaker to be tripped or the inoperable circuit breaker racked out or removed at least once per 7 days thereafter; or

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

SURVEILLANCE REQUIREMENTS

4.8.4.1 All containment penetration conductor overcurrent protective devices shall be demonstrated OPERABLE:

a. At least once per 18 months:*

1) By verifying that the medium voltage (4-15 kV) circuit breakers are OPERABLE by selecting, on a rotating basis, at least 10% of the circuit breakers of each voltage level, and performing the following:

a) A CHANNEL CALIBRATION of the associated protective relays,

b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and control circuits function as designed, and

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

Docket No. 50-423
B14409

ATTACHMENT 2

MILLSTONE NUCLEAR POWER STATION UNIT NO. 3
PROPOSED REVISION TO TECHNICAL SPECIFICATIONS
VARIOUS 18-MONTH SURVEILLANCES
RETYPED PAGES OF TECHNICAL SPECIFICATIONS

MARCH 1993

Proposed Changes to the Millstone Unit No. 3
Technical Specifications

Technical Specification Section	Pages and Amendment Number
4.2.3.1.4	3/4 2-20, Amendment #60
4.2.3.2.4	3/4 2-23, Amendment #60
3/4.3.1	3/4 3-1, Amendment #45
Table 4.3-1	3/4 3-10, 11, 14, Amendment #70
Table 4.3-1	3/4 3-12, Amendment #60
3/4.3.2	3/4 3-16, Amendment #45
Table 4.3-2	3/4 3-36, 37, 38, 39, 40, Amendment #70
Table 4.3-2	3/4 3-41, Amendment #74
Table 4.3-3	3/4 4-45, Amendment #65
Table 4.3-4	3/4 3-49, January 1986
Table 4.3.3.5.2	3/4 3-53 , Amendment #57
Table 4.3-6	3/4 3-58, Amendment #56
Table 4.3-7	3/4 3-62, Amendment #46
Table 4.3-7	3/4 3-63, Amendment #76
4.3.3.8	3/4 3-68, Amendment #57
4.4.6.1.b	3/4 4-21, Amendment #17
4.4.9.3.1	3/4 4-39, January 1986
4.4.11.2	3/4 4-43, January 1986
4.5.2.d.1	3/4 5-4, Amendment #60
4.8.1.1.2.g.12	3/4 8-7, Amendment #64
4.8.2.1.c, d, e, & f	3/4 8-12, Amendment #64
4.8.4.1.a	3/4 8-19, Amendment #64

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

b. Within 24 hours of initially being outside the above limits, verify through incore flux mapping and RCS total flow rate that $F^N_{\Delta H}$ and RCS total flow rate are restored to within the above limits, or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

c. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced THERMAL POWER limit required by ACTION a.2. and/or b., above; subsequent POWER OPERATION may proceed provided that $F^N_{\Delta H}$ and indicated RCS total flow rate are demonstrated, through incore flux mapping and RCS total flow rate comparison, to be within the region of acceptable operation prior to exceeding the following THERMAL POWER levels:

1. A nominal 50% of RATED THERMAL POWER,

2. A nominal 75% of RATED THERMAL POWER, and

3. Within 24 hours of attaining greater than or equal to 95% of RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.2.3.1.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.1.2 RCS total flow rate and $F^N_{\Delta H}$ shall be determined to be within the acceptable range:

a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading, and

b. At least once per 31 Effective Full Power Days.

4.2.3.1.3 The indicated RCS total flow rate shall be verified to be within the acceptable range at least once per 12 hours when the most recently obtained value of $F^N_{\Delta H}$ obtained per Specification 4.2.3.1.2, is assumed to exist.

4.2.3.1.4 The RCS total flow rate indicators shall be subjected to a CHANNEL CALIBRATION at least once per 18 months.* The measurement instrumentation shall be calibrated within 7 days prior to the performance of the calorimetric flow measurement.

*Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

b. Within 24 hours of initially being outside the above limits, verify through incore flux mapping and RCS total flow rate that $F^N_{\Delta H}$ and RCS total flow rate are restored to within the above limits, or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

c. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced THERMAL POWER limit required by ACTION a.2. and/or b., above; subsequent POWER OPERATION may proceed provided that $F^N_{\Delta H}$ and indicated RCS total flow rate are demonstrated, through incore flux mapping and RCS total flow rate comparison, to be within the region of acceptable operation prior to exceeding the following THERMAL POWER levels:

1. A nominal 32% of RATED THERMAL POWER, and

2. A nominal 50% of RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.2.3.2.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2.2 RCS total flow rate and $F^N_{\Delta H}$ shall be determined to be within the acceptable range at least once per 31 Effective Full Power Days.

4.2.3.2.3 The indicated RCS total flow rate shall be verified to be within the acceptable range at least once per 12 hours when the most recently obtained value of $F^N_{\Delta H}$, obtained per Specification 4.2.3.2.2, is assumed to exist.

4.2.3.2.4 The RCS total flow rate indicators shall be subjected to a CHANNEL CALIBRATION at least once per 18 months.* The measurement instrumentation shall be calibrated within 7 days prior to the performance of the calorimetric flow measurement.

4.2.3.2.5 The RCS total flow rate shall be determined by precision heat balance measurement at least once per 18 months. Within 7 days prior to performing the precision heat balance, the instrumentation used for determination of steam pressure, feedwater pressure, feedwater temperature, and feedwater venturi ΔP in the calorimetric calculations shall be calibrated.

4.2.3.2.6 If the feedwater venturis are not inspected at least once per 18 months, an additional 0.1% will be added to the total RCS flow measurement uncertainty.

*Except that the surveillance requirement due no later than June 13, 1993 may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the Reactor Trip System instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE with RESPONSE TIMES as shown in Table 3.3-2.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each Reactor Trip System instrumentation channel and interlock and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

4.3.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each Reactor trip function shall be demonstrated to be within its limit at least once per 18 months.* Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel (to include input relays to both trains) per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific Reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

*Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	N.A.	R(14, 20)	N.A.	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux						
a. High Setpoint	S	D(2, 4), M(3, 4), Q(4, 6), R(4, 5, 20)	Q	N.A.	N.A.	1, 2
b. Low Setpoint	S	R(4, 20)	S/U(1)	N.A.	N.A.	1***, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4, 20)	Q	N.A.	N.A.	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4, 20)	Q	N.A.	N.A.	1, 2
5. Intermediate Range	S	R(4, 5)	S/U(1)	N.A.	N.A.	1***, 2
6. Source Range, Neutron Flux	S	R(4, 5)	S/U(1), Q(9)	N.A.	N.A.	2**, 3, 4, 5
7. Overtemperature ΔT	S	R	Q	N.A.	N.A.	1, 2
8. Overpower ΔT	S	R	Q	N.A.	N.A.	1, 2
9. Pressurizer Pressure--Low	S	R (20)	Q(18)	N.A.	N.A.	1
10. Pressurizer Pressure--High	S	R (20)	Q(18)	N.A.	N.A.	1, 2
11. Pressurizer Water Level--High	S	R (20)	Q	N.A.	N.A.	1
12. Reactor Coolant Flow--Low	S	R (20)	Q	N.A.	N.A.	1

Amendment No. 12, 70,

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
13. Steam Generator Water Level--Low-Low	S	R(20)	Q(18)	N.A.	N.A.	1, 2
14. Low Shaft Speed - Reactor Coolant Pumps	N.A.	R(13)	Q	N.A.	N.A.	1
15. Turbine Trip						
a. Low Fluid Oil Pressure	N.A.	R	N.A.	S/U(1, 10)****	N.A.	1
b. Turbine Stop Valve Closure	N.A.	R	N.A.	S/U(1, 10)****	N.A.	1
16. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R	N.A.	1, 2
17. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	N.A.	R(4, 20)	R	N.A.	N.A.	2**
b. Low Power Reactor Trips Block, P-7	N.A.	R(4)	R	N.A.	N.A.	1
c. Power Range Neutron Flux, P-8	N.A.	R(4, 20)	R	N.A.	N.A.	1
d. Power Range Neutron Flux, P-9	N.A.	R(4, 20)	R	N.A.	N.A.	1
e. Power Range Neutron Flux, P-10	N.A.	R(4, 20)	R	N.A.	N.A.	1, 2
f. Turbine Impulse Chamber Pressure, P-13	N.A.	R	R	N.A.	N.A.	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
18. Reactor Trip Breaker	N.A.	N.A.	N.A.	M(7, 11)	N.A.	1, 2, 3*, 4*, 5*
19. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	M(7)	1, 2, 3*, 4*, 5*
20. Three Loop Operation Bypass Circuitry	N.A.	N.A.	N.A.	R(20)	N.A.	1, 2
21. Reactor Trip Bypass Breakers	N.A.	N.A.	N.A.	M(15) R(16)	N.A.	1, 2, 3*, 4*, 5*
22. Shutdown Margin Monitor	N.A.	N.A	Q(19)	N.A.	N.A.	3, 4, 5

TABLE 4.3-1 (Continued)

TABLE NOTATIONS (Continued)

(10) Setpoint verification is not applicable.

(11) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.

(12) (not used)

(13) Reactor Coolant Pump Shaft Speed Sensor may be excluded from CHANNEL CALIBRATION.

(14) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).

(15) Local manual shunt trip prior to placing breaker in service.

(16) Automatic undervoltage trip.

(17) (not used).

(18) The surveillance frequency and/or MODES specified for these channels in Table 4.3-2 should be reviewed for applicability.

(19) Quarterly surveillance shall include verification that the Shutdown Margin Monitor is set per the CORE OPERATING LIMITS REPORT (COLR).

(20) Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel and interlock and the automatic actuation logic and relays shall be demonstrated OPERABLE by performance of the ESFAS Instrumentation Surveillance Requirements specified in Table 4.3-2.

4.3.2.2 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months.* Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel (to include input relays to both trains) per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" column of Table 3.3-3.

*Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Safety Injection (Reactor Trip, Feedwater Isolation, Control Building Isolation (Manual Initiation Only), Start Diesel Generators, and Service Water)								
a. Manual Initiation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-1	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Pressurizer Pressure-Low	S	R(4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Low	S	R(4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2. Containment Spray								
a. Manual Initiation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4

Amendment No. 46, 70,

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation								
a. Phase "A" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.(4)							
b. Phase "B" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A	1, 2, 3, 4
2) Automatic Actuation Logic Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Containment Pressure-High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
4. Steam Line Isolation								
a. Manual Initiation								
1) Individual	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
2) System	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2, 3, 4

Amendment No. 46, 70,

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. Steam Line Isolation (Continued)								
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-2	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
d. Steam Line Pressure-Low	S	R(4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Negative Rate-High	S	R(4)	Q	N.A.	N.A.	N.A.	N.A.	3
5. Turbine Trip and Feedwater Isolation								
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2
b. Steam Generator Water Level-High-High	S	R(4)	Q	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Safety Injection Actuation Logic	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2
d. T_{ave} Low Coincident with Reactor Trip (P-4)	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2

Amendment No. 46, 70,

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
6. Auxiliary Feedwater								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation and Actuation Relays	N.A.	N.A	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Steam Generator Water Level-Low-Low	S	R(4)	Q	N.A.	N.A.	N.A	N.A	1, 2, 3
d. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
e. Loss-of-Offsite Power	See Item 8 below for all Loss of Power Surveillance.							
f. Containment Depressurization Actuation (CDA)	See Item 2. above for all CDA Surveillance Requirements.							
7. Control Building Isolation								
a. Manual Actuation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	All
b. Manual Safety Injection Actuation	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2, 3, 4
c. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
d. Containment Pressure-- High-1	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
7. Control Building Isolation (Continued)								
e. Control Building Inlet Ventilation Radiation	S	R	Q	N.A.	N.A.	N.A.	N.A.	All
8. Loss of Power								
a. 4 kV Bus Undervoltage (Loss of Voltage)	N.A.	R	N.A	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. 4 kV Bus Undervoltage (Grid Degraded Voltage)	N.A.	R	N.A.	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
9. Engineered Safety Features Actuation System Interlocks								
a. Pressurizer Pressure, P-11	N.A.	R(4)	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
b. Low-Low T_{avg}, P-12	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2, 3
10. Emergency Generator Load Sequencer	N.A.	N.A.	N.A.	N.A.	Q(1, 2)	N.A.	N.A.	1, 2, 3, 4

TABLE 4.3-2 (Continued)

TABLE NOTATION

(1) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(2) This surveillance may be performed continuously by the emergency generator load sequencer auto test system as long as the EGLS auto test system is demonstrated operable by the performance of an ACTUATION LOGIC TEST at least once per 92 days.

(3) On a monthly basis, a loss of voltage condition will be initiated at each undervoltage monitoring relay to verify individual relay operation. Setpoint verification and actuation of the associated logic and alarm relays will be performed as part of the channel calibration required once per 18 months.

(4) Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Containment				
a. Containment Area Purge and Exhaust Isolation	S	R**	M	5, 6
b. RCS Leakage Detection				
1) Particulate Radioactivity	S	R	M	1, 2, 3, 4
2) Gaseous Radioactivity	S	R	M	1, 2, 3, 4
2. Fuel Storage Pool Area Monitors				
a. Radiation Level	S	R	M	*

TABLE NOTATIONS

* With fuel in the fuel storage pool area.

** Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

Amendment No. 45, 85,

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.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

INSTRUMENTATION

REMOTE SHUTDOWN INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.5 The Remote Shutdown Instrumentation transfer switches, power, controls and monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With the number of OPERABLE remote shutdown monitoring channels less than the Minimum Channels OPERABLE as required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

b. With one or more Remote Shutdown Instrumentation transfer switches, power, or control circuits inoperable, restore the inoperable switch(s)/circuit(s) to OPERABLE status within 7 days, or be in HOT STANDBY within the next 12 hours.

c. Entry into an OPERATIONAL MODE is permitted while subject to these ACTION requirements.

SURVEILLANCE REQUIREMENTS

4.3.3.5.1 Each remote shutdown monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-6.

4.3.3.5.2 Each Remote Shutdown Instrumentation transfer switch, power and control circuit including the actuated components, shall be demonstrated OPERABLE at least once per 18 months.*

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Reactor Trip Breaker Indication	M	N.A.
2. Pressurizer Pressure	M	R**
3. Pressurizer Level	M	R**
4. Steam Generator Pressure	M	R**
5. Steam Generator Water Level	M	R**
6. Auxiliary Feedwater Flow Rate	M	R**
7. Loop Hot Leg Temperature	M	R
8. Loop Cold Leg Temperature	M	R
9. Reactor Coolant System Pressure (Wide Range)	M	R**
10. DWST Level	M	R
11. RWST Level	M	R
12. Containment Pressure	M	R
13. Emergency Bus Voltmeters	M	R
14. Source Range Count Rate	M*	R
15. Intermediate Range Amps	M	R
16. Boric Acid Tank Level	M	R

* When below P-6 (intermediate range neutron flux interlock setpoint).

** Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure		
a. Normal Range	M	R
b. Extended Range	M	R
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R***
5. Pressurizer Water Level	M	R***
6. Steam Line Pressure	M	R***
7. Steam Generator Water Level - Narrow Range	M	R***
8. Steam Generator Water Level - Wide Range	M	R***
9. Refueling Water Storage Tank Water Level	M	R
10. Demineralized Water Storage Tank Water Level	M	R
11. Auxiliary Feedwater Flow Rate	M	R***
12. Reactor Coolant System Subcooling Margin Monitor	M	R***
13. Containment Water Level (Wide Range)	M	R***
14. Core Exit Thermocouples	M	R***
15. DELETED		

TABLE 4.3-7 (Continued)

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
16. Containment Area - High Range Radiation Monitor	M	R*, ***
17. Reactor Vessel Water Level	M	R**
18. Containment Hydrogen Monitor	M	R
19. Neutron Flux	M	R

*CHANNEL CALIBRATION may consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/h and a one point calibration check of the detector below 10 R/h with an installed or portable gamma source.

**Electronic calibration from the ICC cabinets only.

***Except that the surveillance requirements due no later June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

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.*

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

a. Either the Containment Atmosphere Gaseous or Particulate Radioactivity Monitoring System, and

b. The Containment Drain Sump Level or Pumped Capacity Monitoring System

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

ACTION:

a. With both the Containment Atmosphere Gaseous and Particulate Radioactivity Monitors INOPERABLE, operation may continue for up to 30 days provided the Containment Drain Sump Level or Pumped Capacity Monitoring System is OPERABLE and gaseous grab samples of the containment atmosphere are obtained at least once per 12 hours and analyzed for gross noble gas activity within the subsequent 2 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the Containment Drain Sump Level or Pumped Capacity Monitoring System INOPERABLE, operation may continue for up to 30 days provided either the Containment Atmosphere Gaseous or Particular Radioactivity Monitoring System is OPERABLE; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the followng 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Radioactivity Monitoring Systems-performance of CHANNEL CHECK, CHANNEL CALIBRATION, and ANALOG CHANNEL OPERATIONAL TEST at the frequencies specified in Table 4.3-3, and

b. Containment Drain Sump Level and Pumped Capacity Monitoring System-performance of CHANNEL CALIBRATION at least once per 18 months.*

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

SURVEILLANCE REQUIREMENTS

4.4.9.3.1 Each PORV shall be demonstrated OPERABLE by:

a. Performance of an ANALOG CHANNEL OPERATIONAL TEST on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required OPERABLE and at least once per 31 days thereafter when the PORV is required OPERABLE;

b. Performance of a CHANNEL CALIBRATION on the PORV actuation channel at least once per 18 months**; and

c. Verifying the PORV isolation valve is open at least once per 72 hours when the PORV is being used for overpressure protection.

4.4.9.3.2 Each RHR suction relief valve shall be demonstrated OPERABLE when the RHR suction relief valves are being used for cold overpressure protection as follows:

a. For RHR suction relief valve 3RHS*RV8708A, by verifying at least once per 12 hours that 3RHS*MV8701A and 3RHS*MV8701C are open;

b. For RHR suction relief valve 3RHS*RV8708B, by verifying at least once per 12 hours that 3RHS*MV8702B and 3RHS*MV8702C are open; and

c. Testing pursuant to Specification 4.0.5.

4.4.9.3.3 The RCS vent(s) shall be verified to be open at least once per 12 hours* when the vent(s) is being used for overpressure protection.

---

* Except when the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify these valves open at least once per 31 days.

** Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

3/4.4.11 REACTOR COOLANT SYSTEM VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System vent path consisting of two vent valves(s) and one block valve powered from emergency busses shall be OPERABLE and closed at each of the following locations:

a. Reactor vessel head, and

b. Pressurizer steam space.

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

ACTION:

a. With one of the above Reactor Coolant System vent paths inoperable, STARTUP and/or POWER OPERATION may continue provided the inoperable vent path is maintained closed with power removed from the valve actuator of all the vent valves and block valves in the inoperable vent path; restore the inoperable vent path to OPERABLE status within 30 days, or, be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With both Reactor Coolant System vent paths inoperable; maintain the inoperable vent paths closed with power removed from the valve actuators of all the vent valves and block valves in the inoperable vent paths, and restore at least one of the vent paths to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.11.1 Each Reactor Coolant System vent path block valve not required to be closed by ACTION a. or b., above, shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel from the control room.

4.4.11.2 Each Reactor Coolant System vent path shall be demonstrated OPERABLE at least once per 18 months* by:

a. Verifying all manual isolation valves in each vent path are locked in the open position,

b. Cycling each vent valve through at least one complete cycle of full travel from the control room, and

c. Verifying flow through the Reactor Coolant System vent paths during venting.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

Valve Number	Valve Function	Valve Position
3SIH*MV8806	RWST Supply to SI Pumps	OPEN
3SIH*MV8802A	SI Pump A to Hot Leg Injection	CLOSED
3SIH*MV8802B	SI Pump B to Hot Leg Injection	CLOSED
3SIH*MV8835	SI Cold Leg Master Isolation	OPEN
3SIH*MV8813	SI Pump Master Miniflow Isolation	OPEN
3SIL*MV8840	RHR to Hot Leg Injection	CLOSED
3SIL*MV8809A	RHR Pump A to Cold Leg Injection	OPEN
3SIL*MV8809B	RHR Pump B to Cold Leg Injection	OPEN

b. At least once per 31 days by:

1) Verifying that the ECCS piping, except for the RSS pump, heat exchanger and associated piping, is full of water by venting the ECCS pump casings and accessible discharge piping high points, and

2) 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. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1) For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

2) Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

d. At least once per 18 months* by:

1) Verifying automatic interlock action of the RHR System from the Reactor Coolant System by ensuring that with a simulated or actual Reactor Coolant System pressure signal greater than or equal to 390 psia the interlocks prevent the valves from being opened.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

8) Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 5335 kW;

9) Verifying the diesel generator's capability to:

a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,

b) Transfer its loads to the offsite power source, and

c) Be restored to its standby status.

10) Verifying* that with the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;

11) Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the day tank of each diesel via the installed cross-connection lines;

12) Verifying* that the automatic load sequence timer is OPERABLE with the interval between each load block within ± 10% of its design interval; and

13) Verifying that the following diesel generator lockout features prevent diesel generator starting:

a) Engine overspeed,

b) Lube oil pressure low (2 of 3 logic),

c) Generator differential, and

d) Emergency stop.

h. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting both diesel generators simultaneously, during shutdown, and verifying that both diesel generators accelerate to at least 508 rpm in less than or equal to 11 seconds; and

i. At least once per 10 years by:

1) Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:

1) The parameters in Table 4.8-2a meet the Category B limits,

2) There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohm, and

3) The average electrolyte temperature of six connected cells is above 60°F.

c. At least once per 18 months* by verifying that:

1) The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration,

2) The cell-to-cell and terminal connections are clean, tight, and coated with anticorrosion material,

3) The resistance of each cell-to-cell and terminal connection is less than or equal to 150×10^{-6} ohm, and

4) Each battery charger will supply at least the amperage indicated in Table 4.8-2b at 125 volts for at least 24 hours.

d. At least once per 18 months,* during shutdown, by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual or simulated emergency loads for the design duty cycle when the battery is subjected to a battery service test;

e. At least once per 60 months,* during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. Once per 60-month interval this performance discharge test may be performed in lieu of the battery service test required by Specification 4.8.2.1d.; and

f. At least once per 18 months,* during shutdown, by giving performance discharge tests of battery capacity to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage but no later than September 30, 1993, whichever is earlier.

ELECTRICAL POWER SYSTEMS

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.1 All containment penetration conductor overcurrent protective devices shall be OPERABLE.

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

ACTION:

With one or more of the containment penetration conductor overcurrent protective device(s) inoperable:

a. Restore the protective device(s) to OPERABLE status or deenergize the circuit(s) by tripping the associated backup circuit breaker or racking out or removing the inoperable circuit breaker within 72 hours, declare the affected system or component inoperable, and verify the backup circuit breaker to be tripped or the inoperable circuit breaker racked out or removed at least once per 7 days thereafter; or

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

SURVEILLANCE REQUIREMENTS

4.8.4.1 All containment penetration conductor overcurrent protective devices shall be demonstrated OPERABLE:

a. At least once per 18 months:*

1) By verifying that the medium voltage (4-15 kV) circuit breakers are OPERABLE by selecting, on a rotating basis, at least 10% of the circuit breakers of each voltage level, and performing the following:

a) A CHANNEL CALIBRATION of the associated protective relays,

b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and control circuits function as designed, and

* Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier.

Docket No. 50-423
B14409

Attachment 3

Safety Assessment of the
Proposed One-Time Extension for Various
18-month Surveillances

March 1993

Millstone Unit No. 3

Safety Assessment of the Proposed One-Time
Extension for Various 18-Month Surveillances

Northeast Nuclear Energy Company (NNECO) has evaluated the proposed one-time extension for the surveillances listed in Table 1 of the cover letter to ensure there is no significant risk to the public. The proposed extension will defer the surveillances until the 1993 refueling outage, but not beyond September 30, 1993. The Methodology used for the evaluation is the following:

1. Functional Tests

   For surveillances which verify the function of a control circuit whose components are not affected by instrumentation drift (e.g., Manual Reactor Trip, Reactor Trip Bypass Breakers, Control Building Isolation, etc.) a probabilistic risk assessment study was performed to determine the public risk significance of extending these surveillances. In addition, past surveillance data were reviewed to ensure past surveillances were acceptable and that no unacceptable trends had developed.

2. Instrument Loops Using Sensors in the Rosemount Program

   For these sensors (mostly Rosemount with a few Veritrak), credit will be taken for the Rosemount program to detect instrument drift during the surveillance extension. Because of the Rosemount transmitter failure problem, it is a NNECO requirement to provide an on-line monitoring program that will detect "loss of fill-oil" for each transmitter.

   The purpose of this program is to identify symptoms of potential loss of fill-oil phenomenon for all safety-related Rosemount 1153 and 1154 transmitters installed at Millstone Unit No. 3.

   The acceptance criteria for this program are the drift criteria from the Rosemount Technical Bulletin which lists the maximum drift associated with each transmitter range code should a loss of fill-oil occur. If the acceptance criteria are exceeded, then an Automated Work Order (AWO) is processed to troubleshoot the rack portion of the loop.

   If the drift problem cannot be isolated to a specific process component, then the transmitter is considered suspect.

   Utilizing this program, NNECO will continue to monitor the performance of these sensors over the surveillance extension to verify that the drift remains below the allowable stated value.

3. Veritrak Transmitters

Veritrak transmitters are not included in the Rosemount Transmitter Loss of Fill-Oil Monitoring Program, and therefore are not officially part of the program as previously described to the Staff. However, the Veritrack transmitters are monitored by the Rosemount program and their instrument drift is tracked and evaluated in the same manner as the Rosemount transmitters. Even though no official instrument drift acceptance criteria have been established for these transmitters, any anomaly in the instrument drift trend data would be detected and action would be taken similar to the action taken for a Rosemount transmitter.

4. Instrument Loops Using Sensors Not in the Rosemount Program

For these loops, the historical sensor calibration data will be reviewed to establish the worst case drift. This worst case drift will be linearly extrapolated to the end of the surveillance extension and then be compared to the allowable drift for the sensor.

5. Analog Channel Operational Test

For technical specification surveillances that require an analog channel operational test, credit will be taken for these tests to provide a high degree of confidence with regard to the functionality of the process loop.

There are two basic parts to a channel calibration.

The first part is to check the calibration of the transmitter. At this time, NNECO can determine the "drift" of the transmitter during the calibration cycle and verify that the "as-found" drift is below the analytical value which is part of the safety analysis.

The second part of the calibration is to determine the operability of the process instrument loop. The instrument loop includes bistables, converter cards, input cards, power supplies, recorders, indicators, etc. Again, the data are collected from the process instruments to determine the operability of the loop and to verify that the "as-found" drift is below the analytical values which are part of the safety analysis.

During the calibration portion of the instrument process loop, the complete loop is checked for operability (annunciators, computer points, indicators, etc.) and to record the "as-found" data for the bistables, which perform the protection function i.e., alarm, interlock or trip.

During an analog channel operational test, the transmitter is taken out of the loop and a simulated signal is injected into the loop. At this time, the bistable setpoints are verified with the data, and bistable

setpoint driftpoint can be calculated. Also, this test verifies the operability of the loop to perform its protection function within the desired range. If not, corrective action is required.

Prior to December 1992, certain analog channel operational tests were performed monthly. These monthly tests were changed to quarterly tests in December 1992. The justification to extend from a monthly to a quarterly test was based on a technical review which found that, over a two-year period and within a quarterly basis, the "as-found" drift was always below the allowable drift used in the safety analysis. Based upon a review of the monthly test data and the results obtained for justification of the analog channel operational test on a quarterly basis, the drift always remained below the allowable values in the safety analysis. It is noted that this change in the form of a license amendment was approved by the NRC (License Amendment #70).

6. Channel Checks

For technical specification surveillances that require a channel check, credit will be taken for the channel check to provide a high degree of confidence regarding the functionality of the process loops including the sensors. A channel check is a qualitative assessment of channel behavior during operation by comparing the channel indication and/or status derived from independent instrument channels measuring the same parameter. Channel checks are performed as specified in the technical specifications and can be hourly, daily or monthly.

The following discussion documents the evaluation for each surveillance extension.

1. 4.2.3.1.4 RCS Total Flow Rate Indicators Channel Calibration (Four Loop Operation)

An extension of 109 days is required from its present due date of June 13, 1993.

A review of historical surveillance data (8-15-91, 3-3-91, 6-27-89, 1-25-88, 11-17-87 & 3-22-87) for the reactor coolant system (RCS) flow has determined that the acceptance criteria have not been exceeded. In addition, the associated RCS flow transmitters are part of the Rosemount program described in the Methodology Section of this evaluation. Also, channel checks of parameters are performed each shift and maximum allowable deviation limits are specified. This determination compares channel indication and/or status with other indications derived from independent instrument channels measuring the same parameter. Surveillance SP3670.1 also includes an availability requirement and parameter limit verification.

Therefore, based on the checks described above, the inclusion of the flow transmitters in the Rosemount program, and the historical test data, extending this surveillance by 109 days is acceptable.

2. 4.2.3.2.4. RCS Total Flow Rate Indicators Channel Calibration (Three Loop Operation)

An extension of 109 days is required from its present due date of June 13, 1993.

A review of historical surveillance data (8-5-91, 3-3-91, 6-27-89, 1-25-88, 11-17-87 & 3-22-87) for the RCS flow has determined that the acceptance criteria have not been exceeded. In addition, the associated RCS flow transmitters are part of the Rosemount program described in the Methodology Section of this evaluation. Also, channel checks of parameters are performed each shift and maximum allowable deviation limits are specified. This determination compares channel indication and/or status with other indications derived from independent instrument channels measuring the same parameter. Surveillance SP3670.1 also includes an availability requirement and parameter limit verification.

Therefore, based on the checks described above, the inclusion of the flow transmitters in the Rosemount program, and the historical test data, extending this surveillance by 109 days is acceptable.

3. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements Functional Unit 1 Manual Reactor Trip

An extension of 97 days is required from its present due date of June 25, 1993.

The surveillance data of the last three refueling outages were reviewed and no failures were detected. This surveillance verifies the functionality of the control logic and instrument drift is not an issue.

In addition, a Probabilistic Risk Assessment (PRA) based analysis was performed that concluded that extending this surveillance by 97 days represented a negligible increase to public risk.

Therefore, based on the historical test data, the PRA analysis and instrument drift which is not an issue, extending the surveillance interval by 97 days is acceptable.

4. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation - Functional Unit No. 2-Power Range, Neutron Flux-High and Low Setpoint

An extension of 40 days is required from its present due date of August 21, 1993.

A. High Setpoint

An analog channel operational test is performed quarterly. In addition, a channel check is performed every 12 hours. See description of the process loop testing in the Methodology Section of this evaluation.

Technical Specification Table 4.3-1 Note (4) states that the neutron detectors may be excluded from channel calibration. The detector plateau curve surveillance required per Table 4.3-1 Note (5) was been performed on 11-18-92 and no extension is required for this surveillance.

Therefore, since detector surveillance requirements have been met, and since the channel checks and the analog tests provide a high degree of confidence that all channels are functional, the 40-day extension is acceptable.

B. Low Setpoint

An analog channel operational test is performed at plant startup. In addition, a channel check is performed every 12 hours. See description of the process loop testing in the Methodology Section of this evaluation.

A review of data from 9 surveillance tests (6-19-90, 2-3-91, 4-15-91, 4-19-91, 10-25-91, 10-31-85, 2-1-86, 3-23-87, 6-6-89) shows that the high and low neutron flux Rx trip setpoints were within their acceptance criteria.

Therefore, based on past history and satisfactory performance of the channel checks and the analog channel operational tests, the 40-day extension is acceptable.

5. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation - Functional Unit No. 3 - Power Range, Neutron Flux-High Positive Rate

An extension of 40 days is required from its present due date of August 21, 1993.

An analog channel operational test is performed quarterly. See description of the process loop testing in the Methodology Section of this evaluation.

Technical Specification Table 4.3-1 Note (4) states that the neutron detectors may be excluded from channel calibration. The detector plateau curve surveillance required per Table 4.3-1 Note (5) was performed on 11-8-92 and no extension is required for this surveillance.

Therefore, since detector surveillance requirements have been met, and since the channel checks and the analog channel operational test provides a high degree of confidence that all channels are functional, the 40-day extension is acceptable.

6. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation - Functional Unit No. 4 - Power Range, Neutron Flux-High Negative Rate

An extension of 40 days is required from its present due date of August 21, 1993.

An analog channel operational test is performed quarterly. See description of the process loop testing in the Methodology Section of this evaluation.

Technical Specification Table 4.3-1 Note (4) states that the neutron detectors may be excluded from channel calibration. Per Table 4.3-1 Note (5), the detector plateau curves have been obtained, evaluated and compared to manufacturer's data. This surveillance was performed satisfactorily in February 1993.

Therefore, since detector surveillance requirements have been met, and since the analog channel operational tests provide a high degree of confidence that all channels are functional, the 40-day extension is acceptable.

7. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements-Functional Unit No. 9-Pressurizer Pressure-Low

An extension of 89 days is required from its present due date of July 3, 1993.

The pressure sensors for this surveillance are monitored by the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence to the operability of the instrument loop.

Therefore, extending this surveillance by 89 days is acceptable.

8. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements - Functional Unit No. 10 - Pressurizer Pressure - High

An extension of 89 days is required from its present due date of July 3, 1993.

The pressure sensors for this surveillance are included in the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence in the operability of the instrument loop.

Therefore, extending this surveillance by 89 days is acceptable.

9. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements - Functional Unit No. 11 - Pressurizer Water Level-High

An extension of 92 days is required from its present due date of June 30, 1993.

The level sensors specified in this surveillance are monitored by the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence in the operability of the instrument loop.

Therefore, extending this surveillance by 92 days is acceptable.

10. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements - Functional Unit No. 12-Reactor Coolant Flow Low

An extension of 92 days is required from its present due date of June 30, 1993.

A review of historical surveillance data (6-27-89, 1-25-88, 11-17-87 & 3-17-87) for the RCS flow has determined that the acceptance criteria have not been exceeded. The flow sensors for this surveillance are Rosemount transmitters that are included in the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence to the operability of the instrument loop.

Therefore, extending this surveillance by 92 days is acceptable.

11. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation Surveillance Requirements-Functional Unit No. 13-Steam Generator Water Level-Low-Low

An extension of 94 days is required from its present due date of June 28, 1993.

The level sensors for this surveillance are Rosemount transmitters that are included in the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence to the operability of the instrument loop.

Therefore, extending this surveillance by 94 days is acceptable.

12. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation-Functional Unit No. 17a, c, d, e-Reactor Trip Safety System Interlocks (P-6, P-8, P-9 & P-10)

An extension of 40 days is required from its present due date of August 21, 1993.

The PRA study has concluded that for four interlocks, P-6, P-8, P-9, and P-10 the increased public risk from the one-time increase of the surveillance test interval is negligible. This conclusion is based on the following:

1. P-6 is not risk significant.

2. P-8 Δ Core Melt Frequency (CMF) is of the order of 10^{-8}/yr.

3. P-9 Δ CMF is of the order of 10^{-8}/yr. or less.

4. P-10 is not risk significant.

In addition, 5 completed surveillance tests (1-5-91- & 10-21-91 for P-8, P-9, & P-10; 3-23-92, 10-28-91, & 3-30-91 for P-6) for all the interlocks were reviewed to determine if any failures occurred. No failures were detected.

Therefore, extending this surveillance by 40 days is acceptable.

13. Section 4.3.1.1, Table 4.3-1 - Reactor Trip System Instrumentation-Functional Unit No. 20-Three Loop Operation Bypass Circuitry

An extension of 97 days is required from its present due date of June 25, 1993.

The purpose of this surveillance is to verify the functionality of the logic for the control circuits involving three loop operation. Instrumentation drift is not an issue for this surveillance. A review of the last four surveillance tests (12-19-91 partial test, 8-31-91, 2-26-91 and 6-15-89) shows no failures have occurred.

Therefore, extending this surveillance by 97 days is acceptable.

14. Section 4.3.1.2 - Reactor Trip System Response Time "B" Channel

An extension of 68 days is required from its present due date of July 24, 1993.

A review has been performed of the past two train B surveillances (2-3-88 & 6-7-91). In all cases, the acceptance limit (time response) has not been exceeded. This consistency in concert with system diversity/redundancy, channel checks, and analog channel operation tests shall provide a basis for a one-time surveillance extension of 68 days.

15. Section 4.3.2.1, Table 4.3-2 - Engineering Safety Features Actuation System Instrumentation Surveillance Requirements - Functional Unit 1.a - Safety Injection Manual Initiation (Trip Actuating Device Operational Test)

An extension of 97 days is required from its present due date of June 25, 1993.

No credit is taken in the accident analysis for manual initiation of safety injection. In addition, manual trip instrumentation is not subject to drift. Past surveillance test data (12-19-91 partial test, 8-31-91, 2-26-91, 6-15-89, 11-27-87 & 3-31-87) for the three previous refuelings were reviewed to determine the history of manual trip actuations from a reliability standpoint. The review showed that a manual initiation has never failed to perform its function. The public risk impact performed by NNECO for extending the surveillance has determined that the subject functional unit is redundant, diverse and maintains a relatively low risk significance.

Therefore, extending this surveillance by 97 days is acceptable.

16. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements-Functional Unit No. 1d-Safety Injection-Pressurizer Pressure-Low

An extension of 89 days is required from its present due date of July 3, 1993.

The pressure sensors for this surveillance are monitored by the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence with regard to the operability of the instrument loop.

Therefore, extending this surveillance 89 days is acceptable.

17. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements-Functional Unit No. 1e-Safety Injection-Steam Line Pressure-Low

An extension of 66 days is required from its present due date of July 26, 1993.

The pressure sensors for this surveillance are Rosemount transmitters which are included in the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence with regard to the operability of the instrument loop.

Therefore, extending this surveillance 66 days is acceptable.

18. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements - Functional Unit 2.a. Containment Spray - Manual Initiation

An extension of 97 days is required from its present due date of June 25, 1993.

No credit is taken in the accident analysis for manual initiation of containment spray. In addition, manual trip instrumentation is not subject to drift. Past surveillance test data (12-91 partial test, 8-31-91, 2-26-91, 6-15-89, 11-27-87 & 3-31-87) were reviewed to determine the history of manual trip actuations from a reliability standpoint. This review showed that a manual initiation has never failed to perform its function.

Therefore, extending this surveillance by 97 days is acceptable.

19. Section 4.3.2.1, Table 4.3-2 - Engineering Safety Features Actuation System Instrumentation Surveillance Requirements-Functional Unit 3 a.1 and Unit 3.a.1 Containment Isolation Phase A and Phase B Isolation-Manual Initiation

An extension of 97 days is required from its present due date of June 25, 1993.

No credit is taken in the accident analysis for manual initiation of containment isolation. In addition, manual trip instrumentation is not subject to drift. Surveillance test data (12-19-91 partial test, 8-31-91, 2-26-91, 6-15-89, 11-27-87 and 3-31-87) were reviewed to determine the history of manual trip actuations from a reliability standpoint. The review showed that a manual initiation has never failed to perform its function. Also, the public risk impact performed by NNECO has determined that the risk introduced due the surveillance test interval extension is negligible primarily due to functional diversities.

Therefore, extending this surveillance by 97 days is acceptable.

20. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements - Functional Unit 3.a.3 - Containment Isolation Phase A Isolation-Safety Injection

An extension of 97 days is required from its present due date of June 25, 1993.

No credit is taken in the accident analysis for manual initiation of containment isolation/safety injection. In addition, manual trip instrumentation is not subject to drift. Past surveillance test data (SP3446F31: 12-19-91 partial test, 8-31-91, 2-26-91, 6-15-89, 11-27-87, 3-31-87, SP3442C01: 9-2-91, 12-4-87, 3-19-87; SP3444B01: 9-13-91, 8-31-87, 5-25-89) were reviewed to determine the history of manual trip actuations from a reliability standpoint. The review showed that manual initiation has never failed to perform its function. The associated transmitters are monitored in the Rosemount program as described in the methodology Section of this evaluation. The public risk impact performed by NNECO for extending the surveillance has determined the subject functional unit is redundant, diverse and maintains a relatively low risk significance.

Therefore, extending this surveillance by 97 days is acceptable.

21. Section 4.3.2.1, Table 4.3.2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements-Functional Unit 4.a - Steam Line Isolation Manual Initiation

An extension of 97 days is required from its present due date of June 25, 1993.

No credit is taken in the accident analysis for manual initiation of steamline isolation. In addition, manual trip instrumentation is not subject to drift. Surveillance SP 3446F31 test data for the three previous refuelings were reviewed to determine the history of manual trip actuations from a reliability standpoint. The risk impact performed by NNECO has determined the subject functional unit is redundant, diverse and maintains a relatively low risk significance. In addition, main steam isolation valve partial stroke tests are performed at a minimum quarterly frequency.

Therefore, extending this surveillance by 97 days is acceptable.

22. Section 4.3.2.1, Table 4.3-2 - Engineering Safety Features Actuation System Instrumentation Surveillance Requirements-Functional Unit No. 4d - Steam Line Isolation Steam Line Pressure-Low

An extension of 66 days is required from its present due date of July 26, 1993

The pressure sensors for this surveillance are Rosemount transmitters which are included in the Rosemount program described in the Methodology section of this evaluation. The Rosemount Program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence with regard to the operability of the instrument loop.

Therefore, extending this surveillance by 66 days is acceptable.

23. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements-Functional Unit. No. 4e - Steam Line Isolation Steam Line Pressure - Negative Rate - High

An extension of 66 days is required from its present due date of July 26, 1993.

The pressure sensors for this surveillance are Rosemount transmitters which are included in the Rosemount program described in the Methodology Section of the evaluation. The Rosemount program will ensure that

sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence with regard to the operability of the instrument loop.

Therefore, extending this surveillance by 66 days is acceptable.

24. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements - Functional Unit No. 5b - Turbine Trip and Feedwater Isolation - Steam Generator Water Level - High - High

An extension of 94 days is required from its present due date of June 28, 1993.

The level sensors for this surveillance are monitored by the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence with regard to the operability of the instrument loop.

Therefore, extending this surveillance by 94 days is acceptable.

25. Section 4.3.2.1, Table 4.3-2 - Engineering Safety Features Actuation System Instrumentation Surveillance Requirements - Functional Unit No. 5c - Turbine Trip and Feedwater Isolation - Safety Injection Actuation Logic

An extension of 97 days is required from its present due date of June 25, 1993.

Past surveillance data (December 19, 1991 partial test, 8-31-91, 2-26-91, 6-15-89, 11-27-87 & 3-31-87) were reviewed and no failures were detected. This surveillance verifies the functionality of the control logic and instrumentation drift is not an issue.

In addition, a PRA analysis was performed that concluded that extending this surveillance by 97 days presents a negligible increase to public risk.

Therefore, based on the historical test data, the PRA study and instrument drift not being an issue, extending this surveillance by 97 days is acceptable.

26. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance - Functional Unit No. 6c - Auxiliary Feedwater-Steam Generator Water Level Low-Low

An extension of 94 days is required from its present due date of June 28, 1993.

The level sensors for this surveillance are monitored by the Rosemount program described in the Methodology Section of the evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, the quarterly analog channel operational test will provide a high degree of confidence with regard to the operability of the instrument loop.

Therefore, extending this surveillance by 94 days is acceptable.

27. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation - Functional Unit No. 7a & 7b - Control Building Isolation (Manual Actuation & Manual Safety Injection Actuation)

An extension of 97 days is required from its present due date of June 25, 1993.

A review of past surveillances (3-31-87, 11-27-87, 6-15-89, 12-19-91 partial test, 8-31-91, 2-26-91) shows that the acceptance criteria was met.

Functional Units 7A and 7B of Table 4.3-2 of Technical Specifications define surveillance requirements for Control Building Isolation by Manual Actuation and by Manual Safety Injection Actuation respectively. The control circuit consists of manual switches and relays which actuate valves to provide control building isolation and is therefore not subject to instrument drift. In addition, a study based on PRA has determined that extending this surveillance 97 days has insignificant impact on public risk based on diversity and redundancy.

Therefore, extending this surveillance 97 days is acceptable.

28. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements - Functional Unit No. 9a - Engineered Safety Features Actuation System Interlocks - Pressurizer Pressure P-11

An extension of 89 days is required from its present due date of July 8, 1993.

The Pressurizer pressure sensors are Rosemount transmitters which are included in the Rosemount program. The technical justification for

extending the surveillance interval for Rosemount transmitters is provided in the general justification for Rosemount transmitters.

A quarterly analog channel operational test is performed to provide a high degree of confidence of the channel's operability.

Therefore, extending this surveillance by 89 days is acceptable.

29. Section 4.3.2.1, Table 4.3-2 - Engineered Safety Features Actuation System Instrumentation Surveillance Requirements - Functional Unit No. 9c - Engineered Safety Features Actuation System Interlocks - Reactor Trip, P-4

An extension of 97 days is required from its present due date of June 25, 1993.

The PRA study has concluded that extending this surveillance for 97 days will increase the core melt frequency by 10^{-7}/yr or less which is insignificant. Therefore, the proposed one time surveillance extension increases the public risk insignificantly.

In addition, the purpose of this surveillance is to verify the functionality of the control interlocks. Instrument drift is not an issue for this surveillance. A review of the last four surveillance tests (12-19-91 partial test, 8-31-91-, 2-26-91, and 6-15-89) showed no failures have occurred.

Therefore, extending this surveillance by 97 days is acceptable.

30. Section 4.3.2.2 - ESF Response Time Testing Channel "B"

An extension of 68 days is required from its present due date of July 24, 1993.

A review has been performed of the past two train B surveillances (2-3-88 & 6-7-91). In all cases, the acceptance limit (time response) has not been exceeded. This consistency in concert with system diversity/redundancy, channel checks, and analog channel operation tests, extending this surveillance by 68 days is acceptable.

31. Section 4.3.3.1, Table 4.3.3 Radiation Monitoring Instrumentation for Plant Operations Surveillance Requirements - Functional Unit 1A - Containment Area Purge and Exhaust Isolation

An extension of 95 days is required from its present due date of June 27, 1993.

The surveillance calibration data of the last three refueling outages were reviewed. All "As-Found" data were within their respective acceptance criteria with the one exception which documented an isolated case of instrument drift. The associated radiation monitor was recalibrated and returned to service.

In addition, a channel check is performed every 12 hours for these instruments. An analog channel operational test as described in the Methodology Section of the evaluation is performed monthly. The 12-hour channel check and the monthly analog channel operational test provides a high degree of confidence with regard to the operability of the instruments and the instrument loop.

Therefore, based on the historical calibration test data, the monthly analog channel operational test, and the 12-hour channel check, extending the surveillance interval by 95 days is acceptable.

32. Section 4.3.3.3.1, Table 4.3-4 - Seismic Monitoring Instrumentation

An extension of 83 days is required from its present due date of July 9, 1993.

Table 4.3-4, "Seismic Monitoring Instrumentation Surveillance Requirements" lists the required Channel Check, Channel Calibration and Analog Channel Operational Test intervals for the specified instrumentation. Seismic monitoring instrumentation surveillance records were reviewed from the beginning of commercial operation (11-6-85, 3-16-87, 5-22-89, 2-19-91, 8-26-91, 11-6-85, 3-18-87, 11-5-87, 5-17-89, 2-8-91, 8-26-91) with three notable failures. In one case, one sensor was found to be marginally oversensitive but still functional. In the other two cases, the Triaxal Peak Accelerographs were declared inoperable, in one case due to failed recorder and in the other case due to questionable acceptance criteria. Since no credit is taken for the seismic monitors in accident analysis and since Millstone Unit 2 also has operational seismic monitors, extending this surveillance by 83 days is acceptable.

33.A Section 4.3.3.5.1, Table 4.3-6 - Remote Shutdown Monitoring Instrumentation 0 Functional Unit 2 - Pressurizer Pressure

An extension of 89 days is required from its present due date of July 3, 1993.

The Pressurizer pressure sensors are Rosemount transmitters which are included in the Rosemount program. The technical justification for extending the surveillance interval for Rosemount transmitters is provided in the Methodology Section of this evaluation.

A channel check is performed monthly which provides a high degree of confidence with regard to the channel's operability.

Therefore, extending this surveillance by 89 days is acceptable.

33.B Section 4.3.3.5.1, Table 4.3-6 - Remote Shutdown Monitoring Instrumentation - Functional Unit 3 - Pressurizer Level

An extension of 92 days is required from its present due date of June 30, 1993.

The Pressurizer level sensors are included in the Rosemount program described in the Methodology Section of the evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval.

A channel check is performed monthly which provides a high degree of confidence with regard to the channel's operability.

Therefore, extending this surveillance by 92 days is acceptable.

33.C Section 4.3.3.5.1, Table 4.3-6 Remote Shutdown Monitoring Instrumentation - Functional Unit 4 - Steam Generator Pressure

An extension of 66 days is required from its present due date of July 26, 1993.

The Steam Generator pressure sensors are Rosemount transmitters which are included in the Rosemount program. The technical justification for extending the surveillance interval for Rosemount transmitters is provided in the Methodology Section of this evaluation.

A monthly channel check is performed which provides a high degree of confidence to the channel's operability. See the Methodology Section of the evaluation describing the channel check.

Therefore, based on the transmitters being in the Rosemount program and the monthly channel check, it is concluded that extending this surveillance by 66 days is acceptable.

33.D Section 4.3.3.5.1, Table 4.3-6 Remote Shutdown Monitoring Instrumentation - Functional Unit 5 - Steam Generator Water Level

An extension of 94 days is required from its present due date of June 28, 1993.

The Steam Generator water level sensors are Rosemount transmitters which are included in the Rosemount program. The technical justification for

extending the surveillance interval for Rosemount transmitters is provided in the Methodology Section of this evaluation.

A channel check is performed monthly which provides a high degree of confidence with regard to the channel's operability.

Therefore, extending this surveillance by 94 days is acceptable.

33.E Section 4.3.3.5.1, Table 4.3-6 Remote Shutdown Monitoring Instrumentation - Functional Unit 6 - Auxiliary Feedwater Flow Rate

An extension of 95 days is required from its present due date of June 27, 1993.

The surveillance data (8-20-91, 2-28-91, 6-6-89, 11-18-87, 7-31-86) for the subject instrumentation were reviewed to determine if "as-found" values exceeded the acceptance criteria limits. Two Instrument Calibration Reviews (ICR Nos. 89-16 & 91-15) were generated because the as-found data was outside the allowable range. ICR 89-16 determined the associated drift with transmitter 3FWA*FT33C was a first-time occurrence. The transmitter was subsequently retested, and declared operable. ICR 91-15 documented that the zero flow data point exceeded acceptance criteria for transmitters 3FWA*FT51 A & D. All other flow points were acceptable. The transmitter was retested and placed back in service. No other problems have been encountered.

These auxiliary feedwater instrument loops provide analog indication only and are not utilized for interlocking or trip functions. Operators use auxiliary feedwater flow indication in the main control room and on the auxiliary shutdown panel to determine pump performance. In addition to these flow indicators, operators also utilize pump motor amps and steam generator narrow-range level indication to verify the pumps are operating. A monthly channel check is also performed to verify functionality.

Based on historical data, it is anticipated that auxiliary feedwater flow transmitter drift for the proposed surveillance interval extension of 89 days is acceptable.

33.F Section 4.3.3.5.1, Table 4.3.6 - Remote Shutdown Monitoring Instrumentations - Functional Unit 9 - Reactor Coolant System Pressure (Wide-Range)

An extension of 27 days is required from its present due date of September 3, 1993.

When in plant modes that require accident monitoring instrumentation to be operable, operability is demonstrated by a monthly Channel Check. A review of the surveillance data (3/31/87, 1/10/88, 6/6/89, 3/28/91 &

11/7/91) from procedure 3442J01, "RCS WIDE RANGE PRESSURE," from the beginning of commercial operation shows only one instance of an instrument being out of allowable calibration range. An auxiliary shutdown panel pressure indicator was outside calibration allowable range at one calibration point. On the basis of good surveillance history, the primary concern of this extended channel calibration interval is sensor drift.

Surveillance procedure 3442J01 identifies four pressure transmitters used to measure the RCS pressure. The calibration history of the four pressure transmitters was reviewed from the beginning of commercial operation. Sensor drift was determined by comparing "as found" with "as left" calibration records, calculating a drift rate and multiplying the calculated drift rate by the 23.5 month proposed interval between transmitter calibrations. When a drift rate was calculated from 7-month and 8-month calibration interval records and then multiplied by 23.5 months, the resultant calculated drift was not within the acceptance criterion. However, when the same calculations were applied to records for a 19-month and a 22-month calibration interval, the calculated drift was well within the acceptance criterion.

Our conclusion is that for short calibration intervals, "as found" and "as left" calibration records may erroneously infer a high sensor drift rate due to errors such as calibration instrumentation inaccuracies and ambient temperature differences. Therefore, the long-term calibration records are more valid for the calculation of instrument drift. Based upon the above history and analysis, the proposed 27-day extension of the RCS wide-range pressure calibration is acceptable.

34. 4.3.3.5.2 Auxiliary Shutdown Panel Operability Test

An extension of 94 days is required from its present due date of July 28, 1993.

The surveillance procedure requires demonstration of transfer of control and operation of devices listed on the associated surveillance forms from the main control board to the auxiliary shutdown panel. Instrument drift is not an issue for this surveillance.

A review of 4 past surveillance (from Commercial Operation) shows only two incidents where valves did not operate as designed. The surveillance that was approved July 7, 1989 had valves that did not show correct valve indication and would not close initially. A recheck of these valves resulted in correct operation. The other incident involved a bent terminal lug that resulted in a plant incident report (PIR). The PIR initiated a memo that warns about the potential problem with two specific types of switches from a signal manufacturer. It appears to be a one-time event that has been adequately addressed.

Therefore, based on historical data and the fact that instrument drift is not an issue for this surveillance, the 94-day extension for the eighteen-month surveillance is acceptable.

35.A Section 4.3.36, Table 4.3-7 - Accident Monitoring Instrumentation Surveillance Requirements - Item 4 - Reactor Coolant Pressure - Wide-Range

An extension of 27 days is required from its present due date of September 3, 1993.

When in plant modes that require accident monitoring instrumentation to be operable, operability is demonstrated by a monthly Channel Check. A review of the surveillance data (3/31/87, 1/10/88, 6/6/89, 3/28/91, & 11/7/91) from procedure 3442J01, "RCS WIDE-RANGE PRESSURE," from the beginning of commercial operation shows only one instance of an instrument being out of allowable calibration range. An auxiliary shutdown panel pressure indicator was outside calibration allowable range at one calibration point. On the basis of good surveillance history, the primary concern of this extended channel calibration interval is sensor drift.

Surveillance procedure 3442J01 identifies four pressure transmitters used to measure RCS pressure. The calibration history of the four pressure transmitters was reviewed from the beginning of commercial operation. Sensor drift was determined by comparing "as found" with "as left" calibration records, calculating a drift rate and multiplying the calculated drift rate by the 23.5 month proposed interval between transmitter calibrations. When a drift rate was calculated from 7-month and 8-month calibration interval records and then multiplied by 23.5 months, the resultant calculated drift was not within the acceptance criterion. However, when the same calculations were applied to records for a 19-month and a 22-month calibration interval, the calculated drift was well within the acceptance criterion.

Our conclusion is that for short calibration intervals, as found and as left calibration records may erroneously infer a high sensor drift rate due to errors such as calibration instrumentation inaccuracies and ambient temperature differences. Therefore, the long-term calibration records are more valid for the calculation of instrument drift. Based upon the above history and analysis, the proposed 27-day extension of the RCS wide-range pressure calibration is acceptable.

35.B Section 4.3.3.6, Table 4.3-7 - Accident Monitoring Instrumentation Surveillance Requirements - Item 5 Pressurizer Water Level

An extension of 92 days is required from its present due date of June 30, 1993.

The level sensors for this surveillance are monitored by the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, a monthly channel check is performed for these instrument loops. This monthly channel check provides a high degree of confidence with regard to the operability of the instrument loop.

Therefore, based on transmitters being included in the Rosemount program and the monthly channel check, extending the surveillance interval by 92 days is acceptable.

35.C Section 4.3.3.6, Table 4.3-7 Accident Monitoring Instrumentation Surveillance Requirements - Item 6 - Steam Line Pressure

An extension of 66 days is required from its present due date of July 26, 1993.

The pressure sensors for this surveillance are Rosemount transmitters that are included in the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, a monthly channel check is performed for these instrument loops. This monthly channel check provides a high degree of confidence with regard to the operability of the instrument loop.

Therefore, based on transmitters being included in the Rosemount program and the monthly channel check, extending the surveillance interval by 66 days is acceptable.

35.D Section 4.3.3.6, Table 4.3-7 Accident Monitoring Instrumentation Surveillance Requirements - Item 7 Steam Generator Water Level - Narrow-Range

An extension of 94 days is required from its present due date of June 28, 1993.

The pressure sensors for this surveillance are monitored by the Rosemount program described in the Methodology Section of this evaluation. The Rosemount program will ensure that sensor drift is reviewed during the extended surveillance interval. In addition, a monthly channel check is performed for these instrument loops. This monthly channel check provides a high degree of confidence with regard to the operability of the instrument loop.

Therefore, based on transmitters being included in the Rosemount program and the monthly channel check, extending the surveillance interval by 94 days is acceptable.

35.E Section 4.3.3.6, Table 4.3-7 - Accident Monitoring Instrumentation Surveillance Requirements - Item 8 Steam Generator Water Level - Wide Range

An extension of 83 days is required from its present due date of July 9, 1993.

The surveillance calibration data of the last three refueling outages were reviewed. All "As-found" data except one transmitter were within their respective allowable ranges. One surveillance data shows that one transmitter was slightly out of allowable range for two mid-points of five calibration points. Allowance for additional drift due to the surveillance extension of 83 days will still project the total instrument calibration error to be within the allowable range.

In addition, a monthly channel check is performed for these instruments. This monthly channel check provides a high degree of confidence with regard to the operability of the instruments.

Therefore, based on the historical calibration test data and the monthly channel check, extending the surveillance interval by 83 days is acceptable.

35.F Section 4.3.3.6, Table 4.3-7 - Accident Monitoring Instrumentation Surveillance Requirements - Item 11 - Auxiliary Feedwater Flow Rate

An extension of 95 days is required from its present due date of June 27, 1993.

The surveillance data (8-20-91, 2-28-91, 6-6-89, 11-18-87, 7-31-86) for the subject instrumentation were reviewed to determine if "as-found" values exceeded the acceptance criterion limits. Two Instrument Calibration Reviews (ICR Nos. 89-16 & 91-15) were generated because the as-found data was outside the allowable range. ICR 89-16 determined the associated drift with transmitter 3FWA*FT33C was a first-time occurrence. The transmitter was subsequently retested, and declared operable. ICR 91-15 documented that the zero flow data point exceeded the acceptance criterion for transmitters 3FWA*FT51 A&D. All other flow points were acceptable. The transmitter was retested and placed back in service. No other problems have been encountered.

These auxiliary feedwater instrument loops provide analog indication only and are not utilized for interlocking or trip functions. Operators use auxiliary feedwater flow indication in the main control room and on the auxiliary shutdown panel to determine pump performance. In addition to these flow indicators, operators also utilize pump motor amps and steam generator narrow-range level indication to verify the pumps are operating. A monthly channel check is also performed to verify functionality.

Based on historical data, it is anticipated that auxiliary feedwater flow transmitter drift for the proposed surveillance interval extension of 95 days is acceptable.

35.G Section 4.3.3.6, Table 4.3-7 Accident Monitoring Instrumentation Surveillance Requirements - Item 12, Reactor Coolant System Subcooling Margin Monitor & Item 14, Core Exit Thermocouples

An extension of 31 days is required from its present due date of August 30, 1993.

The surveillance calibration data of the last three refueling outages were reviewed. All "as-found" data were within the acceptance criterion except for three thermocouples (T/C's). However, even with these three T/C's, the Technical Specification requirement of Table 3.3-10 of 4 core exit T/C's per quadrant was met.

A review of the past calibration data shows that even allowing for additional drift due to the 31-day surveillance extension, the projected instrument error will still be within its acceptance criterion. Also, a monthly channel check is performed for these instruments which provides a high degree of confidence with regard to the functionality of these instruments.

Therefore, extending the surveillance interval by 31 days is acceptable.

35.H Section 4.3.36, Table 4.3-7 - Accident Monitoring Instrumentation Surveillance Requirements - Item 13 - Containment Water level (Wide-Range)

An extension of 89 days is required from its present due date of July 3, 1993.

A review of the past five surveillance (8-21-91, 3-13-91, 5-17-89, 11-8-87 & 8-7-86) for Containment Water Level-Wide Range was performed. Based on the "As-Found" and "As-Left" data for the level transmitters and their indicators, the total expected drift included the additional drift due to the 89-day surveillance extension, will still be within their respective acceptance criteria.

In addition, a monthly channel check is performed for these instruments. This monthly channel check provides a high degree of confidence with regard to the operability of the instruments.

Therefore, based on the historical calibration test data and the monthly channel check, extending the surveillance interval by 89 days is acceptable.

35.I Section 4.3.3.6, Table 4.3-7 - Accident Monitoring Instrumentation Surveillance Requirements, Item 16 - Containment Area High-Range Radiation Monitor

An extension of 88 days is required from its present due date of July 4, 1993.

A review of the past five surveillances (8-22-91, 2-7-91, 6-26-89, 11-24-87 & 3-18-87) for the High-Range Radiation Monitors was performed. Instrument Calibration Review (ICR) No. 91-5 determined 3 RMS*05A "as-found" data was not within acceptance criteria. The ICR determined there was slight drift. It appears to be a one-time occurrence since there is no history of recurrence. Therefore, based on the acceptability of the past surveillance data, extending this surveillance by 88 days is acceptable.

36. Section 4.3.3.38.C - Loose-Part Detection System, Channel Calibration

An extension of 40 days is required from its present due date of August 21, 1993.

The channel calibration of the Loose-Part Detection System verifies the following:

1) Hammer Channel Window Circuit is functional
2) System switches from normal mode to maintenance data acquisition mode.

3) Damped sinusoidal wave duration is < 200 m sec.
4) Damped sinusoidal wave is between 0.5 through 100 g's peak.
5) Damped sinusoidal were leading edge 0 crossing frequency is between 0.5 and 8 khz.

The acceptance criteria for the last three channel calibrations (10-22-91, 7-7-89 & 1-15-88) have been met. In addition, the performance of daily channel checks, monthly analog channel operational tests provides a high degree of confidence to the operability of the instrument channel. If during the performance of channel checks, analog channel operational tests, or channel calibrations one or more Loose-Part Detection System channels is inoperable for more than 30 days, NNECO is required to 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.

Therefore, based on past surveillance, the daily channel check, and the monthly analog channel operational tests, extending the surveillance by 40 days is acceptable.

37. Section 4.4.6.1.B - Containment Drain Sump Level and Pumps Capacity Monitoring System-Channel Calibration

Evaluation

An extension of 97 days is required from its present due date of June 26, 1993.

The channel calibration for this system can be extended for 97 days because the containment sump level and pumped capacity/containment sump flowrate is calculated each shift per control room surveillance SP 3570.1. The acceptance criterion for the control room surveillance includes an availability requirement to check that the associated containment sump pump is running, and a parameter limit verification to ensure that RCS unidentified leakage is < 1 gpm. If acceptance limits are exceeded, corrective action is initiated. Therefore, extending this surveillance by 97 days is acceptable.

38. Section 4.4.9.3.1.B - PORV Channel Calibration

An extension of 27 days is required from its present due date of September 3, 1993.

When in plant modes that require each PORV to be operable, operability is demonstrated by a monthly analog channel operational test. A review of the applicable surveillance procedure 3442J01 "RCS WIDE-RANGE PRESSURE" from the beginning of commercial operation (3/31/87, 1/10/88, 6/6/89, 3/28/91, 11/7/91) shows no PORV actuation related instrumentation being out of allowable calibration range. Therefore, on the basis of good surveillance history and the continued channel operability demonstrated by analog channel operational tests, the primary concern of this extended channel calibration interval is sensor drift.

Surveillance procedure 3442J01 identifies four pressure transmitters used to measure RCS pressure. The calibration history of the four pressure transmitters was reviewed from the beginning of commercial operation. Sensor drift was determined by comparing as found with as left calibration records, calculating a drift rate and multiplying the calculated drift rate by the 23.5-month proposed interval between transmitter calibrations. When a drift rate was calculated from 7-month and 8-month calibration interval records and then multiplied by 23.5 months, the resultant calculated drift was not within the acceptance criterion. However, when the same calculations were applied to records for a 19-month and a 22-month calibration interval, the calculated drift was well within the acceptance criterion.

Our conclusion is that for short calibration intervals, "as found" and "as left" calibration records may erroneously infer a high sensor drift

rate due to errors such as calibration instrumentation inaccuracies and ambient temperature differences. Therefore, the long-term calibration records are more valid for the calculation of instrument drift. Based upon the above history and analysis, the proposed 27-day extension of the RCS wide-range pressure calibration is acceptable.

39. Section 4.4.11.2 - Reactor Coolant System Vent Path

An extension of 7 days is required from its present due date of September 23, 1993.

Surveillance verifies valve operability, flow, lineup and stroke time. Instrumentation drift is not an issue for this surveillance. A review of the last surveillance shows no failures have occurred.

Therefore, extending this surveillance by 7 days is acceptable.

40. Section 4.5.2.d.1 - RHR Interlock

An extension of 27 days is required from its present due date of September 3, 1993.

When in plant modes that require the residual heat removal (RHR) function to be operable, operability is demonstrated by a RHR valve position verification performed each 12 hours. A review of the surveillance data from procedure 3442J01 "RCS WIDE-RANGE PRESSURE" from the beginning of commercial operation (3/31/87, 1/10/88, 6/6/89, 3/28/91, 11/7/91) has revealed no instances of RHR interlock related instrumentation being out of allowable calibration range.

Therefore, based on good historical data, the proposed 27-day extension of the RHR interlock actuation verification is acceptable.

41. 4.8.1.1.2.g.12 Auto. Load Sequence Timer

An extension of 20 days is required from its present due date of September 10, 1993.

The past three Technical specification surveillances have been reviewed and no failures were noted. Timing cards are checked as part of the surveillance in accordance with setting sheets and do not require adjustments due to component drift. The Sequencer autotest feature continuously checks vital functions of the Sequencers and alarms to a main control board in the event of component failure.

Therefore, based on the historical data, the fact that the Sequencers are self-checking and alarming on failure, an extension of the 18-month surveillance by 20 days is acceptable.

42. 4.8.2.1.c, d, e, f 125V-Battery and Charger Operability Tests

An extension of 104 days is required from its present due date of June 27, 1993

There are four Class 1E station batteries. They are manufactured by GNB, lead-calcium type NCX batteries, each located in their own rooms. Each are 60-cell batteries. The batteries are maintained in a fully charged condition by their associated battery chargers (float charge).

Weekly surveillance inspections require pilot cell electrolyte level, cell voltage, specific gravity, charging current checks, total battery terminal voltage checks, and inverter and rectifier output checks.

Eighteen-month surveillance inspections require a review of the cells, cell plates, and battery racks for visual indication of physical damage or abnormal deterioration. Also cell-to-cell and terminal connections are inspected to show they are clean, tight, and coated with anticorrosive material and that the resistance for connections are less than or equal to 150 micro-ohms.

A sixty-month surveillance interval requires performance of a discharge test to verify that the capacity of the battery is at least 80% of the manufacturer's rating. At 80% of manufacturer's published capacity, the battery shows an increasing rate of deterioration.

A review of weekly surveillances (last two years), last refuel surveillance, and last performance surveillances reveal satisfactory results with the only exceptions being inverters out for periodic maintenance. Battery data is fairly consistent and within the acceptable parameters. The weekly performance tests provide a high degree of confidence with regard to the operability of the batteries.

Therefore, based on the weekly and quarterly tests demonstrating the operability of the batteries, and the relative insignificance of the 60-month test, extending these surveillances by 104 days is acceptable.

43. Section 4.8.4.1 Containment Penetration Overcurrent Protection Devices

An extension of 81 days is required from its present due date of July 11, 1993.

A Probabilistic Risk Assessment Study concludes an insignificant risk increase for the following reasons:

1. Past surveillance data indicate low failure rates.

2. The event of containment penetration overheating failure, by itself, does not constitute a public risk (other events leading to

a fission product release to the containment must occur to pose a public risk - low event frequency).

3. Existence of backup circuit breakers (i.e. redundancy)

Therefore, the proposed 81-days extension of containment penetration overcurrent protection devices surveillance is acceptable.