INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Containment					
i. Purge & Exhaust Isolation	3	6	$\leq$ 220 mr/hr	10^{-1} - 10^{4} mr/hr	16
b. Containment Area High Range	2	1, 2, 3, & 4	$\leq$ 10 R/hr	1 - 10^{8} R/hr	30
2. PROCESS MONITORS					
a. Containment					
i. Gaseous Activity					
a) RCS Leakage Detection	1	1, 2, 3, & 4	Not Applicable	1 - 10^{6} cpm	14
ii. Particulate Activity					
a) RCS Leakage Detection	1	1, 2, 3, & 4	Not Applicable	1 - 10^{6} cpm	14
b. ~~Noble Gas~~ Effluent Monitors					
i. Main Vent Wide Range					
a) NOBLE GAS	1	1, 2, 3, & 4	*	10^{-7} to 10^{+5} µCi/cc	30
b) IODINE SAMPLER	1	1, 2, 3, & 4	NOT APPLICABLE	NOT APPLICABLE	30
c) PARTICULATE SAMPLER	1	1, 2, 3, & 4	NOT APPLICABLE	NOT APPLICABLE	30

*Alarm setpoint to be specified in a controlled document (e.g., setpoint control manual)

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. AREA MONITORS				
a. Containment				
i. Purge & Exhaust Isolation	S	R	M	6
b. Containment Area High Range	S	R	M	1, 2, 3, & 4
2. PROCESS MONITORS				
a. Containment				
i. Gaseous Activity				
a) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
b. ~~Noble Gas~~ Effluent Monitor				
i. Main Vent Wide Range				
a) NOBLE GAS	S	R	M	1, 2, 3, & 4
b) IODINE SAMPLER	M	NOT APPLICABLE	NOT APPLICABLE	1, 2, 3, & 4
c) PARTICULATE SAMPLER	M	NOT APPLICABLE	NOT APPLICABLE	1, 2, 3, & 4

TABLE 3.3-11

FIRE DETECTION INSTRUMENTS

UNIT 1

INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE		
	HEAT	FLAME	SMOKE
Spent Fuel Pool Heat Exchanger Room 320			3
Main Control Room 405			6
Control Room Vent Duct "A"			2
Main Plant Exhaust Equip Room 524			8
Control Room HVAC Equip Room 512			4
27' VALVE ALLEY ~~Passage~~ and Filter Room 323			3
SW CNTMT CABLE TRAYS** ~~Unit 1 Cont SW Elec Pen Area*~~	~~4~~		
NE CNTMT CABLE TRAYS** ~~Unit 1 Cont NE Elec Pen Area*~~	~~4~~		
CNTMT ~~Unit 1 Cont~~ East RCPS*	16		
CNTMT ~~Unit 1 Cont~~ West RCPS*	16		
~~Control Room Vent Duct "B"~~ (MOVED TO U-2 T.S.)			~~1~~
West Passage 319, Elev 27'-0" AND VESTIBULE 325			6
E/W Corridor 104, 100 and ~~106~~ - Elev (-) 10'-0"			5
Intake Structure, UNIT 1 SIDE			~~48~~ 24
~~Unit 1~~ Waste Proc Control Room 111			1
Coolant Waste Rec/Mon TK Pp Room 110			2
11 Diesel Generator**	2		
12 Diesel Generator**	2		
~~Unit 1~~ Cable Tunnel Elev 83'-0"			4
Cable Chase 1A			1
Cable Chase 1B			1
~~Unit 1~~ C.S.R. & Cable Chase 1C** ROOM 306	2		10
CNTMT ~~Unit 1 Personnel~~ Access Area Room 525			3
~~Unit 1~~ Switchgear Elev 27'-0" Room 317**			6
~~Unit 1~~ Switchgear Elev 45'-0" Room 430**			8
~~Unit 1~~ Elec Equip Room 529			3
~~Unit 1~~ East Elec Pen Room 429			3
~~Unit 1~~ West Elec Pen Room 423			3
~~Unit 1~~ Refueling Water TK Pump Room 439			2
~~Unit 1~~ East Piping Pen Rooms 227 and 316		3	5
~~Unit 1~~ Purge Air Supply Room 318			2
~~Unit 1~~ West Piping Pen Rooms 221 and 326		2	3
~~Unit 1~~ Letdown Heat Exchanger Room 324			1
~~Unit 1~~ Volume Control TK Room 218			1
~~Unit 1~~ ECCS Pump Rooms 118 and 122			7
~~Unit 1~~ Coolant Waste Rec TK Room 114 and 112		4	
~~Unit 1~~ ECCS Pump Rooms 119 and 123			7
~~Unit 1~~ Elev 27'-0" Swgr Room Vent Duct ROOM 317	1		
~~Unit 1~~ Elev 45'-0" Swgr Room Vent Duct ROOM 430	1		

*Detection instruments located within the containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

**Detectors which automatically actuate fire suppression systems.

†MONITORED BY 4 PROTECTO WIRES

TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS

UNIT 1

INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE		
	HEAT	FLAME	SMOKE
Main Steam Piping Room 315A			6
Hot Machine Shop 223			4
Battery Room ~~304 and 301~~ 301, 304 AND CORRIDOR 300			3
Misc. Waste ~~Monitor~~ Tank Room 113 RECEIVER			1
Charging Pump Room 115			3
East Piping Room 428			7
~~North South Corridor 410~~			~~4~~
Spent Fuel Pool ~~530~~ AREA ROOMS 530, 531 AND 533		5	17
Radiation ~~Chem., Lab Office, Rm. 513,~~ AND CHEMISTRY AREAS ROOMS ~~518 and 519, Corridor 521, 522 and~~ 586 - 590, 592, 593, ~~534~~ 595 - 597 AND CORRIDORS 521 AND 523	~~1~~		~~16~~ 20
Cask and Equipment Loading Area Rm. ~~419,~~ 413, 419 ~~420, 425, and 426~~ 420 AND 424 - 426		3	22
Spent Fuel Vent Equip. Room 520			2
Component Cool Room 228			8
~~Radiation Exchange~~ Vent Equip. Room 225			4
Boric Hold Tank & Pump Room 217			2
Reactor ~~Cooling~~ Pump Room 216 COOLANT MAKE-UP			1
Hot Instrument Shop Room 222			2
Service Water Room 226		3	6
~~East Piping Room 224~~ 12 MSIV HYD AREA ROOM 224			10
Corridor 200, ~~209, and 210~~ 202, 209, 210, 212 AND 219			13
Solid Waste Room 418 and 417		2	3
Spent Resin Metering Tank Room 441			1
Waste Gas Equipment Room 207 AND 208			~~1~~ 3
Auxiliary Feed ~~Tank~~ Room 603 PUMP			2
Misc. Waste Equipment Room 536 AND 537			3
~~Corridor 308~~			~~6~~
N/S Corridor Room 410			4
N/S Corridor Room 308			6
Degasifier Pump Room 220			1
~~Waste Gas Compressor Room 208~~			~~2~~

duplicate

EXHAUST

duplicate

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 The main vent iodine and particulate sampler shall be OPERABLE.

APPLICABILITY: All MODES.

ACTION:

a. With the main vent iodine and particulate sampler inoperable, initiate the preplanned alternate method of sampling the main vent for the appropriate parameter(s) within 72 hours; and

   1. either restore the inoperable sampler to OPERABLE status within 7 days of the event, or

   2. prepare and submit a special report to the Commission pursuant to Specification 6.9.2 within 30 days following the event, outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 The main vent iodine and particulate sampler shall be demonstrated OPERABLE by comparing samples independently drawn from the main vent at least once per month.

DELETE

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of:

1. $\leq L_a$ (346,000 SCCM), 0.20 percent by weight of the containment air per 24 hours at P_a, 50 psig, or

2. $\leq L_t$ (61,600 SCCM), 0.058 percent by weight of the containment air per 24 hours at a reduced pressure of P_t, 25 psig.

b. A combined leakage rate of $\leq$ 0.60 L_a (207,600 SCCM), for all penetrations and valves subject to Type B and C tests when pressurized to P_a.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding 0.75 L_a (259,500 SCCM) or 0.75 L_t (46,200 SCCM), as applicable, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding 0.60 L_a, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50 using the methods and provisions of ANSI N34.4 - 1972:

a. Three Type A tests (overall Integrated Containment Leakage Rate) shall be conducted at 40 + 10 month intervals during shutdown at either P_a (50 psig) or at P_t (25 psig) during each 10-year service period. ~~The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.*~~

~~*The third test of the first 10-year service period shall be conducted during spring 1985 Unit 1 refueling outage.~~

SURVEILLANCE REQUIREMENTS (Continued)

In addition, determining that the average of the normalized lift-off forces for each sample population (hoop, vertical, dome) is equal to or greater than the required average prestress level; 536 kips for hoop tendons, 622 kips for vertical tendons, and 555 kips for dome tendons (reference Figures 4.6-1, -2, and -3). If the average is below the required average prestress force, it shall be considered as evidence of possible abnormal degradation of the containment structure.

b. Removing one wire from each of a dome, vertical and hoop tendon checked for lift off force, and determining over the entire length of the wire:

1. The extent of corrosion, cracks, or other damage. The presence of abnormal corrosion, cracks or other damage shall be considered evidence of possible abnormal degradation of the containment structure.

2. A minimum tensile strength value of 240 Ksi (guaranteed ultimate strength of the tendon material) for at least three wire samples (one from each end and one at mid-length) cut from each removed wire. Failure of any one of the wire samples to meet the minimum tensile strength test is evidence of possible abnormal degradation of the containment structure.

c. Perform a chemical analysis to detect changes in the chemical properties of the sheath filler grease. Any unusual changes in physical appearance or chemical properties that could adversely affect the ability of the filler grease to adhere to the tendon wires or otherwise inhibit corrosion shall be reported to the Commission pursuant to Specification 6.9.2 within the next 30 days.

4.6.1.6.2 End Anchorages and Adjacent Concrete Surfaces. The structural integrity of the end anchorages and adjacent concrete surfaces shall be demonstrated by determining through inspection OF A REPRESENTATIVE SAMPLE OF TENDONS (REFERENCE SPECIFICATION 4.6.1.6.1) that no apparent changes have occurred in the visual appearance of the end anchorages OR THEIR ADJACENT concrete exterior surfaces. ~~or the~~ PRE-SELECTED concrete crack patterns adjacent to ~~the~~ end anchorages. ALSO, Inspections of the ~~concrete~~ shall be performed during the Type A containment leakage rate tests (reference Specification 4.6.1.2) while the containment is at its maximum test pressure.

SEE ATTACHED SHEET FOR CLARIFICATION

4.6.1.6.3 Liner Plate. The structural integrity of the containment liner plate shall be determined during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2) by a visual inspection of the plate and verifying no apparent changes in appearance or other abnormal degradation.

4.6.1.6.4 Reports. Any abnormal degradation of the containment structure detected during the above required tests and inspections shall be reported to the Commission pursuant to Specification 6.9.2 within the next 30 days. This report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective actions taken.

4.6.1.6.2 END ANCHORAGES AND ADJACENT CONCRETE SURFACES. THE STRUCTURAL INTEGRITY OF THE END ANCHORAGES AND ADJACENT CONCRETE SURFACES SHALL BE DEMONSTRATED BY DETERMINING THROUGH INSPECTION OF A REPRESENTATIVE SAMPLE OF TENDONS (REFERENCE SPECIFICATION 4.6.1.6.1) THAT NO APPARENT CHANGES HAVE OCCURRED IN THE VISUAL APPEARANCE OF THE END ANCHORAGES OR THEIR ADJACENT CONCRETE EXTERIOR SURFACES. ALSO, INSPECTIONS OF THE PRE-SELECTED CONCRETE CRACK PATTERNS ADJACENT TO END ANCHORAGES SHALL BE PERFORMED DURING THE TYPE A CONTAINMENT LEAKAGE RATE TESTS (REFERENCE SPECIFICATION 4.6.1.2) WHILE THE CONTAINMENT IS AT ITS MAXIMUM TEST PRESSURE.

INSERT FOR PRESENT WORDING ON PAGE 3/4 6-9

CONTAINMENT SYSTEMS

3/4.6.5 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

3.6.5.1 Two independent containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

b. With both hydrogen analyzers inoperable, restore at least one inoperable analyzer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

~~4.6.5.1 Each hydrogen analyzer shall be demonstrated OPERABLE at least biweekly on a STAGGERED TEST BASIS by drawing a sample from the Waste Gas System through the hydrogen analyzer.~~

4.6.5.~~1~~2 Each hydrogen analyzer shall be demonstrated OPERABLE at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gases in accordance with manufacturers' recommendations.

~~During the period from May 15 to July 15, 1983, one hydrogen analyzer may be made inoperable, at any given time, for the purpose of replacing system solenoid valves with environmentally qualified valves. During this time, Specification 3.0.4 is not applicable to this requirement.~~

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Two auxiliary feedwater trains consisting of one steam-driven and one motor-driven pump and associated flow paths capable of automatically initiating flow shall be OPERABLE.* (An OPERABLE steam-driven train shall consist of one pump aligned for automatic flow initiation and one pump aligned in standby.)**

APPLICABILITY: MODES 1, 2 and 3

ACTION:

a. With any single pump inoperable, perform the following:

1. With No. 13 motor-driven pump inoperable:

(a) Align the standby steam-driven pump to automatic initiating status within 72 hours or be in HOT SHUTDOWN within the next 12 hours, and

(b) Restore No. 13 motor-driven pump to OPERABLE status within the next ~~14~~ 7 days or be in HOT SHUTDOWN within the next 12 hours.

2. With one steam-driven pump inoperable:

(a) Align the OPERABLE steam-driven pump to automatic initiating status within 72 hours or be in HOT SHUTDOWN within the next 12 hours, and

(b) Restore the inoperable steam-driven pump to standby status (or automatic initiating status if the other steam-driven pump is to be placed in standby) within the next ~~30~~ 7 days or be in HOT SHUTDOWN within the next 12 hours.

b. With any two pumps inoperable:

1. Verify that the remaining pump is aligned to automatic initiating status within one hour, and

2. Verify within one hour that No. 23 motor-driven pump is OPERABLE and valve 2-CV-4550 has been exercised within the last 30 days, and

3. Restore a second pump to automatic initiating state ~~s~~ within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

~~*For a period of up to 30 days following the entering into Mode 3 (up through and including MODE 1 operation) from the Cycle 7 Unit 1 startup the automatic actuation features of the auxiliary feedwater system may be inoperable.~~

**A ~~stand~~ by pump shall be available for operation but aligned so that automatic flow initiation is defeated upon AFAS actuation.

SURVEILLANCE REQUIREMENTS (Continued)

characteristics not required) and each auxiliary feedwater pump automatically starts upon receipt of each AFAS test signal, and

2. Verifying that the auxiliary feedwater system is capable of providing a minimum of 200 gpm nominal flow to each flow leg.

SURVEILLANCE REQUIREMENTS (Continued)

a. At least once per 31 days on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the day fuel tank.

2. Verifying the fuel level in the fuel storage tank.

3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.

4. Verifying the diesel starts from ambient condition and accelerates to at least 900 rpm in $\leq$ 10 seconds.

5. Verifying the generator is synchronized, loaded to $\geq$ 1250 kw, and operates for $\geq$ 60 minutes.

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

7. Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within $\pm$ 10% of its design interval.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within the acceptable limits specified in Table 1 of ASTM D975-68 when checked for viscosity, water and sediment.

c. At least once per 18 months by:

1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.

2. Verifying the generator capability to reject a load of $\geq$ ~~450~~ 500 hp without tripping.

3. Simulating a loss of offsite power in conjunction with a safety injection actuation test signal, and:

a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.

AMENDMENT NO

ELECTRICAL POWER SYSTEMS

D. C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.3 The following D.C. bus trains shall be energized and OPERABLE:
(see following page)

a. 125-volt D.C. bus No. 11, a 125-volt D.C. battery bank and a full capacity charger.

b. 125-volt D.C. bus No. 12, a 125-volt D.C. battery bank and a full capacity charger.

c. 125-volt D.C. bus No. 21, a 125-volt D.C. battery bank and a full capacity charger.

d. 125-volt D.C. bus No. 22, a 125-volt D.C. battery bank and a full capacity charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one 125-volt D.C. bus inoperable, restore the inoperable bus to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one 125-volt D.C. battery inoperable (and the associated 125-volt D.C. bus not being supplied by the Reserve Battery), except during surveillance testing per Specifications ~~4.8.2.3.2.c.2~~, 4.8.2.3.2.d, ~~and 4.8.2.3.2.f.~~ (.1):

1. Restore the inoperable battery to OPERABLE status within 2 hours, or replace the inoperable battery with the OPERABLE Reserve Battery within the next 2 hours, or

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

c. With both 125-volt D.C. battery chargers from the same D.C. bus inoperable:

1. Except when necessary during surveillance testing per Specification 4.8.2.3.2.d.1, restore at least one 125-volt D.C. battery charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

2. During surveillance testing per Specification 4.8.2.3.2.d.1, restore at least one 125-volt D.C. battery charger to OPERABLE status within 4 hours or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~d. With one 125-volt D.C. battery inoperable during surveillance testing of the battery per Specification 4.8.2.3.2.c.2 and 4.8.2.3.2.d.2, operation may continue provided the associated bus is being powered by an operable charger and reserve battery.~~

a. 125-volt D.C. bus No. 11, the associated 125-volt D.C. battery bank or as necessary the Reserve Battery, and one associated full capacity charger.

b. 125-volt D.C. bus No. 12, the associated 125-volt D.C. battery bank or as necessary the Reserve Battery, and one associated full capacity charger.

c. 125-volt D.C bus No. 21, the associated 125-volt D.C. battery bank or as necessary the Reserve Battery, and one associated full capacity charger.

d. 125-volt D.C. bus No. 22, the associated 125-volt D.C battery bank or as necessary the Reserve Battery, and one associated full capacity charger.

LIMITING CONDITION FOR OPERATION (Continued)

~~e. With one 125-volt D.C. battery inoperable during surveillance testing of the battery per Specification 4.8.2.3.2.f., operation may continue provided the associated bus is being powered by the Reserve Battery and an OPERABLE charger.~~

d. With single cells having a voltage decrease of more than 0.10 volts from the previous performance discharge test (4.8.2.3.2.f.) value, but still $\geq$ 2.10 volts per surveillance requirement 4.8.2.3.2.b.1., either restore/replace cells or replace the affected battery with the Reserve Battery within 24 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 125-volt battery bank and charger and the Reserve Battery shall be demonstrated OPERABLE;

a. At least once per 7 days by verifying that:

1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks.

2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level is $\geq$ 1.200.

3. The pilot cell voltage is $\geq$ 2.10 volts.

4. The overall battery voltage is $\geq$ 125 volts.

b. At least once per 92 days by verifying that:

1. The voltage of each connected cell is $\geq$ 2.10 volts under float charge and has not decreased more than 0.10 volts from the value observed during the latest performance discharge test (4.8.2.3.2.f).

2. The specific gravity, corrected to 77°F and full electrolyte level, of each connected cell is $\geq$ 1.200 and has not decreased more than 0.02 from the value observed during the previous test.

3. The electrolyte level of each connected cell is between the minimum and maximum level indication marks.

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D. C. electrical equipment and busses shall be energized and OPERABLE:

2 - 125-volt D.C. busses, and
(one of which may be the Reserve Battery)
2 - 125-volt battery banks and chargers supplying the above D.C. busses.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of D.C. equipment and busses OPERABLE, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 125-volt D.C. busses shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 125-volt battery banks and chargers shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.
INSERT (A)

3/4.3.3.2 INCORE DETECTORS

The OPERABILITY of the incore detectors with the specified minimum complement of equipment ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution of the reactor core.

3/4.3.3.3 SEISMIC INSTRUMENTATION

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility and is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes", April 1974.

3/4.3.3.4. METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23 "Onsite Meteorological Programs", February 1972.

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criteria 19 of 10 CFR 50.

3/4.3.3.6 POST-ACCIDENT INSTRUMENTATION

The OPERABILITY of the post-accident instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Plants to Assess Plant Conditions During and Following an Accident," December 1975, and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations."

3/4.3.3.7 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to operability.

3/4.3.3.8 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION
IODINE AND PARTICULATE SAMPLER

The OPERABILITY of the Iodine and Particulate Sampler ensures that Iodine and Particulate samples can be obtained for analysis during and following an accident. The surveillance requirements ensure a high degree of availability.

MOVE TO B 3/4.3.3.1 (A)

The IODINE AND PARTICULATE samplers were installed to meet the requirements of NUREG-0737 Item II.F.1. The samplers' operation was not assumed in any accident analysis.

3/4.6.1.4 INTERNAL PRESSURE

The limitations on containment internal pressure ensure that 1) the containment structure is prevented from exceeding its design negative pressure differential with respect to the outside atmosphere of 3.0 psig and 2) the containment peak pressure does not exceed the design pressure of 50 psig during LOCA conditions.

The maximum peak pressure expected to be obtained from a LOCA event is 47.6 psig. The limit of 1.8 psig for initial positive containment pressure will limit the total pressure to 49.4 psig which is less than the design pressure and is consistent with the accident analyses.

3/4.6.1.5 AIR TEMPERATURE

The limitation on containment average air temperature ensures that the containment peak air temperature does not exceed the design temperature of 276°F during LOCA conditions. The containment temperature limit is consistent with the accident analyses.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the containment will withstand the maximum pressure of 47.6 psig in the event of a LOCA. The measurement of containment tendon lift off force, the visual and metallurgical examination of tendons, anchorages and liner and the Type A leakage tests are sufficient to demonstrate this capability.

The surveillance requirements for demonstrating the containment's structural integrity are ~~in compliance~~ CONSISTENT with the INTENT OF THE recommendations of Regulatory Guide 1.35 "Inservice Surveillance of Ungrouted Tendons in Prestressed Concrete Containment Structures", January 1976.

THE END ANCHORAGE CONCRETE EXTERIOR SURFACES ARE CHECKED VISUALLY FOR INDICATIONS OF ABNORMAL MATERIAL BEHAVIOR DURING TENDON SURVEILLANCE. INSPECTIONS OF PRE-SELECTED CONCRETE CRACK PATTERNS ARE PERFORMED DURING THE TYPE A CONTAINMENT LEAKAGE RATE TESTS, CONSISTENT WITH THE STRUCTURAL INTEGRITY TEST.

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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Containment					
i. Purge & Exhaust Isolation	3	6	$\leq$ 220 mr/hr	10^{-4} - 10^{4} mr/hr	16
b. Containment Area High Range	2	1, 2, 3 & 4	$\leq$ 10 R/hr	1 - 10^{8} R/hr	30
2. PROCESS MONITORS					
a. Containment					
i. Gaseous Activity					
a) RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	10^{1} - 10^{6} cpm	14
ii. Particulate Activity					
a) RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	10^{1} - 10^{6} cpm	14
b. ~~Noble Gas~~ Effluent Monitors					
i. Main Vent Wide Range					
a) NOBLE GAS	1	1, 2, 3 & 4	*	10^{-7} to 10^{5} uCi/cc	30
b) IODINE SAMPLER	1	1, 2, 3 & 4	NOT APPLICABLE	NOT APPLICABLE	30
c) PARTICULATE SAMPLER	1	1, 2, 3 & 4	NOT APPLICABLE	NOT APPLICABLE	30

*Alarm setpoint to be specified in a controlled document (e.g., setpoint control manual).

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. AREA MONITORS				
a. Containment				
i. Purge & Exhaust Isolation	S	R	M	6
b. Containment Area High Range	S	R	M	1, 2, 3, & 4
2. PROCESS MONITORS				
a. Containment				
i. Gaseous Activity				
a) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
b. ~~Noble Gas~~ Effluent Monitors				
i. Main Vent Wide Range	S	R	M	1, 2, 3, & 4
a) NOBLE GAS				
b) IODINE SAMPLER	M	NOT APPLICABLE	NOT APPLICABLE	1, 2, 3, & 4
c) PARTICULATE SAMPLER	M	NOT APPLICABLE	NOT APPLICABLE	1, 2, 3, & 4

TABLE 3.3-11

FIRE DETECTION INSTRUMENTS

UNIT 2

INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE*		
	HEAT	FLAME	SMOKE
~~Unit 2~~ East Elec Pen Room 409			3
~~Unit 2~~ West Elec Pen Room 414			3
~~Unit 2~~ Switchgear Elev 27'-0" Room 311**			6
~~Unit 2~~ Switchgear Elev 45'-0" Room 407**			8
~~Unit 2~~ Elec Equip Room 532			3
SW CNTMT CABLE TRAYS ~~Unit 2 Cont SE Elec Pen Area~~*	~~4~~		
NW CNTMT CABLE TRAYS ~~Unit 2 Cont NW Elec Pen Area~~*	~~4~~		
CNTMT ~~Unit 2 Cont~~ East RCPS*	16		
CNTMT ~~Unit 2 Cont~~ West RCPS*	16		
~~Unit 2~~ Main Plant Exh Equip Room 526			8
CNTMT ~~Unit 2 Personnel~~ Access Area Room 527			3
Cable Tunnel U-2 Elev 83'-0"			4
Cable Chase 2A			1
Cable Chase 2B			1
~~Unit 2~~ C.S.R. & Cable Chase 2C~~**~~ ROOM 302**	2		10
~~Unit 2~~ Letdown Heat Exchanger Room 322			1
~~Unit 2~~ Volume Control Tank Room 214			1
~~Unit 2~~ Cool Waste ~~Rec~~ TK Room 107 and 109 MONITOR		4	
~~Unit 2~~ ECCS Pump Rooms 101 and 120			7
~~Unit 2~~ Pump Room 108 Elev (-) 10'-0"			1
~~Unit 2~~ Intake Structure, UNIT 2 SIDE			~~48~~ 24
~~Unit 2~~ Elev 27'-0" Swgr Room Vent Duct ROOM 311	1		
~~Unit 2~~ Elev 45'-0" Swgr Room Vent Duct ROOM 407	1		
~~Unit 2~~ ECCS Pp Rooms 102 and ~~120~~ 121			7
21 Diesel Generator **	2		
~~Unit 2~~ Refueling Water Tk Pp Room 440.			2
~~Unit 2~~ East Pp Pen Rooms 206 and 310		3	5
~~Unit 2~~ Purge Air Supply Room 312			2
~~Unit 2~~ West Piping Pen Rooms 211 and 321		2	3
CABLE SPREADING ROOM VENT DUCT "B" (from U-1 T.S.)			1

*Detection instruments located within the containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

**Detectors which automatically actuate fire suppression systems.

+MONITORED BY 4 PROTECTO WIRES.

TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS

INSTRUMENT LOCATION	MINIMUM INSTRUMENT OPERABLE		
	HEAT	FLAME	SMOKE
Main Steam Piping Room 309			6
East Piping Area Room 203			10
Charging Pump Room 105			3
Battery Room 307, ~~and~~ 305 AND CORRIDOR 303			3
Misc. Waste Monitor Tank Room			1
East Piping Area Room 408			7
Component Cooling Room 201			9
Radiation Exchange Equip. Room 204			4
Boric Acid Tank and Pump Room 215			2
Reactor ~~Cooling~~ Pump Room 216A COOLANT MAKE-UP			2
Service Water Room 205		3	6
Auxiliary Feed Pump Room 605			2
Degasifier Pump Room			1

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 The main vent iodine and particulate sampler shall be OPERABLE.

APPLICABILITY: All MODES.

ACTION:

a. With the main vent iodine and particulate sampler inoperable, initiate the preplanned alternate method of sampling the main vent for the appropriate parameter(s) within 72 hours, and:

1. either restore the inoperable sampler to OPERABLE status within 7 days of the event,

2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 The main vent iodine and particulate sampler shall be demonstrated OPERABLE by comparing samples independently drawn from the main vent at least once per month.

DELETE

CONTAINMENT SYSTEMS

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of:

1. $\leq L_a$ (346,000 SCCM), 0.20 percent by weight of the containment air per 24 hours at P_a, 50 psig, or

2. $\leq L_t$ (44,600 SCCM), 0.042 percent by weight of the containment air per 24 hours at a reduced pressure of P_t, 25 psig.

b. A combined leakage rate of $\leq 0.60\ L_a$ (207,600 SCCM) for all penetrations and valves subject to Type B and C tests when pressurized to P_a.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75\ L_a$ (259,500 SCCM), or $0.75\ L_t$ (33,400 SCCM), as applicable, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4 - 1972:

a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at either P_a (50 psig) or at P_t (25 psig) during each 10-year service period. ~~The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.*~~

~~*The third test of the first 10-year service period shall be conducted during the fall 1985 Unit 2 refueling outage.~~

CONTAINMENT SYSTEMS

CONTAINMENT STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the structural integrity of the containment not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.6.1 Containment Tendons The containment tendons' structural integrity shall be demonstrated at the end of one, three and five years following the initial containment structural integrity test and at five year intervals thereafter. The tendons' structural integrity shall be demonstrated by a visual examination (to the extent practical and without dismantling load bearing components of the anchorage) of a representative sample of at least 21 tendons (6 dome, 5 vertical, and 10 hoop) and verifying no abnormal degradation. Unless there is evidence of abnormal degradation of the containment structure during the first three tests of the tendons, the number of tendons examined during subsequent tests may be reduced to a representative sample of at least 9 tendons (3 dome, 3 vertical and 3 hoop).

OF A REPRESENTATIVE SAMPLE OF TENDONS (REFERENCE SPECIFICATION 4.6.1.6.1)

4.6.1.6.2 End Anchorages and Adjacent Concrete Surfaces The structural integrity of the end anchorages and adjacent concrete surfaces shall be demonstrated by determining through inspection that no apparent changes have occurred in the visual appearance of the end anchorages OR THEIR ADJACENT concrete exterior surfaces. ~~or the~~ (PRE-SELECTED concrete crack patterns adjacent to ~~the~~ end anchorages) ALSO Inspections of the ~~concrete~~ shall be performed during the Type A containment leakage rate tests (reference Specification 4.6.1.2) while the containment is at its maximum test pressure.

SEE ATTACHED SHEET FOR CLARIFICATION

4.6.1.6.2 END ANCHORAGES AND ADJACENT CONCRETE SURFACES. THE STRUCTURAL INTEGRITY OF THE END ANCHORAGES AND ADJACENT CONCRETE SURFACES SHALL BE DEMONSTRATED BY DETERMINING THROUGH INSPECTION OF A REPRESENTATIVE SAMPLE OF TENDONS (REFERENCE SPECIFICATION 4.6.1.6.1) THAT NO APPARENT CHANGES HAVE OCCURRED IN THE VISUAL APPEARANCE OF THE END ANCHORAGES OR THEIR ADJACENT CONCRETE EXTERIOR SURFACES. ALSO, INSPECTIONS OF THE PRE-SELECTED CONCRETE CRACK PATTERNS ADJACENT TO END ANCHORAGES SHALL BE PERFORMED DURING THE TYPE A CONTAINMENT LEAKAGE RATE TESTS (REFERENCE SPECIFICATION 4.6.1.2) WHILE THE CONTAINMENT IS AT ITS MAXIMUM TEST PRESSURE.

INSERT FOR PRESENT WORDING ON PAGE 3/4 6-8

CONTAINMENT SYSTEMS

3/4.6.5 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

3.6.5.1 Two independent containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

b. With both hydrogen analyzers inoperable, restore at least one inoperable analyzer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

~~4.6.5.1 Each hydrogen analyzer shall be demonstrated OPERABLE at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gases in accordance with manufacturers' recommendations.~~

4.6.5.1 Each hydrogen analyzer shall be demonstrated OPERABLE at least biweekly on a STAGGERED TEST BASIS by drawing a sample from the Waste Gas System through the hydrogen analyzer indicator.

4.6.5.2 Each hydrogen analyzer shall be demonstrated OPERABLE at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gases in accordance with manufacturers' recommendations

~~*During the period from May 15 to July 15, 1983, one hydrogen analyzer may be made inoperable, at any given time, for the purpose of replacing system solenoid valves with environmentally qualified valves. During this time, Specification 3.0.4 is not applicable to this requirement.~~

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

c. Whenever a subsystem (a subsystem consisting of one pump, piping, valves and controls in the direct flow path) required for operability is inoperable for the performance of periodic testing (e.g. manual discharge valve closed for pump Total Dynamic Head test) a dedicated operator will be stationed at the local station with direct communication to the Control Room. Upon completion of any testing, the subsystem required for operability will be returned to its proper status and verified in its proper status by an independent operator check.

d. The requirements of Specification 3.0.4 are not applicable whenever one motor and one steam-driven pump (or two steam-driven pumps) are aligned for automatic flow initiation.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater flowpath shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying that each steam driven pump develops a Total Dynamic Head of $\geq$ 2800 ft. on recirculation flow. (If verification must be demonstrated during startup, surveillance testing shall be performed upon achieving an RCS temperature $\geq$ 300°F and prior to entering MODE 1).

2. Verifying that the motor driven pump develops a Total Dynamic Head of $\geq$ 3100 ft. on recirculation flow.

3. Cycling each testable, remote operated valve that is not in its operating position through at least one complete cycle.

4. Verifying that each valve (manual, power operated or automatic in the direct flow path is in its correct position.

b. Before entering MODE 3 after a COLD SHUTDOWN of at least 14 days by completing a flow test that verifies the flow path from the condensate storage tank to the steam generators.

c. At least once per 18 months by:

1. Verifying that each automatic valve in the flow path actuates to its correct position (verification of flow-modulating characteristics not required) and each auxiliary feedwater pump automatically starts upon receipt of each AFAS test signal, and

2. Verifying that the auxiliary feedwater system is capable of providing a minimum of 200 gpm nominal flow to each flow leg.

SURVEILLANCE REQUIREMENTS (Continued)

a. At least once per 31 days on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the day fuel tank.

2. Verifying the fuel level in the fuel storage tank.

3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.

4. Verifying the diesel starts from ambient condition and accelerates to at least 900 rpm in $\leq$ 10 seconds.

5. Verifying the generator is synchronized, loaded to $\geq$ 1250 kw, and operates for $\geq$ 60 minutes.

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

7. Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within $\pm$ 10% of its design interval.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within the acceptable limits specified in Table 1 of ASTM D975-68 when checked for viscosity, water and sediment.

c. At least once per 18 months by:

1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.

2. Verifying the generator capability to reject a load of $\geq$ ~~450~~ 500 hp without tripping.

3. Simulating a loss of offsite power in conjunction with a safety injection actuation test signal, and:

a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.

ELECTRICAL POWER SYSTEMS

D. C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.3 The following D.C. bus trains shall be energized and OPERABLE: (see following page)

a. ~~125-volt D.C. bus No. 11, a 125-volt D.C. battery bank and a full capacity charger.~~

b. ~~125-volt D.C. bus No. 12, a 125-volt D.C. battery bank and a full capacity charger.~~

c. ~~125-volt D.C. bus No. 21, a 125-volt D.C. battery bank and a full capacity charger.~~

d. ~~125-volt D.C. bus No. 22, a 125-volt D.C. battery bank and a full capacity charger.~~

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one 125-volt D.C. bus inoperable, restore the inoperable bus to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one 125-volt D.C. battery inoperable and the associated 125-volt D.C. bus not being supplied by the Reserve Battery except during surveillance testing per Specifications ~~4.8.2.3.2.c.2~~, 4.8.2.3.2.d ~~and 4.8.2.3.2.f.~~ (.1 ?)

1. Restore the inoperable battery to OPERABLE status within 2 hours, or replace the inoperable battery with the OPERABLE Reserve Battery within the next 2 hours, or

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

c. With both 125-volt D.C. battery chargers from the same D.C. bus inoperable:

1. Except when necessary during surveillance testing per Specification 4.8.2.3.2.d.1, restore at least one 125-volt D.C. battery charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

2. During surveillance testing per Specification 4.8.2.3.2.d.1, restore at least one 125-volt D.C. battery charger to OPERABLE status within 4 hours or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~d. With one 125-volt D.C. battery inoperable during surveillance testing of the battery per Specification 4.8.2.3.2.c.2 and 4.8.2.3.2.d.2, operation may continue provided the associated bus is being powered by an operable charger and reserve battery.~~

a. 125-volt D.C. bus No. 11, the associated 125-volt D.C. battery bank or as necessary the Reserve Battery, and one associated full capacity charger.
b. 125-volt D.C. bus No. 12, the associated 125-volt D.C. battery bank or as necessary the Reserve Battery, and one associated full capacity charger.
c. 125-volt D.C bus No. 21, the associated 125-volt D.C. battery bank or as necessary the Reserve Battery, and one associated full capacity charger.
d. 125-volt D.C. bus No. 22, the associated 125-volt D.C. battery bank or as necessary the Reserve Battery, and one associated full capacity charger.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

~~e. With one 125-volt D.C. battery inoperable during surveillance testing of the battery per Specification 4.8.2.3.2.f., operation may continue provided the associated bus is being powered by the Reserve Battery and an OPERABLE charger.~~

d. With single cells having a voltage decrease of more than 0.10 volts from the previous performance discharge test (4.8.2.3.2.f.) value, but still $\geq$ 2.10 volts per surveillance requirement 4.8.2.3.2.b.1., either restore/replace cells or replace the affected battery with the Reserve Battery within 24 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 125-volt battery bank and charger and the Reserve Battery shall be demonstrated OPERABLE;

a. At least once per 7 days by verifying that:

1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks.

2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level is $\geq$ 1.200.

3. The pilot cell voltage is $\geq$ 2.10 volts.

4. The overall battery voltage is $\geq$ 125 volts.

b. At least once per 92 days by verifying that:

1. The voltage of each connected cell is $\geq$ 2.10 volts under float charge and has not decreased more than 0.10 volts from the value observed during the latest performance discharge test (4.8.2.3.2.f).

2. The specific gravity, corrected to 77°F and full electrolyte level, of each connected cell is $\geq$ 1.200 and has not decreased more than 0.02 from the value observed during the previous test.

3. The electrolyte level of each connected cell is between the minimum and maximum level indication marks.

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D. C. electrical equipment and bus (ses) shall be energized and OPERABLE:

2 - 125-volt D.C. busses, and
(, are of which may be the Reserve Battery,)
2 - 125-volt battery banks and chargers supplying the above D.C. busses.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of D.C. equipment and bus (ses) OPERABLE, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 125-volt D.C. busses shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 125-volt battery banks and chargers shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.

INSERT (B)

3/4.3.3.2 INCORE DETECTORS

The OPERABILITY of the incore detectors with the specified minimum complement of equipment ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution of the reactor core.

3/4.3.3.3 SEISMIC INSTRUMENTATION

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility and is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes", April 1974.

3/4.3.3.4. METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23 "Onsite Meteorological Programs", February 1972.

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criteria 19 of 10 CFR 50.

3/4.3.3.6 POST-ACCIDENT INSTRUMENTATION

The OPERABILITY of the post-accident instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Plants to Assess Plant Conditions During and Following an Accident," December 1975, and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations."

3/4.3.3.7 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to operability.

3/4.3.3.8 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION
IODINE AND PARTICULATE SAMPLER

The OPERABILITY of the Iodine and Particulate Sampler ensures that Iodine and Particulate Samples can be obtained for analysis during and following an accident. The surveillance requirements ensure a high degree of availability.

MOVE TO B 3/4.3.3.1 (B)

IODINE AND PARTICULATE
The sampler was installed to meet the requirements of NUREG-0737 Item II.F.1. The sampler's operation was not assumed in any accident analysis.

3/4.6.1.4 INTERNAL PRESSURE

The limitations on containment internal pressure ensure that 1) the containment structure is prevented from exceeding its design negative pressure differential with respect to the outside atmosphere of 3.0 psig and 2) the containment peak pressure does not exceed the design pressure of 50 psig during LOCA conditions.

The maximum peak pressure expected to be obtained from a LOCA event is 47.6 psig. The limit of 1.8 psig for initial positive containment pressure will limit the total pressure to 49.4 psig which is less than the design pressure and is consistent with the accident analyses.

3/4.6.1.5 AIR TEMPERATURE

The limitation on containment average air temperature ensures that the containment peak air temperature does not exceed the design temperature of 276°F during LOCA conditions. The containment temperature limit is consistent with the accident analyses.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the containment will withstand the maximum pressure of 47.6 psig in the event of a LOCA. The measurement of containment tendon lift off force, the visual and metallurgical examination of tendons, anchorages and liner and the Type A leakage tests are sufficient to demonstrate this capability.

The surveillance requirements for demonstrating the containment's structural integrity are ~~in compliance~~ CONSISTENT with the INTENT OF THE recommendations of Regulatory Guide 1.35 "Inservice Surveillance of Ungrouted Tendons in Prestressed Concrete Containment Structures", January 1976.

THE END ANCHORAGE CONCRETE EXTERIOR SURFACES ARE CHECKED VISUALLY FOR INDICATIONS OF ABNORMAL MATERIAL BEHAVIOR DURING TENDON SURVEILLANCE. INSPECTIONS OF PRE-SELECTED CONCRETE CRACK PATTERNS ARE PERFORMED DURING THE TYPE A CONTAINMENT LEAKAGE RATE TESTS, CONSISTENT WITH THE STRUCTURAL INTEGRITY TEST.

AUG 13 1976