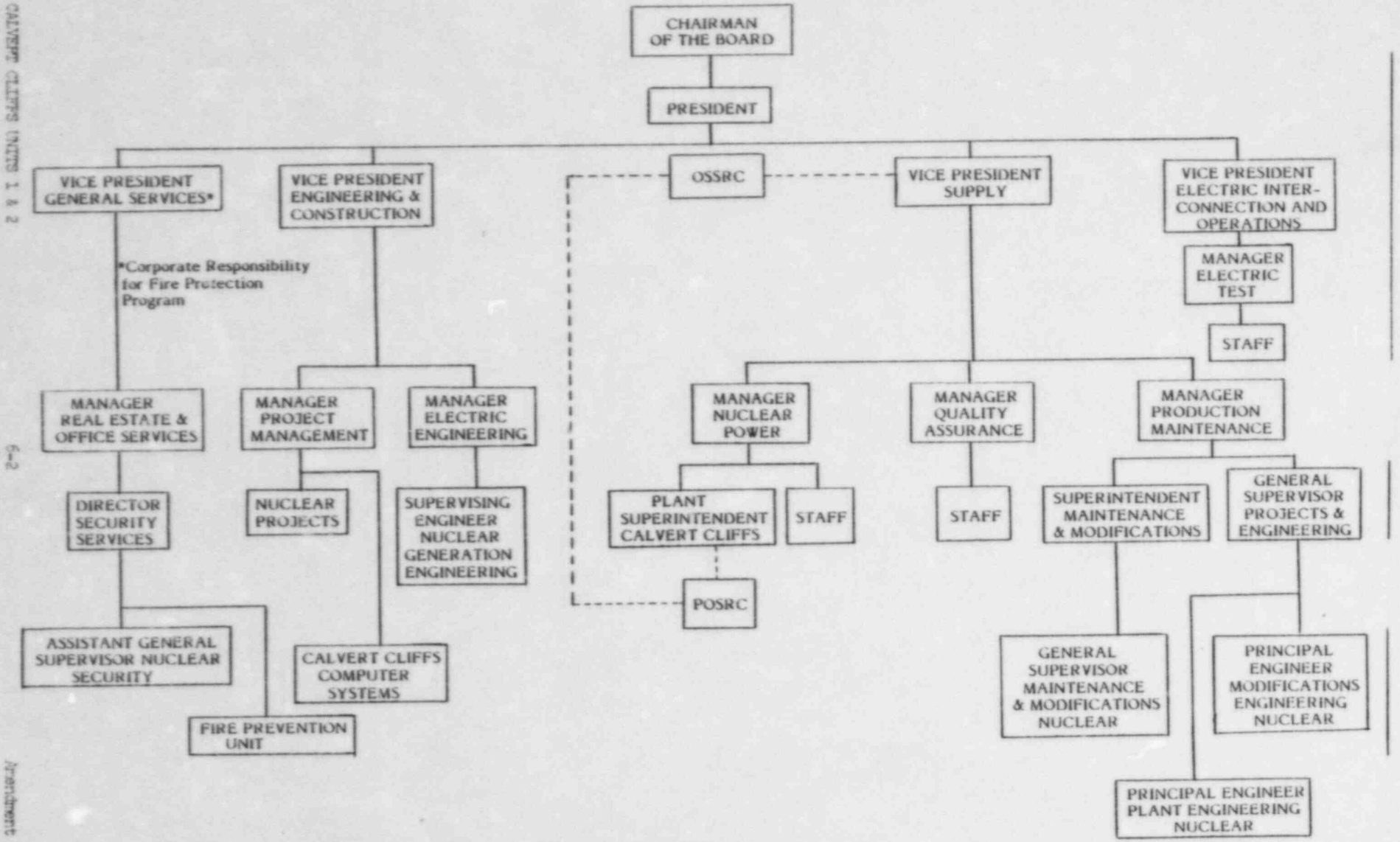

FIGURE 6.2-1
MANAGEMENT ORGANIZATION CHART
CALVERT CLIFFS NUCLEAR POWER PLANT
BALTIMORE GAS & ELECTRIC COMPANY

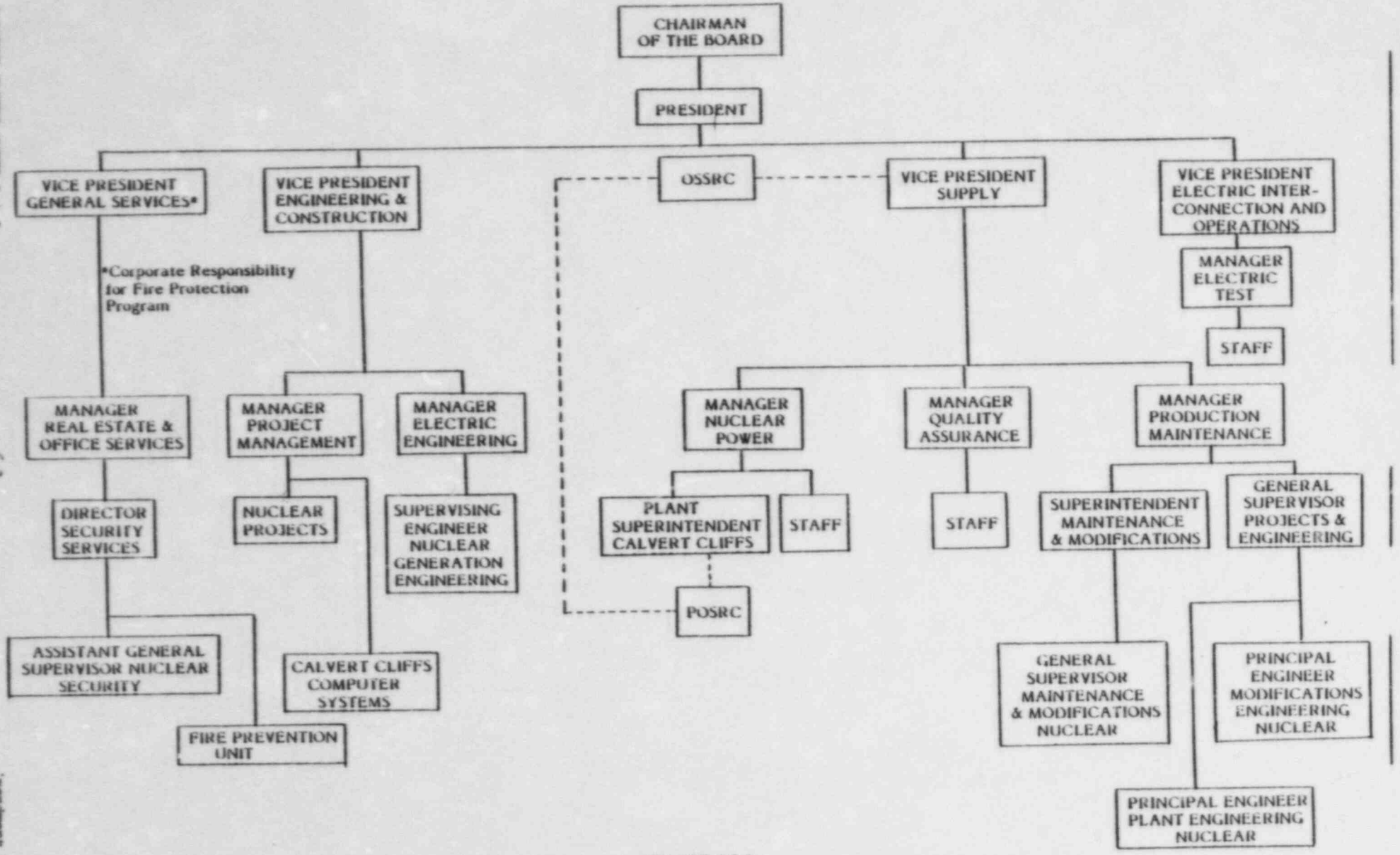

FIGURE 6.2-1
MANAGEMENT ORGANIZATION CHART
CALVERT CLIFFS NUCLEAR POWER PLANT
BALTIMORE GAS & ELECTRIC COMPANY

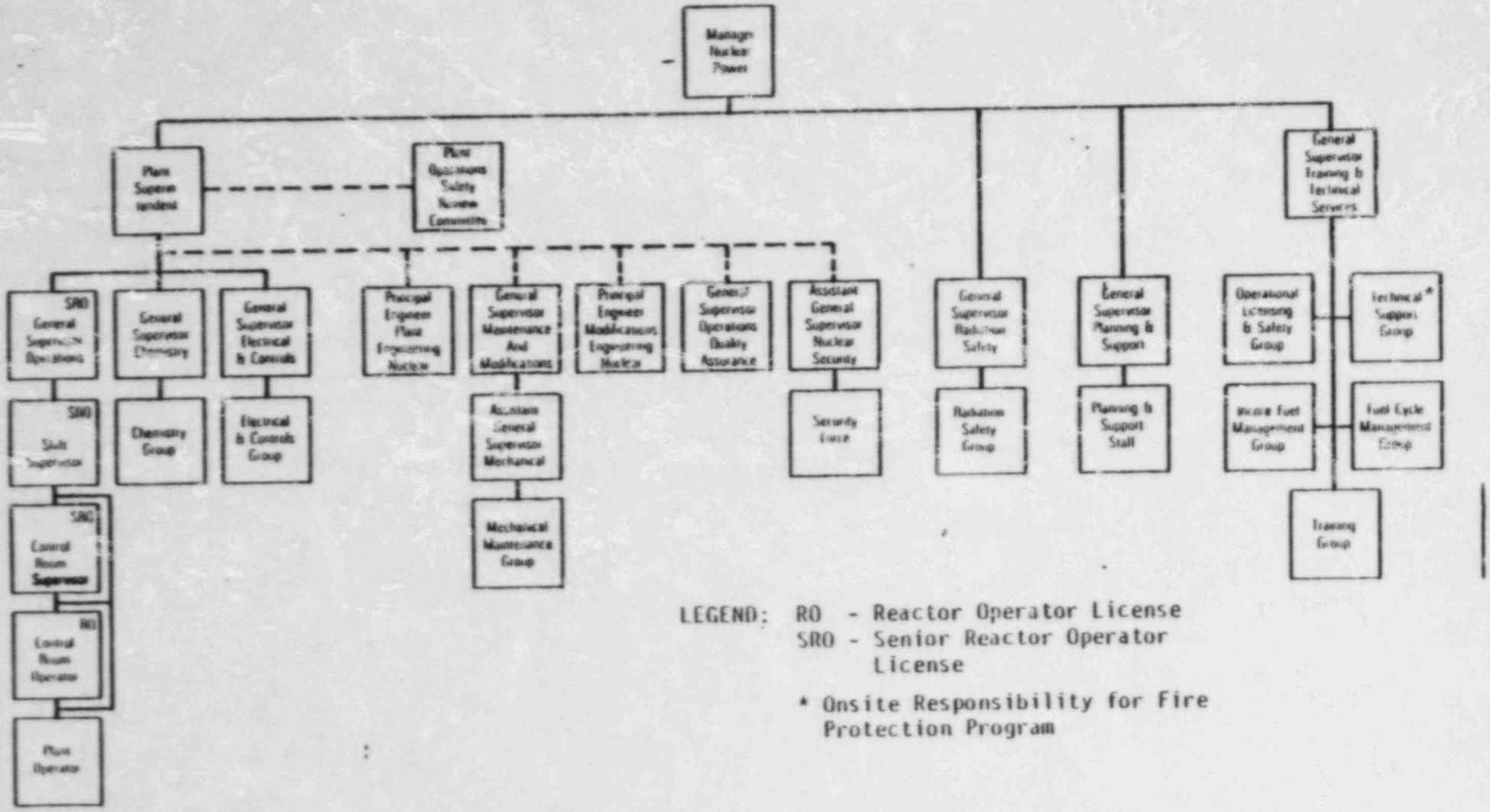

Figure 6.2.2 Organization Chart (Two Unit Operation) - Calvert Cliffs Nuclear Power Plant Baltimore Gas and Electric Company

and particulates with half-lives greater than eight days released from the plant to 1/700 of the levels of 10 CFR Part 20, Appendix B, for unrestricted areas. This reduction factor of 700 is arbitrarily applied to I-131 and to all radionuclides in particulate form with a half-life greater than 8 days to allow for the milk-exposure pathway. The release rate is determined by:

$$\sum \frac{Qi}{(MPC)i} \leq \frac{M^3/sec.}{X/Q \times 700}$$

where Qi and MPC are defined in 2.3.B.1. The X/Q value is derived from the annual average meteorological data.

Specification 2.3.B.3 establishes an upper limit for the release of gaseous activity at 16% of instantaneous release limit of gross activity and 8% of the release rate of I-131 and particulates with half lives greater than 8 days averaged over any calendar quarter, and 8% and 4%, respectively, when averaged over any 12 consecutive months. The intent of this specification is to permit the licensee the flexibility of operation to assure that the public is provided a dependable source of power under unusual operating conditions which may temporarily result in higher releases than the objectives. The licensee has shown that gaseous releases will result in a small fraction of doses specified in 10 CFR Part 20.

Specification 2.3.B.4 requires that suitable equipment to dilute and monitor the radioactive gaseous releases ~~and~~ is operating during any period these releases are taking place.

Specification 2.3.B.6 limits the radioactivity that may be released to the environment to as low as reasonable achievable.

Specification 2.3.B.7 limits the maximum offsite does to well below the limits of 10 CFR Part 100, postulating that the rupture of a waste gas decay tank holding the maximum activity releases all of contents to the atmosphere.

In addition to the limiting conditions for operation listed under 2.3.B.1, 2.3.B.2, and 2.3.B.3, the reporting requirements of Specification 5.6.2c. (2) delineate that the licensee shall identify the cause whenever the radioactive

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5.1 Responsibility

The Plant Superintendent, Calvert Cliffs, has the direct responsibility to assure compliance with the specifications presented in Section 2.0.

The ~~Chief Environmental Engineer~~ Director of Environmental Programs, Electric Engineering Department, has the direct responsibility to assure compliance with the specifications presented in Sections 3.0 and 4.0.

The Off-Site Safety ~~and~~ Review Committee as described in Appendix A Technical Specifications, paragraph b.5, shall be responsible for:

1. Reviewing the results of the Environmental Monitoring Requirements and the Environmental Surveillance and Special Studies as required by the specifications.
2. Reviewing and approving proposed changes to the Environmental Technical Specifications.
3. Reviewing results of the audits performed by the Quality Assurance Department.
4. Review of occurrences which exceed a limiting condition for operation.

The Plant Operations and Safety Review Committee as described in Appendix A, Specification 6.5, shall be responsible for:

1. Review of the results of any any proposed changes to the specifications in Section 2.0 and preparation of a summary report of this review for presentation to the Off-Site Safety ~~and~~ Review Committee.
2. Review of proposed changes or modifications to plant equipment or systems affecting specifications in Section 2.0.
3. Review of operating procedures and changes thereto, for the systems and components involved in fulfilling specifications in Section 2.0.

The ~~Environmental Engineering Group~~ Environmental Programs Unit, Electric Engineering Department shall be responsible for:

1. Review of the results of ~~any~~ any proposed changes to the specifications in Sections 3.0 and 4.0, and preparation of a summary report of this review for presentation to the Off-Site Safety ~~and~~ Review Committee.
2. Review of operating procedures, and changes thereto, for the systems and components involved in fulfilling specifications in Sections 3.0 and 4.0.

The Quality Assurance Department shall be responsible for audit of the operating procedures for the systems and components involved in fulfilling the Environmental Technical Specifications. Significant findings of the audit shall be presented to and revieved by the Off-Site Safety ~~and~~ Review Committee.

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5.5 Operating Procedures

The systems which are directly involved with the fulfillment of the environmental

nnical specifications shall be operated in accordance with approved operating

procedures.

5.5.1 On-Site Environmental Monitoring Program

All written operating procedures, and changes thereto, which pertain to specifications in Section 2.0 shall be reviewed by a member of the plant staff and approved by the Plant Superintendent prior to implementation, except as provided in the following paragraph:

Temporary changes to operating procedures which do not change the intent of the original procedure may be made provided such changes are approved by two licensed senior reactor operators, one of whom shall be the Shift Supervisor. Such changes shall be documented and subsequently reviewed by the Plant Operations and Safety Review Committee and approved by the Plant Superintendent.

.2 Off-Site Environmental Monitoring Programs

All written operating procedures and changes thereto, which pertain to specifications in Sections 3.0 and 4.0, shall be reviewed by the Environmental ~~Engineering~~ Programs Unit ~~Group~~, Electric Engineering Department and approved by the ~~Chief Environmental Engineer~~ Director, Environmental Programs prior to implementation, except as provided below:

Temporary changes to operating procedures which do not change the intent of the original procedure may be made provided such changes are approved by the project leader as specified in the operating procedure. Such changes shall be subsequently reviewed by the Environmental ~~Engineering Group~~ Programs Unit and approved by the ~~Chief Environmental Engineer~~ Director, Environmental Programs.

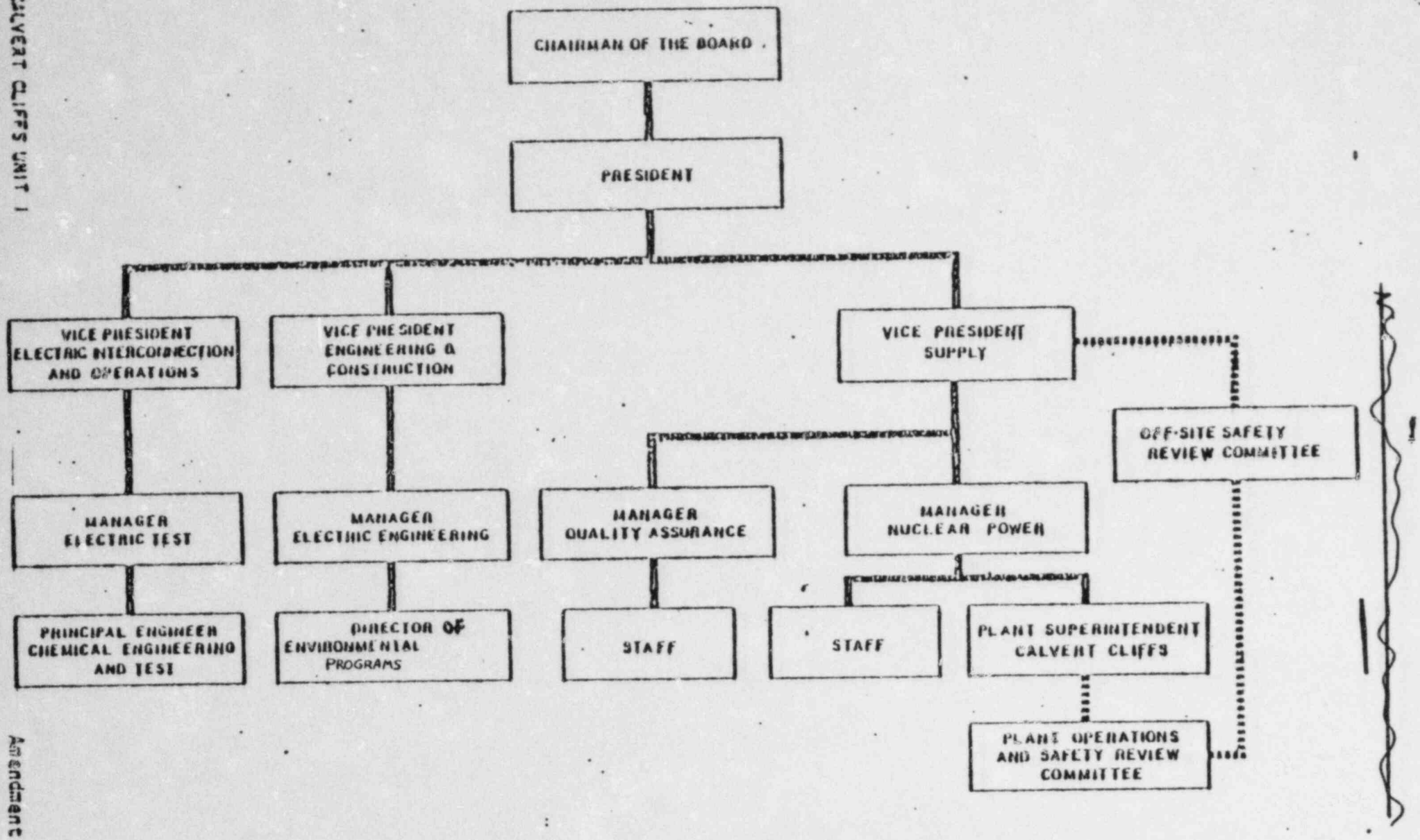

FIGURE 5.2-1
MANAGEMENT ORGANIZATION CHART RELATING TO ENVIRONMENTAL MATTERS
CALVERT CLIFFS NUCLEAR POWER PLANT
BALTIMORE GAS & ELECTRIC COMPANY

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	1	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	1	1, 2, 3 & 4	*	10^{-7} to 10^{+5} $\mu Ci/cc$	30

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

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TABLE 3.3-6 (Continued)

TABLE NOTATION

ACTION 14 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1.

ACTION 16 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.

ACTION 30 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:

1) either restore the inoperable Channel(s) to OPERABLE status within 30 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.

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	N.A.	R	M	1, 2, 3, & 4	1
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	N.A.	R	M	1, 2, 3, & 4	1

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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.)•X

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

~~a. With one motor-driven pump inoperable:~~

~~1. Restore the inoperable motor driven pump to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.~~

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

1. With No. 23 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. 23 motor-driven pump to OPERABLE status within the next 14 days or be in HOT SHUTDOWN within the next 12 hours.

2.

X A With one steam-driven pump inoperable:

(a)
X 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)
X 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 days or be in HOT SHUTDOWN within the next 12 hours.

~~* For a period of up to 30 days following the entering into Mode 2 from Cycle 5 startup, at power levels not to exceed 55% of rated thermal power, the auxiliary feedwater system may be inoperable except with regard to the capability for manually initiating and manually controlling flow to either steam generator with the two steam driven auxiliary feedwater trains.~~

•X A standby pump shall be available for operation but aligned so that automatic flow initiation is defeated upon AFAS actuation.

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. 13 motor-driven pump is OPERABLE and valve 1-CV-4550 has been exercised within the last 30 days, and

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

c. Whenever 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 ~~any combination of two (motor or steam driven) pumps are aligned for automatic flow initiation.~~ one motor and one steam-driven pump (or two steam-driven pumps) are aligned for automatic flow initiation.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

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 ≥ 2800 ft. on recirculation flow. (If verification must be demonstrated during startup, surveillance testing shall be performed upon achieving an RCS temperature ≥ 300°F and prior to entering MODE 1).

2. Verifying that the motor driven pump develops a Total Dynamic Head of ≥ 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. ~~The AFW flow control valves may be verified by observing a 160 gpm setpoint on the flow indicator controller in Control Room.~~

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: ~~verifying that each automatic valve in the flow path actuates to its correct position and each auxiliary feedwater pump automatically starts and delivers a modulated flow of 160 gpm ± 10 GPM to each flow leg upon receipt of each auxiliary feedwater actuation system (AFAS) test signal.~~

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.

plus 25 gpm and minus 26 gpm for the motor-driven pump train. The corresponding values for the steam-driven pump train are plus 37 gpm and minus 40 gpm.

U = maximum number of inoperable safety valves per operating steam line

106.5 = Power Level-High Trip Setpoint for two loop operation

46.8 = Power Level-High Trip Setpoint for single loop operation with two reactor coolant pumps operating in the same loop

X = Total relieving capacity of all safety valves per steam line in lbs/hour

Y = Maximum relieving capacity of any one safety valve in lbs/hour

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the auxiliary feedwater system ensures that the Reactor Coolant System can be cooled down to less than 300°F from normal operating conditions in the event of a total loss of offsite power. A capacity of 400 gpm is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 300°F when the shutdown cooling system may be placed into operation.

Flow control valves, installed in each 200 leg supplying the steam generators, are set to maintain a nominal flow setpoint of ~~160~~ gpm plus or minus 10 gpm for operator setting band. The nominal flow setpoint of ~~160~~ gpm incorporates a total instrument loop error band of ~~plus 47 gpm (217 gpm total flow per leg) and minus 60 gpm (90 gpm total flow per leg)~~.

~~In the spectrum of events analyzed in which automatic initiation of auxiliary feedwater occurs the nominal setting of 160 gpm allows a minimum of 10 minutes before operator action is required. At 10 minutes after automatic initiation of flow the operator is assumed to be available to increase or decrease auxiliary feedwater flow to that required for existing plant conditions.~~

The operator setting band, when combined with the instrument loop error, results in a total flow band of 164 gpm (minimum) and 235 gpm (maximum) for the motor-driven pump train. The corresponding values for the steam-driven

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pump train are 150 gpm (minimum) and 247 gpm (maximum). Safety analyses show that more flow during an overcooling transient and less flow during an undercooling transient could be tolerated; i.e., flow fluctuations outside this flow band but within the assumptions used in the analyses listed below, are allowable.

In the spectrum of events analyzed in which automatic initiation of auxiliary feedwater occurs, the following flow conditions are allowed with an operator action time of 10 minutes.

(1) Loss of Feedwater	0 gpm Auxiliary Feedwater Flow
(2) Feedline Break	0 gpm Auxiliary Feedwater Flow
(3) Main Steam Line Break	1800 gpm Auxiliary Feedwater Flow (this being the maximum flow through the AFW Suction line, with one unit requiring flow, prior to pump cavitation due to low NPSH.)

At 10 minutes after an Auxiliary Feedwater Actuation Signal the operator is assumed to be available to increase or decrease auxiliary feedwater flow to that required by the existing plant condition.

attributable to the Plant,

5.6.2.b Nonroutine Radiological Environmental Operating Reports

If a confirmed measured level of radioactivity, at any offsite location in any environmental medium exceeds ten times the "background" value,

an evaluation shall be made of the radiological dose impact using the applicable pathways and dose calculation methodology described in NRC Regulatory Guide 1.109 Rev. 1, 1977. If the projected annual dose commitment to the whole body or any organ of a maximum exposed individual is equal to or greater than 1 (one) mrem, a written report shall be submitted to the ~~Director of the NRC Regional Office~~ NRC Regional Administrator Document Control Desk, NRC, Washington, D.C. (with a copy to the ~~Director, Office of Nuclear Reactor Regulation~~) within 14 days after confirmation. The report shall include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the results.

SURVEILLANCE REQUIREMENTS

4.7.11.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the contained water supply volume.

b. At least once per 31 days on a STAGGERED TEST BASIS by starting the electric motor driven pump and operating it for at least 15 minutes ~~on recirculation flow~~. This test shall be performed on a STAGGERED TEST BASIS with the test required by 4.7.11.1.2.a.2.

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

d. At least once per 12 months by performance of a system fluch of the filled portions of the system.

e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each pump develops at least 2500 gpm at a discharge pressure of 125 psig,

3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and

4. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure $\geq$ 80 psig.

g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.11.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The diesel fuel oil day storage tank contains at least 174 gallons of fuel, and

2. The diesel starts from ambient conditions and operates for at least 30 minutes ~~on recirculation flow~~. This test shall be performed on a STAGGERED TEST BASIS with the test required by Specification 4.7.11.1.1.b.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM D975-74 when checked for viscosity, water and sediment.

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

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

2. Verifying the diesel starts from ambient conditions on the auto-start signal and operates for $\geq$ 20 minutes while loaded with the fire pump.

4.7.11.1.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

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

1. The electrolyte level of each battery is above the plates, and

2. The overall battery voltage is $\geq$ 24 volts.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

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

1. The batteries, cell plates and battery racks show no visual indication of physical damage or abnormal deterioriation, and

2. The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

SURVEILLANCE REQUIREMENTS

4.7.11.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the contained water supply volume.

b. At least once per 31 days on a STAGGERED TEST BASIS by starting the electric motor driven pump and operating it for at least 15 minutes on ~~recirculation flow~~. This test shall be performed on a STAGGERED TEST BASIS with the test required by 4.7.11.1.2.a.2.

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

d. At least once per 12 months by performance of a system flush of the filled portions of the system.

e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each pump develops at least 2500 gpm at a discharge pressure of 125 psig,

3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and

4. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure $\geq$ 80 psig.

g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.11.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The diesel fuel oil day storage tank contains at least 174 gallons of fuel, and

2. The diesel starts from ambient conditions and operates for at least 30 minutes ~~on recirculation flow~~. This test shall be performed on a STAGGERED TEST BASIS with the test required by Specification 4.7.11.1.1.b.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-0270-65, is within the acceptable limits specified in Table 1 of ASTM 0975-74 when checked for viscosity, water and sediment.

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

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

2. Verifying the diesel starts from ambient conditions on the auto-start signal and operates for $\geq$ 20 minutes while loaded with the fire pump.

4.7.11.1.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

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

1. The electrolyte level of each battery is above the plates, and

2. The overall battery voltage is $\geq$ 24 volts.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

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

1. The batteries, cell plates and battery racks show no visual indication of physical damage or abnormal deterioriation, and

2. The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

TABLE 3.3-11

FIRE DETECTION INSTRUMENTS

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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
Passage and Filter Room 323			3
Unit 1 Cont SW Elec Pen Area*	4		
Unit 1 Cont NE Elec Pen Area*	4		
Unit 1 Cont East RCPS*	16		
Unit 1 Cont West RCPS*	16		
Control Room Vent Duct "B"			1
West Passage 319 Elev ~~27'-0"~~ 100 & 106			6
E/W Corridor 104 ~~Elev (-) 10'-0"~~			5
Intake Structure			48
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**	2		10
Unit 1 Personnel Access Area Room 525			3
Unit 1 Switchgear Elev 27'-0" Room 317**			5
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 113 and 122			7
Unit 1 Coolant Waste Rec TK Room 114 & 112		4	
Unit 1 ECCS Pump Rooms 119 and 122			7
Unit 1 Elev 27'-0" Swgr Room Vent Duct	1		
Unit 1 Elev 45'-0" swgr Room Vent Duct	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.

TABLE 3.3-11

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FIRE DETECTION INSTRUMENT

UNIT 1

INSTRUMENT LOCATION	MINIMUM INSTRUMENT OPERABLE		
	HEAT	FLAME	SMOKE
Main Steam Piping Room 315A			6
Hot Machine Shop 223			4
Battery Room 304 & 301			3
Misc. Waste Monitor Tank Room 113			1
Charging Pump Room 115			3
East Piping Room 428			7
North South Corridor 410			4
Spent Fuel Pool 530		5	17
Radiation Chem., Lab Office, Rm. 513,518 & 519	1		16
Corridor 521,522, & 534			
Cask & Equip. Loading Area Rm. 419,420,425 & 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			1
Hot Instrument Shop Room 222			2
Service Water Room 226		3	6
East Piping Room 224			10
Corridor 200,209, & 210			13
Solid Waste Room 418 & 417		2	3
Spent Resin Metering Tank Room 441			1
Waste Gas Equipment Room 207			1
Auxiliary Feed Tank Room 603			2
Misc. Waste Equipment Room 536			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

TABLE 3.3-11

FIRE DETECTION INSTRUMENTS

FCR 84-34

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
Unit 2 Cont SE Elec Pen Area*	4		
Unit 2 Cont NW Elec Pen Area*	4		
Unit 2 Cont East RCPS*	16		
Unit 2 Cont West RCPS*	16		
Unit 2 Main Plant Exh Equip Room 526			8
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**	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 & 109		4	
Unit 2 ECCS Pump Rooms 101 and 120			7
Unit 2 Pump Room 108 Elev (-) 10'-0"			1
Unit 2 Intake Structure			48
Unit 2 Elev 27'-0" Swgr Room Vent Duct	1		
Unit 2 Elev 45'-0" Swgr Room Vent Duct	1		
Unit 2 ECCS Pp Rooms 102 and 120			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

*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.

TABLE 3.3-11

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ADDITIONAL DETECTION

FIRE DETECTION INSTRUMENT

UNIT 2

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 & 305			3
Misc. Waste Monitor Tank Room			1
East Piping Area Room 408			7
Component Cooling Room 201			9
Raditation Exchange Equip. Room 204			4
Boric Acid Tank & Pump Room 215			2
Reactor Cooling Pump Room 216A			2
Service Water Room 205		3	6
Auxiliary Feed Pump Room 605			2
Degasifier Pump Room			1

b. A high radiation area in which the intensity of radiation is greater than 1000 mrem/hr shall be subject to the provisions of 6.12.1.a, above, and in addition locked barricades shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the ~~Shift Supervisor on duty~~ their separate by the Supervisor-Radiation Control and the Operations Shift Supervisor on duty.

6.13 ENVIRONMENTAL QUALIFICATION

6.13.1 By no later than June 30, 1982 all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of: Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines); or NUREG-0588 "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment", December 1979. Copies of these documents are attached to Order for Modification of Licenses DPR-53 and DPR-69 dated October 24 , 1980.

6.13.2 By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

6.14 SYSTEM INTEGRITY

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and

2. Leak test requirements for each system at a frequency not to exceed refueling cycle intervals.