ENCLOSURE 3

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1
NRC DOCKET 50-325
OPERATING LICENSE DPR-71
REQUEST FOR LICENSE AMENDMENT
FIRE PROTECTION TECHNICAL
SPECIFICATIONS AND LICENSE CONDITION

PROPOSED TECHNICAL SPECIFICATION PAGES

(890BNP)

(6) The licensee may proceed with and is required to complete the modifications identified in Paragraphs 3.1.1 through 3.1.35 of the NRC's Fire Protection Safety Evaluation Report on the Brunswick facility dated November 22, 1977 and supplements thereto. These modifications shall be completed by the dates identified in the Safety Evaluation Report or Table 3.1 in supplements thereto. In addition, the licensee may proceed with and is required to complete the modifications identified in Section B.2.1 of Supplement 1 to the Fire Protection Safety Evaluation Report, and any future supplements. These modifications shall be completed by the dates identified in Table B.2.1 of the supplement.

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C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2436 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 148, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) The licensee will undertake a program for seismic monitoring for a minimum of two years unless termination is earlier approved by the NRC staff. The program and its control will be conducted in general conformity with the document "Brunswick Steam Electric Plant Program for Seismic Monitoring" dated June 10, 1975, as revised June 27, 1975.

The program will include: (a) not less than ten seismic monitoring stations (seven permanent and three portable), in an array approved by the NRC staff, unless a lesser number is approved by the NRC staff in writing, and (b) quarterly reports on the monitoring data to be submitted to the NRC. Should the NRC staff determine that initiation of Phase II as described within the program within the two year monitoring period, or Phase III following initiation of Phase II, is required, the licensee will either comply with a request to proceed to Phase II (or Phase III) or immediately request and be granted a hearing on the issue of whether the data on which the staff's request is based justifies the initiation of Phase II (.

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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

DELETE

BASES

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INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.5.7 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.5.7-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in that fire detection zone is required to be OPERABLE.

ACTION:

With one or more of the fire detection instruments(s) shown in Table 3.3.5.7-1 inoperable:

a. Within 1 hour, increase the inspection frequency for the zone(s) with the inoperable instrument(s) to at least once per hour, and

b. Restore the inoperble instrument(s) to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the instrument(s) to OPERABLE status.

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

SURVEILLANCE REQUIREMENTS

4.3.5.7.1 Each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST.

4.3.5.7.2 The nonsupervised circuits between the local panels associated with the detector alarms of each of the above required fire detection instruments and the control room shall be demonstrated OPERABLE at least once per 31 days in accordance with approved procedures.

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Pages 3/4 3-69 through 3/4 3-71 have been deleted.

(Next page is 3/4 3-72)

TABLE 3.3.3.7-1

FIRE DETECTION INSTRUMENTS

INSTRUMENT LOCATION		MINIMUM INSTRUMENTS OPERABLE		
		FLAME	HEAT	SMOKE
1. Reactor Building #2				
Zone 1	-17'	0	0	1
Zone 2	-17'	0	0	1
Zone 3	-17'	0	0	6
Zone 4	-17'	0	0	6
Zone 5	20'	0	0	12
Zone 6	20'	0	0	10
Zone 7	20'	0	0	9
Zone 8	50'	0	0	11
Zone 9	50'	0	0	15
Zone 10	80'	0	0	9
Zone 11	80'	0	0	10
Zone 12	98'	0	0	3
Zone 13	117'	0	0	1
Zone 14	117'	0	0	34
Zone 16	77'	0	0	4
2. Control Building				
Zone 1	70'	0	0	9
Zone 2	49'	0	0	4
Zone 3	49'	0	0	4
Zone 4	49'	0	0	13
Zone 5	49'	0	0	14
Zone 6	49'	0	0	6
Zone 7	23'	0	0	3
Zone 8	23'	0	0	3
Zone 9	23'	0	0	25
Zone 10	23'	0	0	24
Zone 11	23'	0	0	3
Zone 12	23'	0	0	3
Zone 13	49'	0	0	9
Zone 14	49'	0	0	9
Zone 15	70'	0	1	0
Zone 16	70'	0	1	0
3. Diesel Generator Building				
Zone 1	2'	0	0	25
Zone 2	2'	0	0	24
Zone 3	50'	0	0	9
Zone 4	23'	0	0	7
Zone 5	23'	3	2	0
Zone 6	23'	3	2	0

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TABLE 3.3.5.1-1 (Continued)

INSTRUMENT LOCATION		MINIMUM INSTRUMENTS OPERABLE		
		FLAME	HEAT	SMOKE
3. Diesel Generator Building (Cont'd)				
Zone 7	23'	3	2	0
Zone 8	23'	3	2	0
Zone 9	23'	0	0	8
Zone 10	50'	0	0	9
4. Service Water Building				
Zone 1	4'	0	0	7
Zone 2	20'	0	0	6
5. AOG Building				
Zone 1	20'	0	0	2
Zone 2	20'	0	0	2
Zone 3	20'	1	5	1
Zone 4	37' - 49'	2	5	0

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PLANT SYSTEMS

3/4.7.7 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7.1 The fire suppression water system shall be OPERABLE with:

a. Two OPERABLE fire pumps, one motor-driven and one diesel-driven, each with a capacity of 2000 gpm, with their discharges aligned to the fire suppression yard main,

b. The fire protection water tank, with a minimum contained volume of 200,000 gallons, and the demineralized water tank, with a minimum contained volume of 90,000 gallons, and

c. An OPERABLE flow path capable of taking suction from each of the water supplies and transferring the water through the yard main and distribution piping with OPERABLE sectionalizing control or isolation valves to, but not including, the yard hydrant curb valves and the first valve ahead of each sprinkler and hose standpipe system required to be OPERABLE per Specifications 3.7.7.2 and 3.7.7.4.

APPLICABILITY: At all times.

ACTION:

a. With one pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

b. With the fire suppression water system otherwise inoperable:

1. Establish a backup fire suppression water system within 24 hours, or

2. Be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, and

3. In lieu of any other report required by Specification 6.9.1, submit a Special Report in accordance with Specification 6.9.2;

a) By telephone within 24 hours,

b) Confirmed by telegraph, mailgram or facsimile transmission no later than the first working day following the event, and

c) In writing within 14 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.

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Pages 3/4 7-17 through 3/4 7-28 have been deleted.

(Next page is 3/4 8-1)

SURVEILLANCE REQUIREMENTS

4.7.7.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the contained water supply volume is at least the minimum specified.

b. At least once per 31 days on a STAGGERED TEST BASIS by starting each pump and operating it for at least 15 minutes.

c. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is in its correct position.

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

e. 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 pump develops at least 2000 gpm at a system head of 125 psig,

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

3. Verifying that each fire pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 125 psig.

f. 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.

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SURVEILLANCE REQUIREMENTS (Continued)

4.7.7.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The fuel storage tank contains at least 500 gallons of fuel, and

2. The diesel starts from ambient conditions and operates for at least 20 minutes.

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 greater than or equal to 20 minutes while loaded with the fire pump.

4.7.7.1.3 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 greater than or equal to 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 deterioration, and

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

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PLANT SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.2 The following spray and/or sprinkler systems shall be OPERABLE:

a. Diesel Generator #1 Preaction System - Diesel Generator Building

b. Diesel Generator #2 Preaction System - Diesel Generator Building

c. Diesel Generator #3 Preaction System - Diesel Generator Building

d. Diesel Generator #4 Preaction System - Diesel Generator Building

e. South Cable Spread Area Sprinkler System - Diesel Generator Building

f. North Cable Spread Area Sprinkler System - Diesel Generator Building

g. Two Standby Gas Treatment Train 1A Deluge Systems - Reactor Building #1.

h. Two Standby Gas Treatment Train 1B Deluge Systems - Reactor Building #1.

i. Area Sprinkler System - Reactor Building #1.

j. Service Water Pump Area Sprinkler System - Service Water Building

k. Service Water Cable Spread Area Sprinkler System - Service Water Building

l. Drumming Room Sprinkler System - Radwaste Building

m. Makeup Water Treatment Area Sprinkler System - Makeup Water Treatment Building

APPLICABILITY: Whenever equipment in the areas protected by the spray and/or sprinkler systems is required to be OPERABLE.

ACTION:

a. With one or more of the above required spray and/or sprinkler systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days 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.

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PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.7.2 Each of the above required spray and/or sprinkler systems shall be demonstrated OPERABLE:

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

b. At least once per 18 months:

1. By performing a system functional test which includes simulated automatic actuation of the system, and:

a) Verifying that the automatic valves in the flow path actuate to their correct positions on a simulated actuation signal, and

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

2. By inspection of the spray headers to verify their integrity, and

3. By inspection of each deluge nozzle to verify no blockage.

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PLANT SYSTEMS

HIGH PRESSURE CO_2 SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.3 The following high pressure CO_2 systems shall be OPERABLE with a minimum contained weight of 67.5 lbs. of CO_2 in each cylinder of the inservice bank.

a. Unit No. 1 HPCI CO_2 System - Unit No. 1 Reactor Building.

b. Control Building CO_2 System - Control Building.

APPLICABILITY: Whenever equipment in the area protected by the high pressure CO_2 systems is required to be OPERABLE.

ACTION:

a. With one or more of the above required high pressure CO_2 systems inoperable, establish backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days 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

4.7.7.3 Each of the above required high pressure CO_2 systems shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying that the high pressure CO_2 cylinders contain at least the minimum specified weight of CO_2.

b. At least once per 8 months by verifying:

1. The system control heads and associated ventilation dampers actuate manually and automatically, as appropriate, upon receipt of a simulated actuation signal, and

2. Performance of a flow test through flooding system headers and nozzles and hose reel system horns to assure no blockage.

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PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITIONS FOR OPERATION

3.7.7.4 The fire hose stations shown in Table 3.7.7.4-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the fire hose stations shown in Table 3.7.7.4-1 inoperable, within one hour:

1. Provide an alternate means of fire suppression for the unprotected area(s) or

2. Route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station.

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

SURVEILLANCE REQUIREMENTS

4.7.7.4 Each of the fire hose stations shown in Table 3.7.7.4-1 shall be demonstrated OPERABLE:

a. At least once per 31 days by visual inspection of the station to assure all required equipment is at the station.

b. At least once per 18 months by:

1. Removing the hose for inspection and re-racking, and

2. Replacement of all degraded gaskets in couplings.

c. At least once per 3 years by:

1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage, and

2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at that hose station.

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TABLE 3.7.7.4-1

FIRE HOSE STATIONS

LOCATION	ELEVATION	HOSE RACK#
Unit No. 1 Reactor Bldg.	-17'	1-RB-19
	-17'	1-RB-20
	-17'	1-RB-24
	-17'	1-RB-25
	-17'	1-RB-26
	20'	1-RB-21
	20'	1-RB-22
	20'	1-RB-23
	20'	1-RB-27
	20'	1-RB-28
	20'	1-RB-29
	50'	1-RB-30
	50'	1-RB-31
	50'	1-RB-32
	50'	1-RB-33
	50'	1-RB-34
	50'	1-RB-35
	67'	1-RB-48A
	80'	1-RB-36
	80'	1-RB-39
	80'	1-RB-41
	80'	1-RB-43
	80'	1-RB-44
	80'	1-RB-45
	98'	1-RB-37
	117'	1-RB-38
	117'	1-RB-40
	117'	1-RB-42
	117'	1-RB-46
	117'	1-RB-47
	117'	1-RB-48
AOG Building	23'	2-AOG-57
	23'	2-AOG-58
	23'	2-AOG-59
	23'	2-AOG-60
	37'	2-AOG-62
	49'	2-AOG-61
Radwaste Building	-3'	RW-4
	-3'	RW-50
	-3'	RW-51
	23'	RW-52
	23'	RW-53
	23'	RW-54
	23'	RW-55
	23'	RW-56

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TABLE 3.7.7.4-1 (Continued)

FIRE HOSE STATIONS

LOCATION	ELEVATION	HOSE RACK#
Diesel Generator Building	2'	DGB-1
	2'	DGB-2
	2'	DGB-3
	23'	DGB-4
	23'	DGB-5
	23'	DGB-6
	23'	DGB-7
	23'	DGB-8
	23'	DGB-9
	50'	DGB-10
	50'	DGB-11
	50'	DGB-12
	50'	DGB-13
	50'	AFFF HR-2
	50'	AFFF HR-3
Service Water Building	4'	SW-1
	20'	SW-2
	20'	SW-3
Control Building	23'	1-CB-1
	49'	1-CB-2
	70'	2-CB-3
Diesel Generator Tank Area	NA	AFFF HR-1

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PLANT SYSTEMS

FOAM SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.5 The following foam systems shall be OPERABLE:

a. Diesel Generator Fuel Oil Tank Area Foam System with:

1. The concentrate proportioning and storage subsystem OPERABLE with 240 gallons of concentrate.

2. Each tank room subsystem OPERABLE.

b. Diesel Generator Air Filter Foam System with:

1. The concentrate proportioning and storage subsystem OPERABLE with 40 gallons of concentrate.

2. Each air filter subsystem OPERABLE.

APPLICABILITY: Whenever the diesel generators are required to be OPERABLE.

ACTION:

a. With one tank room subsystem inoperable, verify the OPERABILITY of the backup foam hose reel within one hour.

b. With one air filter subsystem inoperable, verify the OPERABILITY of two backup foam hose reels within one hour.

c. With any inoperability other than as provided in a and b, above, verify the availability of backup fire suppression equipment for the unprotected area(s) within one hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

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

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SURVEILLANCE REQUIREMENTS

4.7.7.5 Each of the above required foam systems shall be demonstrated OPERABLE:

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

b. At least once per 18 months by:

1. Performing a system functional test which includes simulated automatic actuation of the system, and:

a) Verifying that the automatic valves in the flow path actuate to their correct positions on a simulated actuation signal, and

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

2. A visual inspection of the spray headers to verify their integrity.

3. A visual inspection of each nozzle's spray area to verify that the spray pattern is not obstructed.

4. Conducting a performance evaluation of the concentrate.

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PLANT SYSTEMS

3/4.7.8 FIRE BARRIER PENETRATIONS

LIMITING CONDITIONS FOR OPERATION

3.7.8 All fire barrier penetrations, including cable penetration barriers, fire doors, and fire dampers, in fire zone boundaries protecting safety-related areas shall be functional.

APPLICABILITY: At all times.

ACTION:

a. With one or more of the above required fire barrier penetrations nonfunctional, within one hour establish a continuous fire watch on at least one side of the affected penetration or verify the OPERABILITY of fire detectors on at least one side of the nonfunctional fire barrier and establish an hourly fire watch patrol. Restore the nonfunctional fire barrier penetration(s) to functional status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the nonfunctional penetration, and plans and schedule for restoring the fire barrier penetration(s) to functional status.

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

SURVEILLANCE REQUIREMENTS

4.7.8 Each of the above required fire barrier penetrations shall be verified to be functional:

a. At least once per 18 months by a visual inspection, and

b. Prior to restoring a fire barrier penetration to functional status following repairs or maintenance, by performance of a visual inspection of the affected fire barrier penetration.

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MONITORING INSTRUMENTATION (Continued)

3/4.3.5.6 CHLORIDE INTRUSION MONITORS

The chloride intrusion monitors provide adequate warning of any leakage in the condenser or hotwell so that actions can be taken to mitigate the consequences of such intrusion in the reactor coolant system. With only a minimum number of instruments available, increased sampling frequency provides adequate information for the same purpose.

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3/4.3.5.7 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, increasing the frequency of fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

3/4.3.5.8 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent monitoring instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The alarm/trip setpoints for these instruments shall be calculated in accordance with the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50. The purpose of tank level indicating devices is to assure the detection and control of leaks that, if not controlled, could potentially result in the transport of radioactive materials to UNRESTRICTED AREAS. "Without delay" implies that the operator, upon determining the limiting condition for operation is being exceeded, takes the next appropriate action to comply with the specification.

The initial CHANNEL CALIBRATION for the instruments associated with footnote (b) to Table 4.3.5.8-1 shall be performed using National Bureau of Standards traceable sources which will verify that the detector operates properly over its intended energy range and measurement range. For instruments which were operational prior to this specification being implemented, previously established calibration procedures may be substituted for this requirement. Subsequent CHANNEL CALIBRATIONS will be performed using sources that have been related to the initial calibration in order to ensure that the detector is still operational, but the sources need not span the full ranges used in the initial CHANNEL CALIBRATION.

PLANT SYSTEMS

BASES (Continued)

SNUBBERS (Continued)

The service life of a snubber is established via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life.

3/4.7.6 SEALED SOURCE CONTAMINATION

The limitation on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from by-product, source, and special nuclear material sources will not exceed allowable intake values. Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism, i.e., sealed sources with radiation monitoring or boron measuring devices, are considered to be stored and need not be tested unless they are removed from the shielding mechanism.

3/4.7.7 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, CO_2, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a 24-hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

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3/4.7.8 FIRE BARRIER PENETRATIONS

The functional integrity of the fire barrier penetrations ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The fire barrier penetrations are a passive element in the facility fire protection programs and are subject to periodic inspections.

The barrier penetrations, including cable penetration barriers, fire doors, and dampers, are considered functional when the visually observed condition is the same as the as-designed condition. For those fire barrier penetrations that are not in the as-designed condition, an evaluation shall be performed to show that the modification has not degraded the fire rating of the fire barrier penetration.

During periods of time when the barriers are not functional, either, 1) a continuous fire watch is required to be maintained in the vicinity of the affected barrier, or 2) the fire detectors on at least one side of the affected barrier must be verified OPERABLE and a hourly fire watch patrol established until the barrier is restored to functional status.

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FACILITY STAFF (Continued)

d. The Shift Operating Supervisors, Shift Foremen, and Senior Control Operators shall hold a senior reactor operator license. The Control Operators shall hold a reactor operator license.

e. An individual qualified to implement radiation protection procedures shall be onsite when fuel is in either reactor.*

f. All CORE ALTERATIONS shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.

g. A Fire Brigade of at least five members shall be maintained onsite at all times.* The Fire Brigade shall not include the minimum shift crew shown in Table 6.2.2-1 or any personnel required for other essential functions during a fire emergency.

h. Administrative procedures shall be developed and implemented to limit the working hours of facility staff who perform safety-related functions; e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel. These procedures shall meet the working hour guidelines published by the Commission in Generic Letter No. 82-12.

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* The individual qualified to implement radiation protection procedures and Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed two hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

6.2.3 ONSITE NUCLEAR SAFETY (ONS)

FUNCTION

6.2.3.1 The ONS Unit shall function to examine facility operating characteristics, NRC issues, industry advisories, and other sources which may indicate areas for improving facility safety.

RESPONSIBILITIES

6.2.3.2 The ONS Unit shall be responsible for maintaining surveillance of facility activities to provide independent verification* that these activities are performed correctly and that human errors are reduced as much as practical.

AUTHORITY

6.2.3.3 The ONS Unit shall make detailed recommendations for revised procedures, equipment modifications, or other means of improving facility safety to the Manager - Corporate Nuclear Safety Section.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall serve in an advisory capacity to the Shift Operating Supervisor on matters pertaining to the engineering aspects assuring safe operation of the unit.

6.3 FACILITY STAFF QUALIFICATION

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the Manager - Environmental & Radiation Control who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975 and (2) the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant during transients and accidents.

6.4 TRAINING

6.4.1 A retraining and replacement training program for the facility staff shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix "A" of 10 CFR Part 55.

6.4.2 A training program for the Fire Brigade shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements of Section 27 of the NFPA Code-1975.

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* Not responsible for sign-off function.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification.

a. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.5.1.

b. Seismic event analysis, Specification 4.3.5.1.2.

c. Accident Monitoring Instrumentation, Specification 3.3.5.3.

d. Fire detection instrumentation, Specification 3.3.5.7.

e. Reactor coolant specific activity analysis, Specification 3.4.5.

f. ECCS actuation, Specifications 3.5.3.1 and 3.5.3.2.

g. Fire suppression systems, Specifications 3.7.7.1, 3.7.7.2, 3.7.7.3, and 3.7.7.5.

h. Fire barrier penetration, Specification 3.7.8.

i. Liquid Effluents Dose, Specification 3.11.1.2.

j. Liquid Radwaste Treatment, Specification 3.11.1.3.

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k. Dose - Noble Gases, Specification 3.11.2.2.

l. Dose - Iodine-131, Iodine-133, Tritium, and Radionuclides in Particulate Form, Specification 3.11.2.3.

m. Gaseous Radwaste Treatment, Specification 3.11.2.4.

n. Ventilation Exhaust Treatment, Specification 3.11.2.5.

o. Total Dose, Specification 3.11.4.

p. Monitoring Program, Specification 3.12.1.b.

q. Primary Containment Structural Integrity, Specification 4.6.1.4.2

CORE OPERATING LIMITS REPORT

6.9.3.1 Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, for the following:

a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATES (APLHGR) for Specification 3.2.1.

ENCLOSURE 4

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2
NRC DOCKET 50-324
OPERATING LICENSE DPR-62
REQUEST FOR LICENSE AMENDMENT
FIRE PROTECTION TECHNICAL
SPECIFICATIONS AND LICENSE CONDITION

PROPOSED TECHNICAL SPECIFICATION PAGES

2. Facility Operating License No. DPR-62 is hereby issued to the Carolina Power & Light Company to read as follows:

A. This license applies to the Brunswick Steam Electric Plant, Unit 2, a boiling water reactor and associated equipment (the facility), owned by the Carolina Power & Light Company and North Carolina Eastern Municipal Power Agency and operated by Carolina Power and Light Company. The facility is located on the Cape Fear River, near Southport in Brunswick County, North Carolina, and is described in the "Final Safety Analysis Report' as supplemented and amended (Amendments 1 through 29) and the "Environmental Report" as supplemented and amended (Supplements 1 through 7).

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Carolina Power & Light Company:

(1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of the Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Brunswick County, North Carolina, in accordance with the procedures and limitations set forth in this license;

(2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use in amounts as required any byproduct, source, and special nuclear materials without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;

(5) Pursuant to the Act and 10 CFR Parts 30 and 70 to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Brunswick Steam Electric Plant, Unit Nos. 1 and 2, and H. B. Robinson Steam Electric Plant, Unit No. 2.

(6) The licensee may proceed with and is required to complete the modifications identified in Paragraphs 3.1.1 through 3.1.35 of the NRC's Fire Protection Safety Evaluation Report on the Brunswick facility dated November 22, 1977 and supplements thereto. These modifications shall be completed by the dates identified in the Safety Evaluation Report or Table 3.1 in supplements thereto. In addition, the licensee may proceed with

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and is required to complete the modifications identified in Section B.2.1 of Supplement 1 to the Fire Protection Safety Evaluation Report, and any future supplements. These modifications shall be completed by the dates identified in Table B.2.1 of the supplement.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2436 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 178, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Carolina Power & Light Company will undertake a program for seismic monitoring for a minimum of two years unless termination is earlier approved by the NRC staff. The program and its control will be conducted in general conformity with the document "Brunswick Steam Electric Plant Program for Seismic Monitoring" dated June 10, 1975 as revised June 27, 1975 and attached* hereto as Appendix A. The program will include: 1) not less than ten seismic monitoring stations (seven permanent and three portable), in an array approved by the NRC staff, unless a lesser number is approved by the NRC staff in writing, and 2) quarterly reports on the monitoring data to be submitted to the NRC. Should the NRC staff determine that initiation of Phase II as described within the program within the two year monitoring period, or Phase III following initiation of Phase II, is required the licensee will either comply with a request to proceed to Phase II (or Phase III) or immediately request and be granted a hearing on the issue of whether the data on which the staff's request is based justifies the initiation of Phase II (or Phase III) under the program for seismic monitoring agreed to by the licensee and the NRC staff. Nothing herein will be construed as precluding changes in the program by the licensee which do not adversely affect the quantity of information derived from the monitoring program. NRC will be informed of any such changes in the quarterly report.

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INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.5.7 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.5.7-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in that fire detection zone is required to be OPERABLE.

ACTION:

With one or more of the fire detection instruments(s) shown in Table 3.3.5.7-1 inoperable:

a. Within 1 hour, increase the inspection frequency for the zone(s) with the inoperable instrument(s) to at least once per hour, and

b. Restore the inoperable instrument(s) to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the instrument(s) to OPERABLE status.

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

SURVEILLANCE REQUIREMENTS

4.3.5.7.1 Each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST.

4.3.5.7.2 The nonsupervised circuits between the local panels associated with the detector alarms of each of the above required fire detection instruments and the control room shall be demonstrated OPERABLE at least once per 31 days in accordance with approved procedures.

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Pages 3/4 3-69 through 3/4 3-71 have been deleted.

(Next page is 3/4 3-72)

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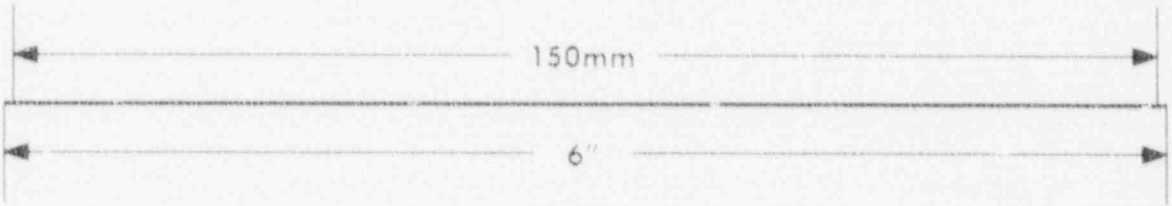
IMAGE EVALUATION
TEST TARGET (MT-3)



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770 BASKET ROAD
P.O. BOX 338
WEBSTER, NEW YORK 14580
(716) 265-1600

TABLE 3.3.5.7-1

FIRE DETECTION INSTRUMENTS

INSTRUMENT LOCATION		MINIMUM INSTRUMENTS OPERABLE		
		FLAME	HEAT	SMOKE
1. Reactor Building #2				
Zone 1	-17'	0	0	1
Zone 2	-17'	0	0	1
Zone 3	-17'	0	0	6
Zone 4	-17'	0	0	6
Zone 5	20'	0	0	12
Zone 6	20'	0	0	10
Zone 7	20'	0	0	9
Zone 8	50'	0	0	11
Zone 9	50'	0	0	15
Zone 10	80'	0	0	9
Zone 11	80'	0	0	10
Zone 12	98'	0	0	3
Zone 13	117'	0	0	1
Zone 14	117'	0	0	34
Zone 16	77'	0	0	4
2. Control Building				
Zone 1	70'	0	0	9
Zone 2	49'	0	0	4
Zone 3	49'	0	0	4
Zone 4	49'	0	0	13
Zone 5	49'	0	0	14
Zone 6	49'	0	0	6
Zone 7	23'	0	0	3
Zone 8	23'	0	0	3
Zone 9	23'	0	0	25
Zone 10	23'	0	0	24
Zone 11	23'	0	0	3
Zone 12	23'	0	0	3
Zone 13	49'	0	0	9
Zone 14	49'	0	0	9
Zone 15	70'	0	1	0
Zone 16	70'	0	1	0
3. Diesel Generator Building				
Zone 1	2'	0	0	25
Zone 2	2'	0	0	24
Zone 3	50'	0	0	9
Zone 4	23'	0	0	7
Zone 5	23'	3	2	0
Zone 6	23'	3	2	0

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TABLE 3.3.5.7-1 (Continued)

INSTRUMENT LOCATION		MINIMUM INSTRUMENTS OPERABLE		
		FLAME	HEAT	SMOKE
3. Diesel Generator Building (Cont'd)				
Zone 7	23'	3	2	0
Zone 8	23'	3	2	0
Zone 9	23'	0	0	8
Zone 10	50'	0	0	9
4. Service Water Building				
Zone 1	4'	0	0	7
Zone 2	20'	0	0	6
5. AOG Building				
Zone 1	20'	0	0	2
Zone 2	20'	0	0	2
Zone 3	20'	1	5	1
Zone 4	37' - 49'	2	5	0

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Pages 3/4 7-17 through 3/4 7-28 have been deleted.

PLANT SYSTEMS

3/4.7.7 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7.1 The fire suppression water system shall be OPERABLE with:

a. Two OPERABLE fire pumps, one motor-driven and one diesel-driven, each with a capacity of 2000 gpm, with their discharges aligned to the fire suppression yard main,

b. The fire protection water tank, with a minimum contained volume of 200,000 gallons, and the demineralized water tank, with a minimum contained volume of 90,000 gallons, and

c. An OPERABLE flow path capable of taking suction from each of the water supplies and transferring the water through the yard main and distribution piping with OPERABLE sectionalizing control or isolation valves to, but not including, the yard hydrant curb valves and the first valve ahead of each sprinkler and hose standpipe system required to be OPERABLE per Specifications 3.7.7.2 and 3.7.7.4.

APPLICABILITY: At all times.

ACTION:

a. With one pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

b. With the fire suppression water system otherwise inoperable:

1. Establish a backup fire suppression water system within 24 hours, or

2. Be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, and

3. In lieu of any other report required by Specification 6.9.1, submit a Special Report in accordance with Specification 6.9.2;

a) By telephone within 24 hours,

b) Confirmed by telegraph, mailgram, or facsimile transmission no later than the first working day following the event, and

c) In writing within 14 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.

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(Next page is 3/4 8-1)

SURVEILLANCE REQUIREMENTS

4.7.7.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the contained water supply volume is at least the minimum specified.

b. At least once per 31 days on a STAGGERED TEST BASIS by starting each pump and operating it for at least 15 minutes.

c. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is in its correct position.

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

e. 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 pump develops at least 2000 gpm at a system head of 125 psig,

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

3. Verifying that each fire pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 125 psig.

f. 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.

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SURVEILLANCE REQUIREMENTS (Continued)

4.7.7.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The fuel storage tank contains at least 500 gallons of fuel, and

2. The diesel starts from ambient conditions and operates for at least 20 minutes.

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 greater than or equal to 20 minutes while loaded with the fire pump.

4.7.7.1.3 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 greater than or equal to 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 deterioration, and

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

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PLANT SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.2 The following spray and/or sprinkler systems shall be OPERABLE:

a. Diesel Generator #1 Preaction System - Diesel Generator Building

b. Diesel Generator #2 Preaction System - Diesel Generator Building

c. Diesel Generator #3 Preaction System - Diesel Generator Building

d. Diesel Generator #4 Preaction System - Diesel Generator Building

e. South Cable Spread Area Sprinkler System - Diesel Generator Building

f. North Cable Spread Area Sprinkler System - Diesel Generator Building

g. Two Standby Gas Treatment Train 1A Deluge Systems - Reactor Building #2.

h. Two Standby Gas Treatment Train 1B Deluge Systems - Reactor Building #2.

i. Area Sprinkler System - Reactor Building #2.

j. Service Water Pump Area Sprinkler System - Service Water Building

k. Service Water Cable Spread Area Sprinkler System - Service Water Building

l. Drumming Room Sprinkler System - Radwaste Building

m. Makeup Water Treatment Area Sprinkler System - Makeup Water Treatment Building

APPLICABILITY: Whenever equipment in the areas protected by the spray and/or sprinkler systems is required to be OPERABLE.

ACTION:

a. With one or more of the above required spray and/or sprinkler systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days 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

4.7.7.2 Each of the above required spray and/or sprinkler systems shall be demonstrated OPERABLE:

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

b. At least once per 18 months:

1. By performing a system functional test which includes simulated automatic actuation of the system, and:

a) Verifying that the automatic valves in the flow path actuate to their correct positions on a simulated actuation signal, and

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

2. By inspection of the spray headers to verify their integrity, and

3. By inspection of each deluge nozzle to verify no blockage.

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PLANT SYSTEMS

HIGH PRESSURE CO_2 SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.3 The following high pressure CO_2 systems shall be OPERABLE with a minimum contained weight of 67.5 lbs. of CO_2 in each cylinder of the inservice bank.

a. Unit No. 2 HPCI CO_2 System - Unit No. 2 Reactor Building.

b. Control Building CO_2 System - Control Building.

APPLICABILITY: Whenever equipment in the area protected by the high pressure CO_2 systems is required to be OPERABLE.

ACTION:

a. With one or more of the above required high pressure CO_2 systems inoperable, establish backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days 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

4.7.7.3 Each of the above required high pressure CO_2 systems shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying that the high pressure CO_2 cylinders contain at least the minimum specified weight of CO_2.

b. At least once per 18 months by verifying:

1. The system control heads and associated ventilation dampers actuate manually and automatically, as appropriate, upon receipt of a simulated actuation signal, and

2. Performance of a flow test through flooding system headers and nozzles and hose reel system horns to assure no blockage.

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PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITIONS FOR OPERATION

3.7.7.4 The fire hose stations shown in Table 3.7.7.4-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the fire hose stations shown in Table 3.7.7.4-1 inoperable, within one hour

   1. Provide an alternative means of fire suppression for the unprotected area(s), or

   2. Route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station.

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

SURVEILLANCE REQUIREMENTS

4.7.7.4 Each of the fire hose stations shown in Table 3.7.7.4-1 shall be demonstrated OPERABLE:

a. At least once per 31 days by visual inspection of the station to assure all required equipment is at the station.

b. At least once per 18 months by:

   1. Removing the hose for inspection and re-racking, and

   2. Replacement of all degraded gaskets in couplings.

c. At least once per 3 years by:

   1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage, and

   2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at that hose station.

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TABLE 3.7.7.4-1

FIRE HOSE STATIONS

LOCATION	ELEVATION	HOSE RACK#
Unit No. 2 Reactor Bldg.	-17'	2-RB-19
	-17'	2-RB-20
	-17'	2-RB-24
	-17'	2-RB-25
	-17'	2-RB-26
	20'	2-RB-21
	20'	2-RB-22
	20'	2-RB-23
	20'	2-RB-27
	20'	2-RB-28
	20'	2-RB-29
	50'	2-RB-30
	50'	2-RB-31
	50'	2-RB-32
	50'	2-RB-33
	50'	2-RB-34
	50'	2-RB-35
	67'	2-RB-48A
	80'	2-RB-36
	80'	2-RB-39
	80'	2-RB-41
	80'	2-RB-43
	80'	2-RB-44
	80'	2-RB-45
	98'	2-RB-37
	117'	2-RB-38
	117'	2-RB-40
	117'	2-RB-42
	117'	2-RB-46
	117'	2-RB-47
	117'	2-RB-48
AOC Building	23'	2-AOG-57
	23'	2-AOG-58
	23'	2-AOG-59
	23'	2-AOG-60
	37'	2-AOG-62
	49'	2-AOG-61
Radwaste Building	-3'	RW-49
	-3'	RW-50
	-3'	RW-51
	23'	RW-52
	23'	RW-53
	23'	RW-54
	23'	RW-55
	23'	RW-56

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TABLE 3.7.7.4-1 (Continued)

FIRE HOSE STATIONS

LOCATION	ELEVATION	HOSE RACK#
Diesel Generator Building	2'	DGB-1
	2'	DGB-2
	2'	DGB-3
	23'	DGB-4
	23'	DGB-5
	23'	DGB-6
	23'	DGB-7
	23'	DGB-8
	23'	DGB-9
	50'	DGB-10
	50'	DGB-11
	50'	DGB-12
	50'	DGB-13
	50'	AFFF HR-2
	50'	AFFF HR-3
Service Water Building	4'	SW-1
	20'	SW-2
	20'	SW-3
Control Building	23'	2-CB-1
	49'	2-CB-2
	70'	2-CB-3
Diesel Generator Tank Area	NA	AFFF HR-1

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PLANT SYSTEMS

FOAM SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.7.5 The following foam systems shall be OPERABLE:

a. Diesel Generator Fuel Oil Tank Area Foam System with:

1. The concentrate proportioning and storage subsystem OPERABLE with 240 gallons of concentrate.

2. Each tank room subsystem OPERABLE.

b. Diesel Generator Air Filter Foam System with:

1. The concentrate proportioning and storage subsystem OPERABLE with 40 gallons of concentrate.

2. Each air filter subsystem OPERABLE.

APPLICABILITY: Whenever the diesel generators are required to be OPERABLE.

ACTION:

a. With one tank room subsystem inoperable, verify the OPERABILITY of the backup foam hose reel within one hour.

b. With one air filter subsystem inoperable, verify the OPERABILITY of two backup foam hose reels within one hour.

c. With any inoperability other than as provided in a and b, above, verify the availability of backup fire suppression equipment for the unprotected area(s) within one hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

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

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SURVEILLANCE REQUIREMENTS

4.7.7.5 Each of the above required foam systems shall be demonstrated OPERABLE:

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

b. At least once per 18 months by:

1. Performing a system functional test which includes simulated automatic actuation of the system, and:

a) Verifying that the automatic valves in the flow path actuate to their correct positions on a simulated actuation signal, and

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

2. A visual inspection of the spray headers to verify their integrity.

3. A visual inspection of each nozzle's spray area to verify that the spray pattern is not obstructed.

4. Conducting a performance evaluation of the concentrate.

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PLANT SYSTEMS

3/4.7.8 FIRE BARRIER PENETRATIONS

LIMITING CONDITIONS FOR OPERATION

3.7.8 All fire barrier penetrations, including cable penetration barriers, fire doors, and fire dampers, in fire zone boundaries protecting safety-related areas shall be functional.

APPLICABILITY: At all times.

ACTION:

a. With one or more of the above required fire barrier penetrations nonfunctional, within one hour establish a continuous fire watch on at least one side of the affected penetration, or verify the OPERABILITY of fire detectors on at least one side of the nonfunctional fire barrier and establish an hourly fire watch patrol. Restore the nonfunctional fire barrier penetration(s) to functional status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the nonfunctional penetration, and plans to schedule for restoring the fire barrier penetration(s) to functional status.

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

SURVEILLANCE REQUIREMENTS

4.7.8 Each of the above required fire barrier penetrations shall be verified to be functional:

a. At least once per 18 months by a visual inspection, and

b. Prior to restoring a fire barrier penetration to functional status following repairs or maintenance, by performance of a visual inspection of the affected fire barrier penetration.

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MONITORING INSTRUMENTATION (Continued)

3/4.3.5.6 CHLORIDE INTRUSION MONITORS

The chloride intrusion monitors provide adequate warning of any leakage in the condenser or hotwell so that actions can be taken to mitigate the consequences of such intrusion in the reactor coolant system. With only a minimum number of instruments available, increased sampling frequency provides adequate information for the same purpose.

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3/4.3.5.7 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, increasing the frequency of fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

3/4.3.5.8 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent monitoring instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The alarm/trip setpoints for these instruments shall be calculated in accordance with the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50. The purpose of tank level indicating devices is to assure the detection and control of leaks that, if not controlled, could potentially result in the transport of radioactive materials to UNRESTRICTED AREAS. "Without delay" implies that the operator, upon determining the limiting condition for operation is being exceeded, takes the next appropriate action to comply with the specification.

The initial CHANNEL CALIBRATION for the instruments associated with footnote (b) to Table 4.3.5.8-1 shall be performed using National Bureau of Standards traceable sources which will verify that the detector operates properly over its intended energy range and measurement range. For instruments which were operational prior to this specification being implemented, previously established calibration procedures may be substituted for this requirement.

PLANT SYSTEMS

BASES (Continued)

SNUBBERS (Continued)

The service life of a snubber is established via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life.

3/4.7.6 SEALED SOURCE CONTAMINATION

The limitation on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from by-product, source, and special nuclear material sources will not exceed allowable intake values. Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism, i.e., sealed sources with radiation monitoring or boron measuring devices, are considered to be stored and need not be tested unless they are removed from the shielding mechanism.

3/4.7.7 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, CO_2, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service.

In the event the fire suppression water system become inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a 24-hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

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3/4.7.8 FIRE BARRIER PENETRATIONS

The functional integrity of the fire barrier penetrations ensures that fires will be confined or adequately retarded from spreading to adjacent potions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The fire barrier penetrations are a passive element in the facility fire protection programs and are subject to periodic inspections.

The barrier penetrations, including cable penetration barriers, fire doors, and dampers, are considered functional when the visually observed condition is the same as the as-designed condition. For those fire barrier penetrations that are not in the as-designed condition, an evaluation shall be performed to show that the modification has not degraded the fire rating of the fire barrier penetration.

During periods of time when the barriers are not functional, either 1) a continuous fire watch is required to be maintained in the vicinity of the affected barrier, or 2) the fire detectors on at least one side of the affected barrier must be verified OPERABLE and a hourly fire watch patrol established until the barrier is restored to functional status.

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FACILITY STAFF (Continued)

d. The Shift Operating Supervisors, Shift Foremen, and Senior Control Operators shall hold a senior reactor operator license. The Control Operators shall hold a reactor operator license.

e. An individual qualified to implement radiation protection procedures shall be onsite when fuel is in either reactor.*

f. All CORE ALTERATIONS shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.

g. A Fire Brigade of at least five members shall be maintained onsite at all times.* The Fire Brigade shall not include the minimum shift crew shown in Table 6.2.2-1 or any personnel required for other essential functions during a fire emergency.

h. Administrative procedures shall be developed and implemented to limit the working hours of facility staff who perform safety-related functions; e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel. These procedures shall meet the working hour guidelines published by the Commission in Generic Letter No. 82-12.

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* The individual qualified to implement radiation protection procedures and Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed two hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

6.2.3 ONSITE NUCLEAR SAFETY (ONS)

FUNCTION

6.2.3.1 The ONS Unit shall function to examine facility operating characteristics, NRC issues, industry advisories, and other sources which may indicate areas for improving facility safety.

RESPONSIBILITIES

6.2.3.2 The ONS Unit shall be responsible for maintaining surveillance of facility activities to provide independent verification* that these activities are performed correctly and that human errors are reduced as much as practical.

AUTHORITY

6.2.3.3 The ONS Unit shall make detailed recommendations for revised procedures, equipment modifications, or other means of improving facility safety to the Manager - Corporate Nuclear Safety Section.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall serve in an advisory capacity to the Shift Operating Supervisor on matters pertaining to the engineering aspects assuring safe operation of the unit.

6.3 FACILITY STAFF QUALIFICATION

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the Manager - Environmental & Radiation Control who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975 and (2) the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant during transients and accidents.

6.4 TRAINING

6.4.1 A retraining and replacement training program for the facility staff shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix "A" of 10 CFR Part 55.

6.4.2 A training program for the Fire Brigade shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements of Section 27 of the NFPA Code-1975.

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* Not responsible for sign-off function.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification.

a. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.5.1.

b. Seismic event analysis, Specification 4.3.5.1.2.

c. Accident Monitoring Instrumentation, Specification 3.3.5.3.

d. Fire detection instrumentation, Specification 3.3.5.7.

e. Reactor coolant specific activity analysis, Specification 3.4.5.

f. ECCS actuation, Specifications 3.5.3.1 and 3.5.3.2.

g. Fire suppression systems, Specifications 3.7.7.1, 3.7.7.2, 3.7.7.3, and 3.7.7.5.

h. Fire barrier penetration, Specification 3.7.8.

i. Liquid Effluents Dose, Specification 3.11.1.2.

j. Liquid Radwaste Treatment, Specification 3.11.1.3.

k. Dose - Noble Gases, Specification 3.11.2.2.

l. Dose - Iodine-131, Iodine-133, Tritium, and Radionuclides in Particulate Form, Specification 3.11.2.3.

m. Gaseous Radwaste Treatment, Specification 3.11.2.4.

n. Ventilation Exhaust Treatment, Specification 3.11.2.5.

o. Total Dose, Specification 3.11.4.

p. Monitoring Program, Specification 3.12.1.b.

q. Primary Containment Structural Integrity, Specification 4.6.1.4.2.

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CORE OPERATING LIMITS REPORT

6.9.3.1 Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, for the following:

a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATES (APLHGR) for Specification 3.2.1 including core flow and core power adjustments.