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RIVER BEND - UNIT 1

PDR ADOCK 05000458

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INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

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LIMITING CONDITION FOR OPERATION

3.3.7.8 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.7.8-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

- a. With any, but no more than one-half the total in any fire zone, Function A fire detection instruments shown in Table 3.3.7.8-1 inoperable, restore the inoperable Function A instrument(s) to OPERABLE status within 14 days or, within the next hour, establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour. If the instrument(s) is located inside the containment, inspect that containment zone at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.8 and 4.6.2.6.
- b. With more than one-half of the Function A fire detection instruments in any fire zone shown in Table 3.3.7.8-1 inoperable, or with any Function B fire detection instruments shown in Table 3.3.7.8-1 inoperable, or with any two or more adjacent instruments shown in Table 3.3.7.8-1 inoperable, within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour. If the instrument(s) is located inside the containment, inspect that containment zone at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.8 and 4.6.2.6.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.8.1 Each of the above required fire detection instruments which are accessible during unit operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during unit operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.7.8.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

	/	FIRE DETECTION INSTRUMENTA	TION	/
NC	TRUMENT L	OCATION		/
13	NONLINE L	OCATION	TOTAL INS	TRUMENTS OPERABLE*
)		HEAT	FLAME SMOKE
			$\overline{(x/y)}$	$\overline{(x/y)} / \overline{(x/y)}$
				/
		BUIDQING		/
	ZONE			/
	SD-1	HVAC ROOM, EL 115'0" & 116'0"		/
	SD-2	HPCS SWGR, EL 115'0" & 116'0"		6/0
	SD-3	BATTERY ROOMS (3) & DC EQUIP RMS,	/	3/0
		EL 115'0" & 116'0"	/	8/0
	SD-4	HVAC ROOM, EL 98'0"	/	6/0
	SD-5	STBY SWGR ROOM B, EL 98'0"	/	3/0
	SD-6		/	3/0
	SD-15	HVAC ROOM 1A, EL XO'O"	/	2/0
	SD-16	HVAC ROOM 1B, EL 70'0"	/	2/0
	SD-17	CABLE VAULT, EL 70'0	/	0/3
	SD-18 SD-19	CABLE VAULT, EL 70'0"		0/4
	SD-20	CABLE VAULT, EL 70'0" CABLE CHASES, EL 70'0"		0/9
	SD-50	CABLE CHASES, EL 98'0"		17/0
	SD-54	CABLE CHASES, EL 116'0"		9/0
	SD-60	125 VDC SWGR & BATT CHGR.		10/0
		EL 115'0" & 116'0"		10/0
	SD-61	GENERAL AREA, EL 98'0"		8/0
	SD-125	PGCC PANEL MODULE, EL 136'0"	0/8	10/0
	SD-126	PGCC PANEL MODULE, EL 136'0"	0/8	13/0
	SD-127		0/8	11/0
	SD-128	PGCC PANEL MODULE, EL 136'0"	0X8	9/0
	SD-129	PGCC PANEL MODULE / EL 136'0"	0/9	12/0
	SD-130 SD-131	PGCC PANEL MODULE, EL 136'0"	0/8	11/0
	SD-131 SD-132	PGCC PANEL MODULE, EL 136'0" PGCC PANEL MODULE, EL 136'0"	0/9	17/0
	SD-132	PGCC PANEL MODULE, EL 136'0"	0/8	17/0
	SD-134	PGCC PANEL MODULE, EL 136'0"	0/8	13/0
	SD-135	PGCC PANEL MODULE, EL 136'0"	0/8	12/0
	SD-136	PGCC PANEL MODULE, EL 136'0"	0/9	9/0 9/0
	SD-137	PGCC PANEL MODULE, EL 136'0"	0/8	8/0
	SD-138	PGCC PANEL MODULE, EL 136'0"	0/8	10/0
	SD-139	PGCC PANEL MODULE, EL 136'0"	0/12	12/0
	SD-140	PGEC PANEL MODULE, EL 136'0"	0/8	14/0
	SD-141	PGCC PANEL MODULE, EL 136'0"	0/8	13/0
	SD-142	PGCC PANEL MODULE, EL 136'0"	0/9	16/0

cation only) instruments. y is number of Function B (actuation of fire suppression systems and early warning fire detection).

*

TABLE 3.3.7.8-1	(Continued)
-----------------	-------------

(DELETE)

FIRE DETECTION INSTRUMENTATION

INSTRUMENT LOC	CATION	TOTAL INS	TRUMENTS OPERABLE*
/		HEAT	FLAME SMOKE
I. CONTROL BU		(x/y)	TENTS TENTS
SD-143 SD-144 SD-145 SD-146 SD-147 SD-148 SD-149 SD-149 SD-150 SD-151 SD-151 SD-158 SD-152 SD-153 SD-154 SD-162	PGCC PANEL MODULE, EL 136'0" PGCC PANEL MODULE, EL 136'0" NON PANEL MODULE, EL 136'0" NON PANEL MODULE AREA NORTH, EL 135' NON PANEL AREA SOUTH, EL 135'0" GENERAL AREA, EL 136'0" REMOTE SHUTDOWN PANEL DIV V,	0/9 0/9 0/8 0/12 0/12 0/10 0/9 0/10 0/8	17/0 17/0 8/0 8/0 14/0 18/0 14/0 15/0 10/0 8/0 10/0 8/0 10/0 84/0
	EL 98'0"		1/0
SD-163	REMOTE SHUTDOWN PANEL DIX II, EL 98'0"		1/0
FD-26 FD-27	CHARCOAL FILTER 1HVC*FLT3B, EL 115'0" CHARCOAL FILTER 1HVC*FLT3A, EL 115'0"	1/0 1/0	
II. REACTOR E	BUILDING	\	
SD-57 SD-104 SD-117 SD-119 FD-13	#CONTAINMENT AREA, EL 114'0" #CONTAINMENT AREA, EL 186'3" #CONTAINMENT AREA, EL 162'3" #CONTAINMENT AREA, EL 162'3" #RECIRC PUMPS - DRYWELL, EL 70'0" & 98'0"	2/0	13/0 17/0 7/0 13/0
/			
cati y is ear	s number of Function A (early warning ion only) instruments. s number of Function B (actuation of t ly warning fire detection). ection instruments located within the	fire suppres	sion systems and

/to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

TABLE 3.3.7.8-1 (Continued)

(DELETE)

FIRE DETECTION INSTRUMENTATION

INSTRUMENT L	OCATION	TOTAL INSTRUMENTS OPERABLE*		
		$\frac{\text{HEAT}}{(x/y)}$	FLAME SMOK	
			/	
III. AUXILIA ZONE	RY BUILDING		/	
SD-28	HPCS PUMP ROOM EL 70'0"	/	1/0	
SD-29	RHR PUMP ROOM B, EL 70'0"	./	2/0	
SD-30	RHR PUMP ROOM C, EL 70'0"	/	2/0	
SD-31	RHR PUMP ROOM A, EL 70'0"	/	2/0	
SD-32	LPCS PUMP ROOM, EL 70'0"	/	1/0	
SD-43	GENERAL AREA WEST, EL 95'0"	/	2/0	
SD-49	GENERAL AREA, EL 141'0"	/	9/0	
SD-52	GENERAL AREA EAST EL 114'0"	/	5/0	
SD-53	GENERAL AREA EAST, EL 114'0" GENERAL AREA WEST, EL 114'0" PASS ROOM, EL 114'0"	·	5/0	
SD-55	PASS ROOM, EL 114'0"		1/0	
SD-96	RCIC PUMP ROOM, EL 70 0"		0/2	
SD-97	GENERAL AREA, EL 70'0"		4/0	
SD-98	GENERAL AREA EAST, EL 95 9"		2/0	
SD-99 SD-100	GENERAL AREA WEST, EL 95'9" GENERAL AREA WEST, EL 95'9"		2/0 2/0	
SD-100	STANDBY GAS TREATMENT ROOM "B".		4/0	
50-101	EL 141'0"		470	
SD-103	STANDBY GAS TREATMENT ROOM "A",			
SD-106	EL 141'0" ANNULUS MIXING FAN AREA, EL 171'0"		4/0 3/0	
FD-33	STANDBY GAS TREATMENT FILTER "B", EL 141'0"	1/0	370	
FD-34	STANDBY GAS TREATMENT FILTER "A", EL 141'0"	1/0		
SD-164	WATER CURTAIN, EL 70'0"	/	0/2	
SD-165	WATER CURTAIN, EL 141'0"	/	0/4	
IV. FUEL BU	ILDING		\backslash	
SD-33	FUEL POOL COOLING PUMP AREAS,			
	/ EL 70'0"		2/0	
SD-44	1ENS*SWG 3A & 4A AREA, EL 95'0"		7/0	
SD-59	GENERAL AREA, EL 113'0"		13/0	
SD-91 SD-94	GENERAL AREA, EL 70'0" NEW FUEL RECEIVING AREA, EL 95'0"		2/0	
30-34	NEW FOEL RECEIVING AREA, EL 55 0		1	
	is number of Function A (early warning	g fire detect	tion and notifi-	
/ y	tion only) instruments. is number of Function B (actuation of	fire suppres	sion systems and	
ear	rly warning fire detection).			

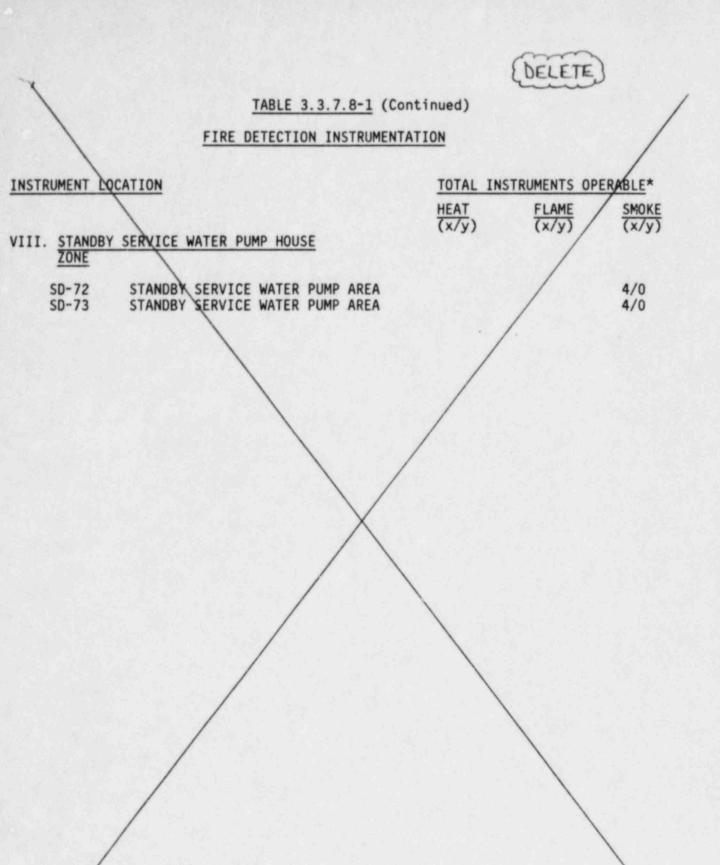
TABLE 3.3.7.8-1 (Continued)

(DELETE)

*

FIRE DETECTION INSTRUMENTATION

INST	RUMENT LOC	CATION	TOTAL INS	TRUMENTS OPE	RABLE*
	/		$\frac{\text{HEAT}}{(x/y)}$	FLAME (x/y)	SMOKE (x/y)
IV.	FUEL BUT		(~,) /		(~,))
	ZONE (Cor	tinued)		/	
	SD-110	FUEL POOL PURIFICATION & BACKWASH PUMP AREAS, EL 70'0"		/	3/0
	SD-111	FUEL POOL COOLER (A & B) AREAS, EL 95'0"	/	/	2/0
	SD-121	CHARCOAL FILTER "A" ROOM, EL 148'0"	. /		2/0
	SD-123	CHARCOAL FILTER "B" ROOM, EL 148'0"	/		2/0
	SD-124	1RMS*CABION AREA, EL 148'0"	/		4/0
	SD-155		1		4/0
	FD-35	CHARCOAL FILTER "A" ROOM, EL 148'0"	2/0		
	FD-36	CHARCOAL FILTER "B" ROOM, EL 148'0"	/1/0		
٧.		AL TUNNELS			
	ZONE				
	SD-79	GENERAL AREA, EL 67'6			0/6
	SD-80	GENERAL AREA, EL 67'6"			0/6
	SD-81	GENERAL AREA, EL 67'6"			0/11
	SD-82	GENERAL AREA, EL 67'6"			0/12
	SD-83	GENERAL AREA, EL 70'0"			0/12
VI.	PIPE TUNN ZONE				
	SD-86	GENERAL AREA, EL 70'0"			0/18
	SD-87	GENERAL AREA, EL 67'6"			0/7
	SD-87	GENERAL AREA, EL 67'6"			0/10
	SD-89	GENERAL AREA, EL 67'6"			0/17
VII		ENERATOR BUILDING			
VII.	ZONE	ALANTON COLOTING	/		
	SD-105	GENERAL AREA, EL 98'0"	1		3/0
	FD-16	DIESEL ROOM DIV. II, EL 98'0"	0/4		
	FD-17	BIESEL ROOM DIV III, EL 98'0"	0/4		
	FD-18	DIESEL ROOM DIV I, EL 98'0	0/4		
	/				
	/				
	/				
* /	the second	s number of Function A (early warning	fire detect	tion and not	fi-
^ (x	(x): x is	ion only) instruments.	The deseed		/
1	cat	s number of Function B (actuation of f	ire suppres	ssion systems	and
/	y 1	ly warning fire detection).	and suppress		
/	edr	ly warning the accection,			
					1



* (x/y): x is number of Function A (early warning fire detection and notification only) instruments. y is number of Function B (actuation of fire suppression systems and early warning fire detection).

3/4,7.6 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6.1 The fire suppression water system shall be OPERABLE with:/

a. Three fire suppression pumps, each with a capacity of 1500 gpm, with their discharges aligned to the fire suppression header,

DELETE

- Two separate fire water tanks, each with a minimum contained volume of 253,000 gallons, and
- c. An OPERABLE flow path capable of taking suction from both water storage tanks and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation values to the yard hydrant curb values, the last value ahead of the water flow alarm device on each sprinkler or hose standpipe, and the last value ahead of the deluge value on each deluge or spray system, required to be OPERABLE per Specifications 3.7.6.5, 3.7.6.4, and 3.7.6.2.

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 provide an alternate backu, pump or supply. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- b. With the fire suppression water system otherwise inoperable, establish a backup fire suppression water system within 24 hours.

SURVEILLANCE REQUIREMENTS

4.7.6.1.1 The fire suppression water system shall be demonstrated QPERABLE:

- a. At: least once per 7 days by verifying the minimum contained water supply volume.
- b. At Yeast once per 31 days by starting the electric motor driven fire suppression pump and operating it for at least 15 minutes on recircu-Vation flow.

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.

SURVEILLANCE REQUIREMENTS (Continued)

- 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:

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- Verifying that each fire suppression pump develops at least 2250 gpm at a system head of 248 feet,
- Cycling each valve in the flow path, that is not testable during plant operation, through at least one complete cycle of full travel, and
- Verifying that each fire suppression pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 70 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.
- 4.7.6.1.2 Each diesel driven fire suppression pump shall be demonstrated OPERABLE:
 - a. At least once per 31 days by;
 - Verifying the fuel day tank contains at least 300 gallons of fuel.
 - Starting the pump from ambient conditions and operating it for greater than or equal to 30 minutes on recirculation flow.
 - 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 D270-75, is within the acceptable limits specified in Table 1 of ASTM D975-77 when checked for viscosity, water, and sediment.
 - c. At Yeast once per 18 months, during shutdown, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.6.1.3 Each diesel driven fire pump 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 cell is above the plates, and

DELETE

- 2. The overall battery bank 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. The specific gravity, corrected to 77°F and full electrolyte level, shall be greater than or equal to 1.200.
- c. At least once per 18 months by verifying that:
 - 1. The battery cases and battery racks show no visual indication of physical damage or abnormal deterioration, and
 - Battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

SPRAY AND/OR SPRINKLER SYSTEMS OFLETE LIMITING CONDITION FOR OPERATION 3.7.6.2 The following spray and sprinkler systems shall be OPERABLE: SYSTEM LOCATION ELEVATION IDENTITY Control Bldg. Cable Chases 116'0" AS-6A a. 98'0" AS-6B 70'0" AS-6C, WS-6A, WS-6B, WS-6C 115'0" WS-7A, WS-7B Cable Tunnels 67'6"/70'0" WS-8D, WS-8E, 45-8F, b. 67'6"/70'0" WS-8G, WS-8H, WS-SK, 67'6"/70'0" WS-8L, WS-8M, WS-8N 70'0" Auxiliary Bldg., RCIC PS-1, WS-19 C. 141'0" Pump Room WS-4A, WS-4B, WS-20, AS-12 98'0" Diesel Generator Bldg. PS-2A, PS-2B, PS-2C d. 95 0" AS-5 Fuel Bldg. e.

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

148'0"

ACTION:

a. With one or more of the above required spray or sprinkler systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.

WS-5A, WS-5B

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

SURVEILLANCE REQUIREMENTS

4.7.6.2 Each of the above required spray and sprinkler systems shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path is in its correct position.
- b. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- c. At least once per 18 months:
 - By performing a system functional test which includes simulated automatic actuation of the automatic systems, and:
 - Verifying that the automatic valves in the flow path actuate to their correct positions on a simulated actuation test signal, and

DELETE

- 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 a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity.
- 3. By a visual inspection of each deluge nozzle's spray area* to verify that the spray pattern is not obstructed.
- d. At least once per 3 years by performing an air or water flow test through each open head spray and sprinkler header system* and verifying that each open head spray nozzle and sprinkler header system is unobstructed.

*The charcoal filter system spray nozzles need only be visually inspected and verified to be unobstructed each time the charcoal is changed.

HALON SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.6.3 The following main control room Power Generation Control Complex (PGCC) Halon systems shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure:

> PGCC Panel Module U701 PGCC Panel Module U702 PGCC Panel Mcdule U703 PGCC Panel Module U704 PGCC Panel Module U710 PGCC Panel Module U711 PGCC Panel Module U712 PGCC Panel Module U713 PGCC Panel Module U714 PGCC Panel Module U715 PGCC Panel Module U717 PGCC Panel Module U717 PGCC Panel Module U720 PGCC Panel Module U721 PGCC Panel Module U723

PGCC Panel Module U730 PGCC Panel Module U731 PGCC Panel Module U732 PGCC Panel Module U732 PGCC Panel Module U740 PGCC Panel Module U741 PGCC Panel Module U743 PGCC Panel Module U743 PGCC Panel Module U744 PGCC Panel Module U745 PGCC Panel Module U745 PGCC Panel Module U747 PGCC Panel Module U748 PGCC Panel Module U748 PGCC Panel Module U749 PGCC Panel Module U799 PGCC Panel Module U750

DELETE

APPLICABILITY: Whenever equipment protected by the Halon systems is required to be GPERABLE.

ACTION:

- a. With one or more of the above required Halon systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas establish an hourly fire watch patrol.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.6.3 The above required Halon system shall be demonstrated ORERABLE:
 - a. At least once per 31 days by verifying that each Halon system storage tank is pressurized to at least 280 psig.

At least once per 6 months by verifying Halon storage tank weight and pressure.

b.

PLANT SYSTEMS DELETE SURVEILLANCE REQUIREMENTS (Continued) c. At least once per 18 months by: Verifying the system actuates, manually and automatically, upon receipt of a simulated actuation signal (actual Halon release, Halon bottle initiator valve actuation, and electro-thermal link burning may be excluded from the test), and 1 Performance of a flow test through headers and nozzles to assure 2. no blockage.

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

3.7.6.4 The fire hose stations shown in Table 3.7.6.4-1 shall be OPERABLE.

DELETE

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 3.7.6.4-1 inoperable, provide gated wye(s) on the nearest OPERABLE hose station(s). One outlet of the wye shall be connected to the standard length of hose provided for the hose station. The second outlet of the wye shall be connected to a length of hose sufficient to provide coverage for the area left unprotected by the inoperable hose station. Where it can be demonstrated that the physical routing of the fire hose would result in a recognizable hazard to operating technicians, plant equipment, or the hose itself, the fire hose shall be stored in a roll at the outlet of the OPERABLE hose station. Signs shall be mounted above the gated wye(s) to identify the proper hose to use. The above ACTION shall be accomplished within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise route the additional hose within 24 hours.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6.4 Each of the fire hose stations shown in Table 3.7.6.4-1 shall be demonstrated OPERABLE.

- a. At least once per 31 days by a visual inspection of the fire hose stations accessible during plant operation to assure all required equipment is at the station.
- b. At least once per 18 months by:
 - Visual inspection of the fire hose stations not accessible during plant operation to assure all required equipment is at the station.

Removing the hose for inspection and re-racking, and

 Inspecting all gaskets and replacing any degraded gaskets in the couplings.

2.

SURVENLANCE REQUIREMENTS (Continued)

- c. At least once per 3 years by:
 - 1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.
 - Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.

DELETE

/			
/		TABLE 3.7.6.4-1	(DELETE) /
		FIRE HOSE STATIONS	citie /
LOCATION		ELEVATION	HOSE RACK
a.	Reactor Building	114'0" 141'0" 162'3" 186'3"	HR - 16, 22 HR - 17, 23 HR - 18, 19, 24, 25 HR - 20, 21, 26
b.	Auxiliary Building	70'0" (Stairwell) 95'9" 114'0" 141'0" 170'0"	HR - 84 HR - 6, 7, 8, 9 HR - 10, 11 HR - 12, 13, 14, 15 HR - 80
c.	Control Building	70'0" 98'0" 115'0" and 116'0" 135'0" (Stairwell)	HR - 85, 86, 87 HR - 88, 89, 90 HR - 91, 92, 93, 94 HR - 96
d.	Fuei Building	70'0" 95'0" 113'0" 148'0"	HR - 1, 2, 82 HR - 3, 4 HR - 81 HR - 5
e.	Pipe Tunnel	67'6"	HR - 83
f.	Turbine Building	95'0" 123'6"	HR - 50, 51 HR - 53
/			

YARO FIRE HYDRANTS AND HYDRANT HOSE HOUSES

LIMITING CONDITION FOR OPERATION

3.7.6.5 The yard fire hydrants and associated hydrant hose houses shown in Table 3.7.6.5-1 shall be OPERABLE.

DELETE

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

ACTION:

- a. With one or more of the yard fire hydrants or associated hydrant hose houses shown in Table 3.7.6.5-1 inoperable, within 1 hour have sufficient additional lengths of 2 1/2 inch diameter hose located in an adjacent OPERABLE hydrant hose house to provide service to the unprotected area(s) if the inoperable fire hydrant or associated hydrant hose house is the primary means of fire suppression; otherwise provide the additional hose within 24 hours.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6.5 Each of the yard fire hydrants and associated hydrant hose houses shown in Table 3.7.6.5-1 shall be demonstrated OPERABLE:

- a. At least once per 31 days by visual inspection of the hydrant hose house to assure all required equipment is at the hose house.
- b. At least once per 6 months, by visually inspecting each yard fire hydrant and verifying that the hydrant barrel is dry and that the hydrant is not damaged.
- c. At least once per 12 months by:
 - Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.
 - 2. / Replacement of all degraded gaskets in couplings.

Performing a flow check of each hydrant.

	TABLE 3.7.6.5-1	DELETE
	YARD FIRE HYDRANTS AND ASSOCIATED H	TYDRANT HOSE HOUSES
LOC	ATION	HYDRANT NUMBER
a. b. c. d.	Northeast of Fuel Bldg East of Control Bldg West of Standby Cooling Tower North of Fuel Bldg	FHY 11 FHY 13 FHY 9* FHY 10
		./.
	X	
/		
/		

3/4. 7 FIRE-RATED ASSEMBLIES

LIMITING CONDITION FOR OPERATION

3.7.7 All fire barrier assemblies shall be OPERABLE. Fire barrier assemblies include:

a. Walls, floors/ceilings, cable tray enclosures, and other fire barriers that separate safety-related fire areas or that separate portions of redundant systems, important to safe shutdown, within a fire area, and

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b. All sealing devices in fire-rated assembly penetrations, including fire doors and fire dampers and cable, piping and ventilation duct penetration seals, and ventilation seals.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required fire-rated assemblies or sealing devices inoperable, within 1 hour establish a continuous fire watch on at least one side of the affected assembly and/or sealing device or verify the OPERABILITY of fire detectors on at least one side of the inoperable assembly or sealing device, and establish an hourly fire watch patrol.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each of the above required fire-rated assemblies and penetration sealing devices shall be verified OPERABLE at least once per 18 months by performing a visual inspection of:

- a. The exposed surfaces of each fire-rated assembly.
- b. Each fire damper and associated hardware.
- c. At least 10 percent of each type of sealed penetration. If changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made. This inspection process shall continue until a 10 percent sample is found with no apparent changes in appearance or abnormal degradation. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.7.2 Each of the above required fire doors shall be verified OPERABLE by inspecting the automatic hold-open, release and closing mechanism and latches at least once per 6 months, and by verifying:

a. At least once per 31 days, the OPERABILITY of the fire door supervision system for each electrically supervised fire door by performing a CHANNEL FUNCTIONAL TEST.

DELETE

- b. At least once per 7 days, that each locked-closed fire door is closed.
- c. At least once per 24 hours, that doors with automatic hold-open and release mechanisms are free of obstructions and, at least once per 18 months, by performing a functional test of these mechanisms.
- d. At least once per 24 hours, that each unlocked fire door without electrical supervision is closed.

INSTRUMENTATION

BASES

MONITORING INSTRUMENTATION (Continued)

3/4.3.7.8 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures both that adequate warning capability is available for prompt detection of fires and that fire suppression systems, that are actuated by fire detectors, will discharge extinguishing agent in a timely manner. Prompt detection and suppression of fires will reduce the potential for damage to safety-related equipment and are integral elements in the overall facility fire protection program.

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Fire detectors that are used to actuate fire suppression systems represent a more critically important component of a plant's fire protection program than detectors that are installed solely for early fire warning and notification. Consequently, the minimum number of OPERABLE fire detectors for fire suppression must be greater than the minimum number of detectors for fire warning.

The loss of detection capability for fire suppression systems, actuated by fire detectors, represents a significant degradation of fire protection for any area. As a result, the establishment of a fire watch patrol must be initiated at an earlier stage than would be warranted for the loss of detectors that provide only early fire warning. The establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

3/4.3.7.9 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or lessen damage to primary system components. The allowable out-ofservice times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.7.10 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 and adjusted in accordance with the methodology and parameters in 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.

BASES

SNUBBERS (Continued)

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. The requirements for the maintenance of records and of the snubber service life review are not intended to affect plant operation.

3/4.7.5 SEALED SOURCE CONTAMINATION

The limitations 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 byproduct, 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 within radiation monitoring devices, are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

3/4 7.6 FIRE SUPPRESSION SYSTEMS COELETE

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 systems consist of the water system, spray and/or sprinkler systems, Halon system 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. When the inoperable fire fighting equipment to intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met. An allowance is made for ensuring a sufficient volume of Halon in the Halon storage tanks by verifying the weight and pressure of the tanks.

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.

BASES

3/4.7.7 FIRE RATED ASSEMBLIES

The OPERABILITY of the fire barriers and barrier penetrations ensure that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire dampers, and fire doors are periodically inspected. to verify their OPERABILITY.

DELETE

3/4.7.8 AREA TEMPERATURE MONITORING

The area temperature limitations ensure that safety-related equipment will not be subjected to temperatures in excess of their environmental qualification temperatures. Exposure to excessive temperatures may degrade equipment and can cause loss of its OFERABILITY.

3/4.7.9 MAIN TURBINE BYPASS SYSTEM

The main turbine bypass system is required to be OPERABLE consistent with the assumptions of the feedwater controller failure analysis in FSAR Chapter 15.

3/4 7.10 STRUCTURAL SETTLEMENT

Structural settlement limitations are imposed and required to be verified so as to preserve the assumptions made in the static design of the major safety related structures.

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6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Supervisor (or during his absence from the control room, a designated individual) shall be responsible for the control room command function. A management directive to this effect, signed by the Senior Vice President - River Bend Nuclear Group, shall be reissued to all station personnel on an annual basis.

6.2 ORGANIZATION

OFFSITE

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6.2.1 The offsite organization for unit management and technical support shall be as shown on Figure 6.2.1-1.

UNIT STAFF

6.2.2 The unit organization shall be as shown on Figure 6.2.2-1 and:

- Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2.2-1;
- b. At least one licensed Operator shall be in the control room when fuel is in the reactor. In addition, while the unit is in OPERATIONAL CONDITION 1, 2 or 3, at least one licensed Senior Operator shall be in the control room;
- A Radiation Protection Technician* shall be on site when fuel is in the reactor;
- d. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Operator or licensed Senior Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation; and

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A site fire brigade of at least five members shall be maintained on site at all times*. The fire brigade shall not include the Shift Supervisor, the Shift Technical Advisor, the Control Operating Foreman, nor the two other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency; and

÷.

^{*}The Radiation Protection Technician and fire brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours, in order to accommodate unexpected absence, provided immediate action is taken to fill the required positions.

ENCLOSURE 2

suppression systems are included in Appendix 9A.

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Twent A Periodic operational checks, inspections, and servicing required to maintain fire protection systems, including the alarm detection system, follow the guidance provided in the NFPA standards.

Inser B → 9.5.1.5 Personnel Qualification and Training

> Qualifications of the personnel responsible for the preparation of the Fire Hazards Analysis and for the design and selection of equipment are provided in the Fire Protection Program Evaluation Report (Appendix 9A), Section 9A.1.2. Personnel responsible for the development of the RBS fire protection program; maintenance, inspection, and testing of fire protection equipment; and training of firefighting personnel are discussed in Section 9A.3.2.1. A discussion of all aspects of fire protection training for RBS is provided in Section 13.2.1.1.11.

Section 9A.3.2 (Administrative Procedures, Controls and Fire Brigade) conforms with BTP APCSB 9.5-1 and Section 9B.4.8, 9B.4.9, and 9B.4.11 (Fire Brigade, Fire Brigade Training, and Administrative Controls) conforms with Items III.H., III.I, and III.K, respectively, of Appendix R to 10CFR50. AFCSB 9.5-1 and Appendix R sections listed above have the same intent as BTP CMEB 9.5-1 Sections C.2 and C.3.

Procedures are provided (shown in Section 13.5) to maintain the performance of the fire protection systems and to set forth the responsibilities, duties, and controls for the fire protection program in the following general areas:

1. Administrative Procedures

a. Responsibilities and authorities

b. Organizational relationships

2. Fire Protection Procedures

a. Control of ignition sources

b. Control of transient combustibles

c. Duties of a fire watch

d. Fire report

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9.5-9

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INSERT A to 9.5.1.4 Page 9.5-9

Administrative controls are provided through existing station operating and quality assurance procedures, to ensure that the Fire Protection Program and equipment is properly maintained. This includes QA audits of the program implementation, conduct of periodic tests, inspections, and remedial actions for systems and barriers out of service. This program emphasizes those elements of fire protection that are associated with safe shutdown as described in Appendix 9A and their significance when evaluating program and equipment deficiencies.

INSERT B to 9.5.1.4 Page 9.5-9

Equipment out of service including fire suppression, detection, and barriers will be controlled through an administrative program. The program requires all impairments to fire protection system to be identified and appropriate notification given to the Shift Supervisor. The Shift Supervisor will ensure operability of fire protection systems in accordance with operability requirements discussed herein. Where such operability requirements are not met, the Shift Supervisor will ensure that the appropriate remedial actions are taken. As conditions warrant remedial actions would include compensatory measures to ensure equivalent level of fire protection in addition to timely efforts to effect repairs and restore equipment to service.

INSERT B to 9.5.1.4 (Continued)

9.5.1.4.1 Fire Detection Instrumentation

9.5.1.4.1.1 Operability

- 1. As a minimum, the fire detection instrumentation for each fire detection zone shown in Fig. 9A.2-10 shall be operable whenever equipment protected by the fire detection instrument is required to be operable.
- With any, but no more than one-half the 2. total in any fire zone, Function A (early warning fire detection and notification only instruments) fire detection instruments shown in Fig. 9A.2-10 inoperable, the inoperable Function A instrument(s) will be restored to operable status within 14 days or, within the next hour, a fire watch patrol will be established to inspect the zone(s) with the inoperable instrument(s) at least once per hour. If the instrument(s) is located inside the containment, the containment zone will be inspected at least once per 8 hours or the containment air temperature will be monitored at least once per hour at the listed in Technical locations Specification 4.6.1.8 and 4.6.2.6.
- 3. With more than one-half of the Function A fire detection instruments in any fire zone shown in Fig. 9A.2-10 inoperable, or with any Function B (actuation of fire suppression systems and early warning fire detection) fire detection instruments shown in Fig. 9A.2-10 inoperable, or with any two or more adjacent instruments shown in Fig. 9A.2-10 inoperable a fire watch patrol will be established within 1 hour to inspect the zone(s) with the inoperable instrument(s) at least once per hour. If the instrument(s) is located inside the

containment, that containment zone will be inspected at least once per 8 hours or the containment air temperature will be monitored at least once per hour at the locations listed in Technical Specification 4.6.1.8 and 4.6.2.6.

9.5.1.4.1.2 Surveillance

- 1. Each of the required fire detection instruments shown in Fig. 9A.2-10 which are accessible during unit operation shall be demonstrated operable at least once per 6 months by performance of a channel functional test. Fire detectors which are not accessible during unit operation shall be demonstrated operable by the performance of a channel functional test during each cold shutdown exceeding 24 hours unless performed in the previous 6 months.
- The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the required fire detection instruments shown in Fig. 9A.2-10 shall be demonstrated operable at least once per 6 months.
- 9.5.1.4.2 Fire Suppression Water System

9.5.1.4.2.1 Operability

- 1. The fire suppression water system shall be operable with:
 - a. Three fire suppression pumps, each with a capacity of 1500 gpm, with their discharges aligned to the fire suppression header.
 - b. Two separate fire water tanks, each with a minimum contained volume of 253,000 gallons, and
 - c. An operable flow path capable of taking suction from both water storage tanks and transferring the water through distribution piping with operable sectionalizing control

or isolation values to the yard hydrant curb values, the last value ahead of the water flow alarm device on each sprinkler or hose standpipe, and the last value ahead of the deluge value on each deluge or spray system, required to be operable per Sections 9.5.1.4.3, 9.5.1.4.5 and 9.5.1.4.6.

- With one pump and/or one water supply inoperable, the inoperable equipment will be restored to operable status within 7 days or an alternate backup pump or supply will be provided.
- With the fire suppression water system otherwise inoperable, a backup fire suppression water system will be established within 24 hours.
- 9.5.1.4.2.2 Surveillance
 - 1. The fire suppression water system shall be demonstrated operable:
 - At least once per 7 days by verifying the minimum contained water supply volume.
 - b. At least once per 31 days by starting the electric motor driven fire suppression pump and operating it for at least 15 minutes on recirculation flow.
 - 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 one per 18 months by performing a system functional test which includes simulated automatic

actuation of the system throughout its operating sequence, and:

- Verifying that each fire suppression pump develops at least 2250 gpm at a system head of 248 feet,
- 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 suppression pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 70 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.
- 2. Each diesel driven fire suppression pump shall be demonstrated operable:
 - a. At least once per 31 days by;
 - Verifying the fuel day tank contains at least 300 gallons of fuel.
 - Starting the pump from ambient conditions and operating it for greater than or equal to 30 minutes on recirculation flow.
 - 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 D270-75, is within the acceptable limits specified in Table 1 of ASTM D975-77 when checked for viscosity, water, and sediment.

- c. At least once per 18 months, during shutdown, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.
- Each diesel driven fire pump starting 24-volt battery bank and charger shall be demonstrated operable:
 - a. At least once per 7 days by verifying that:
 - The electrolyte level of each cell is above the plates, and
 - 2) The overall battery bank 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. The specific gravity, corrected to 77 F and full electrolyte level, shall be greater than or equal to 1.200.
 - c. At least once per 18 months by verifying that:
 - The battery cases and battery racks show no visual indication of physical damage or abnormal deterioration, and
 - Battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

9.5.1.4.3 Spray and Sprinkler Systems

9.5.1.4.3.1 Operability

 The spray and sprinkler systems listed in Fig. 9A.2-9 shall be operable whenever equipment protected by the spray or sprinkler systems is required to be operable.

2. With one or more of the required spray or sprinkler systems inoperable, within one hour a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged will be established. For other areas, an hourly fire watch patrol will be established.

9.5.1.4.3.2 Surveillance

- Each of the spray and sprinkler systems listed in Fig. 9A.2-9 shall be demonstrated operable:
 - a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path is in its correct position.
 - b. At least one per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
 - c. At least once per 18 months:
 - By performing a system functional test which includes simulated automatic actuation of the automatic systems, and:
 - a) Verifying that the automatic valves in the flow path actuate to their correct positions on a simulated actuation test 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.

- By a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity.
- 3) By a visual inspection of each deluge nozzle's spray area* to verify that the spray pattern is not obstructed.

d. At least once per 3 years by performing an air or water flow test through each open head spray and sprinkler header system* and verifying that each open head spray nozzle and sprinkler header system is unobstructed.

9.5.1.4.4 Halon Systems

9.5.1.4.4.1 Operability

- The Main Control Room Power Generation Control Complex (PGCC) Halon systems listed in Table 9.5-7 shall be operable with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure whenever equipment protected by the Halon systems is required to be operable.
- 2. With one or more of the required Halon systems listed in Table 9.5-7 inoperable, within 1 hour a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged will be established. For other areas an hourly fire watch patrol will be established.

9.5.1.4.4.2 Surveillance

- 1. The Halon systems listed in Table 9.5-7 shall be demonstrated operable:
 - a. At least once per 31 days by verifying that each Halon system storage tank is pressurized to at least 280 psig.

*The charcoal filter system spray nozzles need only be visually inspected and verified to the unobstructed each time the charcoal is changed.

- b. At least once per 6 months by verifying Halon storage tank weight and pressure.
- c. At least once per 18 months by verifying the system actuates, manually and automatically, upon receipt of a simulated actuation signal (actual Halon release, Halon bottle initiator valve actuation, and electro-thermal link burning may be excluded from the test).
- d. Performance of a flow test through headers and nozzles to assure no blockage.

9.5.1.4.5 Fire Hose Stations

9.5.1.4.5.1 Operability

- 1. The fire hose stations listed in Table 9.5-8 shall be operable whenever equipment in the areas protected by the fire hose stations is required to be operable.
- With one or more of the fire hose 2. stations shown in Table 9.5-8 inoperable, provide gated wye(s) on the nearest operable hose station(s). One outlet of the wye shall be connected to the standard length of hose provided for the hose station. The second outlet of the wye shall be connected to a length of hose sufficient to provide coverage for the area left unprotected by the inoperable hose station. Where it can be demonstrated that the physical routing of the fire hose would result in a recognizable hazard to operating technicians, plant equipment, or the hose itself, the fire hose shall be stored in a roll at the outlet of the operable hose station. Signs shall be mounted above the gated wye(s) to identify the proper hose to use. The above action shall be accomplished within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise route the additional hose within 24 hours.

9.5.1.4.5.2 Surveillance

- Each of the fire hose stations listed in Table 9.5-8 shall be demonstrated operable:
 - a. At least once per 31 days by a visual inspection of the fire hose stations accessible during plant operation to assure all required equipment is at the station.
 - b. At least once per 18 months by:
 - Visual inspection of the fire hose stations not accessible during plant operation to assure all required equipment is at the station.
 - 2) Removing the hose for inspection and re-racking, and
 - Inspecting all gaskets and replacing any degraded gaskets in the couplings.
 - c. At least once per 3 years by:
 - Partially opening each hose station valve to verify valve operability and no flow blockage.
 - Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.

9.5.1.4.6 Yard Fire Hydrants and Hydrant Hose Houses

9.5.1.4.6.1 Operability

 The yard fire hydrants and associated hydrant hose houses listed in Table 9.5-9 shall be operable whenever equipment in the areas protected by the yard fire hydrants is required to be operable. 2. With one or more of the yard fire hydrants or associated hose houses listed in Table 9.5-9 inoperable, within 1 hour have sufficient additional lengths of 2 1/2 inch diameter hose located in an adjacent operable hydrant hose house to provide service to the unprotected area(s) if the inoperable fire hydrant or associated hydrant hose house is the primary means of fire suppression; otherwise provide the additional hose within 24 hours.

9.5.1.4.6.2 Surveillance

- Each of the yard fire hydrants and associated hydrant hose houses listed in Table 9.5-9 shall be demonstrated operable:
 - a. At least once per 31 days by visual inspection of the hydrant hose house to assure all required equipment is at the hose house.
 - b. At least once per 6 months, by visually inspecting each yard fire hydrant and verifying that the hydrant barrel is dry and that the hydrant is not damaged.
 - c. At least once per 12 months by:
 - Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.
 - Replacement of all degraded gaskets in couplings.
 - Performing a flow check of each hydrant.

9.5.1.4.7 Fire Rated Assemblies

9.5.1.4.7.1 Operability

- All fire barrier assemblies* shall be operable at all times. Fire barrier assemblies include:
 - a. Walls, floors/ceilings, cable tray enclosures, and other fire barriers that separate safety-related fire areas or that separate portions of redundant systems, important to safe shutdown, within a fire area, and
 - b. All sealing devices in fire-rated assembly penetrations, including fire doors and fire dampers and cable, piping and ventilation duct penetration seals, and ventilation seals.
- 2. With one or more of the required fire-rated assemblies or sealing devices inoperable, within 1 hour a continuous fire watch will be established on at least one side of the affected assembly and/or sealing or the operability of fire detectors on a least one side of the inoperable assembly or sealing device will be verified, and an hourly fire watch patrol will be established.
- 9.5.1.4.7.2 Surveillance
 - Each of the required fire-rated assemblies and penetration sealing devices shall be verified operable at least once per 18 months by performing a visual inspection of:
 - a. The exposed surfaces of each fire-rated assembly.
 - b. Each fire damper and associated hardware.

*The requirements delineated in this section are applicable to only those fire barrier assemblies necessary for safe shutdown. At least 10 percent of each type of sealed penetration. If changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made.

This inspection process shall continue until a 10 percent sample is found with no apparent changes in appearance or abnormal degradation. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.

- Each of the required fire doors shall be verified operable by inspecting the automatic hold-open, release and closing mechanism and latches at least once per 6 months, and by verifying:
 - a. At least once per 31 days, the operability of the fire door supervision system for each electrically supervised fire door by performing a channel functional test.
 - b. At least once per 7 days, that each locked-closed fire door is closed.
 - c. At least once per 24 hours, that doors with automatic hold-open and release mechanisms are free of obstructions and, at least once per 18 months, by performing a functional test of these mechanisms.
 - d. At least once per 24 hours, that each unlocked fire door without electrical supervision is closed.

c.

taken to locate the compressor in areas free of dust and contaminants.

RIVER BEND STATION POSITION

(INSERT A)

17

The site fire brigade is trained and equipped to ensure an adequate manual fire fighting capability for protection of safety-related structures, systems, and components. Five members of each shift have fire brigade duties and are 13 required to pass an annual physical examination. These shift members normally include a Nuclear Control Operator, two Nuclear Equipment Operators, one Test Technician -Nuclear, and one Chemistry Technician or Radiation Protection Technician, but not both. V If sufficient numbers of trained personnel are not available from the above, other individuals who are qualified as fire brigade members will be assigned to that shift to complete the five-man fire brigade. The Nuclear Control Operator acts as fire brigade 13 leader and informs the Shift Supervisor from the scene of the fire. The fire brigade leader understands the effects of fire and fire suppressants on safe shutdown capability (two additional brigade members possess similar knowledge).

Turnout coats, boots, gloves, hard hats, portable hand lights and extinguishers are provided for fire brigade members. Page party/public address (PP/PA) equipment is available for emergency communications. In the main control room 10 full-face, positive pressure, self-contained breathing apparatuses (SCBA), and 3 spare air bottles per SCBA are provided for fire brigade use. Each SCBA supplies one individual for 1 hour during moderate exertion. Routine replenishment is available through a casade system located onsite with offsite replenishment available through compressed gas suppliers in the Baton Rouge area.

9B.4.9 Fire Brigade Training (Item III.I of Appendix R)

The fire brigade training program shall ensure that the capability to fight potential fires is established and maintained. The program shall consist of an initial classroom instruction program followed by periodic classroom instruction, fire fighting practice, and fire drills.

- 1. Instruction
 - a. The initial classroom instruction shall include:

Amendment 17

LUSERT B }

9B.4-7

March 1985

INSERT A to 9B.5.9 Page 9B.4-7

The fire brigade shall not include the Shift Supervisor, the Shift Technical Advisor, the Control Operating Foreman, nor the two other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.

INSERT B to 9B.5.9 Page 9B.4-7

The 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 that immediate action is taken to fill the required positions.

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MAY 1985 DETECTION SYSTEM IDENTIFICATION LEGEND SHEET 1 OF 2 FINE SEND STATION HEAT SMOLE 4/0 3/0 3/0 00000 3/0 2/0 2/0 210 0/17 13/0 0/4 FIGURE 9A.2-10 AMENDMENT 19 ----the state of the s A 15 Million and an an NAME OF TAXABLE PARTY. ADDING BADE IN MICH CONTACTION AND Party in the state of the second second -----STATE OF A LOW AND A CALIFOR DARK D. OF C. MINISTER OF P. and operate and a didness -----to save or to save and the The name of cases of the A REAL PROPERTY AND INC. State of the same No. a.m. I. and A. W. and an age a sid mean --------With a widow WALKA WOMEN and the state of the second ------NAME AND A DESCRIPTION OF A DESCRIPTIONO ---------With a set of the INSERT B INSERT A 1111 -----** * ; : ; : : 1 : : : : . : : ; * : : : 1 : : 1 : : ; : : 1 : ; : : 1 . 12 HAI-2016 13/0 4/0 5/0 81/0 01/0 01/0 9/0 13/0 0100 910 710 Franke das of these in a root and as a wird a second of a second second of the second se a anatheniment, b. ter 11 ann unt 1 annen for an allente (1974) 5.5. 1. 4741 474 (1981) 491 448 A-So etter tracters and to see a un -----ments and a side of a statement over -----THE RALE OF COMPANY OF ------------------ANTER CALL IN C. COMM ------The last of C and an end ---------------------------CONTRACT PLAN IN 11 114'S ---1 1 i 1 1 ţ ş I i : 1 : -: : : : : 1 : : : : : : : : : : : : 1 -2 : : : : : : :: : : 1 -. SADIE OFECTION SYSTEM SONEMAE HEAT SMAKE 4/0 3/0 8/0 3/0 3/0 210 210 0/3 0/4 0/9 2/0 21002100 -----1 ------States of the same of the same of the same --i : : : : : : : : 2 : . 3 : : --1 : : : : : : : : : : : : : : : : : 2 2 1 . : 1 -: : -;

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FSAR FIGURE 94.2-10

INSERT A

			HEAT (A/O)	SMOKE (A/8)
125	SD-125	PGCC PANEL MODULE, EL 136'0"	0/8	10/0
126	SD-126	PGCC PANEL MODULE, EL 136'0"	0/8	
127	SD-127	PGCC PANEL MODULE, EL 136'0"	0/8	13/0
126	SD-128	PGCC PANEL MODULE, EL 136'0"	0/8	11/0
129	SD-129	PGCC PANEL MODULE, EL 136'0"	0/9	9/0
130	SD-130	PGCC PANEL MODULE, EL 136'0"	0/8	12/0
131	SD-131	PGCC PANEL MODULE, EL 136'0"	0/9	11/0
132	SD-132	PGCC PANEL MODULE, EL 136'0"	0/8	17/0
133	SD-133	PGCC PANEL MODULE, EL 136'0"	0/8	17/0
134	SD-134	PGCC PANEL MODULE, EL 136'0"	0/8	13/0
135	SD-135	PGCC PANEL MODULE, EL 136'0"	0/8	12/0
136	SD-136	PGCC PANEL MODULE, EL 136'0"	0/9	9/0
137	SD-137	PGCC PANEL MODULE, EL 136'0"	0/8	9/0
138	SD-138	PGCC PANEL MODULE, EL 136'0"	0/8	8/0
139	SD-139	PGCC PANEL MODULE, EL 136'0"	0/12	10/0
140	SD-140	PGCC PANEL MODULE, EL 136'0"	0/8	12/0
141	SD-141	PGCC PANEL MODULE, EL 136'0"		14/0
142	SD-142	PGCC PANEL MODULE, EL 136'0"	0/8	13/0
143	SD-143	PGCC PANEL MODULE, EL 136'0"	0/9	16/0
144	SD-144	PGCC PANEL MODULE, EL 136'O"	0/9	17/0
145	SD-145	PGCC PANEL MODULE, EL 136'O"	0/9	17/0
146	SD-146	PGCC PANEL MODULE, EL 136 0"	0/8	8/0
147	SD-147	PGCC PANEL MODULE, EL 136'0"	0/8	8/0
140	SD-148	PGCC PANEL MODULE, EL 136'O"	0/12	14/0
149	SD-149	PGCC PANEL MODULE, EL 136'0"	0/12	18/0
150	SD-150	PGCC PANEL MODULE, EL 136'0"	0/10	14/0
151	SD-151	PGCC PANEL MODULE, EL 136'0"	0/9	15/0
		PGCC PANEL MODULE, EL 136'0"	0/10	10/0

INSERT B

			SMOKE (A/B)
152	SD-152	NON PANEL MODULE AREA NORTH, EL 135'0"	10/0
153	SD-153	NON PANEL AREA SOUTH, EL 135'O"	10/0

INSERT C

100		.					HEAT
FD-13A	RECIRC	PUMP 2 98'0"	-	DRYWELL,	EL	70'0"	
FD-13B	RECIRC	PUMP 1	-	DRYWELL,	EL	70'0"	1/0
	&	98'0"					1/0

RBS FSAR

TABLE 9.5-7

HALON SYSTEMS

PGCC	Panel	Module	U701	
PGCC	Panel	Module	U702	
PGCC	Panel	Module	U703	
PGCC	Panel	Module	U704	
PGCC	Panel	Module	U710	
PGCC	Panel	Module	U711	
PGCC	Panel	Module	U712	
PGCC	Panel	Module	U713	
PGCC	Panel	Module	U714	
PGCC	Panel	Module	U715	
PGCC	Panel	Module	U717	
PGCC	Panel	Module	U720	
PGCC	Panel	Module	U721	
PGCC	Panel	Module	U723	

PGCC	Panel	Module	U730	
PGCC	Panel	Module	U731	
PGCC	Panel	Module	U732	
PGCC	Panel	Module	U740	
PGCC	Panel	Module	U741	
PGCC	Panel	Module	U742	
PGCC	Panel	Module	U743	
PGCC	Panel	Module	U744	
PGCC	Panel	Module	U745	
PGCC	Panel	Module	U746	
PGCC	Panel	Module	U747	
PGCC	Panel	Module	U748	
PGCC	Panel	Module	U799	
PGCC	Panel	Module	U750	

RBS FSAR

TABLE 9.5-8

FIRE HOSE STATIONS

LOCATION	ELEVATION	HOSE RACK IDENTIFICATION
Reactor Building	114'0" 141'0" 162'3" 186'3"	HR - 16, 1. HR - 17, 2 HR - 18, 11, 24, 25 HR - 20, 21, 26
Auxiliary Building	70'0" (Stairwell) 95'9" 114'0" 141'0" 170'0"	HR - 84 HR - 6, 7, 8, 9 HR - 10, 11 HR - 12, 13, 14, 15 HR - 80
Control Building	70'0" 98'0" 115'0" and 116'0" 135'0" (Stairwell)	HR - 85, 86, 87 HR - 88, 89, 90 HR - 91, 92, 93, 94 HR - 96
Fuel Building	70'0" 95'0" 113'0" 148'0"	HR - 1, 2, 82 HR - 3, 4 HR - 81 HR - 5
Pipe Tunnel	67'6"	HR - 83
Turbine Building	95'0" 123'6"	HR - 50, 51 HR - 53

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TABLE 9.5-9

YARD FIRE HYDRANTS AND ASSOCIATED HYDRANT HOSE HOUSES

LOCATION

HYDRANT NUMBER

Northeast of Fuel Bldg	FHY 11
East of Control Bldg	FHY 13
West of Standby Cooling Tower	FHY 9*
North of Fuel Bldg	FHY 10

* No associated hose house