JERSEY CENTRAL POWER & LIGHT COMPANY
OYSTER CREEK NUCLEAR GENERATING STATION
PROVISIONAL OPERATING LICENSE NO. DPR-16
DOCKET NO. 50-219

Applicant hereby requests the Commission to change Appendix A to the License as follows:

1. Sections to be changed:

   Sections 3.12 and 4.12

2. Extent of changes:

   New specifications for additional fire protection systems installed per the Oyster Creek Fire Protection Program.

3. Changes requested:

   Replace Section 3.12 and 4.12 in their entirety with the attached revised Sections 3.12 and 4.12.

4. Discussion:

   The changes requested are proposed in order to incorporate Technical Specification requirements on additional fire protection systems that have been installed during the 1980 refueling outage. The proposed specifications include revisions to the existing Tables in Section 3.12 which have been modified to include system expansions which have been implemented during the 1980 refueling outage.

3.12 Fire Protection

Applicability: Applies to the operating status of Fire Detection/Suppression systems and associated instrumentation.

Objective: To assure that fire in safety related areas is detected and suppressed at an early stage so as to minimize fire damage to safety relate equipment.

Specification: A. Fire Detection Instrumentation

1. As a minimum, the fire detection instrumentation for each fire detection area/zone shown in Table 3.12.1 shall be operable, except as otherwise specified in this section.

2. With the number of operable fire detection instruments less than required by Table 3.12.1;

a. Within one hour, establish a fire watch patrol to inspect the area (s)/zone(s) with the inoperable instrument(s) at least once per every 2 hours, and

b. Restore the inoperable instrument(s) to operable status within 14 days or prepare and submit a special report to the Commmission within the next 30 days outlining the action taken, the cause of the inoperability and the plans/schedule for restoring the instrument (s) to operable status.

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be operable with:

a. Two high pressure pumps, each with a capacity of 2000 GPM, with their discharge aligned to the fire suppression header.

b. Automatic initiation logic for each fire pump.

c. An operable flow path capable of taking suction from the fire pond and transferring water through distribution piping with operable sectionalizing control of isolation valves to the yard hydrant curb valves and the first valve ahead of the water flow alarm device on each sprinkler, hose standpipe or spray system riser required to be operable per specifications 3.12.C and 3.12.D.

2. With less than the above required equipment, restore the inoperable equipment to operable status within 7 days or prepare and submit a Special Report to the commission within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.

3. With no Fire Suppression Water System operable.

a. Within 48 hours establish a backup Fire Suppression Water System

b. Submit a Special Report to the Commission by telephone within 24 hours, and in writing no later than 14 days following the event, outlining the action taken, the cause of the inoperability and the plans/schedule for restoring the system to operable status.

C. Spray and/or Sprinkler Systems

1. The spray and/or sprinkler systems listed in Table 3.12.2 shall be operable.

2. With a spray and/or sprinkler system inoperable within one hour establish a fire watch patrol to inspect the affected area/zone at least once per every 2 hours.

3. Restore the system to operable status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the cause of inoperability and the plans/schedule for restoring the system to operable status.

D. Fire Hose Stations

1. The Fire Hose Stations listed in Table 3.12.3 shall be operable.

2. With a hose station listed in Table 3.12.3 inoperable, within 2 hours provide additional fire suppression equipment in the affected area/zone.

E. Fire Barrier Penetration Fire Seals

1. All penetration fire barriers protecting safety related fire areas shall be intact except for periods of planned maintenance.

2. With a penetration fire barrier nonfunctional, within one hour establish a fire watch patrol to inspect both sides of the affected penetration at least once per every 2 hours.

F. Halon Systems

1. The Halon Systems listed in Table 3.12-4 shall be operable with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure.

2. With a Halon system inoperable within one hour establish a fire watch patrol to inspect the affected area at least once per every 2 hours.

3. Restore the system to operable status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the action taken, the cause of inoperability and the plans/schedule for restoring the system to operable status.

G. Carbon Dioxide (CO_2) System

1. The 4160 Volt Switchgear CO_2 system shall be operable with a minimum level greater than or equal to 1/2 full and a minimum pressure of 275 psig in the associated storage tank.

2. With the CO_2 system inoperable, within one hour establish a fire watch patrol to inspect the area at least once per every 2 hours.

3. Restore the system to operable status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the cause of inoperability and the plans/schedule for restoring the system to operable status.

Basis:

Fire Protection systems and instrumentation provide for early detection and rapid extinguishment of fires in safety related areas thus minimizing fire damage. These specifications will assure that in the event of inoperable fire protection equipment, corrective action will be initiated in order to maintain fire protection capabilities during all modes of reactor operation.

The pumps in the fire water suppression system have a capacity of 2000 GPM each assuring an adequate supply of water to fire suppression systems. Fire suppression water system operability as defined in 3.12.B.1 applies only as pertains to specification 3.12 and is not applicable to other specifications.

Hose stations are provided for manual fire suppression. In the event that a hose station becomes inoperable, additional fire suppression equipment will be provided such as portable extinguishers or other means of fire suppression.

TABLE 3.12.1 FIRE DETECTION INSTRUMENTATION

Fire Area/Zone	Location	Detector Zone	Required # of Detectors
1	Rx. Bldg. 119' elev.	Sprinkler Sys.#10	1(WFS)
1	" 95' "	NA	24*
1	" 75' "	NA	22*
1	" 75' "	Sprinkler Sys.#11	1(WFS)
1	" 51' "	RK01/RK02	2
	" 51' "	1 - North	6
	" 51' "	2 - North	7
	" 51' "	1 - South	6
	" 51' "	2 - South	6
	" 38'/51' "	Shutdown Pump Rm.	7
1	" 23' "	1 - North	6
	" 23' "	2 - North	5
	" 23' "	1 - South	6
	" [illegible] "	2 - South	6
1	" -19" "	NA	4(1 per corner rm.
3	4160 SG. Rm.	Vault	2 (1 in "C" and 1 in "D")
	4160 SG. Rm.	Gen. Area	5
	4160 SG. Rm.	Battery Rm.	1
4	Cable Spread Rm.	4A-Zone 1	3
	"	4A-Zone 2	3
	"	4B-Zone 3	4
	"	4B-Zone 4	5

TABLE 3.12.1 FIRE DETECTION INSTRUMENTATION

Fire Area/Zone	Location	Detector Zone	Required # of Detectors
5	Control Room	Gen. Area	5
	"	A-Zone 1	3
	"	A-Zone 2	3
	"	B-Zone 1	7*
	"	B-Zone 2	7*
	"	C-Zone 1	1
	"	C-Zone 2	1
	"	Duct	1
6	480 V. SG Rm.	Zone 1	9
	"	Zone 2	8
	"	Corridor	1
7	"A" & "B" Battery Rm.	Zone 1	4
	"	Zone 2	4
	"	Zone 4 (Duct)	1
8	MG Set Rm.	NA	1 (WFS)
10	Monitor & Change Rm.	Below Ceiling	2
	"	Above Ceiling	10*
		Sprinkler Sys.#12	1(WFS)
10/1	Laundry Room	Sprinkler Sys. #13	1(WFS)
11/3	Condenser Bay	Sprinkler Sys. #2	1 (P.S.)
11/1	Tur. Lube Oil	Deluge Sys.#3	1 (P.S.)
11/2	Tur. Basement South	Sprinkler Sys. 9	1 (WFS)
12	Transformers	Deluge Sys. #1	1 (P.S.)
	"	Deluge Sys. #2	1 (P.S.)

TABLE 3.12.1 FIRE DETECTION INSTRUMENTATION

Fire Area/Zone	Location	Detection Zone	Required # of Detector
15	Emer. Diesel #1	Thermal	5
	"	Ionization	1
16	Fuel Storage Area	NA	1
17	Emer. Diesel #2	Thermal	5
		Ionization	1
18	Fire Water Pump House	NA	4

*No two adjacent detectors may be inoperable.

WFS - Water Flow Switch

P.S. - Pressure Switch

TABLE 3.12.2 SPRAY/SPRINKLER SYSTEMS

Fire Area	Location	System
1	Rx. Bldg. 119'	Sprinkler Sys. #10
1	Rx. Bldg. 75'	Sprinkler Sys. #11
1	Rx. Bldg. 51'-N	Deluge Sys. #5
1	" -S	Deluge Sys. #6
1	Rx Bldg. 23' -N	Deluge Sys. #7
	" -S	Deluge Sys. #8
4	Cable Spread Room	Deluge Sys. #4A
	"	Deluge Sys.#4B
8	MG Set Room	Sprinkler Sys. #4
10	Monitor & Change Rm.	Sprinkler Sys. #12
10	Laundry Room	Sprinkler Sys. #13
11	Condenser Bay	Sprinkler Sys. #2
11	Tur. Lube Oil Bay	Deluge Sys. #3
11	Tur. Basement South	Sprinkler Sys. #9
12	Transformers	Deluge Sys. #1
		Deluge Sys. #2
18	Fire Water Pump House	Deluge Sys. #9

TABLE 3.12.3 HOSE STATIONS

FIRE AREA	ZONE	HOSE STATION NO.	LOCATIONS
11	2	3	Tur. Basement-S
11	2	4	Tur. Basement-S
11	1	8	Tur. Basement-N
11	1	9	Tur. Basement-N
11	3	10	Condenser Bay
11	3	11	Condenser Bay
11	3	12	Condenser Bay
11	3	13	Condenser Bay
1	-	29	Rx Bldg. 23'
1	-	30	Rx Bldg. 23'
1	-	31	Rx Bldg. 23'
1	-	32	Rx Bldg. 23'
1	-	33	Rx Bldg. 23'
1	-	34	Rx Bldg.-19'
1	-	35	Rx Bldg.-19'
1	-	36	Rx Bldg.-19'
1	-	37	Rx Bldg.-19'
1	-	38	Rx Bldg. 51'
1	-	39	Rx Bldg. 51'
1	-	40	Rx Bldg. 51'
1	-	41	Rx Bldg. 51'
1	-	42	Rx Bldg. 75'
1	-	43	Rx Bldg. 75'
1	-	44	Rx Bldg. 75'
1	-	45	Rx Bldg. 75'

TABLE 3.12.3 HOSE STATIONS

FIRE AREA	ZONE	HOSE STATION NO.	LOCATIONS
1	-	46	Rx Bldg. 95'
1	-	47	Rx Bldg. 95'
1	-	48	Rx Bldg. 95'
1	-	49	Rx Bldg. 95'
1	-	50	Rx Bldg. 119'
1	-	51	Rx Bldg. 119'
4	-	52	Cable Room
5	-	53	Control Rm.
10	1	54	Chem. Lab
11	2	55	Tur. Basement S
12,15,16,17	-	Hydrant #3 and Hose House #5	Diesel Gen. & Transformer Area
14	-	Hydrant #2 and Hose House #2	Intake Structure

TABLE 3.12.4 HALON SYSTEMS

	Halon 1301 Sys.	Fire Area	Location
1.	Battery Room A & B	7	Battery Room (office Building)
	Cable Tray Room		Instrument Shop (Office Building)
2.	480 Volt Switchgear	6	23' Elev. Between Rx Building & Turbine Building
3.	Control Room Panels	5	Control Room

4.12 Fire Protection

Applicability: Applies to the surveillance requirements of the Fire Protection Systems in safety related areas/zones.

Objective: To specify the minimum frequency and type of surveillance to be applied to fire protection equipment and instrumentation.

Specifications: A. Fire Detection Instrumentation

1. Each of the instruments in Table 3.12.1 shall be demonstrated operable by a channel function test at least once per 6 months.

2. The NFPA Code 72D(1977) Class A 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.

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be demonstrated operable:

a. At least once per month on a staggered test basis by starting each pump and operating it for at least (15) minutes on recirculation flow.

b. At least once per 12 months by performance of a system flush.

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

d. 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 360 feet.

2. Verifying that the pump operates for greater than or equal to 60 minutes.

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

e. 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. The Fire Pump Diesel Engine shall be demonstrated operable:

a. At least once per month by verifying the fuel storage tank contains at least 275 gallons of fuel.

b. At least once per every 3 months by verifying that a fuel sample, obtained in accordance with ASTM-0270-65, from each tank is within the acceptable limits specified in Table 1 of ASTM D 975-1974 when checked for viscosity, water & sediment.

3. The Fire Pump Diesel 24 volt battery bank and associated charger shall be demonstrated operable:

a. At least once per week by verifying that:

1. The electrolyte level of each pilot cell is above the plates,

2. The pilot cell voltage is greater than or equal to 2.0 volts,

3. The pilot cell specific gravity, corrected to 77° F, will be recorded for surveillance review.

4. The overall battery voltage is greater than or equal to 24 volts.

b. At least once per 3 months by verifying that:

1. The voltage of each connected cell is greater than or equal to 2.0 volts,

2. The specific gravity, corrected to 77° F, of each cell will be recorded for surveillance review.

3. The electrolyte level of each cell is above the plates.

C. Spray and/or Sprinkler Systems

1. The spray and/or sprinkler systems listed in Table 3.12.2 shall be demonstrated operable at least once per 18 months:

a. By performing a system functional test which includes simulated automatic actuation of the system and verifying that the automatic valves in the flow path acutate to their correct positions.

b. By inspection of the water headers to verify their integrity.

c. By inspection of each open spray nozzle to verify no blockage.

D. Hose Stations

1. Each of the hose stations listed in Table 3.12.3 shall be verified operable:

a. At least once per month by visual inspection of the station to assure all equipment is available.

b. At least once per 18 months by removing the hose for inspection and reracking and replacing all gaskets in the couplings that are degraded.

c. At least once per 3 years by:

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

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

E. Penetration Fire Barrier

1. Each penetration fire barrier in fire area boundries shall be verified to be functional by a visual inspection:

a. At least once per 18 months, and

b. Prior to declaring a penetration fire barrier functional following repairs or maintenance.

F. Low Pressure Carbon Dioxide (CO2) System

1. The CO2 system for the 4160 volt emergency switchgear vault shall be demonstrated operable:

a. At least once per week by verifying that the storage tank level is greater than or equal to 1/2 full and the pressure is at least 275 psig.

b. At least once per month by verifying that each manual valve in the flow path is in its correct position.

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

1. The system valves and associated ventilation dampers actuate automatically upon receipt of a simulated actuation signal, and

2. Flow is observed from each nozzle during a "puff test".

G. Halon Systems

1. Each of the Halon Systems listed in Table 3-12.4 shall be demonstrated operable:

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

b. At least once per 18 months by:

1. Verifying the system, including associated ventilation dampers, actuates manually and automatically, upon receipt of a simulated test signal.

2. Performance of a flow test through headers and nozzles to assure no blockage.

Basis:

Fire Protection systems are normally inactive and require periodic examination and testing to assure their readiness to respond to a fire situation. These specifications detail inspections and tests which will demonstrate that this equipment is capable of performing its intended function.