SUPPLEMENT NO. 1 TO THE MARCH 3, 1978

FIRE PROTECTION SAFETY EVALUATION REPORT

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

U. S. NUCLEAR REGULATORY COMMISSION

PROVISIONAL OPERATING LICENSE NO. DPR-16

JERSEY CENTRAL POWER & LIGHT COMPANY

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

AMENDMENT NO. 38

Date: June 29, 1979

INTRODUCTION

By letters dated March 14, 1979 and June 26, 1979, and application dated June 1, 1979, Jersey Central Power & Light Company (the licensee) requested a change to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station. The proposed change would extend the completion date for certain modifications required to improve the level of fire protection at the facility, and would allow changes to some of the modifications being made to improve the level of fire protection at the facility.

DISCUSSION

On March 3, 1978, the Commission issued Amendment No. 29 to License No. DPR-16 for Oyster Creek. The amendment added a condition to the license which required completion of the modifications identified in paragraphs 3.1.1 through 3.1.23 of the NRC's Fire Protection Safety Evaluation (FPSE) for Oyster Creek dated March 3, 1978. Such modifications are to be completed by July 1980, except for the remote shutdown station which is required to be implemented by no later than the end of the 1980 refueling outage.

By letter dated March 14, 1979, and application dated June 1, 1979, the licensee requested a schedule change for completion of the proposed sprinkler systems and hose station installations required by Table 3.1 of the FPSE. In addition, the licensee requested that the requirements for the installation of (1) the thermally activated self-closing valve in the diesel generator fuel oil line be changed to the installation of a separate new fuel oil line to Diesel Generator No. 2 with manual isolation valves in both lines; (2) a halon system be changed to an automatic water spray system for the cable spreading room; (3) the water spray system, item 3.1.6 of the FPSE, be changed to an automatic sprinkler system in the south end of the turbine building basement; and (4) the sprinkler system in the fire water pump house be changed to a pre-action sprinkler system inside the house and a deluge system outside the building.

EVALUATION

By letter dated March 14, 1979, the licensee requested a limited extension of the scheduled completion dates for item 3.1.7, Sprinkler Systems and item 3.1.9, Hose Stations. The reason provided by the licensee for not meeting the schedule was due to the difficulting in obtaining qualified vendors to perform the modifications. The vendors have been selected and the modifications are being installed and the time lost in the bidding process requires extending the originally scheduled completion dates.

The specific modifications for which the licensee requests the completion dates to be extended are as follows:

3.1.7 Sprinkler Systems

Automatic sprinkler systems will be added to the following areas:

(1) To protect the metal deck roof at the 119-foot level of the reactor building (5.1);

(2) To protect spent fuel pool cooling pumps (5.3);

(3) Above and below the suspended ceiling to protect cables above the ceiling in the monitor and change room (5.14);

(4) To protect the diesel-driven fire pumps and outside fuel oil storage tanks (5.18); and

(5) Above cable trays which are at the ceiling level of the condenser bay along the west wall of the turbine building (5.16).

Supervisory circuitry will be installed on sprinkler systems in the recirculation pump motor generator set room (5.13).

Presently Table 3.1 specifies that the Sprinkler System installation will be completed in June 1979.

The licensee expects to complete installation of sprinkler systems (and other water systems) for (1) the Fire Water Pump House (pre-action and deluge), (2) outside of the west wall of the turbine building (deluge), (3) the turbine building basement, and (4) the monitor and change areas by the June 1979 schedule. However, the installation of sprinkler systems for the (1) upper trays in the condenser bay, (2) reactor building elevation 119', and (3) reactor building elevation 75' in the area of the spent fuel cooling pumps are contingent upon the installation of a fire water header in the reactor building and these sprinkler systems are scheduled to be completed later in 1979.

The installation of sprinklers at the 119' and 75' elevations of the reactor building are for area protection and protection of the spent fuel pool cooling pumps on the 75' level. Other redundant systems are available for cooling of spent fuel in the event of a fire. No other safety-related equipment affecting safe shutdown is located in these areas.

The upper trays along the west wall of the condenser bay are presently protected by an existing sprinkler system. A fire in these cables may affect availability of emergency power; but, normal shutdown systems for the reactor would not be affected. In addition, high radiation in this areas during operation would expose the installers unnecessarily. If the installation was performed during a refueling shutdown, the radiation exposure to the installers could be reduced to very low levels.

We conclude that extending the schedule for the sprinkler system completion date to September 15, 1979, except for the system extension in the condenser bay which shall be completed during the next refueling outage, is acceptable.

3.1.9 Hose Stations

Hose stations will be installed throughout the plant to provide coverage of all safety-related areas (4.3.1.4).

Table 3.1 currently specifies that the Hose Stations installations will be completed in June 1979. The hose station installations are also dependent on the installation of the fire water header in the reactor building and several hose station installations are not expected to be completed by the June 1979 schedule. Fire Protection Controls put in effect have increased the control of combustibles and ignition sources, have required permits for welding, have restricted smoking areas, have included use of flame retardant materials where practicible, and have increased the station fire brigade size from 3 to 5 members.

We have concluded that the licensee has made a conscientious effort to fulfill his commitments and extension of the schedule to September 15, 1979, for completion of the hose stations is acceptable.

3.1.15 Fire Pump House Fire Protection

We have reviewed the alternative proposal to provide a pre-action sprinkler system within the fire pump house and a dry pipe deluge system on the fuel tanks outside in lieu of a wet pipe sprinkler system for both. We agree that the concern for possible freezing outside and due to possible loss of heat within the building warrants the use of such systems. Our original concern was for the possible loss of redundant fire pumps due to the fuel oil hazard. These alternative systems provide adequate protection for these areas both inside and outside the room in view of the commitment to provide a new water supply tank and an additional fire pump in another location away from this area. Because of this new fire water supply the loss of both these pumps is no longer of concern and the protection is necessary for only the large oil hazard.

We conclude that this alternative to the original commitment does not change the bases or conclusion regarding this matter as stated in the FPSE and is, therefore, acceptable.

5.9 Cable Spreading Room Fire Protection

We have reviewed the proposed alternative to provide a cross-zoned water spray system tracing the cable trays in the cable spreading room instead of a gaseous halon system. We agree with the conclusion that it would be a more effective system in extinguishing fires in cables in open cable trays.

We conclude that this alternative to the original commitment does not change the bases or conclusion regarding this matter as stated in the FPSE for the Oyster Creek plant and is, therefore, acceptable.

5.16.6 Turbine Building Basement Sprinkler System

We have reviewed the proposed alternative to provide an area sprinkler system for the south end of the turbine building basement with additional heads at areas where redundant cables come in proximity instead of a spray system. An alternate safe shutdown capability is also being provided for this area. We find that this protection satisfactorily resolves our concern for protection of the safety-related cables in this area against exposure fires.

We conclude that this alternative to the commitment as identified in the FPSE does not change the bases or conclusion regarding this matter as stated in the FPSE for the Oyster Creek plant and is, therefore, acceptable.

5.17.6 Diesel Generator Fuel Oil Lines

We have reviewed the proposed alternative to install a new independent fuel oil supply line and manual isolation valves so that each line can be isolated from outside the diesel generator rooms instead of the original commitment of thermally actuated valves in each room. We find that (1) reliability of the diesel generator is increased by the independence and redundancy provided by the addition of the new line; and (2) installation of manual valves outside these areas satisfactorily resolves our original concern for having the ability outside these areas to cut off a fire in either one of the diesel rooms from a continuing supply of fuel and still allow the redundant diesel generator to operate if necessary.

We conclude that this alternative to the original commitment does not change the bases or conclusion regarding this matter as stated in the FPSE for the Oyster Creek plant and is, therefore, acceptable.

SUMMARY

We have concluded that the limited extension of the schedules will not significantly affect the ability to safely shutdown the reactor in the event of a fire, that the licensee has made a conscientious effort to fulfill his commitments on schedule, that the ability to combat fires has been improved, that the proposed changes to the modifications do not change the bases or conclusions regarding the modifications, and, therefore, find the proposed amendment acceptable.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Attachment:
Table 3.1

TABLE 3.1

IMPLEMENTATION DATES FOR LICENSEE
PROPOSED MODIFICATIONS

Item		Date
3.1.1	Fire Barriers	December 1979
3.1.2	Fire Barrier Penetrations	December 1979
3.1.3	Dampers	December 1979
3.1.4	Fire Detectors	December 1979
3.1.5	Halon Suppression Systems	December 1979
3.1.6	Water Spray Systems	December 1979
3.1.7	Sprinkler Systems	September 15,1979***
3.1.8	Carbon Dioxide Suppression System	December 1979
3.1.9	Hose Stations	September 15, 1979
3.1.10	Aqueous Film Forming Foam	Completed
3.1.11	Portable Extinguishers	Completed
3.1.12	Emergency Breathing Apparatus	Completed
3.1.13	Removal of Combustible Material	Completed
3.1.14	Transformer Dike	December 1979
3.1.15	Diesel Generator Fuel Oil Line	December 1979
3.1.16	Ventilation System Changes	December 1979
3.1.17	Loss of Ventilation Alarm-Battery Room	Completed
3.1.18	Suppression System Valve Control	Completed
3.1.19	Portable Smoke Removal Equipment	Completed
3.1.20	Alternate Water Supply to the Yard Loop	July 1980
3. 21	Protection From Water Damage	December 1979
3.1.22	New Battery Room and Rerouting Buttery Cables	Completed
3.1.23	Remote Shutdown Station	**

**Schedule dependent on equipment availability (not to exceed end of 1980 refueling outage)

***Except for the system extensions in the turbine building condenser bay which shall be completed during the next refueling outage.