

March 7, 1988

Docket No. 50-219

Mr. P. B. Fiedler  
Vice President and Director  
Oyster Creek Nuclear Generating Station  
Post Office Box 388  
Forked River, New Jersey 08731

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Dear Mr. Fiedler:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. 66884)

The Commission has issued the enclosed Amendment No. 119 to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station, in response to your application dated December 18, 1987.

The amendment revises Technical Specification 3.7.B to allow out of service time for the 125 VDC Motor Control Center "DC-2" to 7 days. The current Technical Specification requires that the plant be shut down within 30 hours if the 125 VDC Motor Control Center "DC-2" becomes unavailable.

A copy of the related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

original signed by

Alexander W. Dromerick, Project Manager  
Project Directorate I-4  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 119 to DPR-16
2. Safety Evaluation

cc w/enclosures:

See next page

PDI-4  
SMNorris:ah  
02/1/88

PDI-4  
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PDR ADOCK 05000219  
P PDR

Mr. P. B. Fiedler  
Oyster Creek Nuclear Generating Station

Oyster Creek Nuclear  
Generating Station

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

GPU NUCLEAR CORPORATION

AND

JERSEY CENTRAL POWER & LIGHT COMPANY

DOCKET NO. 50-219

OYSTER CREEK NUCLEAR GENERATING STATION

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 119  
License No. DPR-16

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by GPU Nuclear Corporation et al., (the licensee), dated December 18, 1987, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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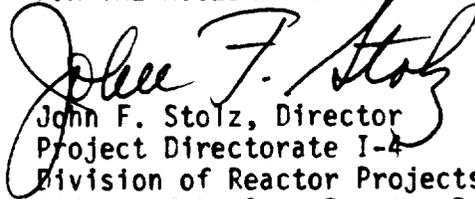
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Provisional Operating License No. DPR-16 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 119, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective on issuance, to be implemented no later than 30 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director  
Project Directorate I-4  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 7, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 119  
PROVISIONAL OPERATING LICENSE NO. DPR-16  
DOCKET NO. 50-219

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

Page 3.7-1

Page 3.7-2

Page 3.7-3

Insert

Page 3.7-1

Page 3.7-2

Page 3.7-3

### 3.7 AUXILIARY ELECTRICAL POWER

Applicability: Applies to the operating status of the auxiliary electrical power supply.

Objective: To assure the operability of the auxiliary electrical power supply.

Specification: A. The reactor shall not be made critical unless all of the following requirements are satisfied:

1. The following buses or panels energized.
  - a. 4160 volt buses 1C and 1D in the turbine building switchgear room.
  - b. 460 volt buses 1A2, 1B2, 1A21, 1B21 vital MCC 1A2 and 1B2 in the reactor building switchgear room: 1A3 and 1B3 at the intake structure; 1A21A, 1B21A, 1A21B, and 1B21B and vital MCC 1AB2 on 23'6" elevation in the reactor building; 1A24 and 1B24 at the stack.
  - c. 208/120 volt panels 3, 4, 4A, 4B, 4C and VACP-1 in the reactor building switchgear room.
  - d. 120 volt protection panel 1 and 2 in the cable room.
  - e. 125 volt DC distribution centers C and B, and panel D, Panel DC-F, isolation valve motor control center DC-1 and 125V DC motor control center DC-2.
  - f. 24 volt D.C. power panels A and B in the cable room.
2. One 230 KV line is fully operational and switch gear and both startup transformers are energized to carry power to the station 4160 volt AC buses and carry power to or away from the plant.
3. An additional source of power consisting of one of the following is in service connected to feed the appropriate plant 4160 V bus or buses:
  - a. A second 230 KV line fully operational.
  - b. One 34.5 KV line fully operational.
4. The station batteries B and C are available for normal service and a battery charger is in service for each battery.
5. Bus tie breakers ED and EC are in the open position.

B. The reactor shall be placed in the cold shutdown position if the availability of power falls below that required by Specification A above, except that

1. The reactor may remain in operation for a period

not to exceed 7 days in any 30 day period if a startup transformer is out of service. None of the engineered safety feature equipment fed by the remaining transformer may be out of service.

2. The reactor may remain in operation for a period not to exceed 7 days if 125 VDC Motor Control Center DC-2 is out of service, provided the requirements of Specification 3.8 are met.

C. Standby Diesel Generators

1. The reactor shall not be made critical unless both diesel generators are operable and capable of feeding their designated 4160 volt buses.
2. If one diesel generator becomes inoperable during power operation, repairs shall be initiated immediately and the other diesel shall be operated at least one hour every 24 hours at greater than 20% rated power until repairs are completed. The reactor may remain in operation for a period not to exceed 7 days in any 30-day period if a diesel generator is out of service. During the repair period none of the engineered safety features normally fed by the operational diesel generator may be out of service or the reactor shall be placed in the cold shutdown condition.
3. If both diesel generators become inoperable during power operation, the reactor shall be placed in the cold shutdown condition.
4. For the diesel generators to be considered operable there shall be a minimum of 14,000 gallons of diesel fuel in the standby diesel generator fuel tank.

Bases: The general objective is to assure an adequate supply of power with at least one active and one standby source of power available for operation of equipment required for a safe plant shutdown, to maintain the plant in a safe shutdown condition and to operate the required engineered safety feature equipment following an accident.

AC power for shutdown and operation of engineered safety feature equipment can be provided by any of four active (two 230 KV and two 34.5 KV lines) and either of two standby (two diesel generators) sources of power. Normally all six sources are available. However, to provide for maintenance and repair of equipment and still have redundancy of power sources the requirement of one active and one standby source of power was

established. The plant's main generator is not given credit as a source since it is not available during shutdown. The plant 125V DC power is normally supplied by two batteries, each with two associated full capacity chargers. One charger on each battery is in service at all times with the second charger available in the event of charger failure. These chargers are active sources and supply the normal 125V DC requirements with the batteries and standby sources. (1)

In applying the minimum requirement of one active and one standby source of AC power, since both 230 KV lines are on the same set of towers, either one or both 230 KV lines are considered as a single active source.

The probability analysis in Appendix "L" of the FDSAR was based on one diesel and shows that even with only one diesel the probability of requiring engineered safety features at the same time as the second diesel fails is quite small. This analysis used information on peaking diesels when synchronization was required which is not the case for Oyster Creek. Also the daily test of the second diesel when one is temporarily out of service tends to improve the reliability as does the fact that synchronization is not required.

As indicated in Amendment 18 to the Licensing Application, there are numerous sources of diesel fuel which can be obtained within 6 to 12 hours and the heating boiler fuel in a 75,000 gallon tank on the site could also be used. As indicated in Amendment 32 of the Licensing Application and including the Security System loads, the load requirement for the loss of offsite power would require 12,410 gallons for a three day supply. For the case of loss of offsite power plus loss-of-coolant plus bus failure 9790 gallons would be required for a three day supply. In the case of loss of offsite power plus loss-of-coolant with both diesel generators starting the load requirements (all equipment operating) shown there would not be three days' supply. However, not all of this load is required for three days and, after evaluation of the conditions, loads not required on the diesel will be curtailed. It is reasonable to expect that within 8 hours conditions can be evaluated and the following loads curtailed:

1. One Core Spray Pump
2. One Core Spray Booster Pump
3. One Control Rod Drive Pump
4. One Containment Spray Pump
5. One Emergency Service Water Pump

With these pieces of equipment taken off at 8 hours after the incident it would require a total consumption of 12,840 gallons for a three day supply. Therefore, a minimum technical specification requirement of 14,000 gallons of diesel fuel in the standby diesel generator fuel tank will exceed the engineered safety features operational requirement after an accident by approximately 9%.

References:

- (1) Letter, Ivan R. Finfrock, Jr. to the Director of Nuclear Reactor Regulation dated April 14, 1978.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 119

TO PROVISIONAL OPERATING LICENSE NO. DPR-16

GPU NUCLEAR CORPORATION AND

JERSEY CENTRAL POWER & LIGHT COMPANY

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

INTRODUCTION

By letter dated December 18, 1987, GPU Nuclear Corporation requested an amendment to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station. The proposed amendment would change Technical Specification (TS) 3.7 "Auxiliary Electric Power" to make it consistent with TS 3.8 "Isolation Condenser." The requested change applies to the 125 VDC Motor Control Center (MCC) "DC-2" which applies power only to valves associated with Isolation Condenser NE01-B. The proposed amendment would revise TS 3.7.B to allow out of service time for the 125 VDC MCC "DC-2" to 7 days.

BACKGROUND AND EVALUATION

The Oyster Creek Isolation Condenser System (ICS) is a standby, high pressure system for removal of heat from the reactor vessel following a reactor trip and isolation of the reactor from the Main Condenser. The system prevents overheating of the reactor fuel, controls the reactor pressure rise, and limits the loss of reactor coolant through the relief valves. The system is operable and ready for service at all times during power operation and whenever the reactor coolant temperature is greater than 212°F.

The ICS consists of two full capacity isolation condensers. Normally, the isolation valves for each condenser are open except for a DC powered condensate return line valve. The system operates by natural circulation without the need for driving power other than the DC electrical system used to place the ICS in operation. The system operates with steam flowing from the reactor pressure vessel through the condenser tubes and condensate returning by gravity to the reactor pressure vessel, forming a closed loop.

The TS change pertains to valves V-14-33, V-14-35, V-14-1 and V-14-19 which are all associated with Isolation Condenser NE01-B. These valves are controlled from the 125 VDC MCC "DC-2" and are the only components fed from MCC "DC-2." The redundant Isolation Condenser NE01-A is controlled from MCC "DC-1" and is not affected by the proposed TS change.

The valve V-14-33 in the steam inlet line for condenser NE01-B is normally open so that the tube bundles are at reactor pressure even during standby. The AC operated condensate return isolation valve (V-14-37 for condenser NE01-B) is normally open. The DC operated condensate return valve (V-14-35 for condenser NE01-B) is normally closed. V-14-35 is the only isolation valve required to be opened to place the condenser NE01-B in operation. The ICS is automatically initiated by a persistent signal of either high reactor vessel pressure or low-low reactor water level.

The high points in the steam supply lines to each loop are vented continuously to the main turbine steam header down stream of the mainsteam isolation valves when the plant is operating and the ICS is in standby. This is done to remove noncondensable gases from the reactor steam, which would otherwise collect at these high points in the system and impair the initial actuation and cooling capability of the ICS. Valves V-14-1 and V-14-19 isolate the vent lines for condenser NE01-B. The vent valves are air operated solenoid valves (energized to open) that close on isolation signals. These valves are fail-safe and would also close and isolate the condenser on loss of MCC "DC-2."

The inconsistency between TS 3.7 and 3.8 was noted when comparing the Limited Condition for Operations (LCOs). Specification 3.7.B requires the reactor be placed in the cold shutdown condition if MCC "DC-2" becomes unavailable. In such an event, the reactor would be placed in cold shutdown within 30 hours. In contrast, Specification 3.8.C allows the reactor to remain in operation for a period not to exceed 7 days (provided certain provisions are met) if one Isolation Condenser becomes inoperable. Thus, the limits on plant operation are more restrictive for MCC "DC-2" unavailability which controls the valves to Isolation Condenser NE01-B, than for inoperability of the condenser itself.

The licensee proposes the following addition to TS 3.7.B.

2. The reactor may remain in operation for a period not to exceed 7 days if 125 VDC Motor Control Center DC-2 is out of service, provided the requirements of Specification 3.8 are met.

For one isolation condenser inoperable, TS 3.8.C. requires that the motor operated isolation and condensate makeup valves of the operable condenser be demonstrated operable daily. This would improve reliability of the redundant condenser. This, in conjunction with the decrease in

required plant shutdowns for MCC "DC-2" inoperability, and the attendant reduction in challenges to the safety systems that sometimes occur during shutdowns and startups, should offset the decrease in reliability expected from the increased period of inoperability allowed for MCC "DC-2." Therefore, the staff concludes that the proposed TS change will not significantly affect plant reliability. Thus, since MCC "DC-2" supplies power to nothing other than isolation condenser NE01-B, and isolation valves V-14-1 and V-14-19 close in the fail-safe position for loss of MCC "DC-2," and the proposed change will eliminate the inconsistency between TS 3.7 and TS 3.8 for MCC "DC-2" out of service, the staff finds the proposed TS change to be acceptable.

#### ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

#### CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Dated: March 7, 1988

Principal Contributor: Argil L. Toalston