

June 4, 1996

Mr. Michael B. Roche
Vice President and Director
GPU Nuclear Corporation
Oyster Creek Nuclear Generating Station
P.O. Box 388
Forked River, NJ 08731

SUBJECT: ISSUANCE OF AMENDMENT RE: ANTICIPATORY SCRAM SIGNAL BYPASS
SETPOINT (TAC NO. M95111)

Dear Mr. Roche:

The Commission has issued the enclosed Amendment No. 184 to Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station in response to your application dated March 28, 1996, (TSCR 234).

The amendment modifies Technical Specification pages 3.1-5 and 3.1-16 to indicate 40 percent of the rated reactor thermal power as the anticipatory reactor scram bypass setpoint on turbine trip or generator load rejection.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

Ronald B. Eaton, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosures: 1. Amendment No. 184 to DPR-16
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

Docket File
PUBLIC
PDI-3 Plant
SVarga
JStolz
REaton
CJamerson
OGC
ACRS
GHill (2)
CGrimes
PEselgroth

RCJones, Jr.
SEDB

110070

1/1
DF07

DOCUMENT NAME: G:\EATON\M95111.AMD

OFFICE	LA	E	PM: PDI-2	D: PDI-2	OGC		
NAME	CJamerson		REaton:bf	JStolz	R Bachmann		
DATE	05/21/96		05/21/96	05/04/96	05/23/96		05/ /96

OFFICIAL RECORD COPY

NRC FILE CENTER COPY

9606110332 960604
PDR ADOCK 05000219
P PDR

June 4, 1996

Mr. Michael B. Roche
Vice President and Director
GPU Nuclear Corporation
Oyster Creek Nuclear Generating Station
P.O. Box 388
Forked River, NJ 08731

SUBJECT: ISSUANCE OF AMENDMENT RE: ANTICIPATORY SCRAM SIGNAL BYPASS
SETPOINT (TAC NO. M95111)

Dear Mr. Roche:

The Commission has issued the enclosed Amendment No. 184 to Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station in response to your application dated March 28, 1996, (TSCR 234).

The amendment modifies Technical Specification pages 3.1-5 and 3.1-16 to indicate 40 percent of the rated reactor thermal power as the anticipatory reactor scram bypass setpoint on turbine trip or generator load rejection.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

Ronald B. Eaton, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosures: 1. Amendment No. 184 to DPR-16
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

Docket File
PUBLIC
PDI-3 Plant
SVarga
JStolz
REaton
CJamerson
OGC
ACRS
GHill (2)
CGrimes
PEselgroth

RCJones, Jr.
SEDB

DOCUMENT NAME: G:\EATON\M95111.AMD

OFFICE	LA	E	PM: PDI-2	D: PDI-2	OGC		
NAME	CJamerson		REaton:bf	JStolz	R Bachmann		
DATE	05/21/96		05/21/96	05/04/96	05/23/96		05/ /96

OFFICIAL RECORD COPY



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 4, 1996

Mr. Michael B. Roche
Vice President and Director
GPU Nuclear Corporation
Oyster Creek Nuclear Generating Station
P.O. Box 388
Forked River, NJ 08731

SUBJECT: ISSUANCE OF AMENDMENT RE: ANTICIPATORY SCRAM SIGNAL BYPASS
SETPOINT (TAC NO. M95111)

Dear Mr. Roche:

The Commission has issued the enclosed Amendment No. 184 to Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station in response to your application dated March 28, 1996, (TSCR 234).

The amendment modifies Technical Specification pages 3.1-5 and 3.1-16 to indicate 40 percent of the rated reactor thermal power as the anticipatory reactor scram bypass setpoint on turbine trip or generator load rejection.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald B. Eaton".

Ronald B. Eaton, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosures: 1. Amendment No. 184 to DPR-16
2. Safety Evaluation

cc w/encls: See next page

M. Roche
GPU Nuclear Corporation

Oyster Creek Nuclear
Generating Station

cc:

Ernest L. Blake, Jr., Esquire
Shaw, Pittman, Potts & Trowbridge
2300 N Street, NW.
Washington, DC 20037

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

BWR Licensing Manager
GPU Nuclear Corporation
1 Upper Pond Road
Parsippany, NJ 07054

Mayor
Lacey Township
818 West Lacey Road
Forked River, NJ 08731

Licensing Manager
Oyster Creek Nuclear Generating Station
Mail Stop: Site Emergency Bldg.
P.O. Box 388
Forked River, NJ 08731

Resident Inspector
c/o U.S. Nuclear Regulatory Commission
P.O. Box 445
Forked River, NJ 08731

Kent Tosch, Chief
New Jersey Department of
Environmental Protection
Bureau of Nuclear Engineering
CN 415
Trenton, NJ 08625



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

GPU NUCLEAR CORPORATION

AND

JERSEY CENTRAL POWER & LIGHT COMPANY

DOCKET NO. 50-219

OYSTER CREEK NUCLEAR GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 184
License No. DPR-16

- I. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by GPU Nuclear Corporation, et al. (the licensee) dated March 28, 1996, 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.

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 Facility 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. 184, 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 as of the date of issuance, to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: June 4, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 184

FACILITY OPERATING LICENSE NO. DPR-16

DOCKET NO. 50-219

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

Remove
3.1-5
3.1-16

Insert
3.1-5
3.1-16

High drywell pressure provides a second means of initiating the core spray to mitigate the consequences of loss-of-coolant accident. Its trip setting of ≤ 3.5 psig initiates the core spray in time to provide adequate core cooling. The break size coverage of high drywell pressure was discussed above. Low-low water level and high drywell pressure in addition to initiating core spray also causes isolation valve closure. These settings are adequate to cause isolation to minimize the offsite dose within required limits.

It is permissible to make the drywell pressure instrument channels inoperable during performance of the integrated primary containment leakage rate test provided the reactor is in the COLD SHUTDOWN condition. The reason for this is that the Engineered Safety Features, which are effective in case of a LOCA under these conditions, will still be effective because they will be activated (when the Engineered Safety Features system is required as identified in the technical specification of the system) by low-low reactor water level.*

The scram discharge volume has two separate instrument volumes utilized to detect water accumulation. The high water level is based on the design that the water in the SDIV's, as detected by either set of level instruments, shall not be allowed to exceed 29.0 gallons; thereby, permitting 137 control rods to scram. To provide further margin, an accumulation of not more than 14.0 gallons of water, as detected by either instrument volume, will result in a rod block and an alarm. The accumulation of not more than 7.0 gallons of water, as detected in either instrument volume will result in an alarm.

Detailed analyses of transients have shown that sufficient protection is provided by other scrams below 45% power to permit bypassing of the turbine trip and generator load rejection scrams. However, for operational convenience, 40% of rated reactor thermal power has been chosen as the setpoint below which these trips are bypassed. This setpoint is coincident with bypass valve capacity.

A low condenser vacuum scram trip of 20 inches Hg has been provided to protect the main condenser in the event that vacuum is lost. A loss of condenser vacuum would cause the turbine stop valves to close, resulting in a turbine trip transient.

The low condenser vacuum trip provides a reliable backup to the turbine trip. Thus, if there is a failure of the turbine trip on low vacuum, the reactor would automatically scram at 20 inches Hg. The condenser is capable of receiving bypass steam until 7 inches Hg vacuum thereby mitigating the transient and providing a margin.

The settings to isolate the isolation condenser in the event of a break in the steam or condensate lines are based on the predicted maximum flows that these systems would experience during operation, thus permitting operation while affording protection in the event of a break. The settings correspond to a flow rate of less than three times the normal flow rate of 3.2×10^5 lb/hr. Upon initiation of the alternate shutdown panel, this function is bypassed to prevent spurious isolation due to fire induced circuit faults.

TABLE 3.1.1 (CONT'D)

* Action required when minimum conditions for operation are not satisfied. Also permissible to trip inoperable trip system. A channel may be placed in an inoperable status for up to six hours for required surveillance without placing the trip system in the tripped condition provided at least one OPERABLE instrument channel in the same trip system is monitoring that parameter.

** See Specification 2.3 for Limiting Safety System Settings.

Notes:

- a. Permissible to bypass, with control rod block, for reactor protection system reset in REFUEL MODE.
- b. Permissible to bypass below 800 psia in REFUEL and STARTUP MODES.
- c. One (1) APRM in each OPERABLE trip system may be bypassed or inoperable provided the requirements of Specification 3.1.C and 3.10.C are satisfied. Two APRM's in the same quadrant shall not be concurrently bypassed except as noted below or permitted by note.

Any one APRM may be removed from service for up to six hours for test or calibration without inserting trips in its trip system only if the remaining OPERABLE APRM's meet the requirements of Specification 3.1.B.1 and no control rods are moved outward during the calibration or test. During this short period, the requirements of Specifications 3.1.B.2, 3.1.C and 3.10.C need not be met.

- d. The IRMs shall be inserted and OPERABLE until the APRMs are OPERABLE and reading at least 2/150 full scale.
- e. Offgas system isolation trip set at $\leq 2.1/\bar{E}$ Ci/sec where \bar{E} = average gamma energy from noble gas in offgas after holdup line (Mev). Air ejector isolation valve closure time delay shall not exceed 15 minutes.
- f. Unless SRM chambers are fully inserted.
- g. Not applicable when IRM on lowest range.
- h. One instrument channel in each trip system may be inoperable provided the circuit which it operates in the trip system is placed in a simulated tripped condition. If repairs cannot be completed within 72 hours the reactor shall be PLACED IN THE COLD SHUTDOWN CONDITION. If more than one instrument channel in any trip system becomes inoperable, the reactor shall be PLACED IN THE COLD SHUTDOWN CONDITION. Relief valve controllers shall not be bypassed for more than 3 hours (total time for all controllers) in any 30-day period and only one relief valve controller may be bypassed at a time.
- i. The interlock is not required during the start-up test program and demonstration of plant electrical output but shall be provided following these actions.
- j. Not required below 40% of rated reactor thermal power.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 184

TO FACILITY OPERATING LICENSE NO. DPR-16

GPU NUCLEAR CORPORATION AND

JERSEY CENTRAL POWER & LIGHT COMPANY

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

By letter dated March 28, 1996, the GPU Nuclear Corporation (the licensee) submitted a request for changes to the Oyster Creek Nuclear Generating Station Technical Specifications (TSs). The requested changes would modify TS pages 3.1-5 and 3.1-16 to indicate 40 percent of rated reactor thermal power as the anticipatory reactor scram bypass setpoint on turbine trip or generator load rejection. The licensee will update its Final Safety Analysis Report for consistency with this change in the TS.

2.0 EVALUATION

The Reactor Protection System (RPS) monitors plant parameters and automatically initiates protective actions if established limits are exceeded. The RPS acts to protect the core against fuel rod cladding damage and to protect the reactor vessel from overpressure. The RPS initiates an anticipatory reactor scram for a turbine trip (turbine stop valve closure) and generator load reject (turbine control valve fast closure).

When reactor rated thermal power is below 40 percent, the TSs allow this anticipatory scram signal to be bypassed. During power ascension, the bypass is removed and the anticipatory scrams are enabled before reaching 40 percent power. The bypass is accomplished using pressure switches off the high pressure turbine third stage extraction steam line. This pressure relates to rated reactor thermal power. Previously, a nonconservative setpoint existed for the anticipatory scram signal. The conversion from steam pressure to reactor thermal power was not properly correlated for all possible equipment configurations during plant operation.

The licensee has collected data to more accurately correlate turbine steam pressure to reactor power and is revising the TSs to clarify that the setpoint is to be based on rated reactor thermal power, rather than turbine rated steam flow.

The proposed changes to the TS would indicate that the bypass for anticipatory reactor scram on turbine trip or generator load reject is based on reactor thermal power, rather than turbine steam flow. Because the changes are a clarification to more accurately represent the design basis of the plant and eliminate a nonconservative setpoint, the changes are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The 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 NRC 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (61 FR 18167). 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 the amendment.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: G. Golub

Date: June 4, 1996