



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

July 9, 1986

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

Dear Mr. Fiedler:

SUBJECT: EXCESS FLOW CHECK VALVES (TAC 61330, TSCR 143)

Re: Oyster Creek Nuclear Generating Station

The Commission has issued the enclosed Amendment No. 104 to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station. This amendment is in response to your application dated April 14, 1986.

This amendment authorizes a change to the Appendix A Technical Specifications (TS) pertaining to the surveillance of the excess flow check valves (EFCV) which are in instrument lines penetrating containment. This change is to TS 4.5.0 in Section 4.5, Containment, of the TS. This change revises the conditions requiring open position verification of the EFCV before an instrument line is returned to service. The revision is to (1) delete the condition of isolating an instrument, (2) delete the condition of venting an isolated instrument or instrument line, (3) retain the condition of venting an unisolated instrument or instrument line, and (4) add the condition of adding a new instrument or instrument line.

You requested in your application that the amendment be effective 60 days after it is issued. This was to allow time for the affected surveillance procedures to be revised and approved before the amendment became effective. This request is acceptable and, therefore, this amendment will be effective 60 days after its date of issue.

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PDR

July 9, 1986

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

Sincerely,

ORIGINAL SIGNED BY

Jack N. Donohew, Jr., Project Manager  
BWR Project Directorate #1  
Division of BWR Licensing


Enclosures:


- 1. Amendment No. 104 to License No. DPR-16
- 2. Safety Evaluation


cc w/enclosures:  
See next page


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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. 104  
License No. DPR-16

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by GPU Nuclear Corporation and Jersey Central Power and Light Company (the licensees) dated April 14, 1986, 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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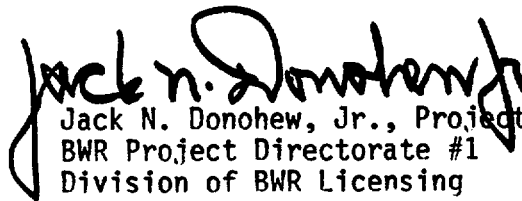
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Provisional Operating License No. DPR-16 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 104, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment becomes effective 60 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Jack N. Donohew, Jr., Project Manager  
BWR Project Directorate #1  
Division of BWR Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 9, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 104  
PROVISIONAL OPERATING LICENSE NO. DPR-16  
DOCKET NO. 50-219

Revise Appendix A Technical Specifications by removing the page identified below and inserting the attached page. The revised page is identified by the captioned amendment number and contains vertical lines indicating the area of change.

REMOVE

4.5-6

INSERT

4.5-6

L. Deleted

"M. Inerting Surveillance

When an inert atmosphere is required in the primary containment the oxygen concentration in the primary containment shall be checked at least weekly."

"N. Drywell Coating Surveillance

Carbon steel test panels coated with Fire-bar D shall be placed inside the drywell near the reactor core midplant level. They shall be removed for visual observation and weight loss measurements during the first, second, fourth and eighth refueling outages."

O. Instrument Line Flow Check Valves Surveillance

The capability of each instrument line flow check valve to isolate shall be tested at least once in every period between refueling outages.

Each time an instrument line is returned to service after any condition which could have produced a pressure or flow disturbance in that line, the open position of the flow check valve in that line shall be verified. Such conditions include:

Leakage at instrument fittings and valves	
Venting an unisolated instrument or instrument line	
Flushing or draining an instrument	
Installation of a new instrument or instrument line.	



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 104 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

1.0 INTRODUCTION

By letter dated April 14, 1986, GPU Nuclear (the licensee) requested an amendment to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station (Oyster Creek). This amendment would authorize a change to the Appendix A Technical Specifications (TS) pertaining to the surveillance of the excess flow check valves (EFCV) in instrument lines penetrating containment. This change is to TS 4.5.0 in Section 4.5, Containment, of the TS.

This amendment would revise the conditions requiring open position verification of the EFCV before an instrument line is returned to service. The revision is to (1) delete the condition of isolating an instrument, (2) delete the condition of venting an isolated instrument or instrument line, (3) retain the condition of venting an unisolated instrument or instrument line, and (4) add the condition of adding a new instrument or instrument line.

2.0 DISCUSSION AND EVALUATION

The licensee has proposed Technical Specification Change Request (TSCR) No. 143 to revise the specific conditions in the surveillance requirements on the instrument line EFCV in TS 4.5.0 for which open position verification must be done before an instrument line is returned to service. The Basis in the TS for these surveillance requirements is to assure the isolation capability for excess flow and the operability of the instrument sensor when it is required. The conditions in the TS for this verification of the open position of the EFCV are to assure the operability and, therefore, the isolation capability for EFCV and the operability of the instrument sensor when required.

Instrument line piping which connects to the reactor coolant system (RCS) and penetrates the primary containment is dead-ended at instruments located in the Reactor Building. These lines are provided with EFCV outside containment and manual isolation valves which are operable from the Reactor Building. The EFCV is to stop excess flow through an instrument line which



would result, for example, if there were a broken line outside containment. These lines are not provided with automatic isolation valves because the instrument lines are needed for monitoring the RCS even during accidents and isolation of the leak or break before the EFCV would be done by closing the manual isolation valve. The plant has been analyzed for such a break and the emergency core cooling system would prevent uncovering the core.

A pressure or flow disturbance in the instrument line might have the EFCV block the line. This would prevent the instrument from communicating with the RCS and performing its intended function. The open position verification of the EFCV, each time an instrument line or instrument is returned to service after any condition that could have produced a pressure or flow disturbance in that line, assures the operability of the EFCV and of the instrument line.

The open position verification test is done indirectly on the EFCV by an ultrasonic device. The device determines by high frequency sound that the ball is in its seat blocking the line or not. The EFCV are located mainly near the instrument racks which hold the sensors in the Reactor Building; however, there are some which are located in areas which are not easily accessible. The required surveillance on instrumentation and sensors in the TS will require the isolation of the instrument line or instrument. This surveillance would not require venting of the instrument line or instrument.

The licensee stated that the procedures employed in isolating an instrument for testing or calibration should not produce flow disturbances. The instrument is isolated by closing the isolation valves and returned to service still filled with process fluid before the isolation valves are cracked open. Venting an isolated instrument or instrument line should not create a significant flow disturbance as the valves are slightly cracked open to vent air and then closed. There is an isolation valve between the vent valve and pressure on the process fluid. This will retain the process fluid. The licensee explained that surveillance has proven and design requires that approximately 2 gpm flow is needed to close an EFCV. Isolating and subsequently unisolating an instrument or instrument line and venting an isolated instrument or instrument line should not cause sufficient flow (i.e. 2 gpm) to close the EFCV.

The licensee stated that this TSCR would reduce surveillance time, improve plant availability and reduce radiation exposure to personnel. The licensee explained that venting an unisolated instrument or instrument line may create a flow disturbance. Putting a new instrument or instrument line in service may also create a flow disturbance because, initially, the inlet line will not be filled with process fluid. Filling the new line or instrument from the old line may cause too high a flow in the new line and close the EFCV. Therefore, the licensee stated that the excess flow check valve should require open position verification for these conditions and has proposed in this TSCR to add these conditions to TS 4.5.0. Adding these conditions to the TS would (1) restrict the existing condition on

"venting an instrument or instrument line" to venting only unisolated instrument or instrument lines and (2) add the new condition of installing a new instrument or instrument line.

The licensee pointed out that the once-per-cycle requirement in the TS for an isolation test (EFCV functional test) will still be performed. This is not being changed by this TSCR. This test includes an open position verification test and would ensure correct valve positioning and valve operability of the EFCV.

The licensee stated that this TSCR would not affect the safety of the plant because no system design, configuration or hardware changes will be made. This TSCR will not increase the potential for radioactive discharge to the atmosphere, because closing of the EFCV in the case of high flow (greater than 2 gpm) will prevent significant discharge of fluid from the RCS.

The proposed change remains compatible with, and in some respects more restrictive than, the BWR Standard Technical Specifications (STS), NUREG-0123, Revision 3 which is applicable to Oyster Creek. The applicable STS surveillance requirement on primary containment isolation valves, Section 3/4.6.3, only requires that each instrumentation line EFCV be demonstrated operable once per 18 months.

The staff has reviewed the basis in the licensee's letter of April 14, 1986, to revise TS 4.5.0. The revision as discussed above is to delete two existing conditions and to add a new condition which would require an open position verification of the EFCV. The staff agrees that the two conditions being deleted should not in themselves require an open position verification check. This would cause unnecessary surveillance and radiation exposure to personnel with little benefit to the safety of the plant. In addition, the licensee states that the open verification test for these two conditions has never shown the EFCV to be closed (Ref 2).

The staff concludes that the two conditions being deleted should not produce a pressure or flow disturbance. Isolating an instrument or instrument line or venting an isolated instrument or instrument line should not cause a pressure or flow disturbance unless the isolation valve leaks. In this case, the open verification test would be performed because the TS 4.5.0 requires this test if there is "leakage at instrument fittings or valves."

Therefore, based on the above, the staff has concluded that the proposed TSCR is acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the 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, this 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 nor environmental assessment need be prepared in connection with the issuance of this amendment.

#### 4.0 CONCLUSION

The staff 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, and (2) 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 nor to the health and safety of the public.

#### 5.0 REFERENCES

1. Letter from P.B. Fiedler (GPUN) to J. Zwolinski (NRC), TSCR 143, dated April 14, 1986
2. Phone call from J. Kowalski (GPUN) to J. Donohew (NRC) on May 29, 1986.

Principal Contributor: J. Donohew

Dated: July 9, 1986