March 8, 1996

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Mr. Donald C. Shelton
Acting Vice President Nuclear - Perry
Centerior Service Company
P. O. Box 97, A200
Perry, OH 44081

SUBJECT: AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-58 - PERRY NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M94493)

Dear Mr. Shelton:

The Commission has issued the enclosed Amendment No. 82 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit No. 1. This amendment revises the Technical Specifications in response to your application dated January 16, 1996, and supplemented by your request of March 1, 1996.

This amendment approves that part of your request that defers the drywell bypass leakage rate test during the current refueling outage. The remainder of the request is still under staff review.

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

Sincerely,

Original Signed By

Jon B. Hopkins, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures: 1. Amendment No. 82 to License No. NPF-58
2. Safety Evaluation

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cc w/encls: See next page

DOCUMENT NAME: G:\PERRY\M94493.AMD *See previous concurrence

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

March 8, 1996

Mr. Donald C. Shelton
Acting Vice President Nuclear - Perry
Centerior Service Company
P. O. Box 97, A200
Perry, OH 44081

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2. Safety Evaluation

cc w/encls: See next page

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The Honorable Lawrence Logan
Mayor, Village of Perry
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Perry, Ohio 44081

The Honorable Robert V. Orosz
Mayor, Village of North Perry
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 82
License No. NPF-58

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by The Cleveland Electric Illuminating Company, Centerior Service Company, Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and Toledo Edison Company (the licensees) dated January 16, 1996, as supplemented on March 1, 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.

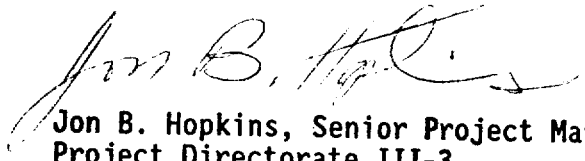
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 82 are hereby incorporated into this license. The Cleveland Electric Illuminating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented not later than 90 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Jon B. Hopkins, Senior Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of issuance: March 8, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 82

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

Replace the following pages of the Appendix "A" Technical Specifications including the issued but not yet implemented Improved Technical Specifications (ITS) with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
3/4 6-16	3/4 6-16
ITS 3.6-59	ITS 3.6-59
ITS 3.6-60	ITS 3.6-60

CONTAINMENT SYSTEMS

DRYWELL BYPASS LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.2.2 Drywell bypass leakage shall be less than or equal to 10% of the minimum acceptable $A/\sqrt{k}$ design value of 1.68 $ft.^2$

APPLICABILITY: When DRYWELL INTEGRITY is required per Specification 3.6.2.1.

ACTION:

With the drywell bypass leakage greater than 10% of the minimum acceptable $A/\sqrt{k}$ design value of 1.68 $ft.^2$, restore the drywell bypass leakage to within the limit prior to increasing reactor coolant system temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.2.2 The drywell bypass leakage rate test shall be conducted at least once per 18 months* at an initial differential pressure of 2.5 psi and the $A/\sqrt{k}$ shall be calculated from the measured leakage. One drywell air lock door shall remain open during the drywell leakage test such that each drywell door is leak tested during at least every other leakage rate test. If any drywell bypass leakage test fails to meet the specified limit, the schedule for subsequent tests shall be reviewed and approved by the Commission. If two consecutive tests fail to meet the limit, a test shall be performed at least every 9 months until two consecutive tests meet the limit, at which time the 18 month test schedule may be resumed.

* The performance of the drywell bypass leakage rate test is extended to the sixth refueling outage and need not be performed during the fifth refueling outage.

3.6 CONTAINMENT SYSTEMS

3.6.5.1 Drywell

LCO 3.6.5.1 The drywell shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Drywell inoperable.	A.1	Restore drywell to OPERABLE status.	1 hour
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.5.1.1	Verify bypass leakage is less than or equal to the bypass leakage limit. However, during the first unit startup following bypass leakage testing performed in accordance with this SR, the acceptance criterion is ≤ 10% of the drywell bypass leakage limit.	------NOTE----- The performance of the drywell bypass leakage test is extended to the sixth refueling outage and need not be performed during the fifth refueling outage. ---------- 18 months
SR 3.6.5.1.2	Visually inspect the exposed accessible interior and exterior surfaces of the drywell.	Once prior to performance of each Type A test required by SR 3.6.1.1.1.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-58

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter dated January 16, 1996, The Cleveland Electric Illuminating Company (CEI or the licensee) requested changes to the Technical Specifications (TSs) for the Perry Nuclear Power Plant, Unit 1 (PNPP). By letter dated March 1, 1996, CEI after having been advised by the staff of the status of the amendment review, supplemented their application by requesting that a subset of the request be implemented during the current refueling outage. The licensee transmitted revised TS pages to reflect this supplement to the amendment application. The supplement revised the schedule for issuing the amendment and was not outside the scope of the original no significant hazards determination.

The originally proposed changes would have revised the test frequency of the drywell bypass leakage rate test (DBLRT) based on a performance-based approach. DBLRT frequency would be extended from an 18-month interval to up to once every 10 years. The frequency would be changed to once every 48 months following a test failure but could be reestablished at 10 years, if the next test was successful. If two consecutive DBLRTs failed to meet the acceptance criteria, a DBLRT must be performed at every refueling outage, until two consecutive tests meet the acceptance criteria. This evaluation is based on the licensee's request to defer the DBLRT scheduled for the current refueling outage (fifth) until the sixth refueling outage.

2.0 EVALUATION

The Mark III containment design at PNPP, incorporates the drywell/pressure-suppression features of previous BWR containment designs into a dry containment structure. The function of the drywell is to force steam generated from a loss-of-coolant-accident (LOCA) through the weir wall vents into the suppression pool, so it can be condensed. Any steam that bypasses the suppression pool and directly enters the dry containment structure has the potential to rapidly increase the containment pressure. The pressure-suppression capability of the suppression pool assures that the peak LOCA temperature and pressure in the primary containment are kept below the design limits. Since the structural integrity of the primary containment is largely

dependent on the drywell's ability to perform its safety function, the total drywell bypass leakage area must be monitored.

The effect of steam bypass of the suppression pool on primary containment integrity has been evaluated for a spectrum of break sizes. The limiting case results in a maximum allowable leakage path area of 1.68 ft^2. (Maximum leak path areas are expressed in terms of $A/\sqrt{k}$, where A is the flow area of leakage and k is the geometric and friction loss coefficient.) The value $A/\sqrt{k}$ of 1.68 ft^2 corresponds to a bypass leakage rate of approximately 58,000 scfm at 2.5 psig.

Drywell preoperational test results indicated that the drywell was not stressed as much as predicted and responded in the elastic stress range. Additionally, no signs of distress or damage to either the concrete or liner were detected. Normal operating pressure and subsequent DBLRTs are less likely to initiate a leakage path or cause an existing path to grow. Regular visual inspections of the accessible drywell surfaces have been performed and have not revealed abnormal cracking. Therefore, the NRC staff concurs that adverse cracking of the drywell structure is not expected.

Seven DBLRTs have been successfully performed at PNPP. The results of these tests are summarized below:

Previous Results of PNPP DBLRTs

Test Date	Leak Rate (scfm)	Design Limit (percent)	Calculated $A/\sqrt{k}$ (ft^2)
9/85	passed*	N/A	N/A
8/87	124	0.2	0.003
7/89	123	0.2	0.003
12/90	797	1.4	0.023
5/92	253	0.4	0.007
6/94	2450	4.2	0.071
7/94	111	0.2	0.003

* Preoperational test; specific leak rate not recorded in test documents.

The drywell air purge system has a 24-inch supply isolation valve and a 36-inch exhaust isolation valve. TSs require that both of these valves be closed during MODES 1, 2, and 3 and that they be verified to be in the closed position at least once ever 31 days. Also, the valves are water sealed and administratively controlled with keylock switches in MODES 1, 2, and 3. The requested change does not affect these controls.

The TS controls for the drywell air lock also are not changed. The drywell air lock will continue to be tested for leakage every refueling outage in accordance with TS.

Nineteen flexible seals are installed in the annular space between the safety relief valve discharge lines and the drywell wall. In the unlikely event of all of the seals failing catastrophically during the accident of interest, the resultant $A/\sqrt{k}$ would be 1.36 ft^2, below the design value of 1.68 ft^2. Also, the remaining margin is greater than the leakage seen in the surveillances performed to date.

Qualitative assessments will be performed at least once every operating cycle in order to provide added assurance that the drywell has not seriously degraded between the DBLRTs. This assessment will provide an indication of the ability of the drywell to perform its design function by checking for gross drywell leakage.

In summary, the licensee has provided justification to decrease the frequency of performing DBLRTs. The performance of DBLRTs is expensive and adds to the outage critical path. Past DBLRTs performed at PNPP have consistently demonstrated margins of two orders of magnitude. The potential bypass leak paths of most concern, have been addressed by the licensee and reasonable assurance has been provided to prevent them from becoming significant contributors to bypass leakage paths.

The NRC staff has concluded that a technical basis exists to defer the performance of DBLRT until the next refueling outage. This conclusion is based upon the fact that (1) all previous DBLRT tests have been successful, (2) all previous DBLRT test results have had significant margins against acceptance criteria, (3) there is no discernable negative trend in test results, and (4) a qualitative assessment will be performed during the operating cycle. However, the staff has not yet been able to conclude that the licensee's original proposal for a 10-year interval is appropriate.

Based on the information described above, the staff concludes that sufficient technical basis exists, particularly the previously good leakage performance of the PNPP drywell, to permit the licensee to forego performance of the DBLRT during the fifth refueling outage begun in January 1996, until the sixth refueling outage while evaluation of the proposal to defer the tests to a 10-year interval continues. Therefore, the staff finds the amended request to defer performing the DBLRT during the current refueling outage acceptable. The staff is continuing its review of the remainder of the amendment request for a 10-year interval for performing DBLRTs.

3.0 STATE CONSULTATION

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

4.0 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 or a change to a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent 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 (61 FR 3951). 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 or environmental assessment need be prepared in connection with the issuance of this amendment.

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

Principal Contributor: J. Hopkins

Date: March 8, 1996