



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. 76  
License No. NPF-58

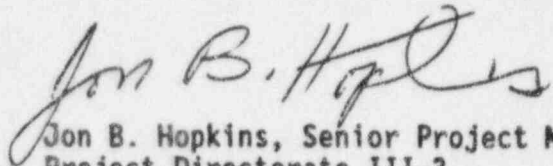
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by The Cleveland Electric Illuminating Company, Centerior Service Company, Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and Toledo Edison Company (the licensees) dated October 21, 1994, 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. 76 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: December 8, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 76

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

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

Remove

3/4 6-3

3/4 6-4

B 3/4 6-2

B 3/4 6-2a

B 3/4 6-2b

Insert

3/4 6-3

3/4 6-4

B 3/4 6-2

B 3/4 6-2a

B 3/4 6-2b

## CONTAINMENT SYSTEMS

### PRIMARY CONTAINMENT LEAKAGE

#### LIMITING CONDITION FOR OPERATION

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3.6.1.2 Primary containment leakage rates shall be limited to:

- a. An overall integrated leakage rate, except for the main steam line isolation valves#, of less than or equal to  $0.75 L_a$ , where  $L_a$  is 0.20 percent by weight of the primary containment air per 24 hours at  $P_a$ .
- b. A combined leakage rate of less than or equal to  $0.60 L_a$  for all penetrations and all valves, except for main steam line isolation valves# and valves which are hydrostatically leak tested, subject to Type B and C tests when pressurized to  $P_a$ .
- c. Less than or equal to 25 scf per hour for any one main steam line through the isolation valves when tested at  $P_a$ .
- d. A combined leakage rate of less than or equal to  $0.0504 L_a$  for all penetrations that are secondary containment bypass leakage paths when pressurized to the required test pressure.
- e. A combined leakage rate of less than or equal to 1 gpm times the total number of containment isolation valves in hydrostatically tested lines which penetrate the primary containment, when tested at greater than or equal to  $1.10 P_a$ .

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, AND 3, with the reactor coolant system temperature greater than 200 °F.

#### ACTION:

- With:
- a. The measured overall integrated primary containment leakage rate, except for the main steam line isolation valves#, exceeding  $0.75 L_a$ , or
  - b. The measured combined leakage rate for all penetrations and all valves except for main steam line isolation valves# and valves which are hydrostatically leak tested, subject to Type B and C tests exceeding  $0.60 L_a$ , or
  - c. The measured leakage rate exceeding 25 scf per hour for any one main steam line through the isolation valves, or
  - d. The combined leakage rate for all penetrations that are secondary containment bypass leakage paths exceeding  $0.0504 L_a$ , or

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# Exemption to Appendix J of 10 CFR 50.

## CONTAINMENT SYSTEMS

### PRIMARY CONTAINMENT LEAKAGE

#### LIMITING CONDITION FOR OPERATION (Continued)

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- e. The measured combined leakage rate for all containment isolation valves in hydrostatically tested lines which penetrate the primary containment exceeding 1 gpm times the total number of such valves:

Restore the leakage rate to less than or equal to the above limit(s) within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

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4.6.1.2 The primary containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50, except that the provisions of Bectel Topical Report BN-TOP-1 may be used for Type A tests having a duration less than 24 hours:

- a. Three Type A Overall Integrated Containment Leakage Rate tests shall be conducted at  $40 \pm 10$  month intervals during shutdown at  $P_a$  during each 10-year service period.
- b. If any periodic Type A test fails to meet  $0.75 L_a$ , the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet  $0.75 L_a$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet  $0.75 L_a$ , at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:



## CONTAINMENT SYSTEMS

### BASES

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#### 3/4.6.1 CONTAINMENT (Continued)

##### 3/4.6.1.2 CONTAINMENT LEAKAGE (Continued)

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix J to 10 CFR 50 with the exception of the exemptions listed below. Additionally, Bechtel Topical Report BN-TOP-1 may be utilized for ILRTs with a duration of less than 24 hours in accordance with Section 7.6 of ANSI N45.4-1972 (Reference 1).

- a) Section III.D.2(b)(ii) - The air lock seal leakage test of Section III.D.2(b)(iii) of Appendix J may be substituted (following normal air lock door opening) for the full-pressure test provided that no maintenance has been performed that would affect the air locks sealing capability (Reference 2).
- b) Sections III.A.1(d), III.A.5(b)(2), and III.B.3 and III.C.3 - The main steam lines between the inboard and outboard MSIVs (including the volume up to the outboard MSIV before seat drain line valves) are not required to be vented and drained for Type A testing, and the main steam line isolation valve leak rates are exempted from inclusion in the overall integrated primary containment leak rate and the combined local leak rate (Reference 3).
- c) Section III.D.1(a) - The third Type A test for each 10-year service period is not required to be conducted when the plant is shutdown for the 10-year plant inservice inspection (Reference 3).
- d) Section III.D.3 - Type C local leak rate testing may be performed at other convenient intervals in addition to shutdown during refueling, but at intervals no greater than 2 years (Reference 3).

#### References

- (1) Letter from NRC (B. J. Youngblood) to CEI (M. R. Edelman), "Performance of the Preoperational Containment Integrated Leak Rate Test - Perry Nuclear Power Plant, Unit 1," dated June 10, 1985.
- (2) PNPP Safety Evaluation Report Supplement 7, Section 6.2.6 "Containment Leakage Testing," November 1985.
- (3) Letter from NRC (J. B. Hopkins) to CEI (D. C. Shelton), "Issuance of Exemption from the Requirements of 10 CFR Part 50, Appendix J - Perry Nuclear Power Plant, Unit 1," dated December 4, 1995.

##### 3/4.6.1.3 CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on PRIMARY CONTAINMENT INTEGRITY and the containment leakage rate given in Specifications 3.6.1.1 and 3.6.1.2. The specification makes allowances for the fact that there may be long periods of time when the air locks will be in a closed and secured position during reactor operation. Only one closed door in each air lock is required to maintain the integrity of the containment.

## CONTAINMENT SYSTEMS

### BASES

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#### 3/4.6.1 CONTAINMENT (Continued)

##### 3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

An allowance has been provided within Action a.1 for access into or through the containment air locks when an interlock mechanism in one or both air locks is inoperable. Action a.1 requires that at least one of the two OPERABLE doors for each affected air lock be maintained closed, and if the interlock mechanism has not been restored to OPERABLE status within 24 hours, one door must be locked closed. The provisions of footnote \* may be utilized for entries and exits. The administrative controls of footnote \* allow the unlocking and use of the air lock provided that an individual is stationed at the air lock, dedicated to assuring that at least one OPERABLE air lock door remains closed at all times. This allowance is provided to address those situations when the use of an air lock with only an inoperable interlock mechanism may be preferred over the use of the other air lock, such as when the other air lock has an inoperable door.

An allowance has also been provided in Action a.2 for access into or through the containment air locks when one air lock door in one or both air locks is inoperable. The first sentence of footnote \*\* provides that entry and exit through the OPERABLE door on one or both air locks is permissible under administrative controls for the performance of repairs of the affected air lock components. The second sentence of footnote \*\* provides for entry into and exit from the containment for activities other than just the repairs of affected air lock components under administrative controls, but only permits these entries when both air locks have an inoperable door, and limits such use to a 7 day period. The administrative controls for the second sentence shall define limits on entry and exit, in order to minimize openings of the OPERABLE door.

The administrative controls for both sentences of footnote \*\* include provisions that after each entry and exit, the OPERABLE door must be promptly closed. The allowances of footnote \*\* are acceptable because of the low probability of an event that could pressurize the containment during the short time that the OPERABLE door will be open for entry into and exit from the containment.

The air supply to the containment air lock and seal system is the service and instrument air system. The system consists of two 100% capacity air compressors per unit and can be cross-connected. This system is redundant and extremely reliable and provides system pressure indication in the control room.

##### 3/4.6.1.4 MSIV LEAKAGE CONTROL SYSTEM

Calculated doses resulting from the maximum leakage allowance for the main steam line isolation valves in the postulated LOCA situations would be a small fraction of the 10 CFR 100 guidelines, provided the main steam line system from the isolation valves up to and including the turbine condenser remains intact. Operating experience has indicated that degradation has occasionally occurred in the leak tightness of the MSIV's such that the specified leakage requirements have not always been maintained continuously. The requirement for the leakage

## CONTAINMENT SYSTEMS

### BASES

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#### 3/4.6.1 CONTAINMENT (Continued)

##### 3/4.6.1.4 MSIV LEAKAGE CONTROL SYSTEM (Continued)

control system will reduce the untreated leakage from the MSIV's when isolation of the primary system and containment is required. An LCO 3.0.4 exception is provided to permit changes in Operational Conditions when the Inboard MSIV-LCS subsystem becomes inoperable due to condensate buildup between the MSIVs when the plant is operated below 50% rated thermal power.

##### 3/4.6.1.5 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the unit. Structural integrity is required to ensure that the containment will withstand the maximum pressure of 15 psig in the event of a LOCA. A visual inspection in conjunction with Type A leakage tests is sufficient to demonstrate this capability.

##### 3/4.6.1.6 CONTAINMENT INTERNAL PRESSURE

The limitations on primary containment to secondary containment differential pressure ensure that the primary containment peak pressure of 7.80 psig does not exceed the design pressure of 15.0 psig during LOCA conditions or that the external pressure differential does not exceed the design maximum external pressure differential of +0.8 psid. The limit of -0.1 to +1.0 psid for initial positive primary containment to secondary containment pressure will limit the primary containment pressure to 7.80 psig which is less than the design pressure and is consistent with the safety analysis.

##### 3/4.6.1.7 CONTAINMENT AVERAGE AIR TEMPERATURE

The limitation on containment average air temperature ensures that the containment peak air temperature does not exceed the design temperature of 185°F during LOCA conditions and is consistent with the safety analysis.

##### 3/4.6.1.8 DRYWELL AND CONTAINMENT PURGE SYSTEM

The use of the drywell and containment purge lines is restricted to the 42-inch outboard and 18-inch purge supply and exhaust isolation valves. These valves will close during a LOCA or steam line break accident and therefore the site boundary dose guidelines of 10 CFR Part 100 would not be exceeded in the event of an accident during purging operations. The term sealed closed as used in this context means that the valve is secured in its closed position by deactivating the valve motor operator, and does not pertain to injecting seal water between the isolation valves by a seal water system.