

March 30, 1994

Mr. Robert A. Stratman  
Vice President Nuclear - Perry  
Centerior Service Company  
P. O. Box 97, S270  
Perry, Ohio 44081

Dear Mr. Stratman:

SUBJECT: REISSUANCE OF TECHNICAL SPECIFICATIONS FOR AMENDMENT NO. 56  
TO FACILITY OPERATING LICENSE NO. NPF-58 - PERRY NUCLEAR POWER  
PLANT (M77736)

The cover sheet and technical specifications for Amendment No. 56 to Facility  
Operating License No. NPF-58 for the Perry Nuclear Power Plant are being  
redistributed.

It was brought to our attention that several copies of Amendment No. 56 did  
not contain a full set of technical specifications. Therefore, to assure that  
a full complement of technical specifications for Amendment No. 56 are  
received by everyone, the cover sheet and technical specifications are being  
redistributed.

Sincerely,

Original Signed By:

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

Enclosures:  
Technical Specifications

cc w/enclosure:  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 30, 1994

Docket No. 50-440

Mr. Robert A. Stratman  
Vice President Nuclear - Perry  
Centerior Service Company  
P. O. Box 97, S270  
Perry, Ohio 44081

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Sincerely,

A handwritten signature in cursive script that reads "Jon B. Hopkins".

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

Enclosures:  
Technical Specifications

cc w/enclosure:  
See next page

Mr. Robert A. Stratman  
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Perry Nuclear Power Plant  
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ATTACHMENT TO LICENSE AMENDMENT NO. 56

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. Overleaf pages are provided to maintain document completeness.

Remove

Insert

3/4 6-6

3/4 6-6

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3/4 6-6a

B 3/4 6-2

B 3/4 6-2

B 3/4 6-2a

B 3/4 6-2a

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B 3/4 6-2b (repositioned)

## CONTAINMENT SYSTEMS

### PRIMARY CONTAINMENT AIR LOCKS

#### LIMITING CONDITION FOR OPERATION

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3.6.1.3 Each primary containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate of less than or equal to 2.5 scf per hour at  $P_s$ , 11.31 psig.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and #.

#### ACTION:

- a. With one or both air locks having:
  1. an inoperable interlock mechanism, for each affected air lock,
    - a) Maintain at least one OPERABLE air lock door closed\* and within 24 hours lock one OPERABLE air lock door closed.
    - b) Operation may then continue provided that at least once per 31 days, one OPERABLE air lock door is verified to be locked closed\*.
  2. one inoperable air lock door, or, both one inoperable door and an inoperable interlock mechanism, for each affected air lock,
    - a) Maintain at least the OPERABLE air lock door closed\*\* and within 24 hours lock the OPERABLE air lock door closed.
    - b) Operation may then continue until performance of the next required overall air lock leakage test provided that at least once per 31 days the OPERABLE air lock door is verified to be locked closed\*\*.

Otherwise, in OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT

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# When handling irradiated fuel in the primary containment, during CORE ALTERATIONS, and operations with a potential for draining the reactor vessel.

\* Entry into and exit from the air lock(s) or primary containment, including through a "locked closed" door, is permitted under administrative controls.

\*\* If one or both air locks have one inoperable door, entry into and exit from the air lock(s) through the OPERABLE door is permitted under administrative controls to perform repairs of the affected air lock components. Also, if both air locks have one inoperable door, entry into and exit from primary containment is permitted under administrative controls for 7 days.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION (Continued)

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SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Otherwise, in OPERATIONAL CONDITION #, suspend handling of irradiated fuel in the primary containment, CORE ALTERATIONS, and operations with a potential for draining the reactor vessel.

The provisions of Specification 3.0.4 are not applicable.

- b. With a primary containment air lock inoperable in OPERATIONAL CONDITIONS 1, 2 or 3, except as a result of an inoperable air lock door and/or interlock mechanism, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With a primary containment air lock inoperable, in OPERATIONAL CONDITION #, except as a result of an inoperable air lock door and/or interlock mechanism, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or suspend all operations involving handling of irradiated fuel in the primary containment, CORE ALTERATIONS, and operations with a potential for draining the reactor vessel.

## 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 exemptions granted for testing the air locks after each opening.

##### 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.

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.

### 3.4.6 CONTAINMENT SYSTEMS

#### BASES

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#### 3/4.6.1 CONTAINMENT

##### 3/4.6.1.1 PRIMARY CONTAINMENT INTEGRITY

PRIMARY CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CFR Part 100 during accident conditions.

During shutdown when irradiated fuel is being handled in the primary containment, and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel, the # footnote permits the opening of six vent and drain pathways for the purpose of performing containment isolation valve leak rate surveillance testing provided the reactor has been subcritical for at least seven days. Offsite doses were calculated assuming the postulated fuel handling accident inside primary containment after a seven day decay time, and assuming all the airborne activity existing inside containment after the accident is immediately discharged directly to the environment (i.e., no containment). Although this analysis would indicate that no restriction on the number of vent and drain pathways was required, the number of open pathways was restricted to six for conservatism.

##### 3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the accident analyses at the peak accident pressure of 11.31 psig,  $P_a$ . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to 0.75  $L_a$  during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

Overall integrated leakage rate means the leakage rate which obtains from a summation of leakage through all potential leakage paths. Where a leakage path contains more than one valve, fitting, or component in series, the leakage for that path will be that leakage of the worst leaking valve, fitting, or component and not the summation of the leakage of all valves, fittings, or components in that leakage path.

Operating experience with the main steam line isolation valves has indicated that degradation has occasionally occurred in the leak tightness of the valves; therefore the special requirement for testing these valves.

## CONTAINMENT SYSTEMS

### BASES

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

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 control system will reduce the untreated leakage from the MSIV's when isolation of the primary system and containment is required.

#### 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 11.31 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 11.31 psig which is less than the design pressure and is consistent with the safety analysis.

## CONTAINMENT SYSTEMS

### BASES

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#### 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.