

December 2, 1998

Mr. Harold W. Keiser  
Chief Nuclear Officer & President  
Nuclear Business Unit  
Public Service Electric & Gas  
Company  
Post Office Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 (TAC NOS. MA3368 AND MA3369)

Dear Mr. Keiser:

The Commission has issued the enclosed Amendment Nos. 215 and 195 to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Nuclear Generating Station, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated August 12, 1998, as supplemented on October 12, 1998.

These amendments revise TS 3/4.6.1.3, "Containment Air Locks," to change the action statements for an inoperable air lock. The amendments also revise TS Bases 3/4.6.1.2, "Containment Leakage," to correct an editorial error and TS Bases 3/4.6.1.3, "Containment Air Locks," to provide additional details regarding the air locks.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,  
original signed by R.Ennis for  
Patrick D. Milano, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-272/50-311

- Enclosures: 1. Amendment No. 215 to License No. DPR-70
- 2. Amendment No. 195 to License No. DPR-75
- 3. Safety Evaluation

cc w/encls: See next page

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NAME	PMilano: <i>mw</i> <sup>JOSE</sup> <sub>for</sub>	TClark <i>JAC</i>	CBerlinger	<i>C Milano</i>	RCapra <i>RC</i>
DATE	11/10/98	11/19/98	11/11/98 <i>BN</i>	11/17/98	12/2/98

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

December 2, 1998

Mr. Harold W. Keiser  
Chief Nuclear Officer & President  
Nuclear Business Unit  
Public Service Electric & Gas  
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Post Office Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 (TAC NOS.  
MA3368 AND MA3369)

Dear Mr. Keiser:

The Commission has issued the enclosed Amendment Nos. 215 and 195 to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Nuclear Generating Station, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated August 12, 1998, as supplemented on October 12, 1998.

These amendments revise TS 3/4.6.1.3, "Containment Air Locks," to change the action statements for an inoperable air lock. The amendments also revise TS Bases 3/4.6.1.2, "Containment Leakage," to correct an editorial error and TS Bases 3/4.6.1.3, "Containment Air Locks," to provide additional details regarding the air locks.

A copy of our 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 "P. D. Milano for".

Patrick D. Milano, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-272/50-311

Enclosures: 1. Amendment No. 215 to  
License No. DPR-70  
2. Amendment No. 195 to  
License No. DPR-75  
3. Safety Evaluation

cc w/encls: See next page

Mr. Harold W. Keiser  
Public Service Electric & Gas  
Company

cc:

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Salem Nuclear Generating Station,  
Units 1 and 2

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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 215  
License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated August 12, 1998, as supplemented on October 12, 1998, 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 set forth in 10 CFR Chapter I;
  - 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-70 is hereby amended to read as follows:

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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 215, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, 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: December 2, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 215

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Pages

3/4 6-5

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B 3/4 6-1

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Insert Pages

3/4 6-5

3/4 6-5a

B 3/4 6-1

B 3/4 6-1a

B 3/4 6-1b

B 3/4 6-1c

B 3/4 6-1d

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

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3.6.1.3 Each 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 in accordance with the Containment Leakage Rate Testing Program.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTION:

Notes

- (1) Entry and exit is permissible to perform repairs on the affected air lock components.
  - (2) Separate condition entry is allowed for each air lock.
  - (3) Required ACTIONS a.1, a.2, and a.3 are not applicable if both doors in the same air lock are inoperable and condition c. is entered.
  - (4) Required ACTIONS b.1, b.2, and b.3 are not applicable if both doors in the same air lock are inoperable and condition c. is entered.
  - (5) Enter applicable Conditions and required Actions of LCO 3.6.1, "Primary Containment," when air lock leakage results in exceeding the overall containment leakage rate.
- a. One or more containment air locks with one containment airlock door inoperable:
    1. Verify the OPERABLE door is closed in the affected air lock within 1 hour, and:
    2. Lock the OPERABLE door closed in the affected air lock within 24 hours, and:
    3. Verify the OPERABLE door is locked closed in the affected air lock once per 31 days. Entry and exit is permissible for 7 days (from initial LCO entry) under administrative controls if one door is inoperable in each air lock. Air lock doors in high radiation areas may be verified locked closed by administrative means.
  - b. One or more containment air locks with only the containment air lock interlock mechanism inoperable.
    1. Verify an OPERABLE door is closed in the affected air lock within 1 hour, and:
    2. Lock an OPERABLE door closed in the affected air lock within 24 hours, and:
    3. Verify an OPERABLE door is locked closed in the affected air lock once per 31 days. Entry and exit of containment is permissible under the control of a dedicated individual for the duration of the entry to ensure only one door is open at a time. Air lock doors in high radiation areas may be verified locked closed by administrative means.

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATIONS (Continued)

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- c. One or more containment air locks inoperable for reasons other than condition a. or b.
  - 1. Immediately initiate action to evaluate overall containment leakage per LCO 3.6.1, and:
  - 2. Verify that at least one door is closed in the affected air lock within 1 hour, and:
  - 3. Restore the air lock to OPERABLE status within 24 hours.
- d. If the ACTIONS and associated completion times of a., b., or c. cannot be met, be in Hot Standby within 6 hours and in Cold Shutdown within the following 30 hours.

SURVEILLANCE REQUIREMENTS

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- 4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:
- a. By verifying seal leakage rate in accordance with the Containment Leakage Rate Testing program.
  - b. By conducting an overall air lock leakage test in accordance with the Containment Leakage Rate Testing Program.
  - c. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.

## 3/4.6 CONTAINMENT SYSTEMS

### BASES

#### 3/4.6.1 PRIMARY CONTAINMENT

##### 3/4 6.1.1 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 100 during accident conditions.

The service water accumulator vessel and discharge valves function to maintain water filled, subcooled fluid conditions in the containment fan coil unit (CFCU) cooling loops during accident conditions. The service water accumulator vessel and discharge valves were installed to address the Generic Letter 96-06 issues of column separation waterhammer and two phase flow during an accident involving a loss of offsite power. The operability of each service water accumulator vessel and discharge valve is required to ensure the integrity of containment penetrations associated with the containment fan coil units during accident conditions. If a service water accumulator vessel does not meet the vessel surveillance requirements, or if the discharge valve response time does not meet design acceptance criteria when tested in accordance with procedures, the containment integrity requirements of the CFCU cooling loops exclusively supplied by the inoperable accumulator vessel or discharge valve are not met. Limiting Condition for Operation 3.6.1.1 is applicable, and the cooling loops for the two CFCU's exclusively supplied by the inoperable accumulator are to be removed from service and isolated to maintain containment integrity.

##### 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 accident pressure  $P_a$ . As an added conservatism, the measured overall integrated leakage rate (Type A test) is further limited to less than or equal to  $0.75 L_a$  or less than or equal to  $0.75 L_t$ , as applicable, during performance of the periodic test to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates are consistent with the Containment Leakage Rate Testing Program.

##### 3/4.6.1.3 CONTAINMENT AIR LOCKS

Containment air locks form part of the containment pressure boundary and provide a means for personnel access during all MODES of operation.

Each air lock is nominally a right circular cylinder, 10 feet in diameter, with a door at each end. The doors are interlocked during normal operation to prevent simultaneous opening. During periods when containment is not required to be OPERABLE, the door interlock mechanism may be disabled, allowing both doors of an air lock to remain open for extended periods when frequent containment entry is necessary. Each air lock door has been designed and tested to certify its ability to withstand a pressure in excess of the maximum expected pressure following a Design Basis Accident (DBA) in containment. As such, closure of a single door supports containment OPERABILITY. Each of the doors contains double gasketed seals and local leakage rate testing capability to ensure pressure integrity. To effect a leak tight seal, the air lock design uses pressure-seated doors (i.e., an

### 3/4.6 CONTAINMENT SYSTEMS

#### BASES

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increase in containment internal pressure results in increased sealing force on each door).

Each personnel air lock is provided with limit switches on both doors that provide control room indication of door position. Additionally, control room indication is provided to alert the operator whenever an air lock door interlock mechanism is defeated.

The containment air locks form part of the containment pressure boundary. As such, air lock integrity and leak tightness is essential for maintaining the containment leakage rate within limit in the event of a DBA. Not maintaining air lock integrity or leak tightness may result in a leakage rate in excess of that assumed in the unit safety analysis.

The DBAs that result in a release of radioactive material within containment are a loss of coolant accident and a rod ejection accident. In the analysis of each of these accidents, it is assumed that containment is OPERABLE such that release of fission products to the environment is controlled by the rate of containment leakage. The containment was designed with an allowable leakage rate of 0.1% of containment air weight per day. This leakage rate is defined in 10CFR50, Appendix J as  $L_a = 0.1\%$  of containment air weight per day, the maximum allowable containment leakage rate at the calculated peak containment internal pressure  $P_a = 47.0$  psig following a DBA. The allowable leakage rate forms the basis for the acceptance criteria imposed on the surveillance requirements associated with the air locks.

Each containment air lock forms part of the containment pressure boundary. As part of containment, the air lock safety function is related to control of the containment leakage rate resulting from a DBA. Thus, each air lock's structural integrity and leak tightness are essential to the successful mitigation of such an event.

Each air lock is required to be OPERABLE. For the air lock to be considered OPERABLE, the air lock interlock mechanism must be OPERABLE, the air lock must be in compliance with the Type B air lock leakage test, and both air lock doors must be OPERABLE. The interlock allows only one air lock door of an air lock to be opened at one time. This provision ensures that a gross breach of containment does not exist when containment is required to be OPERABLE. Closure of a single door in each air lock is sufficient to provide a leak tight barrier following postulated events. Nevertheless, both doors are kept closed when the air lock is not being used for normal entry into and exit from containment.

In MODES 1, 2, 3, and 4, a DBA could cause a release of radioactive material to containment. In MODES 5 and 6, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, the containment air locks are not required in MODE 5 to prevent leakage of radioactive material from containment. The requirements for the containment air locks during MODE 6 are addressed in LCO 3.9.4, "Containment Building Penetrations".

The ACTIONS are modified by five notes. Note (1) allows entry and exit to perform repairs on the affected air lock component. If the outer door is inoperable, then it may be easily accessed for most repairs. It is preferred that the air lock be accessed from inside primary containment by entering through the other OPERABLE air lock. However, if this is not practicable, or if repairs on either door must be performed from the barrel side of the door then it is permissible to enter the air lock through the OPERABLE door, which means there is a short time during which the containment boundary is not

BASES

intact (during access through the OPERABLE door). The ability to open the OPERABLE door, even if it means the containment boundary is temporarily not intact, is acceptable due to the low probability of an event that could pressurize the containment during the short time in which the OPERABLE door is expected to be open. After each entry and exit, the OPERABLE door must be immediately closed. If ALARA conditions permit, entry and exit should be via an OPERABLE air lock.

Note (2) adds clarification that separate condition entry is allowed for each air lock. This is acceptable, since the required ACTIONS provide appropriate compensatory measures for each inoperable air lock. Complying with the Required Actions may allow for continued operation. A subsequent inoperable air lock is governed by condition entry for that air lock.

Notes (3) and (4) ensure that only the required ACTIONS and associated completion times of condition c. are required if both doors in the same air lock are inoperable. With both doors in the same air lock inoperable, an OPERABLE door is not available to be closed. Required ACTIONS c.1 and c.2 are the appropriate remedial actions. The exception of these Notes does not affect tracking the completion time from the initial entry into condition a., only the requirement to comply with the required ACTIONS.

In the event the air lock leakage results in exceeding the overall containment leakage rate, Note (5) directs entry into the applicable Conditions and required ACTIONS of LCO 3.6.1, "Primary Containment".

With one air lock door in one or more containment air locks inoperable, the OPERABLE door must be verified closed (ACTION a.1) in each affected containment air lock. This ensures that a leak tight containment barrier is maintained by the use of an OPERABLE air lock door. This ACTION must be completed within 1 hour. The specified time period is consistent with the ACTIONS of LCO 3.6.1.1 that requires that containment be restored to OPERABLE status within 1 hour. OPERABILITY of the air lock interlock is not required to support the OPERABILITY of an air lock door.

In addition, the affected air lock penetration must be isolated by locking closed the OPERABLE air lock door within the 24 hour completion time (ACTION a.2). The 24 hour completion time is reasonable for locking the OPERABLE air lock door, considering the OPERABLE door of the affected air lock is being maintained closed.

Required ACTION a.3 verifies that an air lock with an inoperable door has been isolated by the use of a locked and closed OPERABLE air lock door. This ensures that an acceptable containment leakage boundary is maintained. The completion time of once per 31 days is based on engineering judgement and is considered adequate in view of the low likelihood of a locked door being mispositioned and other administrative controls.

ACTION a.3 allows the use of the air lock for entry and exit for 7 days under administrative controls if both air locks have an inoperable door. This 7-day restriction begins when the second air lock is discovered to be inoperable. Containment entry may be required on a periodic basis to perform Technical Specification Surveillances and required ACTIONS, as well as other activities on equipment inside containment that are required by Technical Specifications or activities on equipment that support Technical Specification required equipment. This Note is not intended to preclude performing other activities (i.e., non-Technical Specification required activities) if the containment is entered, using the inoperable air lock, to perform an allowed entry listed above. This allowance is acceptable due to the low probability of an event that could pressurize the containment during the short time that the OPERABLE door is expected to be open.

BASES

Because of ALARA considerations, ACTION a.3 also allows air lock doors located in high radiation areas to be verified locked closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of the door, once it has been verified to be in the proper position, is small.

With an air lock interlock mechanism inoperable in one or more air locks, the required ACTIONS and associated completion times are consistent with those specified in Condition a. In addition, ACTION b.3 allows entry into and exit from containment under the control of a dedicated individual stationed at the air lock to ensure that only one door is opened at a time (i.e., the individual performs the function of the interlock). In addition, ACTION b.3 allows air lock doors located in high radiation areas to be verified locked closed by use of administrative means.

ACTION c.1 requires that with one or more air locks inoperable for reasons other than those described in condition a. or b., action must be initiated immediately to evaluate previous combined leakage rates using current air lock test results. An evaluation is acceptable, since it is overly conservative to immediately declare the containment inoperable if both doors in an air lock have failed a seal test or if the overall air lock leakage is not within limits. In many instances (e.g., only one seal per door has failed), containment remains OPERABLE, yet only 1 hour (per LCO 3.6.1.1) would be provided to restore the air lock door to OPERABLE status prior to requiring plant shutdown. In addition, even with both doors failing the seal test, the overall containment leakage rate can still be within limits.

Required ACTION c.2 requires that one door in the affected containment air lock must be verified to be closed within the 1 hour completion time. This specified time period is consistent with the ACTIONS of LCO 3.6.1.1, which requires that containment be restored to OPERABLE status within 1 hour.

Additionally, the affected air lock(s) must be restored to OPERABLE status within the 24 hour completion time. This completion time begins at the time that the air lock is discovered to be inoperable. The specified time period is considered reasonable for restoring an inoperable air lock to OPERABLE status, assuming that at least one door is maintained closed in each affected air lock.

If the inoperable containment air lock cannot be restored to OPERABLE status within the required completion time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least Hot Standby within 6 hours and to Cold Shutdown within the following 30 hours. The allowed completion times are reasonable based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Maintaining containment airlocks OPERABLE requires compliance with the leakage rate test requirements of 10CFR50, Appendix J, as modified by approved exemptions. This Surveillance Requirement reflects the leakage rate testing requirements with regard to air lock leakage (Type B leakage tests). The acceptance criteria were established during initial air lock and containment OPERABILITY testing. The periodic testing requirements verify that the air lock leakage does not exceed the allowed fraction of the overall containment leakage rate. The frequency is required by Appendix J, as modified by approved exemptions. Thus, the provision of Specification 4.0.2 (which allows frequency extensions) does not apply.

BASES

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The air lock interlock is designed to prevent simultaneous opening of both doors in a single air lock. Since both the inner and outer doors of an air lock are designed to withstand the maximum expected post accident containment pressure, closure of either door will support containment OPERABILITY. Thus, the door interlock feature supports containment OPERABILITY while the air lock is being used for personnel transit in and out of the containment. Periodic testing of this interlock demonstrates that the interlock will function as designed and that simultaneous opening of the inner and outer doors will not inadvertently occur. Due to the purely mechanical nature of this interlock, and given that the interlock mechanism is only challenged when the containment air lock door is opened, this test is only required to be performed upon entering or exiting a containment air lock but is not required more frequently than every six months. The six-month frequency is based on engineering judgement and is considered adequate in view of other indications of door and interlock mechanism status available to operations personnel.



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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 195  
License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated August 12, 1998, as supplemented on October 12, 1998, 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 set forth in 10 CFR Chapter I;
  - 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-75 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 195, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, 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: December 2, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 195

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Pages

3/4 6-4  
3/4 6-5  
B 3/4 6-1

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Insert Pages

3/4 6-4  
3/4 6-5  
B 3/4 6-1  
B 3/4 6-1a  
B 3/4 6-1b  
B 3/4 6-1c  
B 3/4 6-1d

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

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3.6.1.3 Each 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 in accordance with the Containment Leakage Rate Testing Program.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTION:

Notes

- (1) Entry and exit is permissible to perform repairs on the affected air lock components.
  - (2) Separate condition entry is allowed for each air lock.
  - (3) Required ACTIONS a.1, a.2, and a.3 are not applicable if both doors in the same air lock are inoperable and condition c. is entered.
  - (4) Required ACTIONS b.1, b.2, and b.3 are not applicable if both doors in the same air lock are inoperable and condition c. is entered.
  - (5) Enter applicable Conditions and required Actions of LCO 3.6.1, "Primary Containment," when air lock leakage results in exceeding the overall containment leakage rate.
- a. One or more containment air locks with one containment airlock door inoperable:
    1. Verify the OPERABLE door is closed in the affected air lock within 1 hour, and:
    2. Lock the OPERABLE door closed in the affected air lock within 24 hours, and:
    3. Verify the OPERABLE door is locked closed in the affected air lock once per 31 days. Entry and exit is permissible for 7 days (from initial LCO entry) under administrative controls if one door is inoperable in each air lock. Air lock doors in high radiation areas may be verified locked closed by administrative means.
  - b. One or more containment air locks with only the containment air lock interlock mechanism inoperable.
    1. Verify an OPERABLE door is closed in the affected air lock within 1 hour, and:
    2. Lock an OPERABLE door closed in the affected air lock within 24 hours, and:
    3. Verify an OPERABLE door is locked closed in the affected air lock once per 31 days. Entry and exit of containment is permissible under the control of a dedicated individual for the duration of the entry to ensure only one door is open at a time. Air lock doors in high radiation areas may be verified locked closed by administrative means.

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATIONS (Continued)

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- c. One or more containment air locks inoperable for reasons other than condition a. or b.
  - 1. Immediately initiate action to evaluate overall containment leakage per LCO 3.6.1, and:
  - 2. Verify that at least one door is closed in the affected air lock within 1 hour, and:
  - 3. Restore the air lock to OPERABLE status within 24 hours.
- d. If the ACTIONS and associated completion times of a., b., or c. cannot be met, be in Hot Standby within 6 hours and in Cold Shutdown within the following 30 hours.

SURVEILLANCE REQUIREMENTS

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- 4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:
- a. By verifying seal leakage rate in accordance with the Containment Leakage Rate Testing program.
  - b. By conducting an overall air lock leakage test in accordance with the Containment Leakage Rate Testing Program.
  - c. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.

## 3/4.6 CONTAINMENT SYSTEMS

### BASES

#### 3/4.6.1 PRIMARY CONTAINMENT

##### 3/4 6.1.1 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 100 during accident conditions.

The service water accumulator vessel and discharge valves function to maintain water filled, subcooled fluid conditions in the containment fan coil unit (CFCU) cooling loops during accident conditions. The service water accumulator vessel and discharge valves were installed to address the Generic Letter 96-06 issues of column separation waterhammer and two phase flow during an accident involving a loss of offsite power. The operability of each service water accumulator vessel and discharge valve is required to ensure the integrity of containment penetrations associated with the containment fan coil units during accident conditions. If a service water accumulator vessel does not meet the vessel surveillance requirements, or if the discharge valve response time does not meet design acceptance criteria when tested in accordance with procedures, the containment integrity requirements of the CFCU cooling loops exclusively supplied by the inoperable accumulator vessel or discharge valve are not met. Limiting Condition for Operation 3.6.1.1 is applicable, and the cooling loops for the two CFCU's exclusively supplied by the inoperable accumulator are to be removed from service and isolated to maintain containment integrity.

##### 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 accident pressure  $P_a$ . As an added conservatism, the measured overall integrated leakage rate (Type A test) is further limited to less than or equal to  $0.75 L_a$  or less than or equal to  $0.75 L_t$ , as applicable, during performance of the periodic test to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates are consistent with the Containment Leakage Rate Testing Program.

##### 3/4.6.1.3 CONTAINMENT AIR LOCKS

Containment air locks form part of the containment pressure boundary and provide a means for personnel access during all MODES of operation.

Each air lock is nominally a right circular cylinder, 10 feet in diameter, with a door at each end. The doors are interlocked during normal operation to prevent simultaneous opening. During periods when containment is not required to be OPERABLE, the door interlock mechanism may be disabled, allowing both doors of an air lock to remain open for extended periods when frequent containment entry is necessary. Each air lock door has been designed and tested to certify its ability to withstand a pressure in excess of the maximum expected pressure following a Design Basis Accident (DBA) in containment. As such, closure of a single door supports containment OPERABILITY. Each of the doors contains double gasketed seals and local leakage rate testing capability to ensure pressure integrity. To effect a leak tight seal, the air lock design uses pressure-seated doors (i.e., an

### 3/4.6 CONTAINMENT SYSTEMS

#### BASES

increase in containment internal pressure results in increased sealing force on each door).

Each personnel air lock is provided with limit switches on both doors that provide control room indication of door position. Additionally, control room indication is provided to alert the operator whenever an air lock door interlock mechanism is defeated.

The containment air locks form part of the containment pressure boundary. As such, air lock integrity and leak tightness is essential for maintaining the containment leakage rate within limit in the event of a DBA. Not maintaining air lock integrity or leak tightness may result in a leakage rate in excess of that assumed in the unit safety analysis.

The DBAs that result in a release of radioactive material within containment are a loss of coolant accident and a rod ejection accident. In the analysis of each of these accidents, it is assumed that containment is OPERABLE such that release of fission products to the environment is controlled by the rate of containment leakage. The containment was designed with an allowable leakage rate of 0.1% of containment air weight per day. This leakage rate is defined in 10CFR50, Appendix J as  $L_a = 0.1\%$  of containment air weight per day, the maximum allowable containment leakage rate at the calculated peak containment internal pressure  $P_a = 47.0$  psig following a DBA. The allowable leakage rate forms the basis for the acceptance criteria imposed on the surveillance requirements associated with the air locks.

Each containment air lock forms part of the containment pressure boundary. As part of containment, the air lock safety function is related to control of the containment leakage rate resulting from a DBA. Thus, each air lock's structural integrity and leak tightness are essential to the successful mitigation of such an event.

Each air lock is required to be OPERABLE. For the air lock to be considered OPERABLE, the air lock interlock mechanism must be OPERABLE, the air lock must be in compliance with the Type B air lock leakage test, and both air lock doors must be OPERABLE. The interlock allows only one air lock door of an air lock to be opened at one time. This provision ensures that a gross breach of containment does not exist when containment is required to be OPERABLE. Closure of a single door in each air lock is sufficient to provide a leak tight barrier following postulated events. Nevertheless, both doors are kept closed when the air lock is not being used for normal entry into and exit from containment.

In MODES 1, 2, 3, and 4, a DBA could cause a release of radioactive material to containment. In MODES 5 and 6, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, the containment air locks are not required in MODE 5 to prevent leakage of radioactive material from containment. The requirements for the containment air locks during MODE 6 are addressed in LCO 3.9.4, "Containment Building Penetrations".

The ACTIONS are modified by five notes. Note (1) allows entry and exit to perform repairs on the affected air lock component. If the outer door is inoperable, then it may be easily accessed for most repairs. It is preferred that the air lock be accessed from inside primary containment by entering through the other OPERABLE air lock. However, if this is not practicable, or if repairs on either door must be performed from the barrel side of the door then it is permissible to enter the air lock through the OPERABLE door, which means there is a short time during which the containment boundary is not

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intact (during access through the OPERABLE door). The ability to open the OPERABLE door, even if it means the containment boundary is temporarily not intact, is acceptable due to the low probability of an event that could pressurize the containment during the short time in which the OPERABLE door is expected to be open. After each entry and exit, the OPERABLE door must be immediately closed. If ALARA conditions permit, entry and exit should be via an OPERABLE air lock.

Note (2) adds clarification that separate condition entry is allowed for each air lock. This is acceptable, since the required ACTIONS provide appropriate compensatory measures for each inoperable air lock. Complying with the Required Actions may allow for continued operation. A subsequent inoperable air lock is governed by condition entry for that air lock.

Notes (3) and (4) ensure that only the required ACTIONS and associated completion times of condition c. are required if both doors in the same air lock are inoperable. With both doors in the same air lock inoperable, an OPERABLE door is not available to be closed. Required ACTIONS c.1 and c.2 are the appropriate remedial actions. The exception of these Notes does not affect tracking the completion time from the initial entry into condition a., only the requirement to comply with the required ACTIONS.

In the event the air lock leakage results in exceeding the overall containment leakage rate, Note (5) directs entry into the applicable Conditions and required ACTIONS of LCO 3.6.1, "Primary Containment".

With one air lock door in one or more containment air locks inoperable, the OPERABLE door must be verified closed (ACTION a.1) in each affected containment air lock. This ensures that a leak tight containment barrier is maintained by the use of an OPERABLE air lock door. This ACTION must be completed within 1 hour. The specified time period is consistent with the ACTIONS of LCO 3.6.1.1 that requires that containment be restored to OPERABLE status within 1 hour. OPERABILITY of the air lock interlock is not required to support the OPERABILITY of an air lock door.

In addition, the affected air lock penetration must be isolated by locking closed the OPERABLE air lock door within the 24 hour completion time (ACTION a.2). The 24 hour completion time is reasonable for locking the OPERABLE air lock door, considering the OPERABLE door of the affected air lock is being maintained closed.

Required ACTION a.3 verifies that an air lock with an inoperable door has been isolated by the use of a locked and closed OPERABLE air lock door. This ensures that an acceptable containment leakage boundary is maintained. The completion time of once per 31 days is based on engineering judgement and is considered adequate in view of the low likelihood of a locked door being mispositioned and other administrative controls.

ACTION a.3 allows the use of the air lock for entry and exit for 7 days under administrative controls if both air locks have an inoperable door. This 7-day restriction begins when the second air lock is discovered to be inoperable. Containment entry may be required on a periodic basis to perform Technical Specification Surveillances and required ACTIONS, as well as other activities on equipment inside containment that are required by Technical Specifications or activities on equipment that support Technical Specification required equipment. This Note is not intended to preclude performing other activities (i.e., non-Technical Specification required activities) if the containment is entered, using the inoperable air lock, to perform an allowed entry listed above. This allowance is acceptable due to the low probability of an event that could pressurize the containment during the short time that the OPERABLE door is expected to be open.

BASES

Because of ALARA considerations, ACTION a.3 also allows air lock doors located in high radiation areas to be verified locked closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of the door, once it has been verified to be in the proper position, is small.

With an air lock interlock mechanism inoperable in one or more air locks, the required ACTIONS and associated completion times are consistent with those specified in Condition a. In addition, ACTION b.3 allows entry into and exit from containment under the control of a dedicated individual stationed at the air lock to ensure that only one door is opened at a time (i.e., the individual performs the function of the interlock). In addition, ACTION b.3 allows air lock doors located in high radiation areas to be verified locked closed by use of administrative means.

ACTION c.1 requires that with one or more air locks inoperable for reasons other than those described in condition a. or b., action must be initiated immediately to evaluate previous combined leakage rates using current air lock test results. An evaluation is acceptable, since it is overly conservative to immediately declare the containment inoperable if both doors in an air lock have failed a seal test or if the overall air lock leakage is not within limits. In many instances (e.g., only one seal per door has failed), containment remains OPERABLE, yet only 1 hour (per LCO 3.6.1.1) would be provided to restore the air lock door to OPERABLE status prior to requiring plant shutdown. In addition, even with both doors failing the seal test, the overall containment leakage rate can still be within limits.

Required ACTION c.2 requires that one door in the affected containment air lock must be verified to be closed within the 1 hour completion time. This specified time period is consistent with the ACTIONS of LCO 3.6.1.1, which requires that containment be restored to OPERABLE status within 1 hour.

Additionally, the affected air lock(s) must be restored to OPERABLE status within the 24 hour completion time. This completion time begins at the time that the air lock is discovered to be inoperable. The specified time period is considered reasonable for restoring an inoperable air lock to OPERABLE status, assuming that at least one door is maintained closed in each affected air lock.

If the inoperable containment air lock cannot be restored to OPERABLE status within the required completion time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least Hot Standby within 6 hours and to Cold Shutdown within the following 30 hours. The allowed completion times are reasonable based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Maintaining containment airlocks OPERABLE requires compliance with the leakage rate test requirements of 10CFR50, Appendix J, as modified by approved exemptions. This Surveillance Requirement reflects the leakage rate testing requirements with regard to air lock leakage (Type B leakage tests). The acceptance criteria were established during initial air lock and containment OPERABILITY testing. The periodic testing requirements verify that the air lock leakage does not exceed the allowed fraction of the overall containment leakage rate. The frequency is required by Appendix J, as modified by approved exemptions. Thus, the provision of Specification 4.0.2 (which allows frequency extensions) does not apply.

BASES

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The air lock interlock is designed to prevent simultaneous opening of both doors in a single air lock. Since both the inner and outer doors of an air lock are designed to withstand the maximum expected post accident containment pressure, closure of either door will support containment OPERABILITY. Thus, the door interlock feature supports containment OPERABILITY while the air lock is being used for personnel transit in and out of the containment. Periodic testing of this interlock demonstrates that the interlock will function as designed and that simultaneous opening of the inner and outer doors will not inadvertently occur. Due to the purely mechanical nature of this interlock, and given that the interlock mechanism is only challenged when the containment air lock door is opened, this test is only required to be performed upon entering or exiting a containment air lock but is not required more frequently than every six months. The six-month frequency is based on engineering judgement and is considered adequate in view of other indications of door and interlock mechanism status available to operations personnel.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 215 AND 195 TO FACILITY OPERATING  
LICENSE NOS. DPR-70 AND DPR-75  
PUBLIC SERVICE ELECTRIC & GAS COMPANY  
PHILADELPHIA ELECTRIC COMPANY  
DELMARVA POWER AND LIGHT COMPANY  
ATLANTIC CITY ELECTRIC COMPANY  
SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated August 12, 1998, as supplemented on October 12, 1998, the Public Service Electric & Gas Company (the licensee) submitted a request for changes to the Salem Nuclear Generating Station, Unit Nos. 1 and 2, Technical Specifications (TSs). The requested changes would revise TS 3/4.6.1.3, "Containment Air Locks," to modify the action statements for an inoperable air lock. The amendments also revise (a) TS Bases 3/4.6.1.2, "Containment Leakage," to correct an editorial error, and (b) replace TS Bases 3/4.6.1.3, "Containment Air Locks," with a section that provides additional detail regarding the operation of the air locks. The October 12, 1998, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

Background

The containment structures at Salem are designed to provide: (a) a barrier to prevent the escape of radioactivity during normal and accident conditions, (b) protection against internally- and/or externally-generated missiles, (c) biological shielding during normal and accident conditions, and (d) seismic category I support for the reactor coolant and associated systems. The containment structure and all penetrations including the air locks are designed to withstand the loadings and peak pressures associated with the Design Basis Accident (DBA) in coincidence with a seismic event.

The Salem containment structures each include two personnel air locks that permit personnel to access/egress the containment while maintaining the integrity of the containment pressure boundary. Each air lock consists of an approximately 9 ft. - 9 in. right circular cylinder that contains two doors forming a personnel chamber between the doors. Mechanical interlocks ensure that both doors cannot be opened at the same time. During Modes 1, 2, 3, and 4 (power

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operation, startup, hot standby, and hot shutdown), at least one of the doors must be closed. During Modes 5 and 6 (cold shutdown and refueling), both doors may be opened at the same time after intentionally disabling the interlock mechanism. This is allowed unless core alterations are in progress or irradiated fuel assemblies are being moved.

#### Current TS Actions Required for Inoperable Air Lock

##### Salem Unit 1

The Action statement for Salem Unit 1 TS 3.6.1.3 states that, with an air lock inoperable, the air lock must be restored to operable status within 24 hours or the unit be in at least Hot Standby (Mode 3) within the next 6 hours and in Cold Shutdown (Mode 5) within the following 30 hours.

##### Salem Unit 2

The Action statements for Salem Unit 2 TS 3.6.1.3 provide required actions in response to (a) one containment air lock door being inoperable, and (b) an inoperable air lock resulting from other than an inoperable door.

Should one air lock door become inoperable, TS 3.6.1.3 Action a. requires:

1. Maintain at least the operable air lock door closed and either restore the inoperable air lock door to operable status within 24 hours or lock the operable air lock door closed.
2. Operation may continue until performance of the next required overall air lock leakage test provided that the operable air lock door is verified to be locked closed at least once per 31 days.
3. Otherwise, be in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours.
4. The provisions of TS 3.0.4 are not applicable.

Should an air lock become inoperable for other than an inoperable door, TS 3.6.1.3, Action b. requires:

At least one air lock door be maintained closed, the inoperable air lock be restored to operable status within 24 hours or be in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours.

#### Proposed Changes

In its August 12, 1998, letter, the licensee proposed changes to TS 3.6.1.3 to modify the action statements should an air lock become inoperable. The licensee stated that the proposed changes will provide the ability to continue operation if an air lock door or an air lock door interlock mechanism becomes inoperable. Thus, the operators would not be challenged by unnecessary plant shutdowns. The changes would also allow separate condition entry for each air lock. Specifically, the proposed changes will provide distinct action statements for: (a) one or

more containment air locks with one air lock door inoperable; (b) one or more containment air locks with only the containment air lock interlock mechanism inoperable; and (c) one or more containment air locks inoperable for reasons other than (a) or (b). The proposed changes are consistent between both Salem units and consistent with the Actions detailed in NUREG-1431, "Standard Technical Specifications - Westinghouse Plants," Revision 1, dated April 1995.

### Evaluation

The Limiting Conditions for Operation (LCOs) for TS 3.6.1.3 state that each containment air lock shall be operable in Modes 1, 2, 3 and 4 with (1) both doors closed except when an air lock is being used for normal transit entry and exit through the containment, then at least one door shall be closed, and (2) an overall air lock leakage rate that is in accordance with the Containment Leakage Rate Testing Program (CLRTP). The CLRTP requires periodic leak rate testing of the seals on each air lock door as well as the leak rate testing of the complete air lock. Furthermore, the surveillance requirement associated with this TS requires testing of the interlock mechanism once per 6 months to verify that only one door in each airlock can be opened at a time.

The containment air locks are provided to permit personnel to enter and exit the containment while maintaining the integrity of the containment pressure boundary. Each air lock door has been designed and tested to certify its ability to withstand a pressure in excess of the maximum expected pressure following a DBA in containment. The design utilizes doors which open into the containment, such that an increase in the containment internal pressure results in increased closing (seating) force on the door, and double gasketed door seals with pressure testing capability. Since each air lock contains two doors with a personnel chamber in between, containment pressure integrity, and hence containment operability, can be maintained with one operable door closed. The air lock door interlock mechanism ensures that both doors cannot be opened at the same time during Modes 1 through 4, when containment integrity must be maintained. Thus, the door interlock supports containment operability while the air lock is being used for personnel transit in and out of containment. However, operability of the interlock mechanism is not required to support the operability of an air lock door.

The licensee proposed that the current Actions be replaced with the following Actions:

- a. One or more containment air locks with one containment air lock door inoperable.
  1. Verify the operable door is closed in the affected containment air lock within 1 hour, and :
  2. Lock the operable door closed in the affected air lock within 24 hours, and:
  3. Verify the operable door is locked closed in the affected air lock once per 31 days. Entry and exit is permissible for 7 days (from initial LCO entry) under administrative controls if one door is inoperable in each lock. Air lock doors in high radiation areas may be verified locked closed by administrative means.
  
- b. One or more containment air locks with only the containment air lock interlock mechanism inoperable.
  1. Verify an operable door is closed in the affected air lock within 1 hour, and:
  2. Lock an operable door closed in the affected air lock within 24 hours, and:

3. Verify an operable door is locked closed in the affected air lock once per 31 days. Entry and exit of containment is permissible under the control of a dedicated individual for the duration of the entry to ensure only one door is open at a time. Air lock doors in high radiation areas may be verified locked closed by administrative means.
- c. One or more containment air locks inoperable for reasons other than condition a or b.
1. Immediately initiate action to evaluate overall containment leakage per LCO 3.6.1, and:
  2. Verify that at least one door is closed in the affected air lock within 1 hour, and:
  3. Restore the air lock to operable status within 24 hours.
- d. If the Actions and associated completion times of a., b., or c. cannot be met, be in Hot Standby within 6 hours and in Cold Shutdown within the following 30 hours.

The NRC staff finds that the actions in response to an inoperable door or interlock ensure that a leak tight containment barrier is maintained by the use of an operable air lock door. For Actions a. and b., the 1-hour time period to complete the verification that an operable door is closed is consistent with the Action of LCO 3.6.1.1, which requires that containment be restored to operable status within 1 hour. The 24-hour completion time for locking the operable air lock door is acceptable since the operable door of the affected air lock is being maintained closed. Verification that the door remains locked once per 31 days is adequate in view of the low likelihood of a locked door being mispositioned and other administrative controls in place. The verification of doors in high radiation areas by use of administrative means is acceptable since access to these areas is typically restricted and the probability of misalignment of the door, once it has been verified to be locked in the proper position, is small. Additionally, the staff finds the 7-day allowance for containment entry if both air locks each have an inoperable door is acceptable due to the low probability of an event that could pressurize the containment during the short time that the operable door is expected to be open.

For the situation of an inoperable door interlock mechanism, the staff finds that entry into and exit from containment under the control of a dedicated individual stationed at the air lock to ensure that only one door is opened at a time is acceptable since the individual performs the function of the interlock.

In the event that an air lock is inoperable for reasons other than in Actions a. and b., the staff finds that the proposed Actions are acceptable. The evaluation of the overall containment leakage, using current air lock test results, ensures that the containment is operable in that the overall leakage does not exceed the limits specified in the CLRTP. The time to verify one door in the affected air lock is closed within 1 hour is consistent with the Actions of LCO 3.6.1 which ensure that the containment is restored to operable status within 1 hour. Additionally, the time to restore the affected air lock(s) to operable status within 24 hours is acceptable since at least one door is maintained closed in the affected air lock.

If the inoperable air lock cannot be restored to operable status within the required completion time, the allowed completion times to complete the plant shutdown are consistent with the times required in other TSs and with operating experience to reach the required plant conditions from full power operation in an orderly manner without challenging plant systems.

The licensee proposed that the Actions be modified by five notes. Note (1) allows entry and exit to perform repairs on the affected air lock component. If the outer door is inoperable, then it may be easily accessed for most repairs. If repairs are required on the interior door, it is preferred that the air lock be accessed from inside primary containment by entering through the operable air lock. However, if this is not practicable, or if repairs on either door must be performed from inside of the air lock, then it is permissible to enter the air lock through the operable door. This means that there is a short period of time during which the containment boundary is not intact (during access through the operable door). The ability to open the operable door, even if it means the containment boundary is temporarily not intact, is acceptable due to the low probability of an event that could pressurize containment during the short time in which the operable door is expected to be open. After each entry and exit, the operable door must be immediately closed.

Note (2) adds clarification that separate condition entry is allowed for each air lock. This is acceptable, since the required Actions provide appropriate compensatory measures for each inoperable air lock.

Notes (3) and (4) ensure that only the required Actions and associated completion times of Action c. are required if both doors in the same air lock are inoperable. With both doors in the same air lock inoperable, an operable door is not available to be closed. Required Actions c.1 and c.2, which require immediate evaluation of overall containment leakage and closing at least one door in the affected air lock respectively, are the appropriate remedial actions.

Note (5) adds clarification that the Conditions and Actions in TS 3.6.1, "Primary Containment," must be entered when the air lock leakage is determined in Action c.1 to result in exceeding the overall containment leakage rate.

The staff also finds that the proposed changes to the TS Bases considerably expand the information that is presented. Additionally, the revised Bases provide detailed information that is consistent with, and satisfactorily supports each of the new Action statements.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change 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 amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (63 FR 48265). Accordingly, the amendments meet 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 amendments.

## **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 amendments will not be inimical to the common defense and security or to the health and safety of the public.**

**Principal Contributors: D. Collins  
P. Milano**

**Date:** December 2, 1998