



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

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-334

BEAVER VALLEY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 197
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated December 15, 1995, as supplemented March 5, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

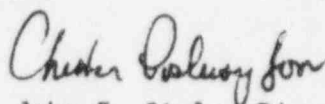
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.197, 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 the date of its issuance, to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, 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: March 19, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 197

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Replace the following pages of Appendix A Technical Specifications, with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

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3/4 6-3
3/4 6-4
3/4 6-5
3/4 6-5b
3/4 6-5c
3/4 6-10
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Insert

XVII
3/4 6-1
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3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that:
 - 1. All penetrations⁽¹⁾ not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.
 - 2. All equipment hatches are closed and sealed.
- b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3.

(1) Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT SYSTEMS

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited in accordance with Specification 6.17 titled "Containment Leakage Rate Testing Program."

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the containment leakage rates exceeding the limits, restore the leakage rates to within limits within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be determined in accordance with the Containment Leakage Rate Testing Program as follows:

- a. Types A, B and C (Overall Integrated and Local Combined Leakage Rate) testing, except for the containment air lock testing, shall be conducted in accordance with the Containment Leakage Rate Testing Program.
- b. Air locks shall be tested in accordance with Surveillance Requirement 4.6.1.3.

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Two containment air locks shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

----- GENERAL NOTES -----

1. Entry and exit is permissible to perform repairs on the affected air lock components.
2. Separate ACTION statement entry is allowed for each air lock.
3. Enter the ACTION of LCO 3.6.1.1 and 3.6.1.2, when air lock leakage results in exceeding the combined containment leakage rate acceptance criteria.

a. With one containment air lock door inoperable in one or more containment air locks:⁽⁴⁾

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 at least once per 31 days.⁽⁵⁾
4. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

(4) Entry and exit is permissible for 7 days under administrative controls to perform activities not related to the repair of affected air lock components.

(5) Air lock doors in high radiation areas may be verified locked closed by administrative means.

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a. By performing the following air lock leakage rate testing at the frequency specified in the Containment Leakage Rate Testing Program:
 1. Verify no detectable seal leakage when the gap between the door seals is pressurized for at least 2 minutes to:
 - a) Personnel air lock $\geq P_a$ (40.0 psig).
 - b) Emergency air lock ≥ 10.0 psig.or, quantify⁽⁷⁾ the air lock door seal leakage to ensure that the leakage rate is $\leq 0.0005 L_a$ when tested at $\geq P_a$ (40.0 psig) for the personnel air lock and $\leq 0.0005 L_a$ when tested at ≥ 10.0 psig for the emergency air lock.
 2. Conduct the overall air lock leakage tests,⁽⁸⁾ at $\geq P_a$ (40.0 psig), and verify the overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$ (40.0 psig):
 - a) At the frequency specified in the Containment Leakage Rate Testing Program, and
 - b) Following maintenance performed on the outer personnel air lock door which may result in a decrease in closure force on any part of the door sealing surface.
- b. At least once per 18 months during shutdown by verifying that only one door in each air lock can be opened at a time.

(7) An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test.

(8) Results shall be evaluated against the acceptance criteria applicable to LCO 3.6.1.2.

CONTAINMENT STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.1.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the structural integrity of the containment not conforming to the above requirements, restore the structural integrity to within the limits within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.6.1 Containment Vessel Surfaces The structural integrity of the exposed accessible interior and exterior surfaces of the containment vessel, including the liner plate, shall be determined at the frequency specified in the Containment Leakage Rate Testing Program, by a visual inspection of these surfaces. This inspection shall verify that there is no evidence of structural deterioration that might affect either the containment structural integrity or leak tightness.

4.6.1.6.2 Reports Reports of containment visual inspections shall be prepared in accordance with the Containment Leakage Rate Testing Program.

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.

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, P_a . Containment leakage is limited to $\leq 1.0 L_a$, except prior to the first startup after performing a required Containment Leakage Rate Testing Program leakage test. At this time additional leakage limits must be met. As left leakage prior to the first startup after performing a required leakage test is required to be $< 0.60 L_a$ on a maximum pathway leakage rate (MXPLR) basis for combined Type B and C leakage following an outage or shutdown that included Type B and C testing and $< 0.75 L_a$ for overall Type A leakage following an outage or shutdown that included Type A testing. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of $\leq 1.0 L_a$ and a combined Type B and C leakage limit of $< 0.60 L_a$ on a minimum pathway leakage rate (MNPLR) basis. The MXPLR for combined Type B and C leakage is the measured leakage through the worst of the two isolation valves, unless a penetration is isolated by use of a valve(s), blind flange(s), or de-activated automatic valve(s). In this case, the MXPLR of the isolated penetration is assumed to be the measured leakage through the isolation device(s).

3/4.6.1.3 CONTAINMENT AIR LOCKS

BACKGROUND

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, with a door at each end. The doors are interlocked 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

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

BACKGROUND (Continued)

extended periods when frequent containment entry is necessary. The emergency air lock, which is located in the equipment hatch opening, is normally removed from the containment building and stored during a refueling outage. 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 o-ring seals and local leakage rate testing capability to ensure pressure integrity. DBA conditions which increase containment pressure will result in increased sealing forces on the personnel air lock inner door and both doors on the emergency air lock. The outer door on the personnel air lock is periodically tested in a manner where the containment DBA pressure is attempting to overcome the door sealing forces.

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 limits 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 analyses.

APPLICABLE SAFETY ANALYSES

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 percent of containment air weight per day. This leakage rate is defined in Specification 6.17 titled "Containment Leakage Rate Testing Program," as $L_a = 0.1$ percent of containment air weight per day, the maximum allowable containment leakage rate at the calculated peak containment internal pressure $P_a = 40.0$ psig following a DBA. This allowable leakage rate forms the basis for the acceptance criteria imposed on the SRs associated with the air locks.

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

ACTIONS (Continued)

in which the OPERABLE door is expected to be open. At no time should the OPERABLE door be opened if it cannot be demonstrated that the inoperable door is sufficiently closed/latched. This verification is necessary to preclude an inadvertent opening of the inoperable door while the OPERABLE door is open. After each entry and exit, the OPERABLE door must be immediately closed. If ALARA conditions permit and personnel safety can be assured, entry and exit should be via an OPERABLE air lock.

General Note (2) has been added to provide clarification that, for this LCO, separate ACTION statement entry is allowed for each air lock.

In the event the air lock leakage results in exceeding the combined containment leakage rate acceptance criteria, General Note (3) directs entry into the ACTION statements of LCO 3.6.1.1 and LCO 3.6.1.2.

- a. With one air lock door in one or more containment air locks inoperable, the OPERABLE door must be verified closed (ACTION statement 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. This specified time period is consistent with the ACTION statements of LCO 3.6.1.1 and LCO 3.6.1.2, which require CONTAINMENT INTEGRITY and containment leakage rates to be restored within 1 hour.

In addition, the affected air lock penetration must be isolated by locking closed (ACTION statement a.2) the OPERABLE air lock door within the 24 hour completion time. 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. This action places additional positive controls on the use of the air lock when one air lock door is inoperable.

ACTION statement a has been modified by a Note. Note (4) allows use of the air lock for entry and exit for 7 days under administrative controls. Containment entry may be required to perform non-routine Technical Specification (TS) Surveillances and Required Actions, as well as other activities on equipment inside containment that are required by TS or activities on equipment that support TS-required equipment. An example of such an activity would be the isolation of a containment penetration by at

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

ACTIONS (Continued)

least one operable valve, and the subsequent repair and post-maintenance technical specification surveillance testing on the inoperable valve. In addition, containment entry may be required to perform repairs on vital plant equipment which, if not repaired, could lead to a plant transient or reactor trip. This Note is not intended to preclude performing other activities (i.e., non-TS-required activities or repair of non-vital plant equipment) if the containment is entered, using the inoperable air lock, to perform an allowed activity 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.

ACTION statement 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 judgment and is considered adequate in view of the low likelihood of a locked door being mispositioned. ACTION statement a.3 is modified by a Note (5) that applies to air lock doors located in high radiation areas and allows these doors 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, it is unlikely that a door would become misaligned once it has been verified to be in the proper position.

- b. With an air lock interlock mechanism inoperable in one or more air locks, the ACTION statements and associated completion times are consistent with those specified in ACTION statement a.

The ACTION statements have been modified by two Notes. Note (6) 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). Note (5) applies to air lock doors located in high radiation areas and allows these doors to be verified locked closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

ACTIONS (Continued)

typically restricted. Therefore, it is unlikely that a door would become misaligned once it has been verified to be in the proper position.

- c. With one or more air locks inoperable for reasons other than those described in ACTION statement a or b (e.g., both air lock doors inoperable and interlock mechanism inoperable or both air lock doors inoperable), ACTION statement c.1 requires action to 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 and LCO 3.6.1.2) would be provided to restore the air lock door to OPERABLE status prior to requiring a plant shutdown. In addition, even with both doors failing the seal test, the combined containment leakage rate can still be within limits.

ACTION statement 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 ACTION statements of LCO 3.6.1.1 and LCO 3.6.1.2, which require that CONTAINMENT INTEGRITY and containment leakage rate limits be restored within 1 hour.

Additionally, ACTION statement c.3 requires that the affected air lock(s) must be restored to OPERABLE status within the 24 hour completion time. 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.

For all ACTION statements, 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 MODE 3 within 6 hours and to MODE 5 within the following 30 hours. The allowed completion times are reasonable, based on operating experience, to reach the required plant

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

ACTIONS (Continued)

conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS (SR)

Maintaining containment air locks OPERABLE requires compliance with the leakage rate test requirements of the Containment Leakage Rate Testing Program. This SR reflects the leakage rate testing requirements with regard to air lock leakage (Type B leakage tests). 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 the Containment Leakage Rate Testing Program.

Testing of the personnel air lock door seals may be accomplished with the air lock pressure equalized with containment or with atmospheric pressure. Each configuration applies P_a , as a minimum, across the sealing surfaces demonstrating the ability to function as designed. As long as the testing conducted is equivalent or more conservative than what might exist for accident conditions, the air lock doors will be able to perform their design function.

Performance of maintenance activities which affect air lock sealing capability, such as the replacement of the o-ring door seals and/or breach ring travel adjustment, will require performance of the appropriate surveillance requirements such as SR 4.6.1.3.a.1 as a minimum. The performance of SR 4.6.1.3.a.2 will depend on the air lock components which are affected by the maintenance. Replacement of o-rings and/or breach ring travel adjustment on the inner personnel air lock door, for example, normally will not require the performance of SR 4.6.1.3.a.2 as a post maintenance test. Testing per SR 4.6.1.3.a.1 is sufficient to demonstrate post accident leak tightness of the inner air lock door. The sealing force, which is applied to o-rings, is developed by the rotation of tapered wedges against the door's outer surface. This action forces the door to compress the o-rings which are located on the air lock barrel. When SR 4.6.1.3.a.1 is performed, the area between the two concentric o-rings is pressurized to at least P_a and a leak rate of the two o-rings and sealing surface is determined. This test pressure applies an opposing force to the breach ring closure force. Since the containment pressure developed during a DBA applies a closing force which is supplemental to the breach ring force, the net result would be to improve the door sealing capability of the inner personnel air lock door over that which exists during the performance of SR 4.6.1.3.a.1. For this reason, performance of SR 4.6.1.3.a.2,

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

SURVEILLANCE REQUIREMENTS (SR) (Continued)

which applies a force which opposes the breech ring force, is not necessary following certain inner air lock door maintenance. SR 4.6.1.3.a.1 sufficiently demonstrates the ability of the inner air lock door to provide a leak tight barrier following maintenance affecting the door sealing surface.

Replacement of the o-rings on the outer personnel air lock door, which results in decreasing the breech ring closure force, will require performance of SR 4.6.1.3.a.2 in addition to SR 4.6.1.3.a.1 which is required due to the door being opened. This surveillance is required because containment DBA pressure tends to overcome the outer personnel air lock door sealing forces. Performance of SR 4.6.1.3.a.1 on the outer personnel air lock applies an opposing force to the breech ring closure force in the same manner as previously described for the inner personnel air lock door. However, for the outer personnel air lock door, the containment pressure developed during a DBA applies an opening force which is opposing the breech ring closure force. Therefore, upon completion of certain maintenance activities, continued outer door leak tightness during a DBA cannot be assured by performance of SR 4.6.1.3.a.1 alone. Maintenance which may result in a decrease in closure force on any part of the door sealing surface (decreasing of breech ring travel for example), will require performance of SR 4.6.1.3.a.2. The performance of this surveillance is necessary to ensure that containment DBA pressure applied against the outer door will not result in the unseating of the air lock door by overcoming of the breech ring closure forces to the point where the leakage becomes excessive. Since SR 4.6.1.3.a.2 duplicates DBA forces on the outer personnel air lock door and also measures the air lock leakage rate, performance of this surveillance requirement demonstrates the continued ability of the outer personnel air lock door to provide a leak tight barrier, during a DBA, following specific maintenance activities.

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 and personnel safety, considering the subatmospheric design, 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.

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

SURVEILLANCE REQUIREMENTS (SR) (Continued)

The SR has been modified by two Notes. Note (7) states that an inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. This is considered reasonable since either air lock door is capable of providing a fission product barrier in the event of a DBA. Note (8) has been added to this SR requiring the results to be evaluated against the acceptance criteria applicable to LCO 3.6.1.2. This ensures that air lock leakage is properly accounted for in determining the combined containment leakage rate.

3/4.6.1.4 and 3/4.6.1.5 INTERNAL PRESSURE AND AIR TEMPERATURE

The limitations on containment internal pressure and average air temperature as a function of river water temperature ensure that 1) the containment structure is prevented from exceeding its design negative pressure of 8.0 psia, 2) the containment peak pressure does not exceed the design pressure of 45 psig during LOCA conditions, and 3) the containment pressure is returned to subatmospheric conditions following a LOCA.

The containment internal pressure and temperature limits shown as a function of river water temperature describe the operational envelope that will 1) limit the containment peak pressure to less than its design value of 45 psig and 2) ensure the containment internal pressure returns subatmospheric within 60 minutes following a LOCA.

The limits on the parameters of Figure 3.6-1 are consistent with the assumptions of the accident analyses.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment vessel will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the vessel will withstand the maximum pressure of 40.0 psig in the event of a LOCA. The visual and Type A leakage tests, performed at the frequency specified in the Containment Leakage Rate Testing Program, are sufficient to demonstrate this capability.

CORE OPERATING LIMITS REPORT (Continued)

4. T. M. Anderson to K. Kniel (Chief of Core Performance Branch, NRC) January 31, 1980 -- Attachment: Operation and Safety Analysis Aspects of an Improved Load Follow Package. Methodology applied for the following Specification: 3.2.1, Axial Flux Difference-Constant Axial Offset Control
5. NUREG-0800, Standard Review Plan, U. S. Nuclear Regulatory Commission, Section 4.3, Nuclear Design, July 1981. Branch Technical Position CPB 4.3-1, Westinghouse Constant Axial Offset Control (CAOC), Rev. 2, July 1981. Methodology applied for the following Specification: 3.2.1, Axial Flux Difference-Constant Axial Offset Control

The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met. The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided on issuance, for each reload cycle, to the NRC Document Control Desk.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the U. S. Nuclear Regulatory Commission, Document Control Desk, within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. ECCS Actuation, Specifications 3.5.2 and 3.5.3.
- b. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.3.3.
- c. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.4.
- d. Seismic event analysis, Specification 4.3.3.3.2.
- e. Sealed source leakage in excess of limits, Specification 4.7.9.1.3.
- f. Miscellaneous reporting requirements specified in the Action Statements for Appendix C of the ODCM.
- g. DELETED

OFFSITE DOSE CALCULATION MANUAL (ODCM) (Continued)

- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

6.16 Moved to the PROCESS CONTROL PROGRAM.

6.17 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions⁽¹⁾. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a , is 40.0 psig.

The maximum allowable containment leakage rate, L_a , at P_a , shall be 0.10% of containment air weight per day.

Leakage Rate acceptance criteria are:

- a. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$ for the overall Type A leakage test and $< 0.60 L_a$ for the Type B and Type C tests on a minimum pathway leakage rate (MNPLR) basis. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60 L_a$ on a maximum pathway leakage rate (MXPLR)⁽²⁾ basis for Type B and Type C tests and $< 0.75 L_a$ for Type A tests.

(1) Exemptions to Appendix J of 10 CFR 50 dated November 19, 1984, December 5, 1984, and July 26, 1995.

(2) For penetrations which are isolated by use of a closed valve(s), blind flange(s), or de-activated automatic valve(s), the MXPLR of the isolated penetration is assumed to be the measured leakage through the isolation device(s).

Containment Leakage Rate Testing Program (Continued)

- b. Air Lock testing acceptance criteria and required action are as stated in Specification 3.6.1.3 titled "Containment Air Locks."

The provisions of Specification 4.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of Specification 4.0.3 are applicable to the Containment Leakage Rate Testing Program.



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

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 80
License No. NPF-73

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated December 15, 1995, as supplemented March 5, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

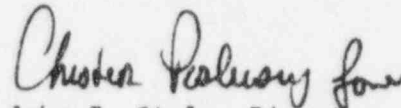
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-73 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 80, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. DLCO shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, 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: March 19, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 80

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

Replace the following pages of Appendix A, Technical Specifications, with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

XVI
3/4 6-1
3/4 6-2
3/4 6-3
3/4 6-4
3/4 6-5a
3/4 6-5b
3/4 6-9
B 3/4 6-1
B 3/4 6-2
B 3/4 6-4
B 3/4 6-5
B 3/4 6-6
B 3/4 6-7
B 3/4 6-8
B 3/4 6-9
6-21
6-25
-

Insert

XVI
3/4 6-1
3/4 6-2
-
3/4 6-4
3/4 6-5a
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3/4 6-9
B 3/4 6-1
B 3/4 6-2
B 3/4 6-4
B 3/4 6-5
B 3/4 6-6
B 3/4 6-7
B 3/4 6-8
B 3/4 6-9
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INDEXADMINISTRATIVE CONTROLS

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3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that:
 1. All penetrations⁽¹⁾ not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.
 2. All equipment hatches are closed and sealed.
- b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3.

(1) Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited in accordance with Specification 6.17 titled "Containment Leakage Rate Testing Program."

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the containment leakage rates exceeding the limits, restore the leakage rates to within limits within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be determined in accordance with the Containment Leakage Rate Testing Program as follows:

- a. Types A, B and C (Overall Integrated and Local Combined Leakage Rate) testing, except for the containment air lock testing, shall be conducted in accordance with the Containment Leakage Rate Testing Program.
- b. Air locks shall be tested in accordance with Surveillance Requirement 4.6.1.3.

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Two containment air locks shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

-----GENERAL NOTES-----

1. Entry and exit is permissible to perform repairs on the affected air lock components.
2. Separate ACTION statement entry is allowed for each air lock.
3. Enter the ACTION of LCO 3.6.1.1 and 3.6.1.2, when air lock leakage results in exceeding the combined containment leakage rate acceptance criteria.

- a. With one containment air lock door inoperable in one or more containment air locks:⁽⁴⁾
 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 at least once per 31 days.⁽⁵⁾
 4. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

(4) Entry and exit is permissible for 7 days under administrative controls to perform activities not related to the repair of affected air lock components.

(5) Air lock doors in high radiation areas may be verified locked closed by administrative means.

SURVEILLANCE REQUIREMENTS

- 4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:
- a. By performing the following air lock leakage rate testing at the frequency specified in the Containment Leakage Rate Testing Program:
 1. Verify no detectable seal leakage when the gap between the door seals is pressurized for at least 2 minutes to:
 - a) Personnel air lock $\geq P_a$ (44.7 psig).
 - b) Emergency air lock ≥ 10.0 psig.or, quantify⁽⁷⁾ the air lock door seal leakage to ensure that the leakage rate is $\leq 0.0005 L_a$ when tested at $\geq P_a$ (44.7 psig) for the personnel air lock and $\leq 0.0005 L_a$ when tested at ≥ 10.0 psig for the emergency air lock.
 2. Conduct the overall air lock leakage tests,⁽⁸⁾ at $\geq P_a$ (44.7 psig), and verify the overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$ (44.7 psig):
 - a) At the frequency specified in the Containment Leakage Rate Testing Program, and
 - b) Following maintenance performed on the outer personnel air lock door which may result in a decrease in closure force on any part of the door sealing surface.
 - b. At least once per 18 months during shutdown by verifying that only one door in each air lock can be opened at a time.

(7) An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test.

(8) Results shall be evaluated against the acceptance criteria applicable to LCO 3.6.1.2.

CONTAINMENT SYSTEMS

CONTAINMENT STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.1.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the structural integrity of the containment not conforming to the above requirements, restore the structural integrity to within the limits within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.6.1 Containment Vessel Surfaces The structural integrity of the exposed accessible interior and exterior surfaces of the containment vessel, including the liner plate, shall be determined at the frequency specified in the Containment Leakage Rate Testing Program, by a visual inspection of these surfaces. This inspection shall verify that there is no evidence of structural deterioration that might affect either the containment structural integrity or leak tightness.

4.6.1.6.2 Reports Reports of containment visual inspections shall be prepared in accordance with the Containment Leakage Rate Testing Program.

3/4.6 CONTAINMENT SYSTEMSBASES3/4.6.1 PRIMARY CONTAINMENT3/4.6.1.1 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.

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, P_a . Containment leakage is limited to $\leq 1.0 L_a$, except prior to the first startup after performing a required Containment Leakage Rate Testing Program leakage test. At this time additional leakage limits must be met. As left leakage prior to the first startup after performing a required leakage test is required to be $< 0.60 L_a$ on a maximum pathway leakage rate (MXPLR) basis for combined Type B and C leakage following an outage or shutdown that included Type B and C testing and $< 0.75 L_a$ for overall Type A leakage following an outage or shutdown that included Type A testing. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of $\leq 1.0 L_a$ and a combined Type B and C leakage limit of $< 0.60 L_a$ on a minimum pathway leakage rate (MNPLR) basis. The MXPLR for combined Type B and C leakage is the measured leakage through the worst of the two isolation valves, unless a penetration is isolated by use of a valve(s), blind flange(s), or de-activated automatic valve(s). In this case, the MXPLR of the isolated penetration is assumed to be the measured leakage through the isolation device(s).

3/4.6.1.3 CONTAINMENT AIR LOCKSBACKGROUND

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, with a door at each end. The doors are interlocked 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. The emergency air lock, which is located in the equipment hatch

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

BACKGROUND (Continued)

opening, is normally removed from the containment building and stored during a refueling outage. 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 o-ring seals and local leakage rate testing capability to ensure pressure integrity. DBA conditions which increase containment pressure will result in increased sealing forces on the personnel air lock inner door and both doors on the emergency air lock. The outer door on the personnel air lock is periodically tested in a manner where the containment DBA pressure is attempting to overcome the door sealing forces.

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 limits 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 analyses.

APPLICABLE SAFETY ANALYSES

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 percent of containment air weight per day. This leakage rate is defined in Specification 6.17 titled "Containment Leakage Rate Testing Program," as $L_a = 0.1$ percent of containment air weight per day, the maximum allowable containment leakage rate at the calculated peak containment internal pressure $P_a = 44.7$ psig following a DBA. This allowable leakage rate forms the basis for the acceptance criteria imposed on the SRs associated with the air locks.

LCO

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.

CONTAINMENT SYSTEMSBASES3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)ACTIONS (Continued)

If ALARA conditions permit and personnel safety can be assured, entry and exit should be via an OPERABLE air lock.

General Note (2) has been added to provide clarification that, for this LCO, separate ACTION statement entry is allowed for each air lock.

In the event the air lock leakage results in exceeding the combined containment leakage rate acceptance criteria, General Note (3) directs entry into the ACTION statements of LCO 3.6.1.1 and LCO 3.6.1.2.

- a. With one air lock door in one or more containment air locks inoperable, the OPERABLE door must be verified closed (ACTION statement 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. This specified time period is consistent with the ACTION statements of LCO 3.6.1.1 and LCO 3.6.1.2, which require CONTAINMENT INTEGRITY and containment leakage rates to be restored within 1 hour.

In addition, the affected air lock penetration must be isolated by locking closed (ACTION statement a.2) the OPERABLE air lock door within the 24 hour completion time. 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. This action places additional positive controls on the use of the air lock when one air lock door is inoperable.

ACTION statement a has been modified by a Note. Note (4) allows use of the air lock for entry and exit for 7 days under administrative controls. Containment entry may be required to perform non-routine Technical Specification (TS) Surveillances and Required Actions, as well as other activities on equipment inside containment that are required by TS or activities on equipment that support TS-required equipment. An example of such an activity would be the isolation of a containment penetration by at least one operable valve, and the subsequent repair and post-maintenance technical specification surveillance testing on the inoperable valve. In addition, containment entry may be required to perform repairs on

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

ACTIONS (Continued)

vital plant equipment which, if not repaired, could lead to a plant transient or reactor trip. This Note is not intended to preclude performing other activities (i.e., non-TS-required activities or repair of non-vital plant equipment) if the containment is entered, using the inoperable air lock, to perform an allowed activity 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.

ACTION statement 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 judgment and is considered adequate in view of the low likelihood of a locked door being mispositioned. ACTION statement a.3 is modified by a Note (5) that applies to air lock doors located in high radiation areas and allows these doors 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, it is unlikely that a door would become misaligned once it has been verified to be in the proper position.

- b. With an air lock interlock mechanism inoperable in one or more air locks, the ACTION statements and associated completion times are consistent with those specified in ACTION statement a.

The ACTION statements have been modified by two Notes. Note (6) 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). Note (5) applies to air lock doors located in high radiation areas and allows these doors 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, it is unlikely that a door would become misaligned once it has been verified to be in the proper position.

CONTAINMENT SYSTEMSBASES3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)ACTIONS (Continued)

- g. With one or more air locks inoperable for reasons other than those described in ACTION statement a or b (e.g., both air lock doors inoperable and interlock mechanism inoperable or both air lock doors inoperable), ACTION statement c.1 requires action to 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 and LCO 3.6.1.2) would be provided to restore the air lock door to OPERABLE status prior to requiring a plant shutdown. In addition, even with both doors failing the seal test, the combined containment leakage rate can still be within limits.

ACTION statement 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 ACTION statements of LCO 3.6.1.1 and LCO 3.6.1.2, which require that CONTAINMENT INTEGRITY and containment leakage rate limits be restored within 1 hour.

Additionally, ACTION statement c.3 requires that the affected air lock(s) must be restored to OPERABLE status within the 24 hour completion time. 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.

For all ACTION statements, 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 MODE 3 within 6 hours and to MODE 5 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.

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

SURVEILLANCE REQUIREMENTS (SR)

Maintaining containment air locks OPERABLE requires compliance with the leakage rate test requirements of the Containment Leakage Rate Testing Program. This SR reflects the leakage rate testing requirements with regard to air lock leakage (Type B leakage tests). 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 the Containment Leakage Rate Testing Program.

Testing of the personnel air lock door seals may be accomplished with the air lock pressure equalized with containment or with atmospheric pressure. Each configuration applies P_a , as a minimum, across the sealing surfaces demonstrating the ability to function as designed. As long as the testing conducted is equivalent or more conservative than what might exist for accident conditions, the air lock doors will be able to perform their design function.

Performance of maintenance activities which affect air lock sealing capability, such as the replacement of the o-ring door seals and/or breech ring travel adjustment, will require performance of the appropriate surveillance requirements such as SR 4.6.1.3.a.1 as a minimum. The performance of SR 4.6.1.3.a.2 will depend on the air lock components which are affected by the maintenance. Replacement of o-rings and/or breech ring travel adjustment on the inner personnel air lock door, for example, normally will not require the performance of SR 4.6.1.3.a.2 as a post maintenance test. Testing per SR 4.6.1.3.a.1 is sufficient to demonstrate post accident leak tightness of the inner air lock door. The sealing force, which is applied to o-rings, is developed by the rotation of tapered wedges against the door's outer surface. This action forces the door to compress the o-rings which are located on the air lock barrel. When SR 4.6.1.3.a.1 is performed, the area between the two concentric o-rings is pressurized to at least P_a and a leak rate of the two o-rings and sealing surface is determined. This test pressure applies an opposing force to the breech ring closure force. Since the containment pressure developed during a DBA applies a closing force which is supplemental to the breech ring force, the net result would be to improve the door sealing capability of the inner personnel air lock door over that which exists during the performance of SR 4.6.1.3.a.1. For this reason, performance of SR 4.6.1.3.a.2, which applies a force which opposes the breech ring force, is not necessary following certain inner air lock door maintenance.

CONTAINMENT SYSTEMSBASES3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)SURVEILLANCE REQUIREMENTS (SR) (Continued)

SR 4.6.1.3.a.1 sufficiently demonstrates the ability of the inner air lock door to provide a leak tight barrier following maintenance affecting the door sealing surface.

Replacement of the o-rings on the outer personnel air lock door, which results in decreasing the breech ring closure force, will require performance of SR 4.6.1.3.a.2 in addition to SR 4.6.1.3.a.1 which is required due to the door being opened. This surveillance is required because containment DBA pressure tends to overcome the outer personnel air lock door sealing forces. Performance of SR 4.6.1.3.a.1 on the outer personnel air lock applies an opposing force to the breech ring closure force in the same manner as previously described for the inner personnel air lock door. However, for the outer personnel air lock door, the containment pressure developed during a DBA applies an opening force which is opposing the breech ring closure force. Therefore, upon completion of certain maintenance activities, continued outer door leak tightness during a DBA cannot be assured by performance of SR 4.6.1.3.a.1 alone. Maintenance which may result in a decrease in closure force on any part of the door sealing surface (decreasing of breech ring travel for example), will require performance of SR 4.6.1.3.a.2. The performance of this surveillance is necessary to ensure that containment DBA pressure applied against the outer door will not result in the unseating of the air lock door by overcoming of the breech ring closure forces to the point where the leakage becomes excessive. Since SR 4.6.1.3.a.2 duplicates DBA forces on the outer personnel air lock door and also measures the air lock leakage rate, performance of this surveillance requirement demonstrates the continued ability of the outer personnel air lock door to provide a leak tight barrier, during a DBA, following specific maintenance activities.

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 and personnel safety, considering the subatmospheric design, 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.

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

SURVEILLANCE REQUIREMENTS (SR) (Continued)

The SR has been modified by two Notes. Note (7) states that an inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. This is considered reasonable since either air lock door is capable of providing a fission product barrier in the event of a DBA. Note (8) has been added to this SR requiring the results to be evaluated against the acceptance criteria applicable to LCO 3.6.1.2. This ensures that air lock leakage is properly accounted for in determining the combined containment leakage rate.

3/4.6.1.4 and 3/4.6.1.5 INTERNAL PRESSURE AND AIR TEMPERATURE

The limitations on containment internal pressure and average air temperature as a function of service water temperature ensure that 1) the containment structure is prevented from exceeding its design negative pressure of 8.0 psia, 2) the containment peak pressure does not exceed the design pressure of 45 psig during LOCA conditions, and 3) the containment pressure is returned to subatmospheric conditions following a LOCA.

The containment internal pressure and temperature limits shown as a function of service water temperature describe the operational envelope that will 1) limit the containment peak pressure to less than its design value of 45 psig and 2) ensure the containment internal pressure returns subatmospheric within 60 minutes following a LOCA. Additional operating margin is provided if the containment average air temperature is maintained above 100°F as shown on Figure 3.6-1.

The limits on the parameters of Figure 3.6-1 are consistent with the assumptions of the accident analyses.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment vessel will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the vessel will withstand the maximum pressure of 44.7 psig in the event of a LOCA. The visual and Type A leakage tests, performed at the frequency specified in the Containment Leakage Rate Testing Program, are sufficient to demonstrate this capability.

SPECIAL REPORTS (Continued)

- c. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.4.
- d. Seismic event analysis, Specification 4.3.3.3.2.
- e. Sealed source leakage in excess of limits, Specification 4.7.9.1.3.
- f. Miscellaneous reporting requirements specified in the ACTION Statements for Appendix C of the ODCM.
- g. DELETED
- h. Steam generator tube inservice inspection, Specification 4.4.5.5.
- i. Inoperable accident monitoring, Specification 3.3.3.8.
- j. Liquid Hold-Up Tanks, Specification 3.11.1.4.
- k. Gas Storage Tanks, Specification 3.11.2.5.
- l. Explosive Gas Monitoring Instrumentation, Specification 3.3.3.11.

6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five (5) years;

- a. Records and logs of facility operation covering time interval at each power level.
- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. All REPORTABLE EVENTS.
- d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
- e. Records of reactor tests and experiments.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:
 - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
 - 2) A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the OSC and the approval of the General Manager Nuclear Operations, predesignated alternate or a predesignated Manager to whom the General Manager Nuclear Operations has assigned in writing the responsibility for review and approval of specific subjects.
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

6.16 Moved to the PROCESS CONTROL PROGRAM.

6.17 CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54 (o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions⁽¹⁾. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

(1) Exemptions to Appendix J of 10 CFR 50, as stated in the operating license.

CONTAINMENT LEAKAGE RATE TESTING PROGRAM (Continued)

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a , is 44.7 psig.

The maximum allowable containment leakage rate, L_a , at P_a , shall be 0.10% of containment air weight per day.

Leakage Rate acceptance criteria are:

- a. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$ for the overall Type A leakage test and $< 0.60 L_a$ for the Type B and Type C tests on a minimum pathway leakage rate (MNPLR) basis. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60 L_a$ on a maximum pathway leakage rate (MXPLR)⁽²⁾ basis for Type B and Type C tests and $< 0.75 L_a$ for Type A tests.
- b. Air lock testing acceptance criteria and required action are as stated in Specification 3.6.1.3 titled "Containment Air Locks."

The provisions of Specification 4.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of Specification 4.0.3 are applicable to the Containment Leakage Rate Testing Program.

(2) For penetrations which are isolated by use of a closed valve(s), blind flange(s), or de-activated automatic valve(s), the MXPLR of the isolated penetration is assumed to be the measured leakage through the isolation device(s).