



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20565-0001

PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 107
License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company (the licensee) dated January 14, 1994, as supplemented by letters dated August 1, October 25, December 13, December 22, 1994 (two submittals) and February 7, 1995, 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-39 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 107, are hereby incorporated into this license. Philadelphia Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented prior to startup in Cycle 7.

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: January 25, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 107

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

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

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CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Primary containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of less than or equal to L_a , 0.500 percent by weight of the containment air per 24 hours at P_a , 44.0 psig.
- b. A combined leakage rate of less than or equal to $0.60 L_a$ for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves* and valves which are hydrostatically tested per Table 3.6.3-1, subject to Type B and C tests when pressurized to P_a , 44.0 psig.
- c. *Less than or equal to 100 scf per hour through any one main steam isolation valve not to exceed 200 scf per hour for all four main steam lines, when tested at P_t , 22.0 psig.
- d. A combined leakage rate of less than or equal to 1 gpm times the total number of containment isolation valves in hydrostatically tested lines which penetrate the primary containment, when tested at $1.10 P_a$, 48.4 psig.

APPLICABILITY: When PRIMARY CONTAINMENT INTEGRITY is required per Specification 3.6.1.1.

ACTION:

With:

- a. The measured overall integrated primary containment leakage rate exceeding $0.75 L_a$, or
- b. The measured combined leakage rate for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves* and valves which are hydrostatically tested per Table 3.6.3-1, subject to Type B and C tests exceeding $0.60 L_a$, or
- c. The measured leakage rate exceeding 100 scf per hour through any one main steam isolation valve, or exceeding 200 scf per hour for all four main steam lines, or
- d. The measured combined leakage rate for all containment isolation valves in hydrostatically tested lines which penetrate the primary containment exceeding 1 gpm times the total number of such valves,

restore:

- a. The overall integrated leakage rate(s) to less than or equal to $0.75 L_a$, and

*Exemption to Appendix J of 10 CFR Part 50.

CONTAINMENT SYSTEMS
LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- b. The combined leakage rate for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves* and valves which are hydrostatically tested per Table 3.6.3-1, subject to Type B and C tests to less than or equal to $0.60 L_a$, and
- c. The leakage rate to ≤ 11.5 scf per hour for any main steam isolation valve that exceeds 100 scf per hour, and restore the combined maximum pathway leakage to ≤ 200 scf per hour, and
- d. The combined leakage rate for all containment isolation valves in hydrostatically tested lines which penetrate the primary containment to less than or equal to 1 gpm times the total number of such valves,

prior to increasing the reactor coolant system temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The primary containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50 using the methods and provisions of ANSI 45.4-1972 and BN-TOP-1 and verifying the result by the Mass Point Methodology described in ANSI N56.8-1981:

- a. Three Type A Overall Integrated Containment Leakage Rate tests shall be conducted at 40 +/- 10 month intervals during shutdown at P_a , 44.0 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.**
- b. If any periodic Type A test fails to meet $0.75 L_a$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet $0.75 L_a$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet $0.75 L_a$, at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
 1. Confirms the accuracy of the test by verifying that the difference between the supplemental data and the Type A test data is within $0.25 L_a$. The formula to be used is: $[L_0 + L_{am} - 0.25 L_a] \leq L_c \leq [L_0 + L_{am} + 0.25 L_a]$ where L_c = supplemental test result; L_0 = superimposed leakage; L_{am} = measured Type A leakage.
 2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.
 3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be between $0.75 L_a$ and $1.25 L_a$.

* Exemption to Appendix "J" to 10 CFR Part 50.

** The interval between the second and third Overall Integrated Leakage Rate tests of the first 10-year service period will be extended to the sixth Unit 1 refueling outage. As a result, the duration of the first 10-year service period will be extended to the end of the sixth Unit 1 refueling outage.

CONTAINMENT SYSTEMS

MSIV LEAKAGE ALTERNATE DRAIN PATHWAY

LIMITING CONDITION FOR OPERATION

3.6.1.4 The MSIV Leakage Alternate Drain Pathway shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With the MSIV Leakage Alternate Drain Pathway inoperable, restore the pathway to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.4 The MSIV Leakage Alternate Drain Pathway shall be demonstrated OPERABLE:

- a. In accordance with 4.0.5, by cycling each motor operated valve, required to be repositioned, through at least one complete cycle of full travel.

TABLE 3.6.3-1

PART A - PRIMARY CONTAINMENT ISOLATION VALVES

PENETRATION NUMBER	FUNCTION	INBOARD ISOLATION BARRIER	OUTBOARD ISOLATION BARRIER	MAX. ISOL. TIME. IF APP. (SEC) (26)	ISOL. SIGNAL(S), IF APP. (20)	NOTES	P&ID
003B	CONTAINMENT INSTRUMENT GAS SUPPLY - HEADER 'B'	59-1005B (CK)	HV59-129B	NA 7	C,H,S		59
003D-2	CONTAINMENT INSTRUMENT GAS SUPPLY TO ADS VALVES E & K	59-1112(CK)	HV59-151B	NA 45	M		59
007A(B,C,D)	MAIN STEAM LINE 'A'(B,C,D)	HV41-1F022A (B,C,D)		5*	C,E,F,P,Q	6	41
			HV41-1F028A (B,C,D)	5*	C,E,F,P,Q	6	
008	MAIN STEAM LINE DRAIN	HV41-1F016		30	C,E,F,P,Q	4	41
			HV41-1F019	30	C,E,F,P,Q		
009A	FEEDWATER	41-1F010A(CK)		NA			41
			HV41-1F074A(CK)	NA			
			41-1036A(CK)	NA			
			HV41-130B	45			
			HV41-133A	45			
			HV41-109A	NA	32		
			HV41-1F032A(CK)	NA			
			HV55-1F105	30	7		
HV44-1F039(CK) (X-9B)	NA						
	41-1016(X-9B, X-44)	NA	31				

TABLE 3.6.3-1 (Continued)

PART B - PRIMARY CONTAINMENT ISOLATION EXCESS FLOW CHECK VALVES

PENETRATION NUMBER	FUNCTION	INBOARD ISOLATION BARRIER	OUTBOARD ISOLATION BARRIER	MAX. ISOL. TIME. IF APP. (SEC) (26)	ISOL. SIGNAL(S), IF APP. (20)	NOTES	P&ID
003A-1	INSTRUMENTATION - 'D' MAIN STEAM LINE FLOW	--	XV41-1F070D XV41-1F073D			1	41
003A-2	INSTRUMENTATION - 'A' RECIRC PUMP SEAL PRESSURE	--	XV43-1F003A			1	43
003C-1	INSTR. - HPCI STEAM FLOW	--	XV55-1F024A			1	55
003C-2	INSTR. - HPCI STEAM FLOW	--	XV55-1F024C			1	55
003D-1	INSTR. - 'A' MAIN STEAM LINE FLOW	--	XV41-1F070A XV41-1F073A			1	41
007A(B,C,D)	INSTR. - 'A' (B,C,D) MAIN STEAM LINE PRESSURE	(HV41-1F022A(B, C,D) SEE PART A THIS TABLE)	(HV41-1F028A (B,C,D)	5* 5*	C,E,F,P,Q C,E,F,P,Q	6 6	41
020A-1	INSTR - RPV LEVEL	--	XV42-1F045B			1	42
020A-2	INSTR - 'B' LPCI DELTA P	--	XV51-102B			1	51
020A-3	INSTR - 'D' LPCI DELTA P	--	XV51-103B			1	51
020B-1	INSTR - RPV LEVEL	--	XV42-1F045C			1	42
020B-2	INSTR - 'C' LPCI DELTA P	--	XV51-102C			1	51

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3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 PRIMARY CONTAINMENT INTEGRITY

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

3/4.6.1.2 PRIMARY CONTAINMENT LEAKAGE

The limitations on primary containment leakage rates ensure that the total containment leakage volume will not exceed the value calculated in the safety analyses for the peak accident pressure of ≤ 44 psig, Pa. As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to 0.75 La during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

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

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix J of 10 CFR Part 50 with the exception of exemptions granted for leak testing of the main steam isolation valves, the airlock and TIP shear valves.

3/4.6.1.3 PRIMARY CONTAINMENT AIR LOCK

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

3/4.6.1.4 MSIV LEAKAGE ALTERNATE DRAIN PATHWAY

Calculated doses resulting from the maximum leakage allowances for the main steamline isolation valves in the postulated LOCA situations will not exceed the criteria of 10 CFR Part 100 guidelines, provided the main steam line system from the isolation valves up to and including the turbine condenser remains intact. Operating experience has indicated that degradation has occasionally occurred in the leak tightness of the MSIVs such that the specified leakage requirements have not always been continuously maintained. The requirement for the MSIV Leakage Alternate Drain Pathway serves to reduce the offsite dose.