



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

PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 2  
License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by the Philadelphia Electric Company dated December 18, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the 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 license amendment will not be inimical to the common defense and security or to the health and safety of the public;
  - 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 amendment and Paragraph 2.C(2) of Facility Operating License No. NPF-39 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 2, are hereby incorporated in the license. PECO shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective immediately and is to be fully implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director  
Project Directorate No. 4  
Division of BWR Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: MAR 03 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 2

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Also to be replaced are the following overleaf pages to the amended pages.

Amendment Pages

Overleaf Pages

3/4 6-4  
3/4 6-19  
3/4 6-20  
3/4 6-21  
3/4 6-24  
3/4 6-25  
3/4 6-27

3/4 6-3  
3/4 6-20  
3/4 6-19  
3/4 6-22  
3/4 6-23  
3/4 6-26  
3/4 6-28

## 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 less than or equal to 11.5 scf per hour for any one main steam line through the isolation valves, 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 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  $40 \pm 10$  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:  $[L_o + L_{am} - 0.25 L_a] \leq L_c \leq [L_o + L_{am} + 0.25 L_a]$  where  $L_c$  = supplemental test result;  $L_o$  = 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.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

---

- d. Type B and C tests shall be conducted with gas at  $P_a$ , 44.0 psig\*, at intervals no greater than 24 months\*\* except for tests involving:
  - 1. Air locks,
  - 2. Main steam line isolation valves,
  - 3. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment, and
- e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- f. Main steam line isolation valves shall be leak tested at least once per 18 months.
- g. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment shall be leak tested at least once per 18 months.\*\*
- h. The provisions of Specification 4.0.2 are not applicable to Specifications 4.6.1.2a., 4.6.1.2b., 4.6.1.2c., 4.6.1.2d., and 4.6.1.2e.

---

\*Unless a hydrostatic test is required per Table 3.6.3-1.

\*\*A Type C test interval extension to May 26, 1986 is permissible for primary containment isolation valves identified by an asterisk in the inboard and outboard isolation barrier columns of Table 3.6.3-1, Part A, as discussed in Application for Amendment of Facility Operating License dated December 18, 1985.

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,D,E,F,P,Q	6	41	
				HV41-1F028A (B,C,D)	5*	C,D,E,F,P,Q	6	
				HV40-1F001B (F,K,P)	45	EA	6	
				(XV40-101B (F,K,P)	NA		6,1	
				SEE PART B, THIS TABLE)				
008	MAIN STEAM LINE DRAIN	HV41-1F016		30	C,D,E,F,P,Q	4	41	
				HV41-1F019	30	C,D,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)	NA			
				(X-9B)				
	41-1016(X-9B, X-44)	NA		31				

LIMERICK - UNIT 1

3/4 6-19

AMENDMENT NO. 2

TABLE 3.6.3-1 (Continued)

PART A - PRIMARY CONTAINMENT ISOLATION VALVES

LIMERICK - UNIT 1

3/4 6-20

Amendment No. 2

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
009B	FEEDWATER	41-1F010B(CK)		NA			
			HV41-1F074B(CK)	NA			41
			41-1036B(CK)	NA			
			HV41-130A	45			
			HV41-133B	45			
			HV41-109B	NA		32	
			HV41-1F032B(CK)	NA			
			HV49-1F013	23	LFCC		
			HV44-1F039(CK)	NA			
			(X-9A)				
010	RCIC STEAM SUPPLY	HV49-1F007		7.2*	K, KA	5	49
			HV49-1F008	7.2*	K, KA		
			HV49-1F076	45	K, KA		
011	HPCI STEAM SUPPLY	HV55-1F002		12*	L, LA	5	55
			HV55-1F003	12*	L, LA		
			HV55-1F100	45	L, LA		
012	RHR SHUTDOWN COOLING SUPPLY	HV51-1F009 PSV51-155		100	A, V	9,22	51
			HV51-1F008	NA			
013A(B)	RHR SHUTDOWN COOLING RETURN	HV51-1F050A*(B*) (CK) HV51-151A*(B*)		100	A, V	9,22	51
			HV51-1F008	100	A, V		
			HV51-1F015A(B)	45	A, V		
014	RWCU - SUCTION	HV44-1F001*		10*	B, J, Y		44
			HV44-1F004*	10*	B, J, Y		

TABLE 3.6.3-1 (Continued)

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
016A	CORE SPRAY INJECTION	HV52-1F006A(CK)		NA		9,22	52
		HV52-1F039A		7		9,22	
016B	CORE SPRAY INJECTION	HV52-1F006B(CK) HV52-1F039B	HV52-1F005	18			52
					NA		
017	RPV HEAD SPRAY	HV51-1F022 PSV51-122		60	A,V	4,9,22	51
			HV51-1F023	135	A,V	9,22	
021	SERVICE AIR TO DRYWELL	15-1140	15-1139	NA NA			15
022	DRYWELL PRESSURE INSTRUMENTATION		HV42-147C	45		10	42
023	RECW SUPPLY TO RECIRC PUMPS	HV13-106*		40		11,28, 29	13
			HV13-108*	30		11,28 29	
			HV13-109*	NA		11,13	
024	RECW RETURN FROM RECIRC PUMPS	HV13-107*		40		11,28, 29	13
			HV13-111*	30		11,28, 29	
			HV13-110*	NA		11,13	

LIMERICK - UNIT 1

3/4 6-21

Amendment No. 2



TABLE 3.6.3-1 (Continued)

## PART A - PRIMARY CONTAINMENT ISOLATION VALVES

LIMERICK - UNIT 1

3/4 6-22

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		
025	DRYWELL PURGE SUPPLY	HV57-121(X-201A) HV57-123 HV57-163	HV57-109 (X-201A)	5**	B,H,S,U,W	3,11,14,25	57		
				5**	B,H,S,U,W	3,11,14,25			
				9	B,H,R,S	3,11,14			
					HV57-131 (X-201A)	6**	B,H,S,U,W	11,25	
						5**	B,H,S,U,W	11,25	
						6**	B,H,S,U,W	11,25	
026	DRYWELL PURGE EXHAUST	HV57-114 HV57-111 HV57-161 SV57-139	HV57-115	5**	B,H,S,U,W	3,11,14,25	57		
				15**	B,H,S,U	5,11,25			
				9	B,H,R,S	3,11,14			
					HV57-117 SV57-145	5		10	
						6**	B,H,S,U,W	11,25	
						5**	B,H,S,U	11,25	
5	B,H,R,S	11							
027A	CONTAINMENT INSTRUMENT GAS SUPPLY TO ADS VALVES H,M,&S	59-1128(CK)	HV59-151A	NA 45	M		59		
028A-1	RECIRC LOOP SAMPLE	HV43-1F019	HV43-1F020	10	B,D		43		
				10	B,D				
028A-2	DRYWELL H2/O2 SAMPLE	SV57-132	SV57-142	5	B,H,R,S	11	57		
				5	B,H,R,S	11			
028A-3	DRYWELL H2/O2 SAMPLE	SV57-134	SV57-144	5	B,H,R,S	11	57		
				5	B,H,R,S	11			

TABLE 3.6.3-1 (Continued)

PART A - PRIMARY CONTAINMENT ISOLATION VALVES

LIMERICK - UNIT 1

3/4 6-23

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	
028B	DRYWELL H2/O2 SAMPLE	SV57-133		5	B,H,R,S	11	57	
				SV57-143	5	B,H,R,S		11
				SV57-195	5	B,H,R,S		11
030B-1	DRYWELL PRESSURE INSTRUMENTATION		HV42-147A	45		10	42	
035A	TIP PURGE	59-1056(CK) (DOUBLE "O" RING)		NA			59	
				HV59-131	7	B,H,S		16
035C-G	TIP DRIVES	XV59-141A-E (DOUBLE "O" RING)		NA	B,H	11,16,21	59	
				XV59-140A-E	NA			11,16
037A-D	CRD INSERT LINES	BALL CHECK		NA		12	47	
				HCU	NA			12
038A-D	CRD WITHDRAW LINES SDV VENTS & DRAINS			NA		12	47	
				HCU	NA			12
				XV47-1F010	25			30
				XV47-1F180	30			30
				XV47-1F011	25			30
	XV47-1F181	30		30				
039A(B)	DRYWELL SPRAY	HV51-1F021A(B)		160		4,11	51	
				HV51-1F016A(B)	160			11
040E	DRYWELL PRESSURE INSTRUMENTATION		HV42-147D	45		10	42	
040F-2	CONTAINMENT INSTRUMENT GAS -SUCTION	HV59-101		45	C,H,S	5	59	
				HV59-102	7	C,H,S		

TABLE 3.6.3-1 (Continued)

PART A - PRIMARY CONTAINMENT ISOLATION VALVES

LIMERICK - UNIT 1

3/4 6-24

Amendment No. 2

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
040G-1	ILRT DATA ACQUISITION	60-1057	60-1058	NA NA		5,11 11	60
040G-2	ILRT DATA ACQUISITION	60-1071	60-1070	NA NA		5,11 11	60
040H-1	CONTAINMENT INSTRUMENT GAS SUPPLY - HEADER 'A'	59-1005A(CK)	HV59-129A	NA 7	C,H,S		59
042	STANDBY LIQUID CONTROL	48-1F007(CK) (X-116)	HV48-1F006A	NA 60		29	48
043B	MAIN STEAM SAMPLE	HV41-1F084	HV41-1F085	10 10	B,D B,D		41
044	RWCU ALTERNATE RETURN	41-1017	41-1016(X-9A, X-9B) PSV41-112	NA NA NA		5,31	41
045A(B,C,D)	LPCI INJECTION 'A'(B,C,D)	HV51-1F041A*(B,C*, D*)(CK) HV51-142A*(B,C*, D*)	HV51-1F017A* (B,C*,D*)	7 38	NA	9,22 9,22	9,22 51
050A-1	DRYWELL PRESSURE INSTRUMENTATION		HV42-147B	45		10	42
053	DRYWELL CHILLED WATER SUPPLY - LOOP 'A'	HV87-128*	HV87-120A* HV87-125A*	60 60 60	C,H	11 11,28, 29 11,28,29	87

TABLE 3.6.3-1 (Continued)

## 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	
054	DRYWELL CHILLED WATER RETURN - LOOP 'A'	HV87-129*		60	C,H	11	87	
			HV87-121A*	60				11,28,29
			HV87-124A*	60				11,28,29
055	DRYWELL CHILLED WATER SUPPLY - LOOP 'B'	HV87-122*		60	C,H	11	87	
			HV87-120B*	60				11,28,29
			HV87-125B*	60				11,28,29
056	DRYWELL CHILLED WATER RETURN - LOOP 'B'	HV87-123*		60	C,H	11	87	
			HV87-121B*	60				11,28,29
			HV87-124B*	60				11,28,29
061-1	RECIRC PUMP 'A' SEAL PURGE	43-1004A(CK)	(XV43-103A - SEE PART B, THIS TABLE)	NA NA		15 1	43	
061-2	RECIRC PUMP 'B' SEAL PURGE	43-1004B*(CK)	(XV43-103B - SEE PART B, THIS TABLE)	NA NA		15 1	43	
062	DRYWELL H2/O2 SAMPLE RETURN, N2 MAKE-UP	SV57-150(X-220A)		5	B,H,R,S	11	57	
			SV57-159 (X-220A)	5				B,H,R,S
			HV57-116 (X-220A)	30**				B,H,R,S
			SV57-190 (X-220A)	5				B,H,R,S

LIMERICK - UNIT 1

3/4 6-25

Amendment No. 2

TABLE 3.6.3-1 (Continued)

## PART A - PRIMARY CONTAINMENT ISOLATION VALVES

LIMERICK - UNIT 1

3/4 6-26

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
			SV57-191 (X-220A)	5	B,H,R,S	11	
116	STANDBY LIQUID CONTROL	48-1F007(CK) (X-42)	HV48-1F006B	NA 60		29	48
117B-1	DRYWELL RADIATION MONITORING SUPPLY	SV26-190A	SV26-190B	5 5	B,H,R,S B,H,R,S	11 11	26
117B-2	DRYWELL RADIATION MONITORING RETURN	SV26-190C	SV26-190D	5 5	B,H,R,S B,H,R,S	11 11	26
201A	SUPPRESSION POOL PURGE SUPPLY	HV57-124 HV57-131(X-25) HV57-164	HV57-109(X-25) HV57-147 HV57-121(X-25)	5** 5** 9 6** 6** 5**	B,H,S,U,W B,H,S,U,W B,H,R,S B,H,S,U,W B,H,S,U,W B,H,S,U,W	3,11,14,25 3,11,14,25 3,11,14 11,25 11,25 11,25	57
202	SUPPRESSION POOL PURGE EXHAUST	HV57-104 HV57-105 HV57-162	HV57-112 HV57-118 SV57-185	5** 15** 9 6** 5** 5	B,H,S,U,W B,H,S,U B,H,R,S B,H,S,U,W B,H,S,U B,H,R,S	3,11,14,25 5,11,25 3,11,14 11,25 11,25 11	57
203A(B,C,D)	RHR PUMP SUCTION		HV51-1F004A(B, C,D)	240		4,22, 19,29	51
			PSV51-1F030A(B, C,D)	NA		22	

TABLE 3.6.3-1 (Continued)

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
204A(B)	RHR PUMP TEST LINE AND CONTAINMENT COOLING		HV51-125A(B)	180		4,22,29	51
205A(B)	SUPPRESSION POOL SPRAY		HV51-1F027A*(B)	45	C,G	11	51
206A(B,C,D)	CS PUMP SUCTION		HV52-1F001A (B,C,D)	160		4,22,29	52
207A(B)	CS PUMP TEST AND FLUSH		HV52-1F015A(B)	23	C,G	5,22	52
208B	CS PUMP MINIMUM RECIRC		HV52-1F031B	45	LFCH	5,22,29	52
209	HPCI PUMP SUCTION		HV55-1F042	160	L,LA	4,22	55
210	HPCI TURBINE EXHAUST		HV55-1F072	120		4,22,29	55
212	HPCI PUMP TEST AND FLUSH		HV55-1F071	40	B,H	4,22	55
214	RCIC PUMP SUCTION		HV49-1F031	60		4,22,29	49
215	RCIC TURBINE EXHAUST		HV49-1F060	80		4,22,29	49
216	RCIC MINIMUM FLOW		HV49-1F019	8	LFRC	5,22	49

LIMERICK - UNIT 1

3/4 6-27

Amendment No. 2

TABLE 3.6.3-1 (Continued)

## PART A - PRIMARY CONTAINMENT ISOLATION VALVES

LIMERICK - UNIT 1

3/4 6-28

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
217	RCIC VACUUM PUMP DISCH	HV49-1F002	49-1F028(CK)	60 NA		5,29	49
218	INSTRUMENT GAS TO VACUUM RELIEF VALVES	59-1001(CK)	HV59-135	NA 7	C,H,S		59
219A	INSTRUMENTATION - SUPPRESSION POOL LEVEL	--	HV55-121	45		10	55
219B	INSTRUMENTATION - SUPPRESSION POOL LEVEL	--	HV55-120	45		10	55
220A	H2/O2 SAMPLE RETURN	SV57-191(X-62)	SV57-190(X-62) HV57-116(X-62) SV57-150(X-62) SV57-159(X-62)	5 5 30** 5 5	B,H,R,S B,H,R,S B,H,R,S B,H,R,S B,H,R,S	11 11 11 11 11	57
220B	INSTRUMENTATION - SUPPRESSION POOL PRESSURE SUPPRESSION POOL LEVEL	--	SV57-101	5		10	57
221A	WETWELL H2/O2 SAMPLE	SV57-181	SV57-141 SV57-184	5 5 5	B,H,R,S B,H,R,S B,H,R,S	11 11 11	57
221B	WETWELL H2/O2 SAMPLE	SV57-183	SV57-186	5 5	B,H,R,S B,H,R,S	11 11	57