BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of	:	
	:	Docket No. 50-352
PHILADELPHIA ELECTRIC COMPANY		

APPLICATION FOR AMENDMENT

OF

FACILITY OPERATING LICENSE

NPF-39

AND

EXEMPTION TO PART 50, APPENDIX J

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Philadelphia Electric Company, Licensee under Facility Operating License NPF-39 for Limerick Generating Station Unit 1, hereby requests that the Technical Specifications contained in Appendix A of the Operating License be temporarily amended to provide an extension of up to twelve weeks (see attachment 1) to the local leak rate test interval (Type C tests) for certain primary containment isolation valves specified in Technical Specifications 4.6.1.2.d and 4.6.1.2.g (page 3/4 6-4). Additionally, Philadelphia Electric Company requests, pursuant to Section 50.12 of the Commission's Regulations, an exemption from

the requirements of 10 CFR 50, Appendix J, Section III.D.3 to provide the same temporary relief.

Technical Specifications 4.6.1.2.d and 4.6.1.2.g (page 3/4 6-4) requires local leak rate tests (Type C tests) on the primary containment isolation valves listed in Table 3.6.3-1 to be performed at intervals no greater than 24 months, except for containment isolation valves, in hydrostatically tested lines penetrating the primary containment, which shall be leak tested at least once per 18 months. The Commission's Regulations (10 CFR 50, Appendix J, Section III.D.3) require local leak test (Type C tests) to be performed during each reactor shutdown for refueling, but in no case at intervals greater than 2 years.

The end of the initial 18 month and 24 month intervals for some of the Limerick Generating Station Unit 1 primary containment isolation valves is approaching. Type C tests are being performed on those valves that can be safely tested at power within the required test interval. However, in order to meet the test interval requirements for approximately 15 tests covering thirty-seven valves (out of a total of approximately 245 valves), it would be necessary to shut down the plant prior to March 3, 1986, solely for this purpose, for approximately two weeks.

A containment entry is required to perform testing upon the valves that cannot be tested at power. Testing of these valves at power poses a personnel hazard due to the radiation field and high ambient temperatures existing within containment.

Additional restraints to testing some of the valves at power include the need to depressurize the reactor, drain the Reactor Enclosure Chilled Water (RECW) system, the Drywell Chilled Water System (DCW) or one Emergency Service Water (ESW) loop, remove the recirculation pump or drywell coolers from service, or a combination of the above.

The long time associated with obtaining the full power license is a major factor in the need for schedule relief. A normal schedule for low power testing, Start-up Testing and 100 hour full power warranty run would not have resulted in a requirement to extend the testing interval. All low power (less than 5% thermal power) testing was completed prior to late April 1985. Circumstances beyond the control of licensee delayed the issuance of the full power license until August 1985. During this period of time the unit was maintained in a 48 hour standby condition to demonstrate its availability for operation. Because of this condition, testing of all of these valves was not possible. During this same time period surveillance testing was completed on a number of valves. These valves had test intervals that would expire prior to the expiration of the excess flow check valve test interval, which was the controlling interval due to the time required for its performance (i.e. two weeks).

The current schedule is for a maintenance and testing outage beginning on or before May 26, 1986 when the testing for those valves which are known to be maintenance-intensive in Boiling Water Reactors (e.g. main steam isolation valves and feedwater check valves) is required to be performed. During this

outage, maintenance activities, surveillance testing and minor plant modifications will be performed which will allow the plant to operate through the first refueling outage.

A two week outage required to perform this testing prior to May 26, 1986 would result in a net increase in overall outage time. This additional outage would impose an economic penalty of greater than 6 million dollars to area customers as a result of replacement energy costs, and subject plant equipment and systems to the detrimental effects inherent in an additional shutdown and startup operation.

Therefore, Licensee requests an extension of up to twelve weeks to the Type C test interval for the specified primary containment isolation valves listed in Table 3.6.3-1, Part A, that require a plant outage, to test and a conforming exemption to the requirements of Appendix J to Part 50 (see attachment 1) for the applicable valves. The proposed change as shown on enclosed Technical Specification page 3/4 6-4 would extend the test interval for these valves until May 26, 1986.

JUSTIFICATION FOR THE REQUESTED EXEMPTIONS

NRC regulations provide for specific exemptions if the requested exemption is warranted as follows: (1) the exemption and the activities to be conducted are authorized by law, (2) operation with the exemption does not endanger life or property or involve undue risk to the health and safety of the public, (3)

the common defense and security are not endangered, and (4) the exemption is in the public interest because, on balance, there is good cause for granting it and the public health and safety are adequately protected.

I. The Requested Exemptions Are Authorized by Law and the Activities Which Would Be Allowed Thereunder Do Not Violate Applicable Laws.

The criteria established in 10CFR50.12(a) are satisfied in this case, and no other prohibition of law exists which would preclude the activities to be authorized by the requested exemption. Thus the Commission is authorized by law to grant this exemption request.

II. The Requested Exemptions Will Not Endanger Life or Property

The effects of deferral of the requested Type C tests upon the potential for post-accident leakage from the primary containment, and thus endangerment of life and property, have been evaluated and are shown to be negligible. The following forms the basis for this conclusion:

1. This requested exemption applies only to the first scheduled periodic Type C tests for these penetrations. As such, the valves do not have signficant operating hours upon them, and

degradation of their sealing capability would not be expected.

2. The two-year time limit of 10CFR50, Appendix J, was written to ensure that Type C tests are performed on a schedule approximately consistent with normal plant refueling outages. At Limerick, the schedule indeterminacy of the plant startup test program and the first fuel cycle has caused the two-year time limit for these valves to expire just as the plant enters its first period of sustained operation. The plant has not operated at consistently high power levels until this time; therefore, the subject valves have not been continuously exposed to the type of environment which will occur during normal plant operation.

3. Operating experience to date with the subject valves has been favorable. The Type C tests which are the subject of this exemption request are among the earliest performed during the preoperational containment leakage test program. Since that time, the valves have not required any maintenance, repairs, or adjustments which would mandate reperformance of the Type C test in conformance with Paragraph IV of Appendix J.

The requested exemptions are for containment isolation valves which have traditionally good

maintenance histories in the industry. No exemptions are being requested for the known maintenance-intensive valves in Boiling Water Reactor (BWR) plants, such as feedwater check valves, main steam isolation valves, and containment purge and vent valves.(1)

4. The sum total of the Type C test leakage rates on these valves is not a significant portion of the allowable leakage limits. For the subject valves which are pneumatically tested and included within the plant's 0.6 La Type C leakage total, the total leakage recorded during the preoperational tests was 3786 sccm, or 18% of the current Limerick Type C test total of 20,910 sccm. Since the maximum Limerick Type C test total of 0.6 La is 94,964 sccm, these valves would have to experience a significant increase in leakage before the plant's 0.6 La limit is exceeded.

5. The Limerick preoperational leakage rate test experience with these valves was favorable. Once system start-up type activities (e.g. system flushing, Limitorque operator settings, etc.) had been completed, the valves readily passed their Type C tests.

6. Leakage through these valves will not affect the conclusions of the plant preoperational Integrated

Leakage Rate Test . The valve alignments for the ILRT result in the inclusion of minimum pathway leakage within the leakage rate total. For scoping purposes we have assumed degradation of the tighter containment isolation boundary in the time since the ILRT was conducted, such that maximum pathway leakage would occur. If the maximum pathway leakage for the valves is tabulated the ILRT results may be adjusted as follows:

	Leakage Rates, %/day	
	Mass Point Analysis	
	Calculated	95% UCL
Corrected ILRT leakage, from ILRT report (2)	0.1592	0.1646
Exemption Request Correction	0.0203	0.0203
Total Adjusted ILRT Leakage	0.1795	0.1845

The adjusted leakage rates show that even under this conservative method of assessment, Limerick is still well below the ILRT test acceptance criteria of 0.375%/day outleakage, and also the Technical Specification LCO value of 0.5%/day.

III. The Requested Exemptions Will Not Endanger the Common Defense and Security

The common defense and security are not implicated in this exemption request. Only the potential impact on public health and safety is at issue.

IV. The Requested Exemptions are In the Public Interest

The requested exemptions are in the public interest in that if literal compliance with the applicable provisions of Appendix J discussed in Section II above were mandated, a forced outage would be required resulting in substantial increased costs to the public without, as shown above, a commensurate increase in the protection of the public.

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(1) M. B. Weinstein, "Containment Failure Experience - Implications for Testing" presented at the Eleventh Biennial Topical Conference on Reactor Operating Experience of the American Nuclear Society, Scottsdale, Az, August 1-3, 1983.

(2) Philadelphia Electric Company; Primary Reactor Containment Integrated Leakage Rate Test for Limerick Generating Station, Unit 1, Final Report August 1984.

Significant Hazards Consideration Determination

The Commission had provided guidance concerning the application of standards in 10 CFR 50.92 for determining whether license amendments involve significant hazards consideration by providing certain examples which were published in Federal Register on April 6, 1983 (48 FR 14870). One of the examples (vi) of an action involving no significant hazards consideration is a change which may in some way reduce a safety margin, but where the results of the change are clearly within all acceptable criteria. The foregoing requested change and exemption fits this example. Postponing the aforementioned local leak rate tests until an outage commencing on or before May 26, 1986 would allow for continued operation of the plant and would have little or no effect on containment integrity as discussed above and for the following additional reasons.

(1) Redundant primary containment isolation valves are provided for each penetration; that is, two isolation valves in series. Consequently, a reduction in the effectiveness of one seal would not compromise containment integrity. Deterioration in the overall integrity of the containment penertations is normally a gradual process. Considering the redundancy of the isolation barriers and the short duration of the requested extension of the testing interval, any reduction in containment integrity during the 12 week extension period would be negligible.

(2) The intent of the Technical Specifications and Section III.D.3 of Appendix J to 10 CFR 50 is to require testing of the isolation valves once every fuel cycle. A normal reactor fuel load is designed to provide an 18 month cycle with approximately 16 months of full power operations. Consequently, the primary containment isolation valves are normally exposed to 18 months of rated temperature conditions between each Type C test. Due to the limited power history of the Limerick Generating Station since the initial Type C tests, these valves will have been subjected to rated temperature conditions for only approximately ten months as of May 26, 1986. Consequently, the valves have been subjected to operating conditions less severe than that anticipated by the test schedule identified in the regulations. A 12 week extension in the Type C test interval does not appear to be inconsistent with the intent of the test schedule specified by the Technical Specifications and Appendix J.

(3) Five of the tests, which include ten valves, for which extension is requested are for hydrostatically tested valves in which the leakage is excluded from the Type C leakage rate total per Paragraph III.C.3 of Appendix J. The preoperational leakage rate test experience with these valves was excellent; the aggregate leakage for the ten affected valves was approximately 0.2 GPM,

which is substantially below the maximum leakage limit of 1.0 GPM times the total number of the valves.

These valves are in lines which connect to closed systems outside of containment. The closed system is missile protected, Seismic Category I, quality group B, and designed to the temperature and pressure conditions that the system will encounter. The integrity of this closed system is assured by the leakage reduction and maintenance program developed in response to NUREG 0737, Item III.D.1.1. Any leakage out of this system will be into the reactor enclosure, thus facilitating collection and treatment.

For these reasons, the proposed temporary amendment to the Limerick Operating License does not constitute a significant hazards consideration in that it would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated because the change extends the surveillance interval less than 20% beyond the current conservative surveillance requirements and has no effect on the assumptions of valve leakages assumed in the present analyses; or

2. Create the possibility of a new type of accident or a different kind of accident from any accident previously analyzed in that current analyses assume certain values

of containment leakage; therefore, new accident scenarios are not credible based upon scheduling of this testing alone; or

3. Involve a significant reduction in the margin of safety because, based on the adjusted ILRT and initial LLRT results, these valves have exhibited a high degree of leak tight reliability. Additionally, the valves have been exposed to operating conditions less severe than are normally experienced between testing.

The requested amendment concerns schedular relief for surveillance testing of a limited number of containment isolation valves and will not result in a significant change in the amounts or types of effluents that may be released off-site.

There will be no significant increase in individual or cumulative occupational radiation exposure as a result of the requested amendment which merely requests to delay testing.

The Plant Operations Review Committee and the Nuclear Review Board have reviewed these proposed temporary changes to the Technical Specifications and exemption request and have concluded that they do not involve an unreviewed safety question

or a significant hazards consideration and will not endanger the public health and safety.

Respectfully Submitted,
PHILADELPHIA ELECTRIC COMPANY

Vice President

COMMONWEALTH OF PENNSYLVANIA :

: ss.

COUNTY OF PHILADELPHIA :

S. L. Daltroff, being first duly sworn, deposes and says:

That he is Vice President of Philadelphia Electric Company, the Applicant herein; that he has read the foregoing Application for Amendment of Facility Operating License NPF-39 and Exemption to Part 50, Appendix J and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

S. L. Daltroff

Subscribed and sworn to
before me this 18th day
of December, 1985

Patricia D Scholl

Notary Public

PATRICIA D. SCHOLL
Notary Public, Philadelphia, Philadelphia Co.
My Commission Expires February 10, 1986

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	:	Docket No. 50-352
PHILADELPHIA ELECTRIC COMPANY	:	
(Limerick Generating Station, Unit No. 1)	:	

CERTIFICATE OF SERVICE

I hereby certify that copies of Philadelphia Electric Company's Application for Amendment of Facility Operating License NPF-39 and Application for Amendment of Facility Operating License NPF-39 and Exemption to Part 50, Appendix J in the above-captioned matter were served on the following by deposit in the United States mail, first-class postage prepaid on this 19th day of December, 1985.

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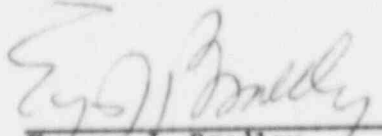

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