

BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of   :  
  :  
PHILADELPHIA ELECTRIC COMPANY                                :             Docket Nos. 50-277  
  :  
  :             50-278

APPLICATION FOR AMENDMENT  
OF  
FACILITY OPERATING LICENSES  
DPR-44 & DPR-56

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Attorneys for  
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408 249

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By letter dated November 29, 1978 to E. G. Bauer, Jr., the Division of Operating Reactors (D.O.R.) requested, among other things, that Philadelphia Electric propose changes to the Technical Specifications attached as Appendix A to Operating Licenses DPR-44 and DPR-56 for Peach Bottom Units 2 and 3 in the area of containment purging. Specifically, the letter requested that the Technical Specification change limit purging during operation to 90 hours per year. Further, the letter required that the Technical Specification change request include justification supporting the ability of the containment purge

isolation valves to close under postulated design bases accident conditions. Our response to the November 29, 1978 NRC letter reference above (S. L. Daltroff to T. A. Ippolito dated January 2, 1979), included a discussion of the containment purging systems installed at Peach Bottom. As was indicated in this letter, all areas of these systems, except one, meet the requirements referenced in the NRC request. The one area which required further investigation on our part involved four (three 18 inch and one 20 inch) penetrations on each unit. These penetrations are each provided with two or more containment isolation valves. The butterfly valves and their operators used for this service are designed to assure valve closure during and following a seismic event. The valves are also designed to remain closed under post-LOCA conditions. Our investigation indicated that the valves would not close from a full-open position against post-LOCA pressure but that if their opening was limited, they would close as required. Conservative analyses conducted using information supplied by the valve manufacturer confirmed that if limited to 37 degrees open, the valves would close against post-LOCA pressures in less than five seconds. As a result of this investigation it is proposed that the valves on these containment purge penetrations be restricted to 35 degrees open. A mechanical stop which restricts opening of the valve to 35 degrees or less will be installed. In the interim, the valves have been limited to less than 35 degrees open by an adjustment of the control system.

408 250

Another part of our investigation involved verification of the seismic qualification of the control system associated with the inflatable seals for the valves. This investigation, conducted in conjunction with the Peach Bottom Architect Engineer and the valve manufacturer, indicated that some modifications were required to upgrade the seal control system to meet seismic criteria. In order to ensure primary containment integrity, the valves were temporarily locked closed until a seismically qualified air supply for the valve seals utilizing nitrogen bottles and a minimum number of valves and fittings was expeditiously installed. Since this system somewhat hampers the operational flexibility of containment purging, inerting and de-inerting, longer term modifications re-establishing this flexibility will be implemented. These events were reported to the Office of Inspection & Enforcement Region I via LER 2-79-11/1T.

Since the concern addressed in the November 29 D.O.R. letter was the ability to maintain containment integrity during a Loss of Coolant Accident (LOCA), our proposed technical specification limits use of the containment purging system to 90 hours per year during those periods when a LOCA is possible (i.e. when the reactor pressure is greater than 105 psig with the reactor critical and the mode switch in the startup or run position).

Accordingly, Philadelphia Electric Licensee under Facility Operating Licenses DPR-44 for Peach Bottom Unit 2 and DPR-56 for Peach Bottom Unit 3 request that section 3.7.A.5 and

associated bases of the Technical Specification attached as Appendix A to the Facility Operating License be revised as shown on new pages 171a and existing page 190a for both Unit 2 and 3 attached hereto and incorporated herein. Changes to the pages are indicated by a vertical bar in the margin.

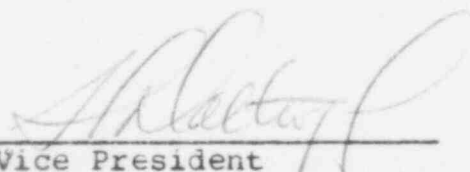
Since the changes requested involve a single issue which, per the November 29, 1978 D.O.R. letter has acceptability clearly identified, and since they do not involve a hazards condition, and since the request for Unit 3 is a duplicate of that for Unit 2, pursuant to 10 CFR 170.22, Philadelphia Electric Company, for fee purposes, proposes that the Application for Amendment for Unit No. 2 be considered a Class III Amendment and that the Application for Amendment for Unit No. 3 be considered a Class I Amendment.

The Plant Operation Review Committee and the Operation and Safety Review Committee have reviewed this proposed change to the Technical Specifications and have concluded that it does not involve an unreviewed safety question or a significant hazard consideration, and will not endanger the health and safety of the public.

Respectfully submitted,

PHILADELPHIA ELECTRIC COMPANY

By

  
Vice President

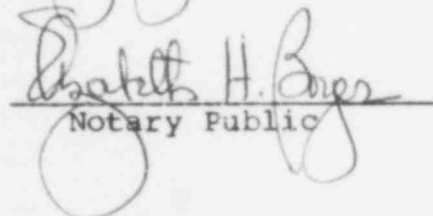
COMMONWEALTH OF PENNSYLVANIA :  
COUNTY OF PHILADELPHIA : SS.

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 Licenses 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.



Subscribed and sworn to  
before me this 27<sup>th</sup> day  
of July, 1979



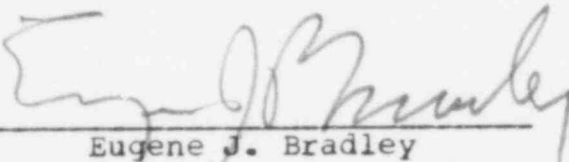
Notary Public

ELIZABETH H. BOYER  
Notary Public, Phila., Phila. Co.  
My Commission Expires Jan. 30, 1982

408 253

CERTIFICATE OF SERVICE

I certify that service of the foregoing Application was made upon the Board of Supervisors, Peach Bottom Township, York County, Pennsylvania, by mailing a copy thereof, via first-class mail, to Albert R. Steele, Chairman of the Board of Supervisors, R. D. No. 1, Delta, Pennsylvania 17314; upon the Board of Supervisors, Fulton Township, Lancaster County, Pennsylvania, by mailing a copy thereof, via first-class mail, to George K. Brinton, Chairman of the Board of Supervisors, Peach Bottom, Pennsylvania 17563; and upon the Board of Supervisors, Drumore Township, Lancaster County, Pennsylvania, by mailing a copy thereof, via first-class mail, to Wilmer P. Bolton, Chairman of the Board of Supervisors, R. D. No. 1, Holtwood, Pennsylvania 17532; all this 31st day of July, 1979.

  
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Eugene J. Bradley

Attorney for  
Philadelphia Electric Company

LIMITING CONDITIONS FOR OPERATION                      SURVEILLANCE REQUIREMENTS

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3.7.A Primary Containment (Cont.)

5. Oxygen Concentration (Cont.d)

- c. When the reactor pressure is greater than 105 psig with the reactor critical and the reactor mode switch in startup or run, the total time a flow path exists through the flow paths listed below shall be limited to 90 hours per year.

<u>Penetration</u>	<u>Flow Path Valves</u>
N25	A0-2505 - A0-2520 A0-2519 - A0-2520
N26	A0-2506 - A02507
N205B	A0-2521A - A02521B A0-2519 - A0-2521B
N219	A0-2511 - A0-2512



LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS3.7.a Primary Containment (Cont)5. Oxygen Concentration (Cont)

- c. When the reactor pressure is greater than 105 psig with the reactor critical and the reactor mode switch in startup or run, the total time a flow path exists through the flow paths listed below shall be limited to 90 hours per year.

<u>Penetration</u>	<u>Flow Path Valves</u>
N25	A0-3505 - A0-3520 A0-3519 - A03520
N26	A0-3506 - A03507
N205B	A0-3521A - A0-3521B A0-3519 - A0-3521B
N219	A0-3511 - A0-2512

408 256

3.7.A & 4.7.A BASES (Cont'd.)

The requirement for an external visual examination following any event where potentially high loadings could occur provides assurance that no significant damage was encountered. Particular attention should be focused on structural discontinuities in the vicinity of the relief valve discharge since these are expected to be the points of highest stress.

Inerting

The relatively small volume inherent in the GE-BWR pressure suppression containment and the large amount of zirconium in the core are such that the occurrence of a very limited (a percent or so) reaction of the zirconium and steam during a loss-of-coolant accident could lead to the liberation of hydrogen combined with an air atmosphere to result in a flammable concentration in the containment. If a sufficient amount of hydrogen is generated and oxygen is available in stoichiometric quantities, the subsequent ignition of the hydrogen in rapid recombination rate could lead to failure of the containment to maintain a low leakage integrity. The 4% oxygen concentration minimizes the possibility of hydrogen combustion following a loss-of-coolant accident.

The occurrence of primary system leakage following a major refueling outage or other scheduled shutdown is much more probable than the occurrence of the loss-of-coolant accident upon which the specified oxygen concentration limit is based. Permitting access to the drywell for leak inspections during a startup is judged prudent in terms of the added plant safety offered without significantly reducing the margin of safety. Thus, to preclude the possibility of starting the reactor and operating for extended periods of time with significant leaks in the primary system, leak inspections are scheduled during startup periods, when the primary system is at or near rated operating temperature and pressure. The 24-hour period to provide inerting is judged to be sufficient to perform the leak inspection and establish the required oxygen concentration.

Technical Specification 3.7.A.5.c limits the total time that flow paths may exist through certain penetrations associated with containment purge system isolation valves to 90 hours per year. Since this limit is imposed to limit the probability of a LOCA occurring while the containment is being vented the limit is applicable during those periods when a LOCA is possible (i.e. when the reactor pressure is greater than 105 psig with the reactor critical and the mode switch in the startup or run position).

The primary containment is normally slightly pressurized during periods of reactor operation. Nitrogen used for inerting could leak out of the containment but air could not leak in to increase oxygen concentration. Once the