

BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of

PHILADELPHIA ELECTRIC COMPANY

:  
:  
:

Docket No. 50-278

APPLICATION FOR AMENDMENT  
OF  
FACILITY OPERATING LICENSE  
DPR-56

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Philadelphia Electric Company

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Philadelphia Electric Company, Lic      der Facility  
Operating License DPR-56 Peach Bottom Atomic Power Station Unit  
No. 3, hereby requests that the Technical Specifications  
incorporated in Appendix A of the Operating License be amended by  
revising certain sections as indicated by a vertical bar in the  
margin of the attached page 241.

The proposed change would permit reactor operations  
with one hafnium control rod installed. The hafnium control rod  
contains twenty solid hafnium rods and sixty four stainless steel  
tubes containing boron carbide. The purpose of the hafnium  
control rod installation and operation is to obtain information

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regarding the performance of hafnium when exposed to the boiling water reactor environment. It is intended that the hafnium control rod be installed during the Peach Bottom, Unit No. 3, refueling outage scheduled for September, 1979.

An analysis of the safety considerations involved with the installation, operation, and inspection of the hafnium control rod are set forth in a document entitled Proposed Peach Bottom Atomic Power Station Unit 3 Alternate Absorber Control Blade Test Program (NEDO 24213) which is filed herewith and incorporated herein by reference.

Since the proposed change to the Technical Specifications do not involve a significant hazards consideration, pursuant to 10 CFR 170.22, Philadelphia Electric Company, for fee purposes, proposed that the Application for Amendment be considered a Class III Amendment.

The Plant Operation Review Committee and the Operation and Safety Review Committee have reviewed the proposed changes to the Technical Specifications and have concluded that they do 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 *N. L. Maruchin*  
Vice President

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COMMONWEALTH OF PENNSYLVANIA :  
COUNTY OF PHILADELPHIA : ss.

W. L. Maruchi, 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.

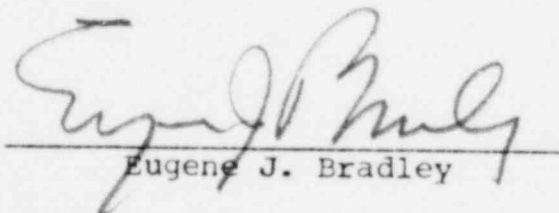
W. L. Maruchi

Subscribed and sworn to  
before me this 19<sup>th</sup> day  
of September, 1979

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

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 21st day of September, 1979.

  
Eugene J. Bradley

Attorney for  
Philadelphia Electric Company

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## 5.0 MAJOR DESIGN FEATURES

### 5.1 SITE FEATURES

The site is located partly in Peach Bottom Township, York County, partly in Drumore Township, Lancaster County, and partly in Fulton Township, Lancaster County, in southeastern Pennsylvania on the westerly shore of Conowingo Pond at the mouth of Rock Run Creek. It is about 38 miles north-northeast of Baltimore, Maryland, and 63 miles west-southwest of Philadelphia, Pennsylvania. Figures 2.2.1 through 2.2.4 of the FSAR show the site location with respect to surrounding communities.

### 5.2 REACTOR

- A. The core shall consist of not more than 764 fuel assemblies. 7 x 7 fuel assemblies shall contain 49 fuel rods and 8 x 8 fuel assemblies shall contain 62 or 63 fuel rods. The core shall consist of not more than 440 8x8 fuel assemblies.
- B. One Pressurized Test Assembly may be inserted in the Core for up to four full fuel cycles.
- C. The reactor core shall contain 185 cruciform-shaped control rods. The control material shall be boron carbide powder (B<sub>4</sub>C) compacted to approximately 70% of the theoretical density, except as described in Section 5.2.E below.
- D. One Fast Scram Control Rod Drive may be utilized for up to two full fuel cycles.
- E. One test control rod with up to 20 boron carbide (B<sub>4</sub>C) pins replaced with hafnium control pins may be substituted for one B<sub>4</sub>C control rod (Section 5.2.C above).

### 5.3 REACTOR VESSEL

The reactor vessel shall be as described in Table 4.2.2 of the FSAR. The applicable design codes shall be as described in Table 4.2.1 of the FSAR.

### 5.4 CONTAINMENT

- A. The principal design parameters for the primary containment shall be as given in Table 5.2.1 of the FSAR. The applicable design codes shall be as described in Appendix M of the FSAR.
- B. The secondary containment shall be as described in Section 5.3 of the FSAR.
- C. Penetrations to the primary containment and piping passing through such penetrations shall be designed in accordance with standards set forth in Section 5.2.3.4 of the FSAR.