



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

PHILADELPHIA ELECTRIC COMPANY
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
DELMARVA POWER AND LIGHT COMPANY
ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-277

PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 108
License No. DPR-44

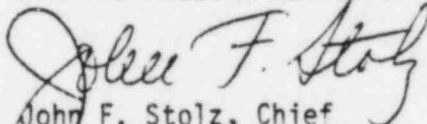
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company, et al. (the licensee) dated September 7, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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. DPR-44 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.108, are hereby incorporated in the license. PECO shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 19, 1985

ATTACHMENT TO LICENSE AMENDMENT NO.108

FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change.

Remove

iv
119
133a
133d
133e
142
142a
142b
142e
142f
142i

241

Insert

iv
119
133a
133d
133e

142a

142i
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<u>Figure</u>	<u>LIST OF FIGURES</u> <u>Title</u>	<u>Page</u>
1.1-1	APRM Flow Bias Scram Relationship To Normal Operating Conditions	16
4.1.1	Instrument Test Interval Determination Curves	55
4.2.2	Probability of System Unavailability Vs. Test Interval	98
3.4.1	Required Volume and Concentration of Standby Liquid Control System Solution	122
3.4.2	Required Temperature vs. Concentration for Standby Liquid Control System Solution	123
3.5.K.1	Deleted	142
3.5.K.2	MCPR Operating Limit vs. Tau, P8X8R fuel	142a
3.5.K.3	Deleted	142b
3.5.1.E	Kf Factor Vs. Core Flow	142d
3.5.1.F.	Deleted	142e
3.5.1.G	Deleted	142f
3.5.1.H	MAPLHGR Vs. Planar Average Exposure, Unit 2, P 8X8R Fuel, Type P8DRB285, 100 mil channels	142g
3.5.1.I	MAPLHGR vs. Planar Average Exposure, Unit 2, P 8x8R Fuel, Type P8DRB284 H, 80 mil & 100 mil channel & 120 mil channels	142h
3.5.1.J.	MAPLHGR vs. Planar Average Exposure Unit 2, P8X8R and BP8X8R Fuel, Type P8DRB299 and BP8DRB299, 100 mil channels	142i
3.5.1.K.	MAPLHGR vs. Planar Average Exposure Unit 2, P8X8R Fuel (Generic)	142j
3.5.1.L.	MAPLHGR vs. Planar Average Exposure Unit 2, BP8X8R Fuel, Type BP8DRB299H.	142k

3.4 BASES

STANDBY LIQUID CONTROL SYSTEM

- A. The conditions under which the Standby Liquid Control System must provide shutdown capability are identified via the Plant Nuclear Safety Operational Analysis (Appendix G). If no more than one operable control rod is withdrawn, the basic shutdown reactivity requirement for the core is satisfied and the Standby Liquid Control system is not required. Thus, the basic reactivity requirement for the core is the primary determinant of when the liquid control system is required.

The purpose of the liquid control system is to provide the capability of bringing the reactor from full power to a cold, xenon-free shutdown condition assuming that none of the withdrawn control rods can be inserted. To meet this objective, the liquid control system is designed to inject a quantity of boron that produces a concentration of 660 ppm of boron in the reactor core in less than 125 minutes. The 660 ppm concentration in the reactor core will bring the reactor from full power to a subcritical condition, considering the hot to cold reactivity difference, xenon poisoning, etc. The time requirement for inserting the boron solution was selected to override the rate of reactivity insertion caused by cooldown of the reactor following the xenon poison peak.

The minimum limitation on the relief valve setting is intended to prevent the recycling of liquid control solution via the lifting of a relief valve at too low a pressure. The upper limit on the relief valve setting provides system protection from overpressure.

- B. Only one of the two standby liquid control pumping loops is needed for operating the system. One inoperable pumping circuit does not immediately threaten shutdown capability, and reactor operation can continue while the circuit is being repaired. Assurance that the remaining system will perform its intended function and that the long term average availability of the system is not reduced is obtained for a one out of two system by an allowable equipment out of service time of one third of the normal surveillance frequency. This method determines an equipment out of service time of ten days. Additional conservatism is introduced by reducing the allowable out of service time to seven days, and by increased testing of the operable redundant component.

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS3.5.I Average Planar LHGR

During power operation, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed the limiting value shown in the applicable figures during two recirculation loop operations. During single loop operation, the APLHGR for each fuel type shall not exceed the above values multiplied by the following reduction factor: 0.79 for P8X8R and BP8X8R fuel. If at any time during operation it is determined by normal surveillance that the limiting value of APLHGR is being exceeded, action shall be initiated within one (1) hour to restore APLHGR to within prescribed limits. If the APLHGR is not returned to within prescribed limits within five (5) hours reactor power shall be decreased at a rate which would bring the reactor to the cold shutdown condition within 36 hours unless APLHGR is returned to within limits during this period. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

3.5.J Local LHGR

During power operation, the linear heat generation rate (LHGR) of any rod in any fuel assembly at any axial location shall not exceed design LHGR.

$$\text{LHGR} \leq \text{LHGRd}$$

LHGRd = Design LHGR
13.4 kW/ft for all 8X8 fuel

4.5.I Average Planar LHGR

The APLHGR for each type of fuel as a function of average planar exposure shall be checked daily during reactor operation at $\geq 25\%$ rated thermal power.

4.5.J Local LHGR

The LHGR as a function of core height shall be checked daily during reactor operation at $\geq 25\%$ rated thermal power.

Table 3.5.K.2

OPERATING LIMIT MCPR VALUES
FOR VARIOUS CORE EXPOSURES*

<u>Fuel Type</u>	<u>MCPR Operating Limit**</u> <u>For Incremental Cycle Core Average Exposure</u>	
	<u>BOC to 2000 MWD/t</u> <u>Before EOC</u>	<u>2000 MWD/t before EOC</u> <u>To EOC</u>
P8X8R ***	1.23	1.29

* If requirement 4.5.K.2.a is met.

** These values shall be increased by 0.01 for single loop operation.

*** Applicable to all P8X8R fuel bundles including BP8X8R and the P8DRB285 (Reload 5) types.

Table 3.5.K.3

OPERATING LIMIT MCPR VALUES
FOR VARIOUS CORE EXPOSURES*

<u>Fuel Type</u>	<u>MCPR Operating Limit**</u> <u>For Incremental Cycle Core Average Exposure</u>	
	<u>BOC to 2000 MWD/t</u> <u>Before EOC</u>	<u>2000 MWD/t before EOC</u> <u>To EOC</u>
P8X8R***	1.34	1.41

* If surveillance requirement 4.5.K.2 is not performed.

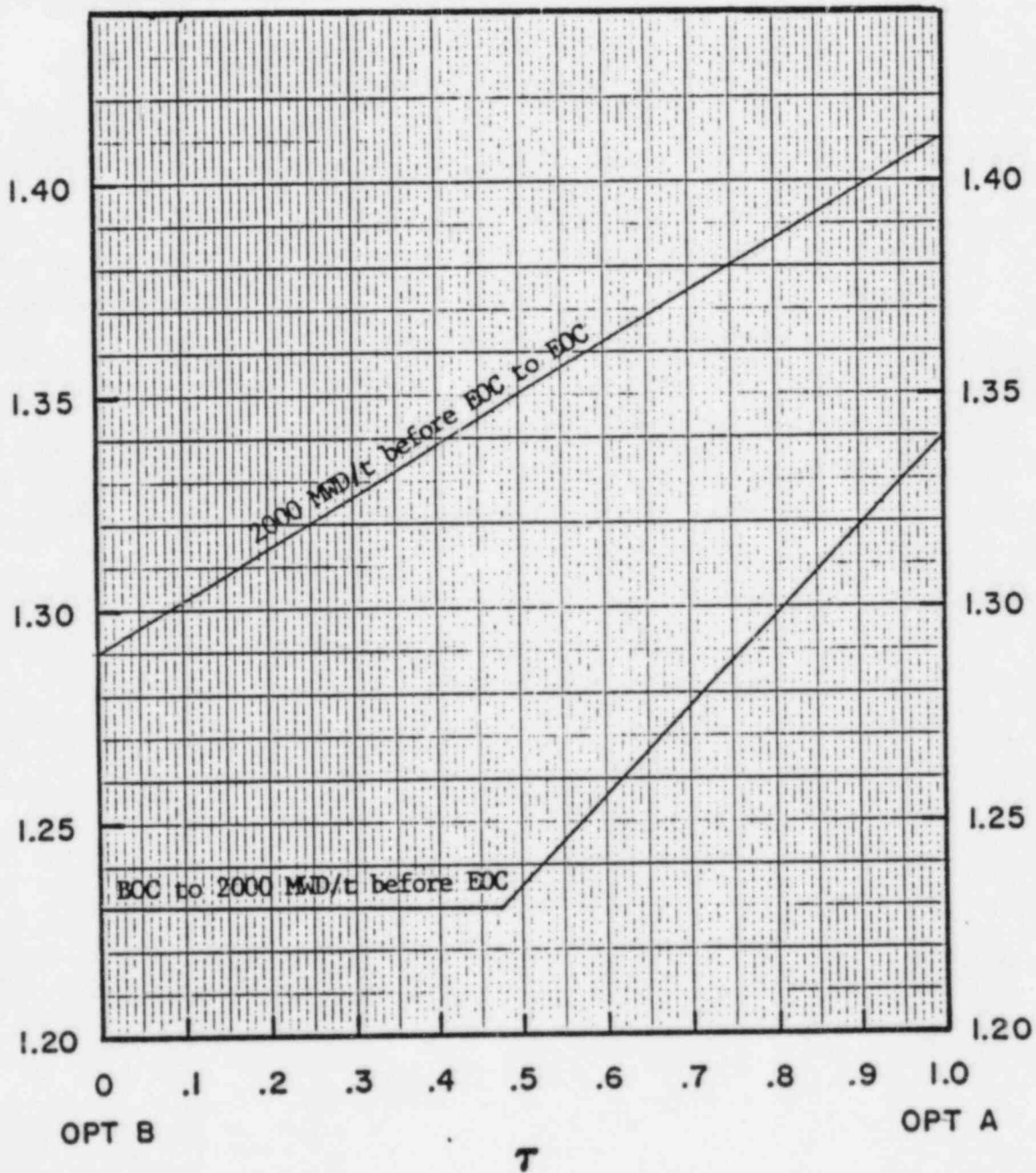
** These values shall be increased by 0.01 for single loop operation.

*** Applicable to all P8X8R fuel bundles including BP8X8R and the P8DRB285 (Reload 5) types.

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FIGURE 3.5K2 MCPR OPERATING LIMIT vs T

FUEL TYPE P8X8R*



* Applicable to all P8X8R fuel bundles including BP8X8R and the P8DRB285 (Reload 5) Types

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FUEL TYPE P8DRB299

BP8X8R Fuel Type BP8DRB299

MAXIMUM AVERAGE PLANAR LINEAR
HEAT GENERATION RATE (KW/FT)

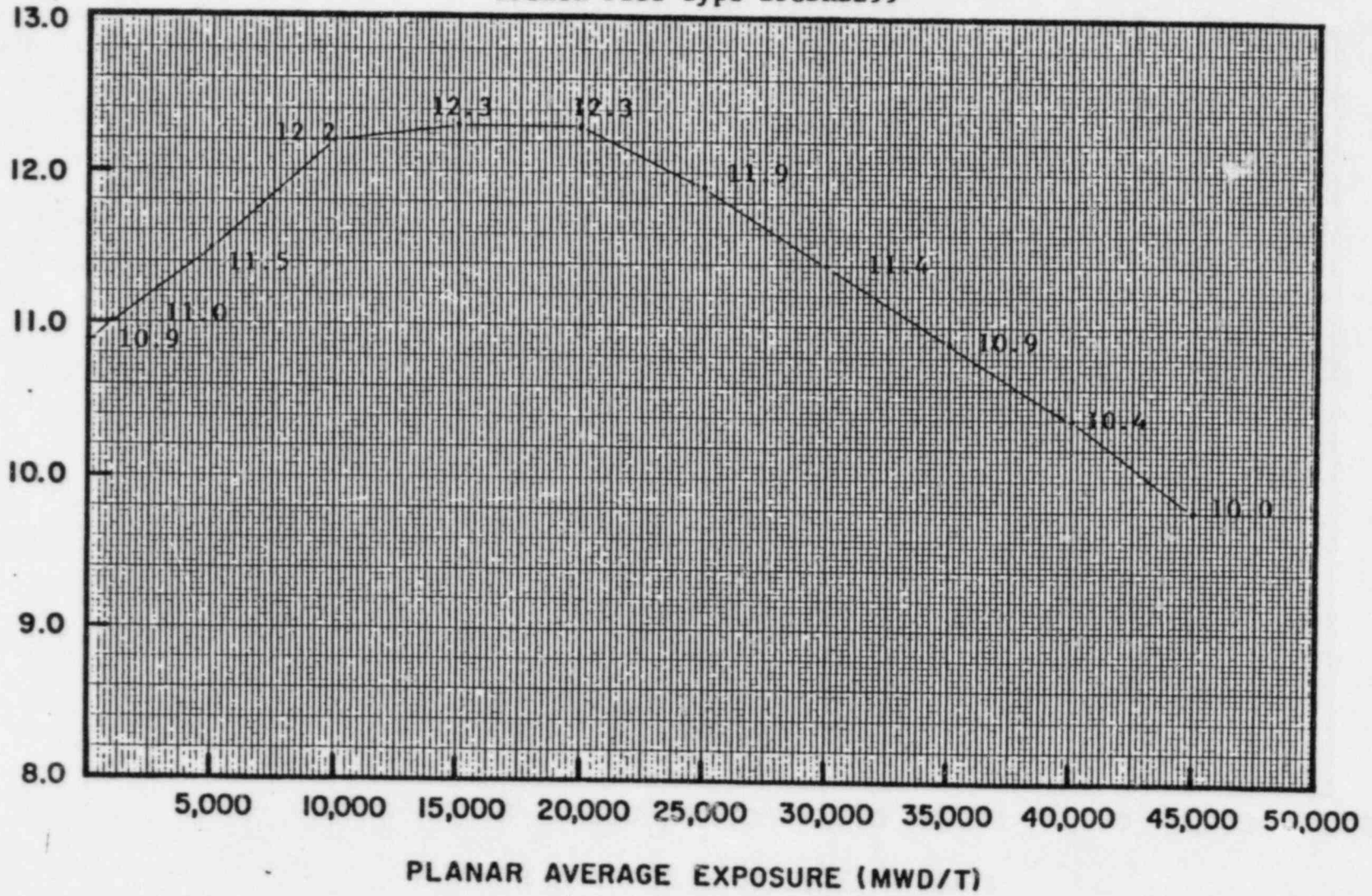


FIGURE 3.5.1J MAXIMUM AVERAGE PLANAR LINEAR HEAT GENERATION RATE VERSUS PLANAR AVERAGE EXPOSURE

PEACH BOTTOM UNIT 2

FUEL TYPE BP8DRB299H

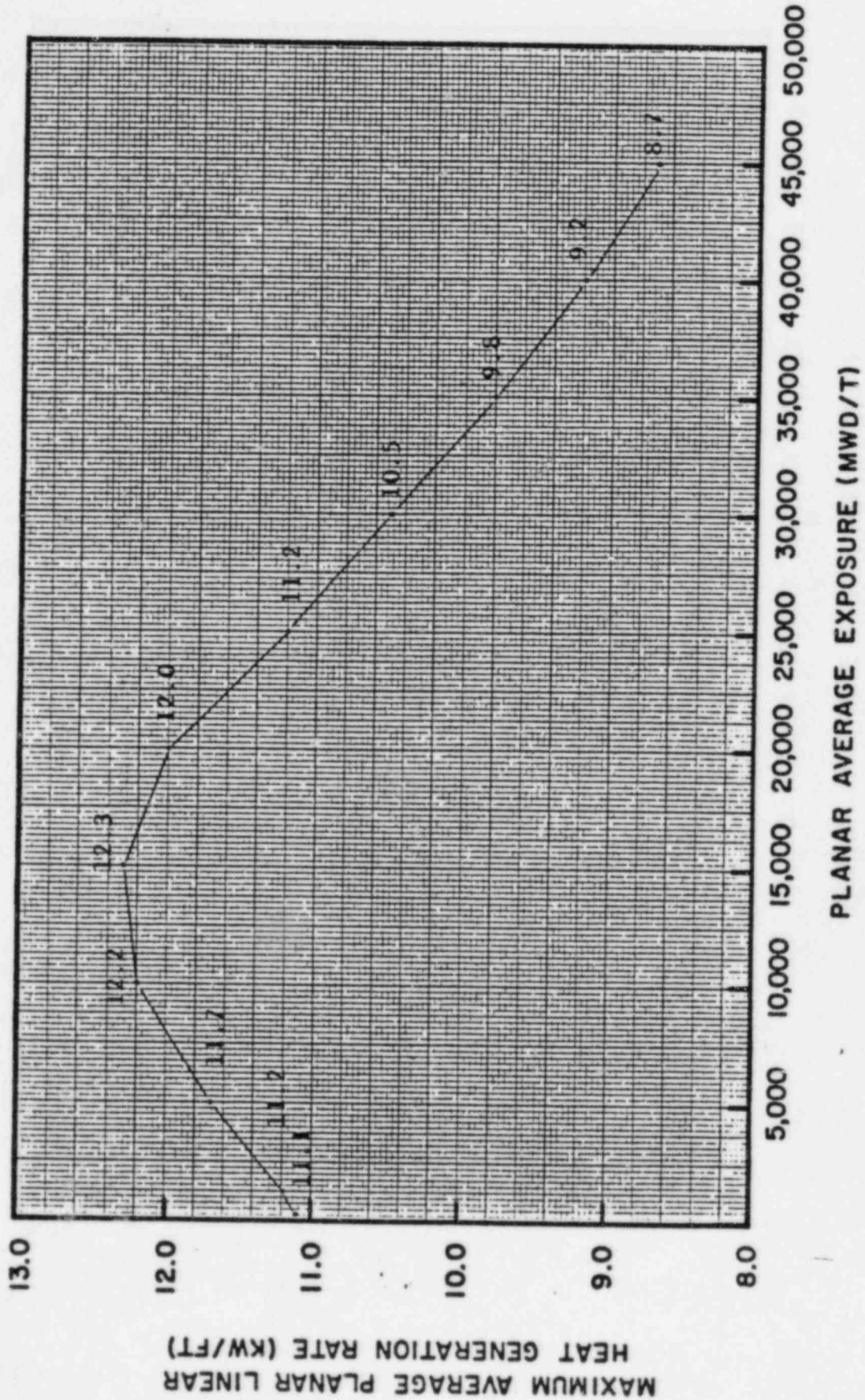


FIGURE 3.5.1.1. MAXIMUM AVERAGE PLANAR LINEAR HEAT GENERATION RATE VERSUS PLANAR AVERAGE EXPOSURE

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.
- B. The reactor core shall contain 185 cruciform-shaped control rods.

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.