



LICENSE AUTHORITY FILE COPY

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

December 28, 1979

B. Jones
DO NOT REMOVE

Posted

Am-54 to
DPR-29

Docket Nos. 50-254
and 50-237

Mr. D. Louis Peoples
Director of Nuclear Licensing
Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690

Dear Mr. Peoples:

The Commission has issued the enclosed Amendment No. 54 to Facility Operating License No. DPR-29 for the Quad Cities Nuclear Power Station, Unit No. 1 and Amendment No. 45 to Provisional Operating License No. DPR-19 for the Dresden Nuclear Power Station, Unit No. 2. These amendments are in response to your letter dated December 4, 1979 as supplemented December 20, 1979.

The amendments extend the MAPLHGR curves for improved 7x7 (7D230) and 7x7 mixed oxide fuel bundles to planar average exposure values of 40,000 MWD/t (short ton).

Your letter dated December 20, 1979 states that it is not your intent to exceed 40,000 MWD/t peak pellet exposure for any fuel type for any operating cycle. This constraint will apply before planar average exposure values of 40,000 MWD/t are approached.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:

1. Amendment No. 54 to DPR-29
2. Amendment No. 45 to DPR-19
3. Safety Evaluation
4. Notice

cc w/enclosures:
see next page

Mr. D. Louis Peoples
Commonwealth Edison Company

- 2 -

cc:

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Plant Superintendent
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Natural Resources Defense Council
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Moline, Illinois 61265

Illinois Department of Public Health
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Springfield, Illinois 62761

Mr. Marcel DeJaegher, Chairman
Rock Island County Board
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Rock Island County Court House
Rock Island, Illinois 61201

Director, Technical Assessment Division
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Agency
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

COMMONWEALTH EDISON COMPANY
AND
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-254

QUAD CITIES STATION UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54
License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated December 4, 1979 as supplemented December 20, 1979, 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 3.B of Facility Operating License No. DPR-29 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 54, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 28, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 54

FACILITY OPERATING LICENSE NO. DPR-29

DOCKET NO. 50-254

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages.

Remove

Figure 3.5-1, Sheet 2 of 3
Figure 3.5-1, Sheet 3 of 3

Insert

Figure 3.5-1, Sheet 2 of 3
Figure 3.5-1, Sheet 3 of 3

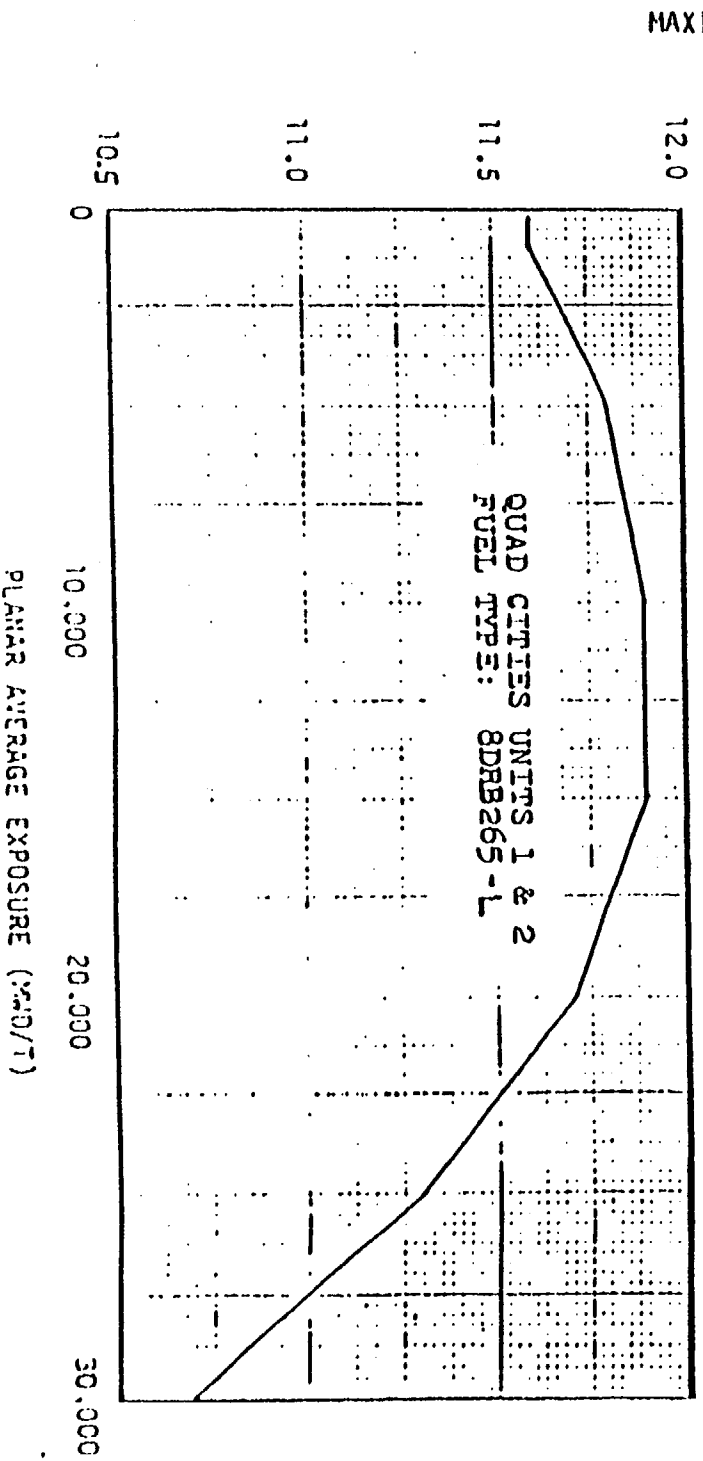
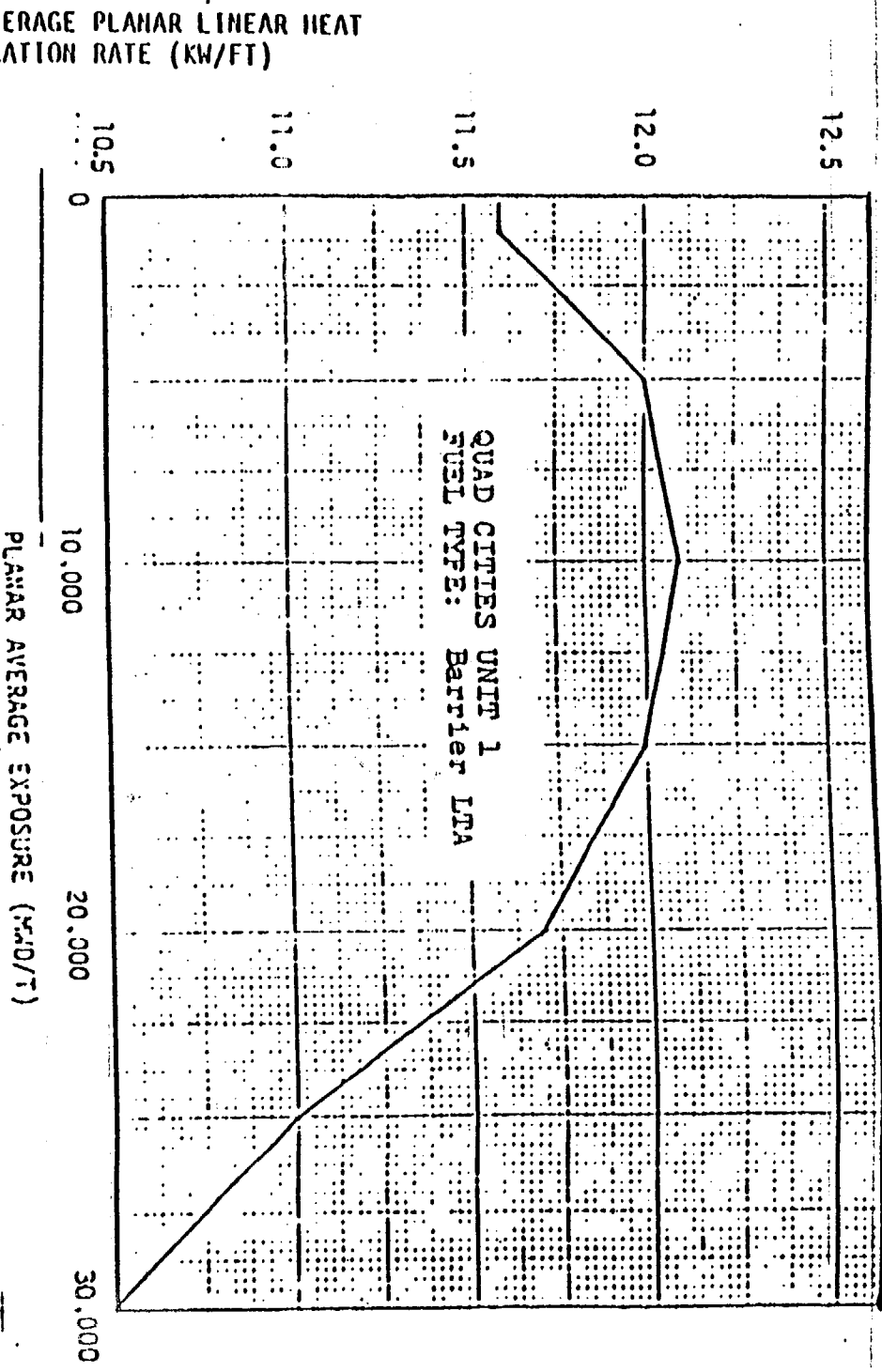


FIGURE 3.5-1
MAXIMUM AVERAGE PLANAR LINEAR HEAT GENERATION RATE (MAPLHGR) VS. PLANAR AVERAGE EXPOSURE
(Sheet 2 of 3)

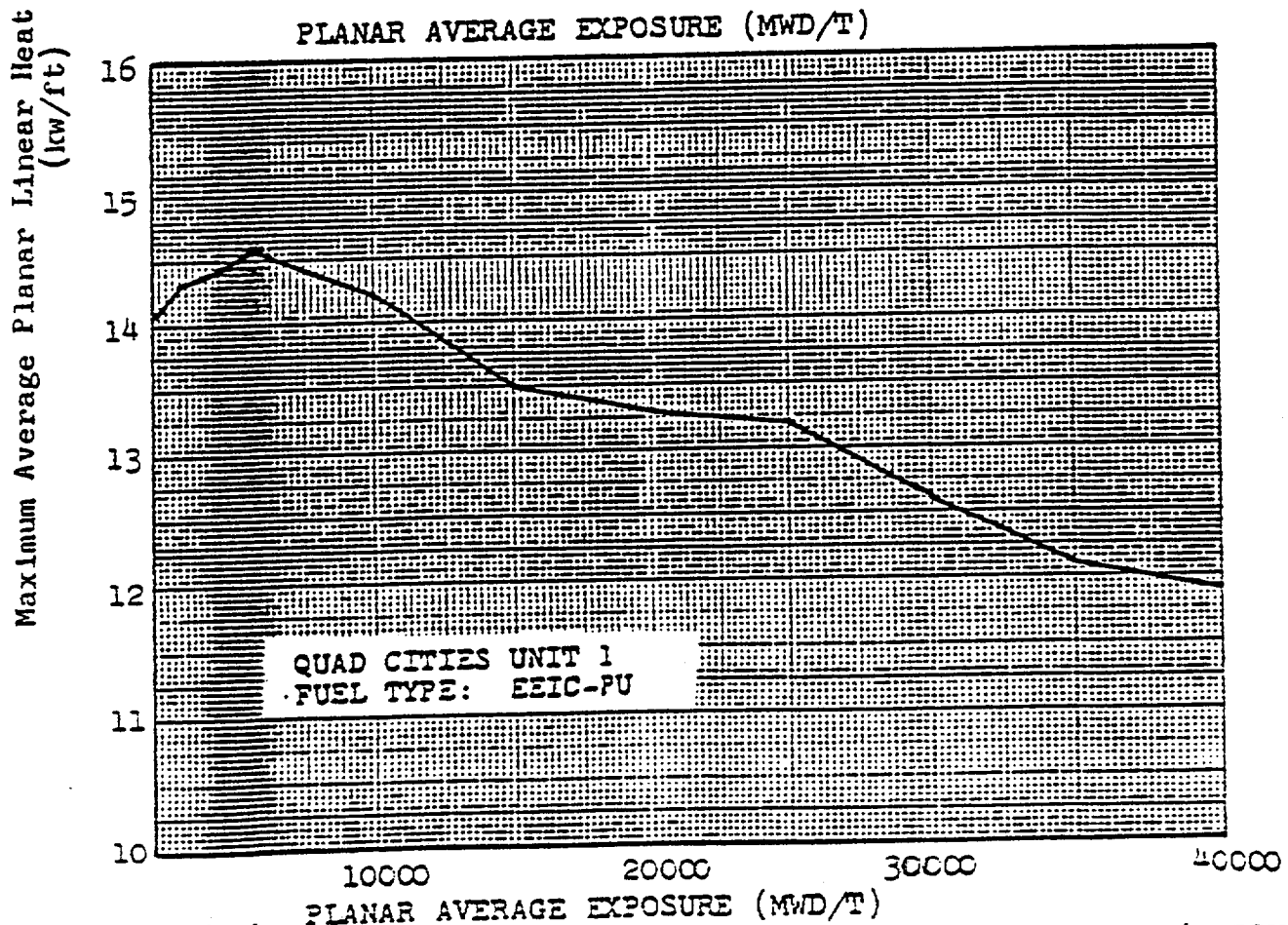
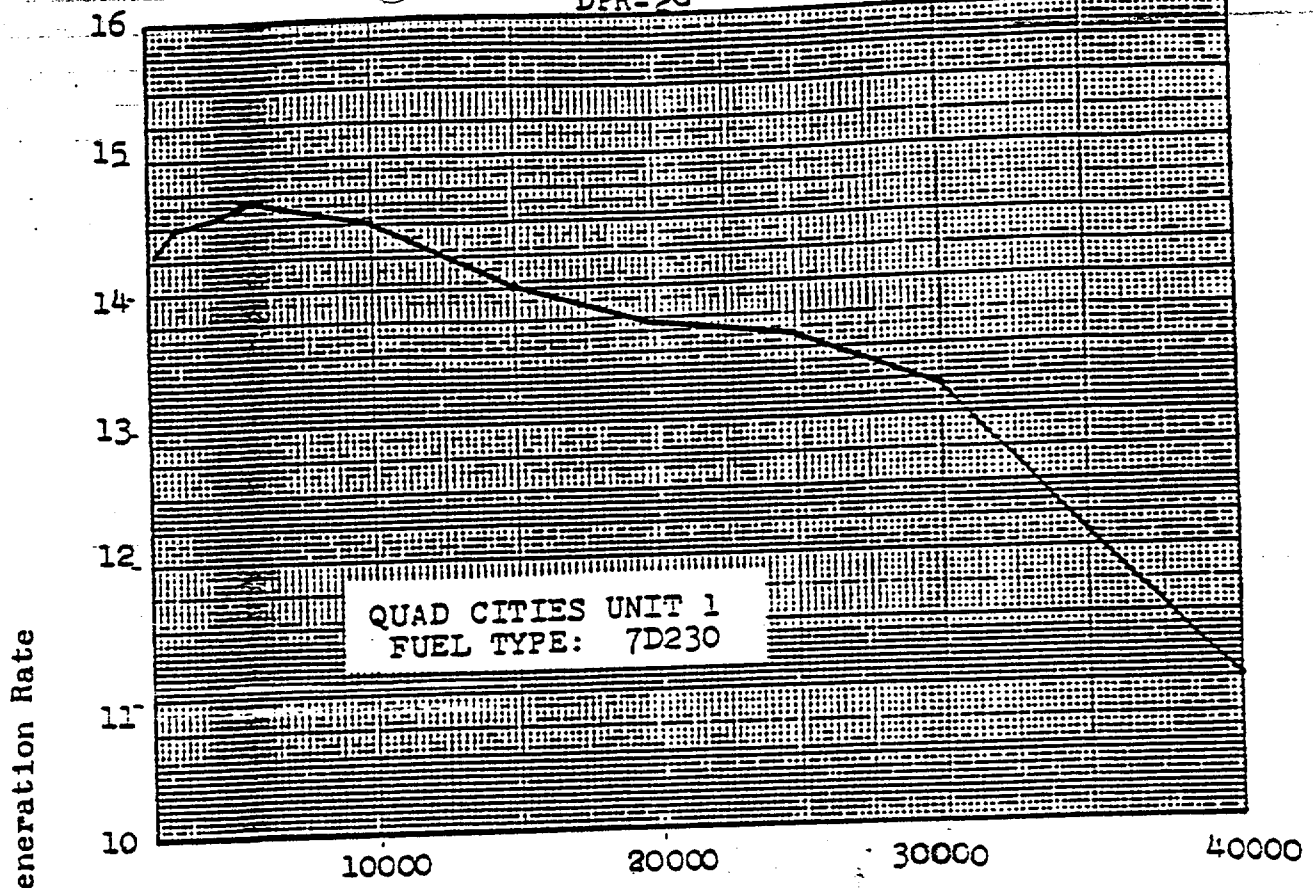


Figure 3.5-1 Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) vs Planar Average Exposure (Sheet 3 of 3)



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN STATION UNIT NO. 2

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 45
License No. DPR-19

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated December 4, 1979 as supplemented December 20, 1979, 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.

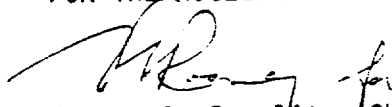
2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment, and paragraph 3.B. of Provisional Operating License No. DPR-19 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 45, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 28, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 45
PROVISIONAL OPERATING LICENSE NO. DPR-19
DOCKET NO. 50-237

Replace page 81C-1 of the Appendix "A" Technical Specifications with the enclosed page 81C-1.

Maximum Average Planar Linear Heat Generation Rate (kw/ft)

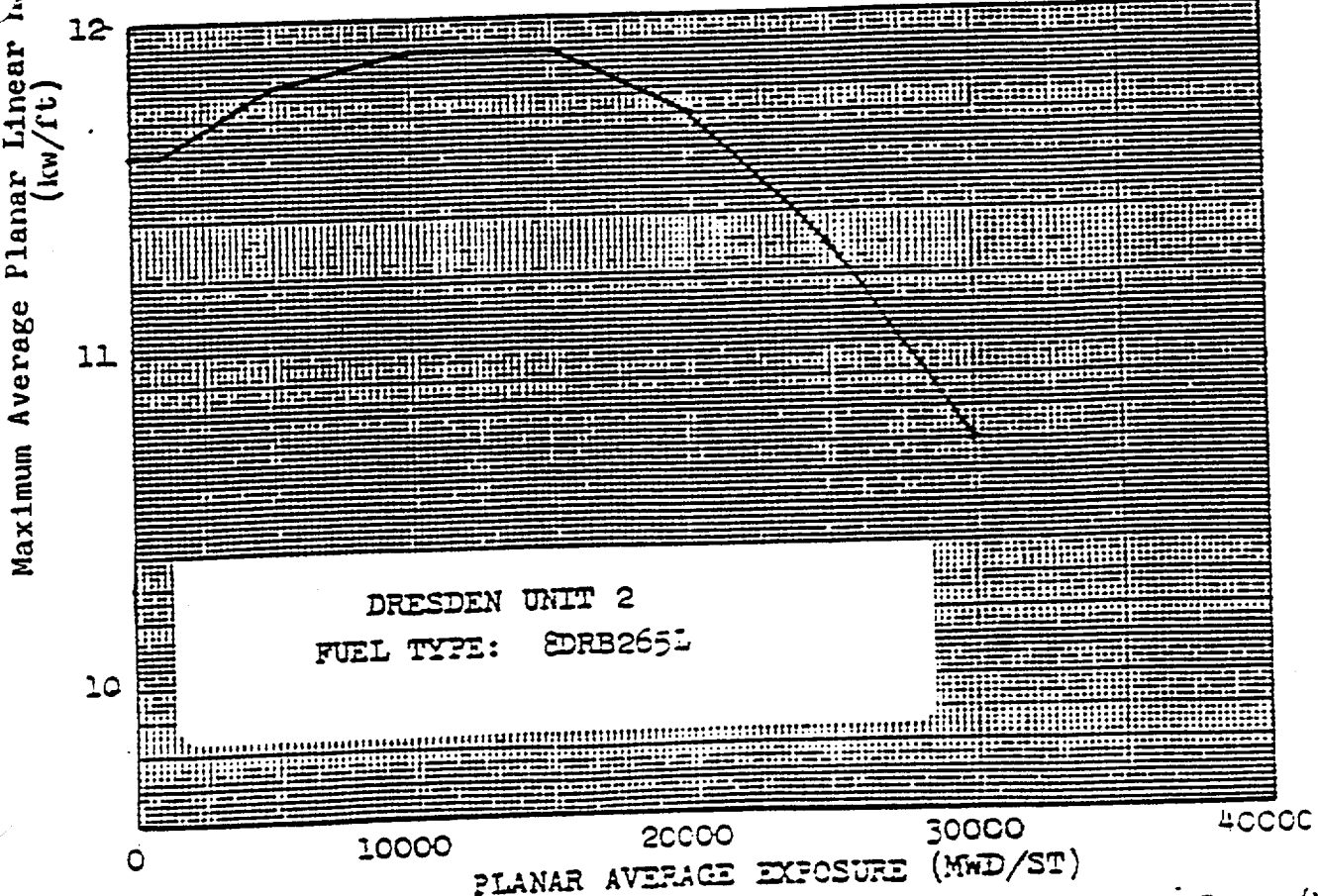
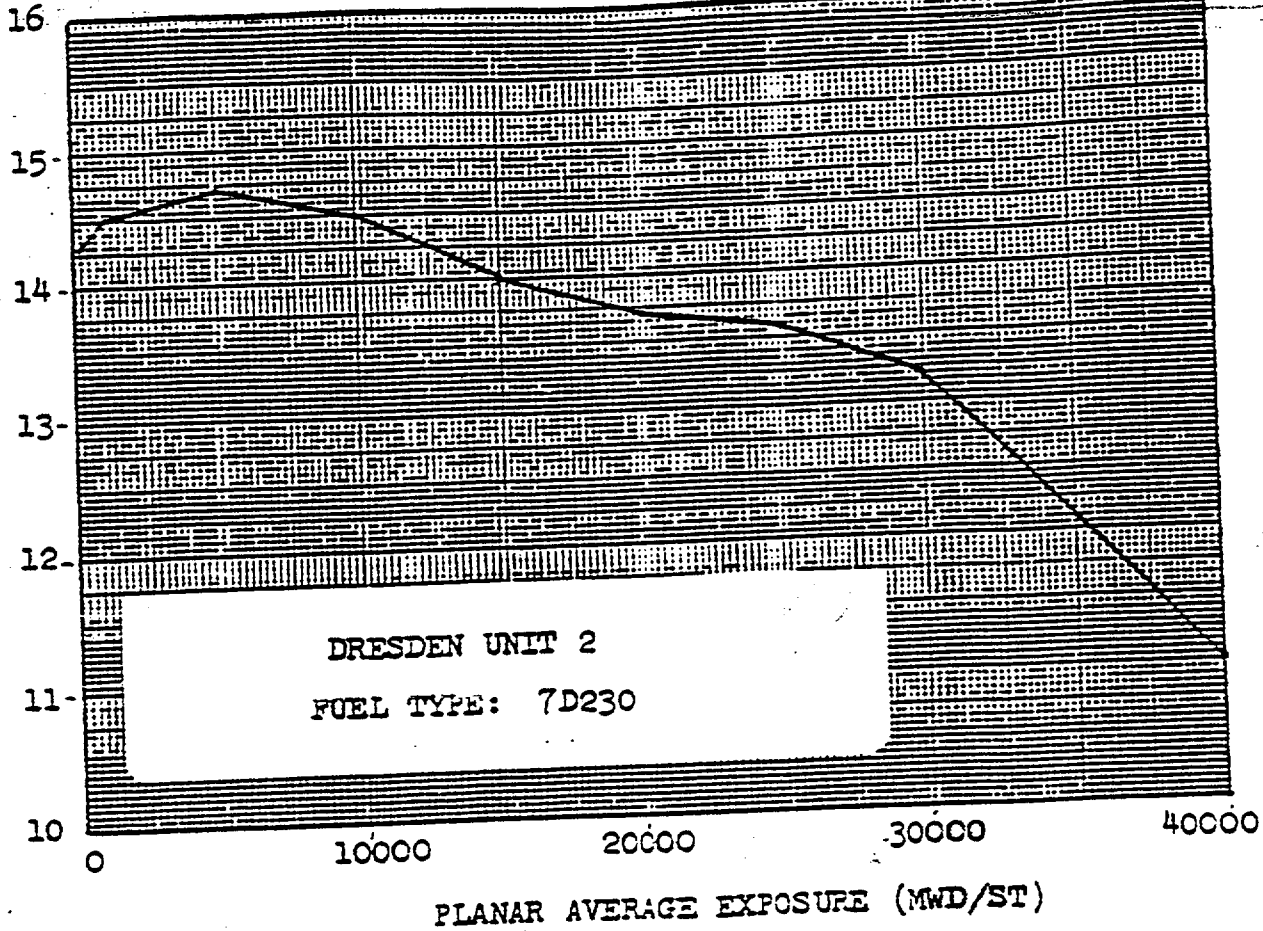


Figure 3.5.1-B Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) vs. Planar Average Exposure
Amendment No. 45
810-1



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 45 TO PROVISIONAL OPERATING LICENSE NO. DPR-19
AND AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. DPR-29

COMMONWEALTH EDISON COMPANY

DRESDEN NUCLEAR POWER STATION, UNIT NO. 2

QUAD CITIES NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NOS. 50-237 AND 50-254

Introduction

By letter dated December 4, 1979 (Reference 1), Commonwealth Edison Company, the licensee, proposed amendments to Appendix A, Technical Specifications, to Provisional Operating License No. DPR-19 for the Dresden Nuclear Power Station, Unit No. 2 and Facility Operating License No. DPR-29 for the Quad Cities Nuclear Power Station, Unit No. 1. The amendments would extend Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) curves to larger exposure values for improved 7x7 (7D230) and 7x7 mixed oxide fuel bundles.

Evaluation

The extension of the MAPLHGR curves by addenda to Reference 2 has been proposed by the licensee in Reference 1. The analysis methods for the MAPLHGR calculations of Reference 2 have been previously accepted by our letter of February 3, 1979 (Reference 3). The only change to Reference 2 from that previously accepted is to extend the range of exposure from 30,000 MWD/t (short ton) to 40,000 MWD/t for the 7D230 and the 7x7 mixed oxide bundles MAPLHGR curves.

In our review of this change we identified two areas which required additional information. One relates to the 1% plastic strain criterion of the Zircaloy fuel rod cladding as the safety limit below which fuel damage due to overstraining is not expected to occur. At extended exposures, i.e., beyond

40,000 MWD/t peak local exposure, this safety limit had not been calculated. The licensee has agreed with us that operation beyond this exposure is restricted and would require additional analyses (Reference 4). Also, the probability of a high exposure bundle achieving power levels which would challenge the 1% plastic strain criterion is extremely small. This probability is based on reactor operation vs. fuel exposure characteristics and the licensee documentation of operational margin of linear power density in Reference 4.

In addition, the licensee has confirmed by Reference 4 that because APLHGR for high burnup rods are generally only 80% to 90% of MAPLHGR limits, there are no significant effects of enhanced fission gas release at extended exposures. This confirmation is in agreement with our generic evaluation (Reference 5), thus assuring that the enhancement of fission gas release at extended exposures was adequately considered.

Enhanced fission gas release at extended exposures and the exposure restriction due to the 1% plastic strain limit are subjects of ongoing generic reviews. Although their treatment for the current application is acceptable, future generically related changes may be necessary. We have reviewed the extension of the MAPLHGR curves to 40,000 MWD/t average planar exposure and have found it to be acceptable.

Environmental Considerations

We have determined that these amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that these amendments involve an action which is insignificant from the standpoint of environmental impact, and pursuant to 10 CFR Section 51.5(d)(4) that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: December 28, 1979

References:

1. Letter from D. L. Peoples (Commonwealth Edison Co.), to the Director of Nuclear Reactor Regulation (USNRC), "Dresden Station Unit 2, Quad Cities Station Unit 1, Proposed Amendment to Appendix A, Technical Specifications, to Provisional Operating License DPR-19 and Facility Operating License No. DPR-29, NRC Docket Nos. 50-237 and 50-254," December 4, 1979.
2. "Loss-Of-Coolant Accident Analysis Report for Dresden Units 2, 3 and Quad Cities Units 1, 2 Nuclear Power Stations," NEDO-24146 A, April 1979.
3. Letter from T. A. Ippolito (USNRC) to C. Reed (CECo), February 3, 1979.
4. Letter from R. F. Janecek (CECo) to H. R. Denton (USNRC), December 20, 1979.
5. Memorandum from P. S. Check to A. Schwencer, et. al., "Enhanced Fission Gas Release," October 13, 1978.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-237 AND 50-254COMMONWEALTH EDISON COMPANY
ANDIOWA-ILLINOIS GAS AND ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 45 to Provisional Operating License No. DPR-19, issued to Commonwealth Edison Company, which revised the Technical Specifications for operation of the Dresden Nuclear Power Station, Unit No. 2, located in Grundy County, Illinois. The Commission has also issued Amendment No. 54 to Facility Operating License No. DPR-29, issued to Commonwealth Edison Company and Iowa-Illinois Gas and Electric Company, which revised the Technical Specifications for operation of the Quad-Cities Nuclear Power Station, Unit No. 1, located in Rock Island County, Illinois. The amendments become effective as of the date of issuance.

The amendments extend the MAPLHGR curves for improved 7x7 (7D230) and 7x7 mixed oxide fuel bundles to planar average exposure values of 40,000 MWD/t (short ton).

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

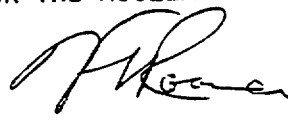
- 2 -

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of these amendments.

For further details with respect to this action, see (1) the application for amendment dated December 4, 1979, as supplemented December 20, 1979, (2) Amendment No. 45 to License No. DPR-19, and Amendment No. 54 to License No. DPR-29, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Morris Public Library, 604 Liberty Street, Morris, Illinois, for Dresden 2 and at the Moline Public Library, 504 - 17th Street, Moline, Illinois, for Quad Cities 1. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 28 day of December 1979.

FOR THE NUCLEAR REGULATORY COMMISSION



Vernon L. Rooney, Acting Chief
Operating Reactors Branch #3
Division of Operating Reactors