

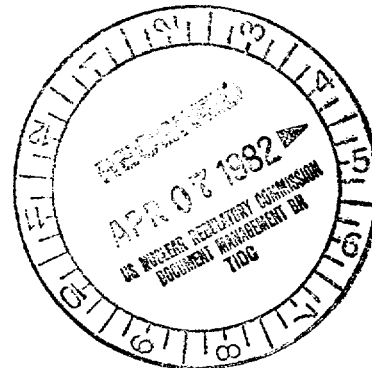
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Docket No. 50-298

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April 1, 1982

Mr. J. M. Pilant, Director
Licensing & Quality Assurance
Nebraska Public Power District
P. O. Box 499
Columbus, Nebraska 68601



Dear Mr. Pilant:

The Commission has issued the enclosed Amendment No. 78 to Facility Operating License No. DPR-46 for the Cooper Nuclear Station. This amendment consists of changes to the Technical Specifications in response to your application of December 31, 1981.

The amendment extends the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) limits for the 7x7 (types 2 and 3) and the 8x8 (types 8D250, 8D274L, P8DRB265L, 8DRB283, and P8DRB283) fuel assemblies for exposure values beyond the 30,000 megawatt days per short ton of uranium currently in the Technical Specifications to 40,000 megawatt days per short ton. The basis for this extension was provided in letters from R. E. Engel of General Electric to T. A. Ippolito of NRC dated May 6, 1981 and May 28, 1981 which were approved in a memorandum from L. S. Rubenstein (NRC) to T. M. Novak (NRC) dated June 25, 1981.

You will note that Tables S-3 and S-4 of 10 CFR 51.20 are based on an average fuel burnup of 33,000 MWD/metric ton for irradiated fuel from the reactor. Therefore, even though this amendment establishes MAPLHGR limits for fuel burnup out to 40,000 MWD/t, the average level of irradiation of the irradiated fuel from the reactor should not exceed 33,000 MWD/metric ton.

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

Sincerely,

Byron Siegel, Project Manager
Operating Reactors Branch #2
Division of Licensing

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P PDR

Enclosures:

1. Amendment No. 78 to DPR-46
2. Safety Evaluation
3. Notice

OFFICE	cc w/enc	osures: See next page	AD-OR:DL	OELD	
SURNAME	ORB#2:DL SNorris	ORB#2:DL BSiegel	C-ORB#2:DL DVassallo	Novak	
DATE	3/2/82	3/1/82	3/4/82	3/1/82	3/30/82

OFFICIAL RECORD COPY

Mr. J. M. Pilant
Nebraska Public Power District

cc:

Mr. G. D. Watson, General Counsel
Nebraska Public Power District
P. O. Box 499
Columbus, Nebraska 68601

Mr. Arthur C. Gehr, Attorney
Snell & Wilmer
3100 Valley Center
Phoenix, Arizona 85073

Cooper Nuclear Station
ATTN: Mr. L. Lessor
Station Superintendent
P. O. Box 98
Brownville, Nebraska 68321

Auburn Public Library
118 - 15th Street
Auburn, Nebraska 68305

Director
Nebraska Dept. of Environmental Control
P. O. Box 94877, State House Station
Lincoln, Nebraska 68509

Mr. William Siebert, Commissioner
Nemaha County Board of Commissioners
Nemaha County Courthouse
Auburn, Nebraska 68305

Mr. Dennis Dubois
USNRC
Resident Inspector
P. O. Box 218
Brownville, NE 68321

U. S. Environmental Protection Agency
Region VII Office
Regional Radiation Representative
324 East 11th Street
Kansas City, MO 64106

John T. Collins
Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



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

NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 78
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Nebraska Public Power District dated December 31, 1981 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-46 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 78, 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 its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "D. Vassallo".

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Dated: April 1, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 78

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

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

<u>Remove</u>	<u>Replace</u>
211	211
211a	211a
211b	211b
211c	--

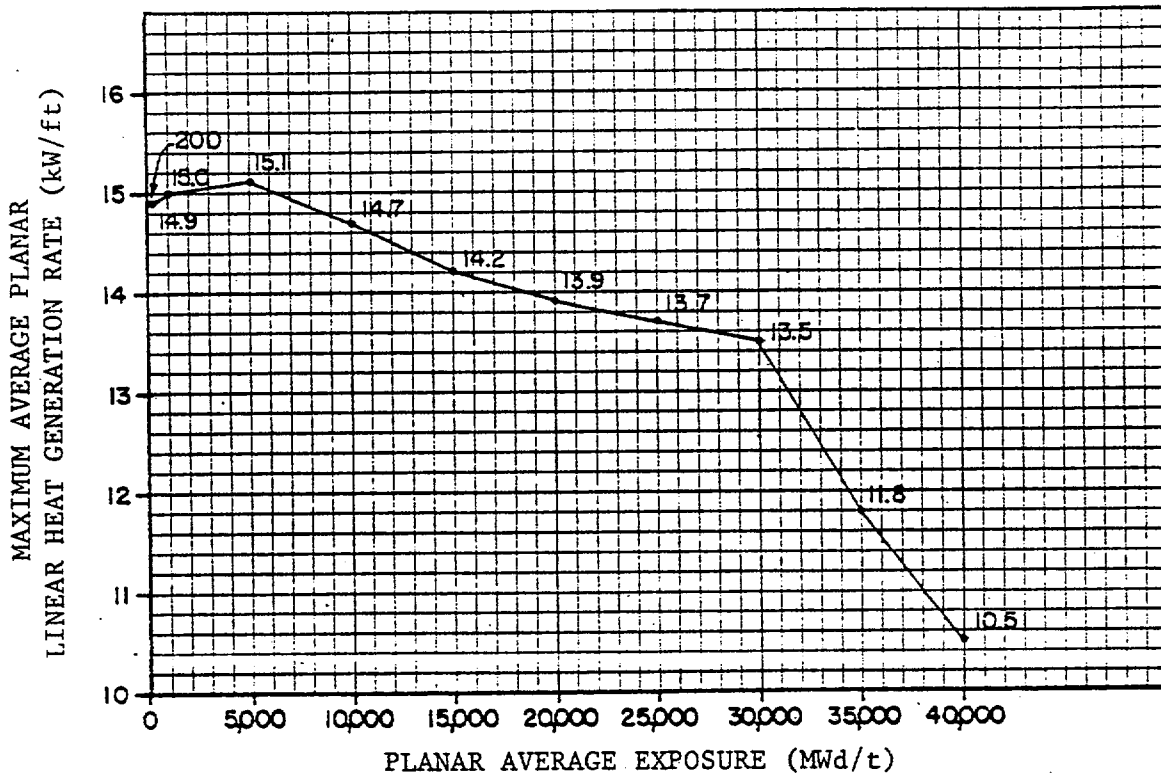


Figure 3.11-1.1 Maximum Average Planar Linear Heat Generation Rate versus Exposure with LPCI Modification and Bypass Flow Holes Plugged, Initial Core Fuel Type 3.

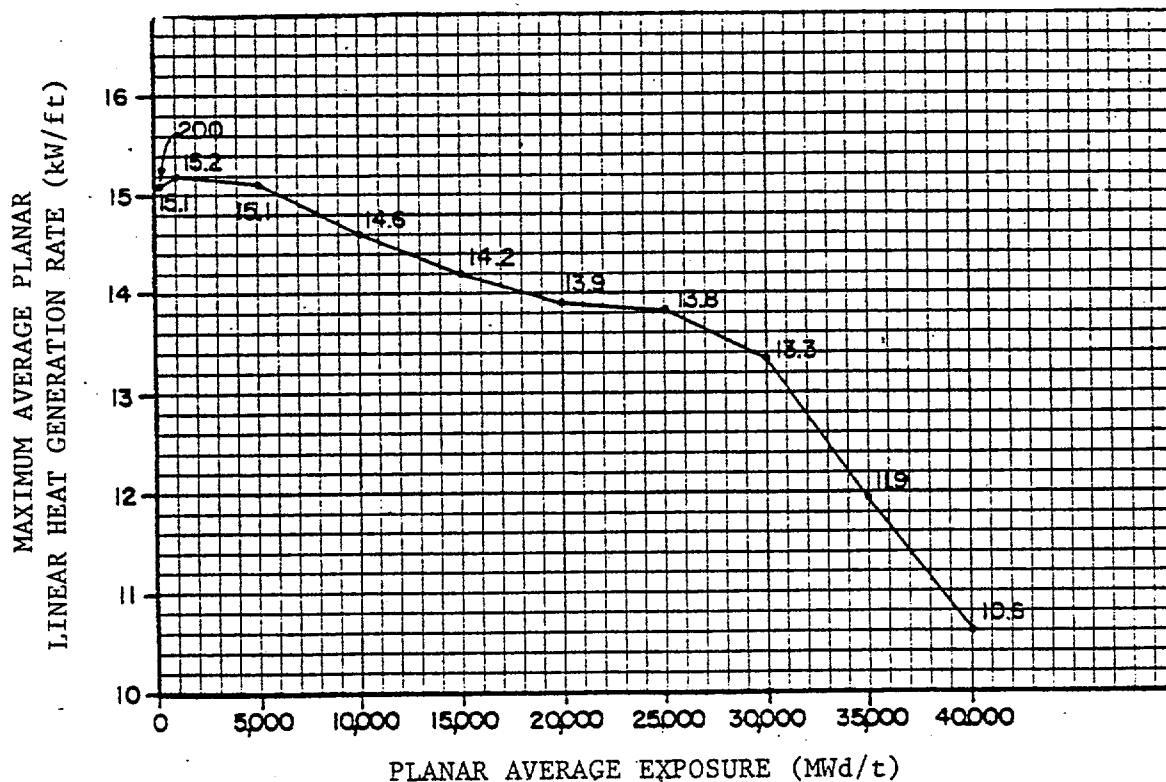


Figure 3.11-1.2 Maximum Average Planar Linear Heat Generation Rate versus Exposure with LPCI Modification and Bypass Holes Plugged, Initial Core Fuel Type 2.

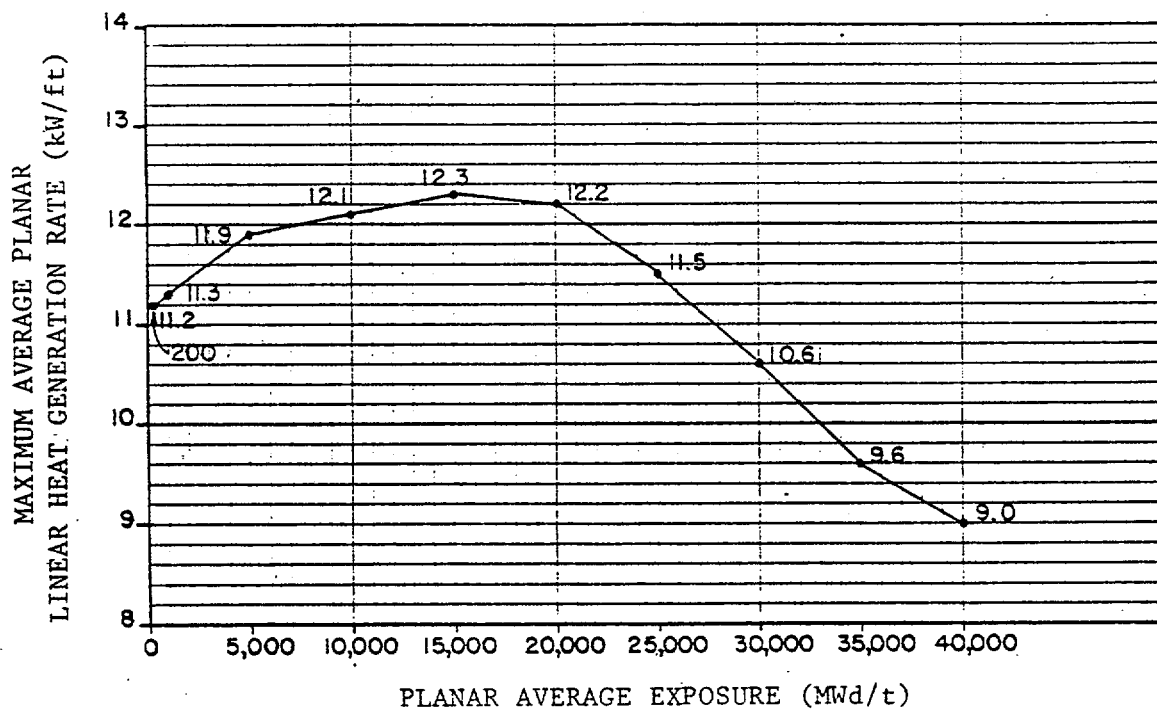


Figure 3.11-1.3 Maximum Average Planar Linear Heat Generation Rate versus Exposure with LPCI Modification and Bypass Flow Holes Plugged, 8D250 Fuel.

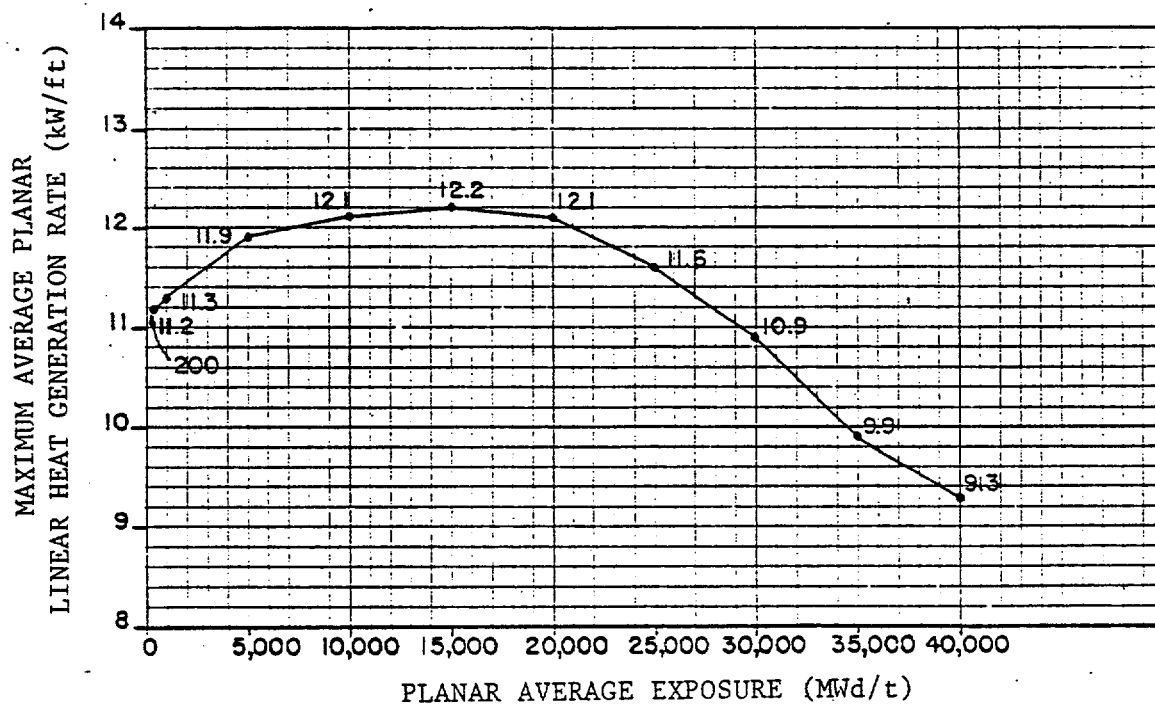


Figure 3.11-1.4 Maximum Average Planar Linear Heat Generation Rate versus exposure with LPCI Modification and Bypass Flow Holes Plugged, 8D274L Fuel.

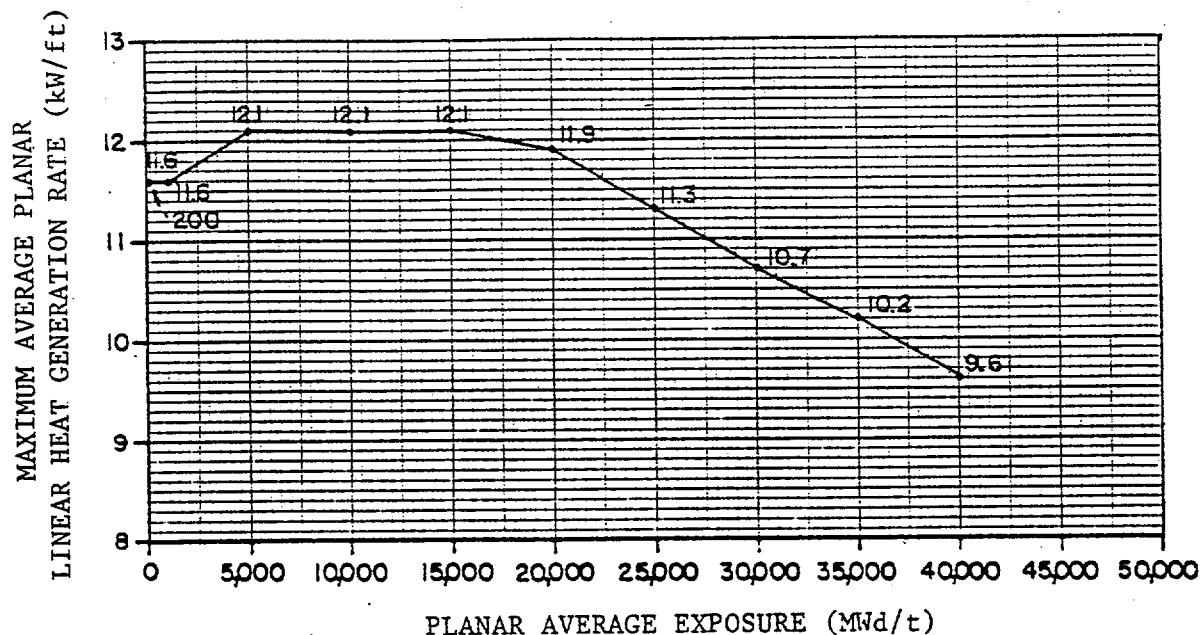


Figure 3.11-1.5 Maximum Average Planar Linear Heat Generation Rate versus Exposure with LPCI Modification and Bypass Flow Holes Plugged, P8DRB265L Fuel.

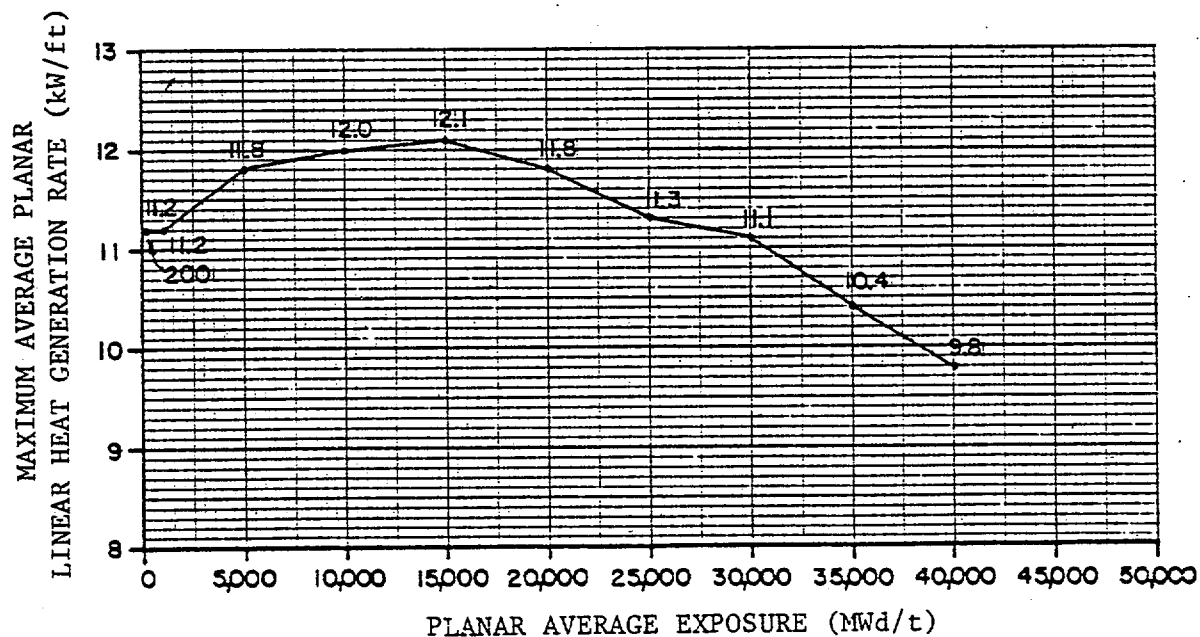


Figure 3.11-1.6 Maximum Average Planar Linear Heat Generation Rate versus Exposure with LPCI Modification and Bypass Flow Holes Plugged, 8DRB283 Fuel and P8DRB283 Fuel.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 78 TO LICENSE NO. DPR-46

NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

Author: Byron Siegel

1.0 INTRODUCTION

By letter dated December 31, 1981(1) Nebraska Public Power District (the licensee) requested an amendment to the Technical Specifications for the Cooper Nuclear Station. The effect of the amendment would be to extend the exposure range of the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) versus average planar exposure values for the 7x7 (types 2 and 3) and 8x8 (types 8D250, 8D274L, P8DRB265L, 8DRB283 and P8DRB283) fuel assemblies loaded in the core. The proposed extension would provide MAPLHGR limits for the fuel bundle types identified to an average planar exposure of 40,000 MWd/t which is 10,000 MWd/t beyond the current exposure range of 30,000 MWd/t in the Technical Specifications.

2.0 EVALUATION

For 7x7 (types 2 and 3) and 8x8 (types 8D250, 8D274L, P8DRB265L, 8DRB283 and P8DRB283) fuel types the licensee proposed to extend the burnup time from 30,000 to 40,000 MWd/t. The licensee has stated (Ref. 1) that they comply with General Electric letters (Refs. 2 and 3) for the MAPLHGR limits. Therefore, as stated in Ref. 4, we find the proposed extended exposure MAPLHGR limits for these fuel types acceptable. The licensee's proposed generic MAPLHGR curves for these fuel types, which reduce the need for future cycle dependent revisions, have been done with currently approved calculational methods and are in compliance with Refs. 2 and 3; therefore, we conclude these revised curves are acceptable.

ENVIRONMENTAL CONSIDERATIONS

In addition, the staff considered the proposed changes in the light of Tables S-3 and S-4 of 10 CFR Part 51, which addresses uranium fuel cycle and fuel transportation environmental impacts.

The assumed maximum average level of exposure of the irradiated fuel discharge from the reactor used in these analyses is 33,000 MWD/MTU (megawatt days per metric ton) which is equivalent to $\approx 29,000$ MWd/t (megawatt days per short ton). Although this amendment establishes MAPLHGR limits for fuel burnup out to 40,000 MWd/t, since this limit is based on the peak exposure of the most limiting node of the high burnup fuel assemblies in the core, this amendment

will not cause the average fuel burnup of 33,000 MWD/MTU ($\approx 29,000$ MWD/t) for the irradiated fuel from the reactor to be exceeded. This is because the peak node in any of the most highly exposed bundles is typically in the order of 20% greater than the average exposure of these bundles and these most highly exposed bundles are likely to have a 10% higher average exposure than the remainder of the bundles being discharged.

We have determined that this amendment does 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 this amendment involves 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 this amendment.

3.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: April 1, 1982

REFERENCES

1. Letter, J. M. Pilant (NPPD) to T. A. Ippolito (NRC), "Proposed Changes to Technical Specifications - MAPLHGR Curves", dated December 31, 1981.
2. Letter, R. E. Engel (GE) to T. A. Ippolito (NRC), "Extension of Emergency Core Cooling System Performance Limits", dated May 6, 1981.
3. Letter, R. E. Engel (GE) to T. A. Ippolito (NRC), "Additional Information Regarding Extension of Emergency Core Cooling System Performance Limits", dated May 28, 1981.
4. Memorandum, L. S. Rubenstein (NRC) to T. M. Novak (NRC), "Extension of General Electric Emergency Core Cooling System Performance Limits", dated June 25, 1981.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-298NEBRASKA PUBLIC POWER DISTRICTNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 78 to Facility Operating License No. DPR-46, issued to Nebraska Public Power District (the licensee), which revised the Technical Specifications for operation of the Cooper Nuclear Station, located in Nemaha County, Nebraska. The amendment is effective as of its date of issuance.

The amendment modifies the Technical Specifications to extend the Maximum Average Planar Linear Heat Generation Rate limits for the 7x7 (types 2 and 3) and the 8x8 (types 8D250, 8D274L, P8DRB265L, 8DRB283, and P8DRB283) fuel assemblies for exposure values beyond the 30,000 megawatt days per short ton of uranium currently in the Technical Specifications to 40,000 megawatt days per short ton.

The application for the amendment 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 amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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

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For further details with respect to this action, see (1) the application for amendment dated December 31, 1981, (2) Amendment No. 78 to License No. DPR-46, 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 Auburn Public Library, 118-15th Street, Auburn, Nebraska 68305. 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 Licensing.

Dated at Bethesda, Maryland this 1st day of April 1982.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing