

Docket No. 50-254

Mr. J. S. Abel
Director of Nuclear Licensing
Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690

Distribution:

Docket File

NRC PDR
Local PDR
ORB #2 Rdg
D. Eisenhut
S. Norris
R. Bevan
OELD
OI&E (4)
G. Deegan (4)
B. Scharf
J. Wetmore

ACRS (10)
OPA
R. Diggs
NSIC
TERA
ASLABP

May 13, 1981

Dear Mr. Abel:

The Commission has issued the enclosed Amendment No. 71 to Facility Operating License No. DPR-29 for Quad Cities Station Unit 1. The amendment is in response to your letter of November 13, 1980.

The amendment extends the MAPLHGR curve for a mixed oxide fuel bundle to 50,000 MWD/ST planar average exposure. This will enable the completion of a high burnup fuel experiment in the present core.

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

Sincerely,
Original Signed by
T. A. Ippolito

Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Enclosures:

1. Amendment No. 71 to Facility Operating License No. DPR-29
2. Safety Evaluation
3. Notice of Issuance

8105210 356

P

OFFICE	DL:ORB#2	DL:ORB#2	DL:ORB#2	DL:OR	OELD		
SURNAME	SNorris	RBevan:ms	TAIppolito	TMNovak	Goodard		
DATE	5/16/81	5/11/81	5/16/81	5/17/81	5/11/81		



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

Docket file

May 13, 1981

Docket No. 50-254

Mr. J. S. Abel
Director of Nuclear Licensing
Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690

Dear Mr. Abel:

The Commission has issued the enclosed Amendment No. 71 to Facility Operating License No. DPR-29 for Quad Cities Station Unit 1. The amendment is in response to your letter of November 13, 1980.

The amendment extends the MAPLHGR curve for a mixed oxide fuel bundle to 50,000 MWD/ST planar average exposure. This will enable the completion of a high burnup fuel experiment in the present core.

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

Sincerely,

A handwritten signature in cursive script, reading "Tom Ippolito", is written over the typed name.

Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Enclosures:

1. Amendment No. 71 to
Facility Operating License No. DPR-29
2. Safety Evaluation
3. Notice of Issuance

Mr. J. S. Abel
Commonwealth Edison Company

cc:

Mr. D. R. Stichnoth
President
Iowa-Illinois Gas and
Electric Company
206 East Second Avenue
Davenport, Iowa 52801

Mr. John W. Rowe
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza, 42nd Floor
Chicago, Illinois 60603

Mr. Nick Kalivianakas
Plant Superintendent
Quad Cities Nuclear Power Station
22710 - 206th Avenue - North
Cordova, Illinois 61242

Resident Inspector
U. S. Nuclear Regulatory Commission
22712 206th Avenue N.
Cordova, Illinois 61242

Moline Public Library
504 - 17th Street
Moline, Illinois 61265

Illinois Department of Nuclear Safety
1035 Outer Park Drive
5th Floor
Springfield, Illinois 62704

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

U. S. Environmental Protection Agency
Federal Activities Branch
Region V Office
ATTN: EIS COORDINATOR
230 South Dearborn Street
Chicago, Illinois 60604

Susan N. Sekuler
Assistant Attorney General
Environmental Control Division
188 W. Randolph Street
Suite 2315
Chicago, Illinois 60601



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 NUCLEAR POWER STATION UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 71
License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated November 13, 1980, 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 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. 71, 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 #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 13, 1981

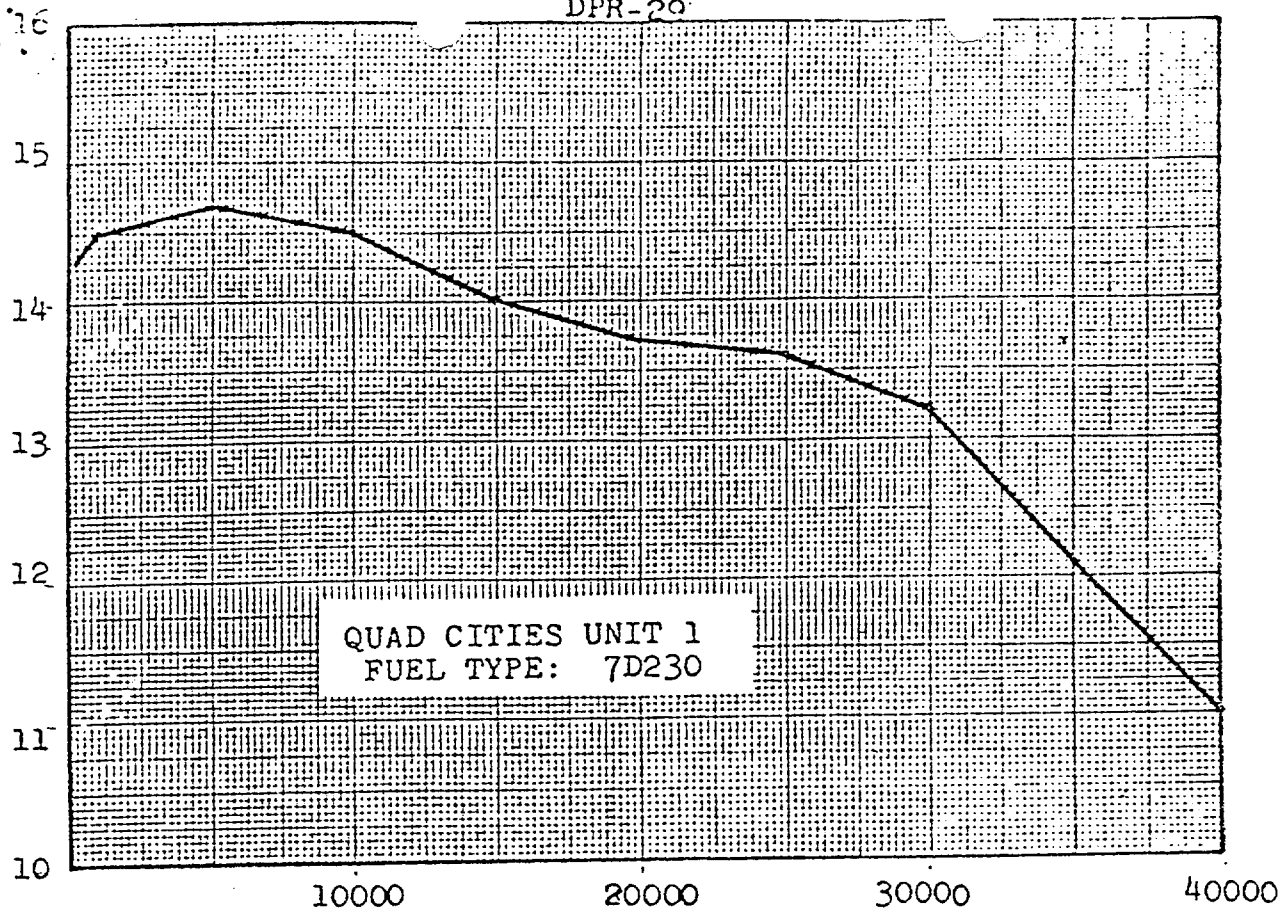
ATTACHMENT TO LICENSE AMENDMENT NO. 71

FACILITY OPERATING LICENSE NO. DPR-29

DOCKET NO. 50-254

Remove Figure 3.5-1 - Sheet 3 of 6 and insert revised Figure 3.5-1 - Sheet 3 of 6.

Maximum Average Planar Linear Heat Generation Rate



PLANAR AVERAGE EXPOSURE (MWD/T)

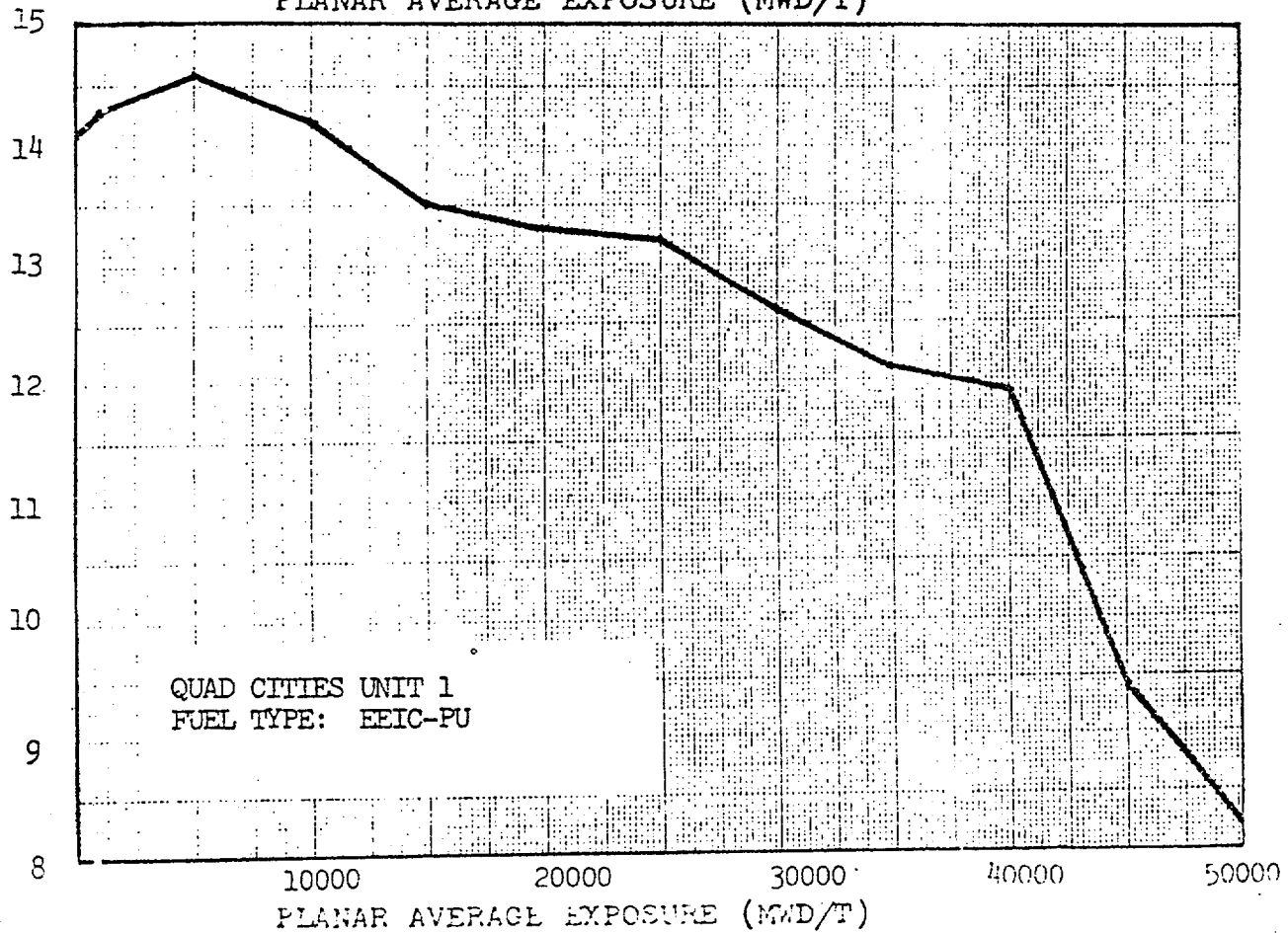


Figure 3.5-1 Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) vs. Planar Average Exposure (Sheet 3 of 6)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 71 TO FACILITY OPERATING LICENSE NO. DPR-29
COMMONWEALTH EDISON COMPANY
AND
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY
QUAD CITIES NUCLEAR POWER STATION, UNIT NO. 1
DOCKET NO. 50-254

Introduction

By letter dated November 13, 1980, CECO (the licensee) proposed to amend the Technical Specifications for Quad Cities Unit 1 to allow extended burnup of an experimental mixed oxide fuel assembly. The assembly is one of five such assemblies loaded into the core in operating Cycle 2 in 1974. Three of the five have since been removed. The fifth is a low burnup assembly presently located in a peripheral position in the core.

Discussion and Evaluation

The experimental high burnup mixed oxide assembly presently in the core is part of an ongoing General Electric (GE) extended burnup Advanced Fuel Test Bundle (AFTB) program. The Quad Cities 1 participation in this program is described in NEDO-24855. For one experimental test assembly still remaining in the present cycle, an extended exposure MAPLHGR curve will be needed prior to reaching a core average exposure of 4,000 MWD/ST into the present cycle. The MAPLHGR curve out to 50,000 MWD/ST for the experimental bundle has been submitted, and a revised page of the current LOCA analysis report (NEDO-24146/24146A) showing peak clad temperatures and oxidation fraction out to 50,000 MWD/ST has been provided with the submittal. Also provided is a supplement to NEDO-24855 which addresses margin to the 1% plastic strain limit for the mixed oxide fuel out to 50,000 MWD/ST.

Although the MAPLHGR curve for the experimental fuel must be extended to beyond 40,000 MWD/ST planar average exposure, burnup in that higher range has already been considered generically (Ref. 1), and has been approved by the staff (Ref. 2). It should be noted that only two experimental fuel assemblies are involved, only one of which will burn beyond 40,000 MWD/ST this cycle. This program is yielding significant experimental results regarding fuel behavior. The vendor and licensee have provided adequate documentation. On the basis of the foregoing considerations, the proposed changes are acceptable.

8105210358

P

Environmental Consideration

We have determined that the 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 the 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.

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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: May 13, 1981

References

- 1) R. E. Engel (GE) letter to T. A. Ippolito (NRC) dated July 21, 1980, proposed changes to NEDE-24011-P-A-1.
- 2) R. L. Tedesco (NRC) letter to R. E. Engel (GE) dated November 7, 1980.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-254COMMONWEALTH EDISON COMPANYANDIOWA-ILLINOIS GAS AND ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 71 to Facility Operating License 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 amendment becomes effective as of the date of issuance.

The amendment extends the MAPLHGR curve for a mixed oxide fuel bundle to 50,000 MWD/ST planar average exposure. This will enable the completion of a high burnup fuel experiment in the present core.

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 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 the amendment.

8105210359

P

For further details with respect to this action, see (1) the application for amendment dated November 13, 1980, (2) Amendment No. 71 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, NW., Washington, D. C., and at the Moline Public Library, 504 - 17th Street, Moline, Illinois, for Quad Cities Unit No. 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 Licensing.

Dated at Bethesda, Maryland, this 13th day of May 1981.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing