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Docket No. 50-244

Mr. Leon D. White, Jr.
Vice President
Electric and Steam Production
Rochester Gas and Electric Corporation
89 East Avenue
Rochester, New York 14649

APR 15 1980

Dear Mr. White:

The Commission has issued the enclosed Amendment No. 32 to Provisional Operating License No. DPR-18 for the R. E. Ginna Nuclear Power Station. This amendment completes our response to your application dated December 14, 1979 (transmitted by your letter dated December 20, 1979), as supplemented February 20, 1980 and March 5, 1980.

The amendment authorizes Rochester Gas and Electric Corporation to possess and use four (4) mixed oxide fuel assemblies.

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

Sincerely,

for
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:
1. Amendment No. 32 to License No. DPR-18
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

Noticed Objection to Form of Notice & Amendment. Staff Safety and Environmental judgements not reviewed/approved by OELD.

4/14/80

subject to changes provided on the SE, 4/15

	DOR:ORB #2	DOR:ORB #2	OELD	DOR:ORB #2	DOR:A/AD/SEP	
	HXmtt:acc/ah	JJShea	KETCHEN	DLZiemann	RVollmer	
DATE ▶	4/14/80	4/14/80	4/15/80	4/15/80	4/15/80	

NRC FORM 318 (9-76) NRCM 0240 ☆U.S. GOVERNMENT PRINTING OFFICE: 1979-289-369

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

April 15, 1980

Docket No. 50-244

Mr. Leon D. White, Jr.
Vice President
Electric and Steam Production
Rochester Gas and Electric Corporation
89 East Avenue
Rochester, New York 14649

Dear Mr. White:

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Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

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cc w/enclosures:
See next page

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** (State Official with copy of incoming)
(12/20/79-application)

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

ROCHESTER GAS AND ELECTRIC CORPORATION

DOCKET NO. 50-244

R. E. GINNA NUCLEAR POWER PLANT

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 32
License No. DPR-18

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Rochester Gas and Electric Company (the licensee) dated December 14, 1979 (transmitted by letter dated December 20, 1979), as supplemented February 20, 1980 and March 5, 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 by adding a new paragraph 2.B(2)(b) and changing paragraph 2.C(2) of Provisional Operating License No. DPR-18 to read as follows:

   2.B(2)(b) Pursuant to the Act and 10 CFR Part 70, to possess and use four (4) mixed oxide fuel assemblies in accordance with the licensee's application dated December 14, 1979 (transmitted by letter dated December 20, 1979), as supplemented February 20, 1980 and March 5, 1980.

   2.C(2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 32, 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

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 15, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 32

PROVISIONAL OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

Revise Apendix A Technical Specifications by removing the page identified below and inserting the enclosed page. The revised page contains the captioned amendment number and a vertical line which indicates the area of change.

REMOVE	INSERT
5.3-1	5.3-1

5.3 Reactor Design Features

5.3.1 Reactor Core

a. The reactor core contains approximately 48 metric tons of uranium in the form of slightly enriched uranium dioxide pellets. The pellets are encapsulated in Zircaloy 4 tubing to form fuel rods. The reactor core is made up of 121 fuel assemblies. Each fuel assembly contains 179 fuel rods.(1)

b. The average enrichment of the initial core is a nominal 2.90 weight per cent of U-235. Three fuel enrichments are used in the initial core. The highest enrichment is a nominal 3.48 weight per cent of U-235.(2)

c. Reload fuel shall be similar in design to the initial core. The enrichment of reload fuel will be no more than 3.5 weight per cent of U-235 or its equivalent in terms of reactivity.

d. Burnable poison rods are incorporated in the initial core. There are 528 poison rods in the form of 8 and 12-rod clusters, which are located in vacant rod cluster control guide tubes.(3) The burnable poison rods consist of borated pyrex glass clad with stainless steel.(4)

e. There are 29 full-length RCC assemblies and 4 partial-length RCC assemblies in the reactor core. The full-

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 32 TO PROVISIONAL OPERATING LICENSE NO. DPR-18

ROCHESTER GAS AND ELECTRIC CORPORATION

R. E. GINNA NUCLEAR POWER PLANT

DOCKET NO. 50-244

1.0 INTRODUCTION

By application (Reference 2) dated December 14, 1979 (transmitted by letter dated December 20, 1979), Rochester Gas and Electric Corporation (RG&E) (the licensee) requested an amendment to License No. DPR-18 for the R. E. Ginna Nuclear Power Plant to allow plant operation with four plutonium mixed oxide (MOX) fuel assemblies. By letters (Reference 6) dated February 20, 1980, and March 5, 1980, RG&E provided additional information responsive to our questions.

The staff has previously evaluated generically the ability of nuclear reactors to operate with MOX fuel in excess of the four bundles now being considered for Ginna. After discussions with and reviewing submittals from the domestic nuclear fuel manufacturers, the staff issued its findings in Chapter IV, Section C-3 of NUREG-0002 (Reference 1). This section adequately discusses the differences in nuclear and material properties of MOX and UO_2 fuel and the impact of these differences on reactor safety. These generic differences will not be included in this safety evaluation for Cycle 10 operation with four MOX fuel assemblies, since these generic differences are not significant with respect to the proposed amendment to use four (4) MOX fuel assemblies. Our evaluation concerns the specific effects on reactor safety of loading four MOX assemblies and 32 new UO_2 assemblies in Ginna core beginning with Cycle 10 operation.

MOX fuel has been irradiated in other U. S. light water reactors. This experience up to 1975 is discussed in Reference 1. The experience of Exxon and Westinghouse with MOX fuel is given in Tables 1 and 2 (attached).

2.0 EVALUATION

2.1 Fuel Design

A description of the fuel to be irradiated during Cycle 10 in Ginna is provided in Table 3.1 of Reference 2. The mechanical design of the fuel assemblies containing the MOX fuel is similar to fuel already irradiated

at Ginna (designated Region 7). No problems have occurred with this fuel batch except for excessive fuel rod bowing. Westinghouse, the manufacturer of the Region 7 fuel and the 4 MOX fuel assemblies, in discussions with the staff, stated that this was traced back to the cladding material used for the Region 7. The licensee has stated that none of this material was used for the MOX fuel rod cladding.

Based on previous operating experience of Westinghouse 14x14 fuel, and specifically with the Region 7 fuel irradiated in Ginna, we anticipate no problems with the use of four MOX fuel assemblies.

The licensee, in Reference 2, notes that the densification of Westinghouse MOX fuel is less than or equal to that of UO_2. An Electric Power Research Institute (EPRI) Study (Reference 3) showed that, in general, the behavior of MOX fuel is comparable with that of UO_2 fuel, i.e., PuO_2 additions to UO_2 typical of plutonium recycle fuels do not create any limitations on performance in terms of densification.

Also, like UO_2 fuels, it was demonstrated in this EPRI Study that stability towards densification of the MOX fuel types studied is related to microstructural characteristics, i.e., grain size, pore size, and volume percent of submicron porosity.

The licensee has presented data (Reference 6) which indicate that MOX fuel manufactured by Westinghouse does not densify any differently from UO_2 fuel manufactured by Westinghouse. This conclusion is important in justifying the use of the standard Westinghouse densification model for LOCA analyses and other postulated accident analyses.

Data from MOX fuel irradiated in San Onofre, Saxton and Beznau were compared with the data base for UO_2 fuel given in WCAP 8218 (Reference 4) to show that no difference in densification would be expected.

2.2 Nuclear Design and Safety Analysis

Because only four MOX fuel bundles are to be included in the Cycle 10 reloading, and these four assemblies will be located symmetrically at the core periphery, the effect on the core properties will be minimal. The values of the kinetics parameters for Cycle 10 and a calculation of shutdown margin are reported in Reference 2.

Cycle 10 with MOX fuel has slightly lower control rod worths and shutdown margin than without MOX. The licensee reports that the differences are less than approximately 0.5% $\Delta k/k$.

According to Reference 1, the uncertainty associated with the calculation of local power peaking in MOX fuel may be greater than that currently used for UO_2 fuel. This effect was not considered by the licensee since the MOX fuel bundles will be in the periphery of the core at a power level below the core average. We understand that the current plan for the next cycle is to continue to keep these bundles below the core average power. However, after the second cycle these MOX assemblies might be placed in core positions where the bundle power will be greater than core average. To assure that the power is being adequately calculated for the MOX assemblies, the licensee will compare the measured and predicted powers in the instrumented MOX assemblies with the measured and predicted powers in adjacent UO_2 assemblies. The data will be reported to the NRC at each refueling outage following Cycle 10.

Exxon Nuclear Company performed the physics calculations for expected Cycle 10 core configuration. Comparisons of Exxon calculational methods for MOX fuel with data are given in Reference 5. In particular, Tables 4.2-1 and 4.2-2, 4.2-3 and 4.2-4 give comparisons with critical experiments which contained UO_2 rods and PuO_2 rods. These comparisons are an indication of the ability of Exxon's physics methods to calculate power distributions and related quantities such as neutron multiplication factors and buckling. In general, the comparison is good.

For Cycle 10, because of the addition of the four MOX assemblies, the reactivity worth of the boric acid will slightly decrease and the BOC delayed neutron fraction will slightly decrease so that the values assumed for safety analyses for the postulated accidents listed below in Table 3 were reevaluated. These accidents are the most limiting with respect to the above two parameters. The results of the analyses show that the applicable safety criteria for each event were met. The reference analyses for Cycle 10 are given in References 8 and 9.

TABLE 3

Steam Line Break (Large and Small)

Fast Rod Withdrawal

Rod Ejection

Although boron worth decreases, the safety criterion for the steam line break will still be met since the minimum Departure from Nucleate Boiling Ratio (DNBR) of the reference analysis is above the safety limit of 1.3 and the change in the delayed neutron fraction (β) from the reference analysis would result in only a slight increase in fuel rod power and a negligible change in DNBR.

A recalculation of the Rod Ejection Accident showed that the maximum total peaking factor (F_Q) after ejection was less than that for the reference cycle.

The LOCA analysis was not redone for Cycle 10. The licensee stated (Reference 6) that the volumetric average temperature (stored energy) for the MOX fuel (at the same power and burnup) will be lower than for UO_2 fuel. The staff has performed an independent calculation to verify this result. Our calculations show only a slight difference between the volumetric average temperature calculated with MOX fuel at 3.1% PuO_2 and UO_2 fuel with U-235 enrichment of 3.45% (the enrichment of the Region 12 fuel). The calculated UO_2 volumetric average temperature is slightly higher. These calculations utilized the NRC code GAPCON THERMAL-2. Densification and fuel relocation were both considered. The confirmatory NRC calculations were done for a peak power fuel rod and a fuel rod at slightly above the average core power to a burnup of 5000 MWd/MTU to account for densification effects. The flux depression for the MOX fuel was based on calculations done for the EPRI densification study (Reference 3). It is noted that although the MOX fuel has a lower thermal conductivity than the UO_2, more of the heat is generated in the outside area of the fuel pellet and less at the center due to the neutron flux depression in the MOX fuel rod interior.

As part of the calculation of F_Q, the licensee must include the effects of fuel rod bowing. As a fuel rod bows, the local moderation will increase and may result in power peaking. In Reference 7, Westinghouse presents calculations which show that this effect can be adequately accounted for within the existing uncertainty allowance. However, this calculation was for UO_2 fuel only. The MOX fuel bundles, like all the Westinghouse fuel used in Ginna, is HIPAR, meaning that the reactor cluster control guide tubes are stainless steel. Westinghouse has previously presented data to the staff to show that the amount of fuel rod bowing in HIPAR fuel is negligible. Therefore, the effect of any power peaking due to fuel rod bowing in the MOX fuel assemblies will be negligible.

3.0 SUMMARY

The addition of four MOX fuel assemblies results in negligible changes to the Ginna Cycle 10 core. The licensee has taken the differences in fuel material properties into account in evaluating Cycle 10 performance. The fuel bundles are identical in design to Westinghouse fuel bundles previously irradiated satisfactorily at Ginna. Two parameters, the boron worth and the delayed neutron fraction are outside of the range of values used for previous accident analyses. The licensee reevaluated the most limiting postulated accidents for which these parameters have a significant effect and concluded that the applicable safety criteria are still met.

Based on the above, we have concluded that the Ginna reactor can be operated safely during Cycle 10 operation with four MOX fuel assemblies. However, the licensee must determine the nuclear uncertainty on power peaking for the MOX fuel rods before operation for future cycles. This uncertainty, after review and approval by the staff, should be applied to the MOX fuel assembly irradiation beyond Cycle 10.

4.0 COMMISSION POLICY - MOX FUEL

The proposed action to amend the Provisional Operating License No. DPR-18 for Ginna is consistent with the Commission's Memorandum of Decision, dated May 8, 1978, (In the Matter of Mixed Oxide Fuel, CLI-78-10, 7 NRC 711 (1978))[1/], and the Commission's Order of December 23, 1977, concerning its proceeding on the Generic Environmental Statement on Mixed Oxide Fuel (GESMO) and matters related to reprocessing and the recycling of uranium and plutonium in mixed oxide fuel. 42 FR 65334 (December 30, 1977); CLI-77-33, 6 NRC 861. The proposed action is consistent with the Commission's policy on the use of MOX fuel in that the proposed use of the four MOX assemblies in the Ginna reactor involves the use of a small quantity of MOX fuel for experimental, demonstration, and feasibility purposes on a noncommercial basis. The proposed use does not involve wide-scale commercial reprocessing.

Our conclusion is based on the following factors. The proposed action to use four MOX fuel assemblies involves the use of less than 50 kg of plutonium. Rochester Gas and Electric does not presently have other contracts in existence for the purchase of MOX fuel. Nor does it now plan to use MOX fuel in the future in addition to these four MOX assemblies. As stated in the application submitted by Rochester Gas and Electric, the proposed insertion of the MOX fuel into the Ginna reactor is the culmination of the experimental work carried out as part of a Research, Demonstration, and Development ("RDD") program initiated by Rochester Gas and Electric approximately six years ago (Application, Attachment D, "Research, Demonstration and Development Aspects of the Proposed Use of Mixed Oxide Fuel Assemblies," at page 1). Completion of this experimental RDD program by the use of the four MOX assemblies will allow Rochester Gas and Electric to:

1/ The Commission's Memorandum of Decision of May 8, 1978, and its Order of December 30, 1977 concerning its GESMO proceedings was upheld by the Third Circuit Court of Appeals in Westinghouse Electric Corporation vs. United States Nuclear Regulatory Commission, 598 F. 2d 759 (3rd. Cir, 1979).

(a) Verify current neutronic methodology applied to mixed oxide assemblies;

(b) Verify current capabilities to calculate incore detector responses in mixed oxide assemblies relative to all-uranium assemblies;

(c) Obtain a degree of mathematical confidence relative to the capability to predict mixed oxide assembly reactivity and migration area as a function of burnup;

(d) Compare calculated and measured control rod worths for these mixed oxide assemblies when used in future cycles if desired;

(e) Make visual comparisons of fuel assemblies during refueling outages to determine if there are any differences in mixed oxide assemblies, as opposed to the all-uranium assemblies;

(f) Analyze the actual power distribution for two MOX assemblies on a regular basis and validate existing PWR design codes by comparison with actual operating data.

(g) Participate in post-irradiation programs.

(h) Obtain information that is not currently available and achieve a substantial advance in state-of-the-art knowledge concerning the use of mixed oxide fuel in commercial nuclear reactors.

(i) Obtain energy spectrum data on fuel densification not currently available based on mixed oxide fuel in pressurized, zircaloy clad rods fabricated with processes developed and approved following the identification of the fuel densification problem.

Use of the fuel converts it to a form that is less vulnerable to safeguards risks for two reasons. While in the reactor the fuel is virtually inaccessible. Once used, MOX spent fuel is virtually indistinguishable from the normal highly radioactive discharged UO_2 spent fuel. The Commission has also obtained the views of the Administration in connection with this matter:

> "Several considerations are relevant in this connection: First, it is our understanding that the MOX fuel was fabricated well before the 1977 announcement of President Carter's policy, and no fabrication of MOX fuel is now going on or contemplated. I would note that we have, in the past, permitted <u>export</u> of MOX fuel for recycle R&D in three cases where commitments had been made

prior to our April 1977 policy change. I also understand the present holders of plutonium generally want to divest themselves, to avoid the need for associated special physical protection measures. In fact, another of the general non-proliferation efforts has been to move toward a situation in which presence of unirradiated plutonium, more vulnerable to theft or diversion, is minimized. These considerations would indicate that, from a foreign policy standpoint, approval of the RG&E license would not be seen as a new thermal recycle program, but rather as cleaning up or minimizing an old problem." (Letter from Stuart E. Eizenstat, Assistant to the President for Domestic Affairs and Policy to Chairman Ahearne, dated April 4, 1980).

Since the four mixed oxide fuel assemblies with a total quantity of less than 50 kg of plutonium constitute a very small quantity of plutonium and fuel assemblies to be used as part of an experimental program, there will be no foreclosure of future safeguards options or future operational alternatives.

5.0 ENVIRONMENTAL CONSIDERATION

Essentially the only aspect of the change in assemblies that will affect offsite releases from postulated accidents is the change in fission product inventory in the core, and any resulting changes in the fission product concentration in the reactor coolant. The change in the core inventory is very small for the nuclides that are of highest significance during a release, with the greatest changes being those of I-131 and I-132. For the GESMO model MOX reactor (Reference 1), the increase over a U-only reactor is about 3.6% for I-131 and 8.3% for I-132, compared to the concentrations that exist just prior to refueling. However, the Pu added in the four assemblies planned for insertion in the Ginna reactor results in a total heavy-metal percentage of new Pu in the core of only 0.09% (Exxon Nuclear Inc. XN-NF-79-103). This is about 5% of the initial Pu fraction that was used in the GESMO model, so the change in fission product inventories would also be 5% of the changes in the GESMO report. Thus, there is only a negligible (at most 0.18 to 0.42%) increase expected in the concentration of any fission product that could contribute to accidental offsite doses, and therefore no significant change from our previous accident analyses.

We have further determined that the proposed amendment does not authorize a change in effluent types, increase in total amounts of effluents, or an increase in power level, and will not result in any significant environmental impact. Having made this determination, we have concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact, and, pursuant to 10 CFR 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.

6.0 CONCLUSION

We also conclude, 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 the health and safety of the public.

Attachments:
Tables 1 and 2

Date:

References

1. Fuel Generic Environmental Statement on the Use of Recycle Plutonium in Mixed Oxide Fuel in Light Water Cooled Reactors: Health, Safety and Environment, NUREG-0002, Vol. 3, Chapter IV, Section C-3, August 1976.

2. Letter to H. Denton, USNRC, from H. Voigt of LeBoeuf, Lamb, Leiby and MacRae, December 20, 1979 (enclosing application dated December 14, 1979) which contains as addenda the following documents:

   Westinghouse Fuel and LOCA Evaluation of R. E. Ginna Mixed Oxide Fuel Assemblies

   Plant Transient Analysis for the R. E. Ginna Unit 1 Nuclear Power Plant

   Addendum to the Criticality Analysis for the Ginna Nuclear Plant Fuel Storage Racks to Address the Storage of Mixed Oxide Fuel Assemblies

   Radiological Impact of Mixed Oxide Fuel Assemblies

   R. E. Ginna Nuclear Plant Cycle 10 Safety Analysis Report with Mixed Oxide Assemblies

3. Plutonia Fuel Study, Electric Power Research Institute (EPRI), January 1978.

4. Helluan, J. M., et. al., "Fuel Densification Experimental Results and Model for Reactor Applications," Westinghouse Electric Corporation, WCAP 8218, October 1973.

5. Skogen, F. K., "Exxon Nuclear Neutronic Design Methods for Pressurized Water Reactors," Exxon Nuclear Company, Inc., XN-75-27 June 1975.

6. Letter to Director of Nuclear Reactor Regulation, USNRC, from L. D. White, Rochester Gas and Electric Corporation, February 20, 1980, and letter dated March 5, 1980 from L. D. White enclosing a better copy of page 16 to Attachment A of the February 20, 1980 submittal.

7. Reavis, J. R., et. al., "Fuel Rod Bowing," Westinghouse Electric Corporation, WCAP 8691, December 1975.

8. Markowski, F. J., et. al., "Plant Transient Analysis for the R. E. Ginna Unit 1 Nuclear Power Plant," Exxon Nuclear Company, Inc., XN-NF-77-40.

9. Markowski, F. J., et. al., "Plant Transient Analysis for the R. E. Ginna Unit 1 Nuclear Power Plant," Exxon Nuclear Company, Inc., XN-NF-77-40, Rev. 1 July 3, 1979.

TABLE 1

EXXON NUCLEAR COMPANY MIXED OXIDE FUEL PERFORMANCE

REACTOR	NUMBER OF ASSEMBLIES	MATRIX	EXPOSURE (MWD/MT) AVERAGE	EXPOSURE (MWD/MT) MAXIMUM
BIG ROCK POINT	2*	11x11	30,400	30,400
	6*	11x11	25,000	25,400
	12	11x11	24,300	30,800
	8*	11x11	17,100	17,800
	14	11x11	15,700	17,900
KAHL	18	6x6	11,600	12,200

* DISCHARGED

TABLE 2

WESTINGHOUSE MIXED OXIDE IRRADIATION EXPERIENCE IN PWRs

Reactor	Core/Cycle	Number of Rods	Power (kw/ft)	Burnup (MWD/MTU)	Dates Of Operation
Saxton	Core II	638	18.7(1,3)	28,000(2)	Dec. 1965 to Oct. 1968
Saxton	Core III	250	21.2(1)	51,000(2)	Dec. 1969 to May 1972
San Onofre	Cycle 2	720	6.9(1)	12,600(2)	Nov. 1970 to Dec. 1971
San Onofre	Cycle 3	716	7.3(1)	25,200(2)	March 1972 to June 1973
Beznau	Cycle 8	716	6.1(4)	11,200(5)	June 1978-June 1979
	Cycle 9	716	5.9(4)	20,900(5) at EOC 9	Presently operating

(1) Peak pellet power achieved during the cycle.

(2) Peak pellet burnup at the end of life.

(3) Two mixed oxide fuel rods achieved 18.7 kw/ft during a special overpower test. However, the peak power for the remainder of rods was 13.7 kw/ft.

(4) Assembly average power.

(5) Assembly average burnup.

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-244

ROCHESTER GAS AND ELECTRIC CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 32 to Provisional Operating License No. DPR-18, to Rochester Gas and Electric Corporation (the licensee), which revised the license and its appended Technical Specifications for operation of the R. E. Ginna Plant (facility) located in Wayne County, New York. This amendment is effective as of its date of issuance.

The amendment authorizes the licensee to possess and use four mixed oxide fuel assemblies.

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.

For further details with respect to this action, see (1) the application for amendment dated December 14, 1979 (transmitted by letter dated December 20, 1979) and supplements thereto dated February 20, 1980 and March 5, 1980, (2) Amendment No. 32 to License No. DPR-18, 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 Rochester Public Library, 115 South Avenue, Rochester, New York 14627. 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 15th day of April, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION

Darrell G. Eisenhut, Acting Director
Division of Operating Reactors

Four Mixed Oxide Fuel ... including security changes submitted by letter dated 12/4-20*

William O. Miller, Chief
License Fee Management Branch, ADM

Date: 2/13/80
Amended Form Date: 4/15/80

FACILITY AMENDMENT CLASSIFICATION - DOCKET NO(S). 50-244

"Final"

Licensee: Rochester Gas

Plant Name and Unit(s): Ginna

License No(s): DPR-18

Mail Control No: 7912280198

Request Dated: 12/14/79 (Amd) 12/20/79 (Ltr)

Fee Remitted: Yes ✓ No ____

Assigned TAC No: ~~12440~~ (or 12462 ?)

Licensee's Fee Classification: Class I ____, II ____, III ____, IV ✓, V ____, VI ____, None ____.

Check # 086765

Subject:

Amendment No. 31

Date of Issuance: February 13, 1980

Amend. No. 32 Date of Iss. 4/15/80

☐ 1. This request has been reviewed by DOR/DPM in accordance with Section 170.22 of Part 170 and is properly categorized.

☐ 2. This request is incorrectly classified and should be properly categorized as Class ____. Justification for classification or reclassification: ____

☒ 3. ~~Additional information~~ is required to properly categorize the request: We hereby affirm our original fee position: JShea 2/13 JShea D Ziemann

☐ 4. This request is a Class ____ type of action and is exempt from fees because it:

(a) ____was filed by a nonprofit educational institution,

(b) ____was filed by a Government agency and is not for a power reactor,

(c) ____is for a Class____(can only be a I, II, or III) amendment which results from a written Commission request dated ____ for the application and the amendment is to simplify or clarify license or technical specifications, has only minor safety significance, and is being issued for the convenience of the Commission, or

(d) ____other (state reason therefor): ____

45 1/25/80

JShea JShea

Dennis L Ziemann
Division of Operating Reactors/Project Management

☐ THE INITIAL FEE DETERMINATION HAS BEEN REASSESSED AND IS HEREBY AFFIRMED ____.

☐ The above request has been reviewed and is exempt from fees.

William O. Miller, Chief
License Fee Management Branch

Date

LFMB 6/78

Attached: 12/14 amd. + 12/20/79 ltr.

* D. Matthews, NMSS agrees (by telephone discussion with this position. AKY