

May 22, 1982

Docket No. 50-244
LS05-82-05-051

Mr. John E. Maier
Vice President
Electric & Steam Production
Rochester Gas & Electric Corporation
89 East Avenue
Rochester, New York 14649

DISTRIBUTION	
Docket	DCrutchfield
NRC PDR	HSmith (2)
Local PDR	CTropf
ORB Reading	ASLAB
DEisenhut	GLainas
OELD	
AEOD	
OI&E (2)	
ACRS (10)	
TBarnhart (4)	
LSchneider	
OGC	
OPA	
DBrinkman	
RDiggs	
JLyons	

Dear Mr. Maier:

SUBJECT: RESTART OF R. E. GINNA NUCLEAR POWER PLANT

TECHNICAL SPECIFICATION CHANGES - REACTOR COOLANT
SYSTEM IODINE ACTIVITY

We have completed our review of the Ginna steam generator tube rupture event of January 25, 1982. This review was based on your submittals dated April 12 and 26, 1982, reports from the NRC consultants, Brookhaven National Laboratory and Franklin Research Center, and our independent analyses. The reports by our consultants are included as appendices to NUREG-0916 (copy enclosed). The NRC staff concludes that restart of the R. E. Ginna Nuclear Power Plant would be acceptable based on the conclusions reached in Section 10.0 of the Ginna restart Safety Evaluation Report NUREG-0916, and subject to the commitments contained in Section 9.0 of the report which have been incorporated into license conditions.

We understand that you have agreed to restrict operation of Ginna to 5% of rated power until further notice from NRC.

The Commission has issued the enclosed Amendment No. 51 to Provisional Operating License No. DPR-18 for the R. E. Ginna Nuclear Power Plant. This amendment responds to your application submitted by letter dated May 17, 1982. Your application is supported by the information contained in your submittals dated April 12 and 26, 1982, in addition to your letters listed in Section 1.0 of NUREG-0916.

SED
1/1

DSU USE EX(07)

8206040306 820522
PDR ADOCK 05000244
PDR

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	.....	.....	.....	.....	.....	.....	.....
DATE ▶	.....	.....	.....	.....	.....	.....	.....

Mr. John E. Maier

- 2 -

May 22, 1982

The amendment revises the Technical Specification requirements for reactor coolant system Iodine 131 activity, and for coolant activity sampling. The amendment also incorporates License Condition 2.C(9) which is related to the commitments you have made in connection with Ginna restart, as documented in Section 9.0 of NUREG-0916, and to which you have agreed.

During our review of your application, we found it necessary to modify your proposed Technical Specifications relating to Iodine 131 activity and sampling. We have discussed these modifications with your representative and have mutually agreed upon them.

The Notice of Issuance is also enclosed.

Sincerely,

Original signed by

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosures:

1. Amendment No. 51 to License No. DPR-18
2. Safety Evaluation Report related to Ginna Restart (NUREG-0916)
3. Notice of Issuance

cc w/enclosures:
See next page

*SEE PREVIOUS TISSUE FOR CONCURRENCE

Comments of S. Goldberg, OED have been incorporated

OFFICE	DL:..ORB..#5*	..DL:..ORB..#5:	..DL:..ORB..#5*	..DL:..ORB..#5*	..OELD.....*	..DL:..AD/SA...	..DL:..DIR.....
SURNAME	HSmith:cc	JLyons	CTropf	DCrutchfield	SGoldberg	GAmas	DEisenhut
DATE	5/21/82	././82	5/21/82	5/22/82	5/21/82	5/22/82	././82

During our review of your application we found it necessary to modify your proposal. We have discussed these modifications with your representative and have mutually agreed upon them.

The Notice of Issuance is also enclosed.

Sincerely,

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosures:

- 1. Amendment No. to License No. DPR-18
- 2. Safety Evaluation Report related to Ginna Restart (NUREG-0916)
- 3. Notice of Issuance

cc w/enclosures:
See next page

ELD
OK per ELD comments.
5/21/82
(Steve Goldberg)

ORB#5:DL HSmith:cf 5/21/82	ORB#5:DL JLyons 5/1/82	ORB#5:DL JL Tropp 5/21/82	C-ORB#5:DL DCrutchfield 5/1/82	OFFICE AD:OR:DL	D:DL
				SURNAME GLainas	DEisenhut
				DATE 5/1/82	5/1/82

May 22, 1982

CC

Harry H. Voigt, Esquire
LeBoeuf, Lamb, Leiby and MacRae
1333 New Hampshire Avenue, N. W.
Suite 1100
Washington, D. C. 20036

Mr. Michael Slade
12 Trailwood Circle
Rochester, New York 14618

Ezra Bialik
Assistant Attorney General
Environmental Protection Bureau
New York State Department of Law
2 World Trade Center
New York, New York 10047

Resident Inspector
R. E. Ginna Plant
c/o U. S. NRC
1503 Lake Road
Ontario, New York 14519

Director, Bureau of Nuclear
Operations
State of New York Energy Office
Agency Building 2
Empire State Plaza
Albany, New York 12223

Supervisor of the Town
of Ontario
107 Ridge Road West
Ontario, New York 14519

Dr. Emmeth A. Luebke
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

U. S. Environmental Protection Agency
Region II Office
ATTN: Regional Radiation Representative
26 Federal Plaza
New York, New York 10007

Herbert Grossman, Esq., Chairman
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Ronald C. Haynes, Regional Administrator
Nuclear Regulatory Commission, Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Mr. Eric Smith
NUS Corporation
2536 Countryside Boulevard
Clearwater, Florida 33515

Mr. Bob Pollard
UCS
1346 Connecticut Avenue N. W.
Suite 1101
Washington, D. C. 20036

Mr. Fred Levine
Counsels Office
New York State Consumer
Protection Board
99 Washington Avenue
Albany, New York 12210

Ms. Ruth N. Caplan, Chairman
National Energy Committee
278 Washington Boulevard
Oswego, New York 13126

Robert Roth, Esq.
Assistant Attorney General
Energy and Utilities Consumer
Fraud Bureau
New York State Department of Law
2 World Trade Center
New York, New York 10047



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. 5T
License No. DPR-18

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Rochester Gas and Electric Corporation (the licensee) dated May 17, 1982, as supported by submittals dated April 12 and 26, 1982*, 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 Provisional Operating License No. DPR-18 is hereby amended to read as follows:

* and letters identified in Section 1.0 of NUREG-0916.

Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 51, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. In addition, License No. DPR-18 is hereby amended to add Paragraph 2.C(9) to read as follows:

2.C(9) Ginna Restart Commitments (NUREG-0916, Section 9.0)

The licensee shall effect the following requirements on the indicated schedules:

1. Modify the 1C safety injection pump logic to establish a fixed loading sequence and to provide a lockout feature to prevent automatic transfer of a fault at the load to the redundant bus, by the end of the next refueling outage.
2. Within six months, reanalyze the radiological consequences of a steam generator tube rupture. The analysis should include the effect of overfilling the steam generator or evidence should be provided that overfilling will not occur.
3. Revise the setpoints and surveillance requirements for the effluent monitoring system within six months.
4. Prior to December 1, 1982, develop procedures for snow sampling.
5. Within six months, consider procedure changes to reduce or prevent ventilation intake of contaminated air during unplanned releases.
6. Within six months, review the requirement for a safety injection signal to be present for automatic transfer of safety injection pump suction from the boric acid storage tanks to the refueling water storage tank.
7. Within six months perform a detailed thermal-hydraulic analysis of system behavior during the incident to verify phenomena, including void formation.
8. Within six months, study the RCP trip criteria with the purpose of finding a method to keep the RCPs running during a steam generator tube rupture.
9. Within six months, study the RCP restart criteria to ensure that proper criteria are employed.

10. Within six months, review plant procedures to provide any additional guidance required for operator actions to be taken in response to real or suspected reactor vessel upper head voiding.
11. Within six months, provide procedures for cooldown following a steam generator tube rupture.
12. Within six months, provide procedures to cover a steam generator tube rupture with a failed open steam generator safety valve.
13. Within six months, review the time response of simulators used for operator training of steam generator tube ruptures and implement any actions necessary to identify differences between the simulator and Ginna.
14. Confirm by test that the modified letdown system isolation functions properly and submit, within six months, a detailed design description.
15. Confirm by test that the wide range pressurizer pressure transmitter functions properly and submit, within six months, a detailed design description.
16. Perform fiber optic inspections during the intermediate outage of the tubes in Row 45 of the B-steam generator hot leg.
17. Submit, within six months, a detailed design description of the Loose Parts Monitoring System.
18. Within six months, review and identify potential transients and accident scenarios that could provide relatively stagnant flow conditions in a coolant loop, and examine the effect of the operator taking actions which would draw the cold water into the vessel. For these scenarios, review and modify procedures and train operators as necessary to prevent or minimize the flow of cold water into the vessel.
19. In the long term, include an evaluation of the scenarios identified above in the overall resolution of the pressurized thermal shock issue. Modify equipment, procedures and operator training in accordance with the resolution of that issue.

ATTACHMENT TO LICENSE AMENDMENT NO.51

PROVISIONAL OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages contain the captioned amendment number and marginal lines which indicate the area of changes.

<u>REMOVE</u>	<u>INSERT</u>
3.1-20	3.1-20
3.1-21	3.1-21
3.1-22	3.1-22
-----	3.1-23
4.1-8	4.1-8
4.1-9	4.1-9
4.1-10	4.1-10
-----	4.1-12

3.1.4 Maximum Coolant Activity

Specifications:

- 3.1.4.1 Whenever the reactor is critical or the reactor coolant average temperature is greater than 500°F:
- a. The total specific activity of the reactor coolant shall not exceed $84/\bar{E}$ $\mu\text{Ci/gm}$, where \bar{E} is the average beta and gamma energies per disintegration in Mev.
 - b. The I-131 equivalent of the iodine activity in the reactor coolant shall not exceed $0.2 \mu\text{Ci/gm}$.
 - c. The I-131 equivalent of the iodine activity on the secondary side of a steam generator shall not exceed $0.1 \mu\text{Ci/gm}$.
- 3.1.4.2 If the limit of 3.1.4.1.a is exceeded, then be subcritical with reactor coolant average temperature less than 500°F within 8 hours.
- 3.1.4.3 a. If the I-131 equivalent activity in the reactor coolant exceeds the limit of 3.1.4.1.b but is less than the allowable limit shown on Figure 3.1.4-1, operation may continue for up to 168 hours provided that the cumulative operating time under these circumstances does not exceed 800 hours in any consecutive 12-month period. If the I-131 equivalent activity in the reactor coolant exceeds the limit of 3.1.4.1.b for more than 500 hours in any consecutive 6-month period,

then prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days indicating the number of hours above this limit. The reactor may be taken critical or reactor coolant average temperature may be increased above a 500°F with the I-131 equivalent activity greater than the limit of 3.1.4.1.b as long as the provisions of this paragraph are met.

- b. If the I-131 equivalent activity exceeds the limit of 3.1.4.1.b for more than 168 hours during one continuous time interval or exceeds the limit shown on Figure 3.1.4-1, be subcritical with reactor coolant average temperature less than 500°F within 8 hours.
- c. If the I-131 equivalent activity exceeds the limit of 3.1.4.1.b, then perform sampling and analysis as required by Table 4.1-4, item 4a, until the activity is reduced to less than the limit of 3.1.4.1.b.

3.1.4.4 If the limit of 3.1.4.1.c is exceeded, then be at hot shutdown within 8 hours and in cold shutdown within the following 32 hours.

Basis:

The total activity limit for the primary system corresponds to operation with the plant design basis of 1% fuel defects. (1)
Radiation shielding and the radioactive waste disposal systems

were designed for operation with 1% defects⁽²⁾. The limit for secondary iodine activity is conservatively established with respect to the limits on primary system iodine activity and primary-to-secondary leakage (Specification 3.1.5.2). If the activity should exceed the specified limits following a power transient the major concern would be whether additional fuel defects had developed bringing the total to above 1% defects. Appropriate action to be taken to bring the activity within specification include one or more of the following: gradual decrease in power to a lower base power, increase in letdown flow rate, and venting of the volume control tank gases to the gas decay tanks.

The specified activity limits provide protection to the public against the potential release of reactor coolant activity to the atmosphere, as demonstrated by the analysis of a steam generator tube rupture accident.⁽³⁾

The 500°F temperature in the specification corresponds at saturation to 681 psia, which is below the set point of the secondary side relief valves. Therefore, potential primary to secondary leakage at a temperature below 500°F can be contained by closing the steam line isolation valves.

References:

- (1) FSAR Table 9.2-5
- (2) FSAR Section 11.1.3
- (3) Letter dated September 24, 1981 from Dennis M. Crutchfield, USNRC, to John E. Maier, RG&E.

I-131 EQUIVALENT REACTOR COOLANT SPECIFIC ACTIVITY LIMIT ($\mu\text{Ci}/\text{gm}$)

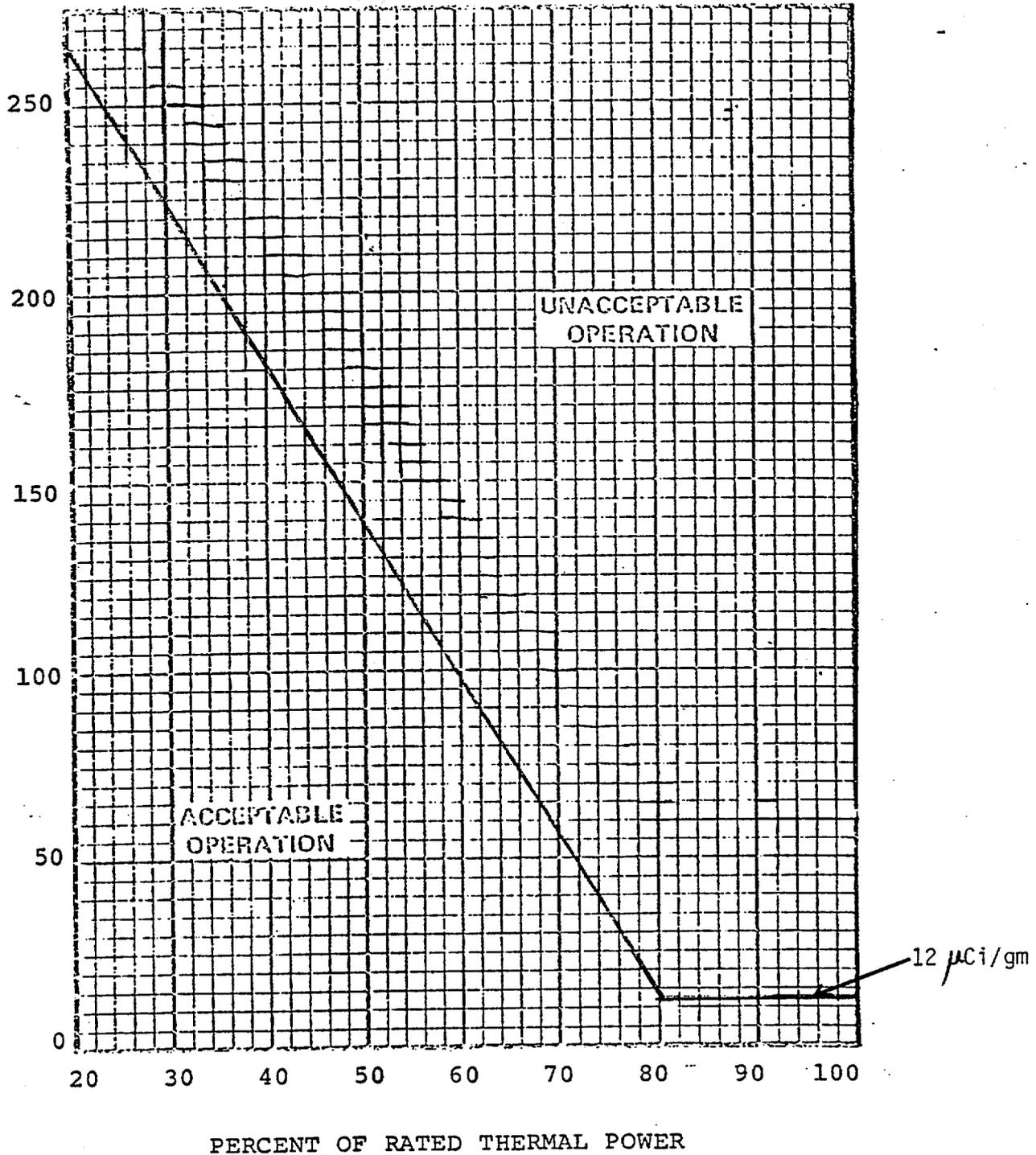


Figure 3.1.4-1

I-131 Equivalent Reactor Coolant Specific Activity Limit Versus Percent of Rated Thermal Power

TABLE 4.1-2

MINIMUM FREQUENCIES FOR EQUIPMENT AND SAMPLING TESTS

	<u>Test</u>	<u>Frequency</u>	<u>FSAR</u> <u>- Section</u> <u>Reference</u>
1. Reactor Coolant Chemistry Samples	Chloride and Fluoride Oxygen	3 times/week and at least every third day 5 times/week and at least every second day except when below 250°F	
2. Reactor Coolant Boron	Boron concentration	Weekly	
3. Refueling Water Storage Tank Water Sample	Boron concentration	Weekly	
4. Boric Acid Tank	Boron concentration	Twice/week	
5. Control Rods	Rod drop times of all full length rods	After vessel head removal and at least once per 18 months (1)	7
6. Full Length Control Rod	Movement of at least 10 steps in any one direction for any rod not fully inserted	Monthly	7
7. Pressurizer Safety Valves	Set point	Each Refueling shutdown	4
8. Main Steam Safety Valves	Set point	Each Refueling shutdown	10
9. Containment Isolation Trip	Functioning	Each Refueling Shutdown	5
10. Refueling System Interlocks	Functioning	Prior to Refueling Operations	9.4.5
11. Service Water System	Functioning	Each Refueling Shutdown	9.5.5
12. Fire Protection Pump and Power Supply	Functioning	Monthly	9.5.5

	<u>Test</u>	<u>Frequency</u>	
13. Spray Additive Tank	NaOH Concent.	Monthly	7
14. Accumulator	Boron Concentration	Bi-Monthly	6
15. Primary System Leakage	Evaluate	Daily	4
16. Diesel Fuel Supply	Fuel Inventory	Daily	8.2.3
17. Spent Fuel Pit	Boron Concentration	Monthly	9.5.5
18. Secondary Coolant Samples	Gross activity	72 hours (2)(3)	
19. Circulating Water Flood Protection Equipment	Calibrate	Each Refueling Shutdown	

Notes:

- (1) Also required for specifically affected individual rods following any maintenance on or modification to the control rod drive system which could affect the drop time of those specific rods.
- (2) Not required during a cold or refueling shutdown.
- (3) An isotopic analysis for I-131 equivalent activity is required at least monthly whenever the gross activity determination indicates iodine concentration greater than 10% of the allowable limit but only once per 6 months whenever the gross activity determination indicates iodine concentration below 10% of the allowable limit.

INTENTIONALLY BLANK

TABLE 4.1-4

REACTOR COOLANT SPECIFIC ACTIVITY SAMPLE
AND ANALYSIS PROGRAM

<u>TYPE OF MEASUREMENT AND ANALYSIS</u>	<u>SAMPLE AND ANALYSIS FREQUENCY</u>	<u>MODES IN WHICH SAMPLE AND ANALYSIS REQUIRED</u>
1. Gross Activity Determination (beta-gamma) (1)	At least once per 72 hours	Above cold shutdown
2. Isotopic Analysis for Dose Equivalent I-131 Concentration	1 per 14 days	Above 5% reactor power
3. Radiochemical for \bar{E} Determination (2)	1 per 6 months (3)	Above 5% reactor power
4. Isotopic Analysis for Iodine Including I-131, I-133, and I-135	a) Once per 8 hours, whenever the I-131 equivalent activity exceeds the limit of 3.1.4.1.b	As required by Specification 3.1.4.3.c*
	b) One sample between 2 and 10 hours following a reactor power change exceeding 15 percent within a 1-hour period	Hot shutdown or above

(1) A gross radiactivity analysis shall consist of the quantitative measurement of the total radioactivity of the primary coolant in units $\mu\text{Ci/gm}$. The total primary coolant activity shall be the sum of the degassed beta-gamma activity and the total of all identified gaseous activity 15 minutes after the primary system is sampled.

(2) A radiochemical analysis shall consist of the quantitative measurement of the activity for each radionuclide which is identified in the primary coolant 15 minutes after the primary system is sampled. The activities for the individual isotopes shall be used in the determination of \bar{E} .

(3) Sample to be taken after a minimum of 2 EFPD and 20 days of power operation have elapsed since reactor was last subcritical for 48 hours or longer.

* Except at refueling shutdown, sampling shall be continued until the activity of the reactor coolant system is restored to within its limits.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-244ROCHESTER GAS AND ELECTRIC CORPORATIONAVAILABILITY OF THE GINNA RESTART SAFETY EVALUATION REPORT ANDNOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission's staff has completed its review of the Ginna steam generator tube rupture event of January 25, 1982. This review is documented in the Ginna restart Safety Evaluation Report, NUREG-0916. In NUREG-0916, the staff has determined, based on conclusions reached in Section 10.0, that operation of the Ginna plant would be acceptable subject to the commitments contained in Section 9.0 of that report which, as summarized below, have been incorporated into the license as conditions.

The Commission has also issued Amendment No. 51 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 Nuclear Power Plant (facility) located in Wayne County, New York. This amendment is effective as of its date of issuance.

The amendment revises the Technical Specification requirements for reactor coolant system Iodine 131 activity, and for coolant activity sampling. The amendment also incorporates License Condition 2.C(9), imposing as license requirements commitments made by the licensee regarding

- 2 -

additional analysis; reevaluation of aspects of operator training; new operating procedures; confirmatory testing; revision of setpoints and surveillance requirements; modification of safety injection pump logic; and the conduct of additional inspections.

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

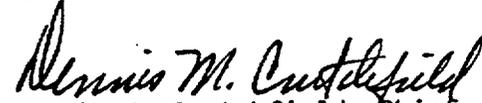
For further details with respect to this action, see (1) the application transmitted by letter dated May 17, 1982, and supporting information transmitted by letters dated April 12 and 26, 1982, and the letters identified in Section 1.0 of NUREG-0916; (2) Amendment No. 51 to License No. DPR-18; and (3) the Commission's restart Safety Evaluation Report for Ginna (NUREG-0916). All of these items are available for

public inspection and copying 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 item (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Item (3), NUREG-0916 may be purchased, at current rates, from the National Technical Information Service, Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161, and through the NRC GPO sales program by writing to the U. S. Nuclear Regulatory Commission, Attention Sales Manager, Washington, D. C. 20555. GPO deposit holders can call 301-492-9530.

FOR THE NUCLEAR REGULATORY COMMISSION


Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Dated at Bethesda, Maryland
this 22nd day of May, 1982.