

June 23, 1988

Docket No. 50-244

Mr. Roger W. Kober, Vice President
Electric and Steam Production
Rochester Gas & Electric Corporation
89 East Avenue
Rochester, New York 14649

Dear Mr. Kober:

SUBJECT: ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE NO. DPR-18

The Commission has issued the enclosed Amendment No. 29 to Facility Operating License No. DPR-18 for the R. E. Ginna Nuclear Power Plant. This amendment is in response to your application dated February 8, 1988.

The amendment revises the requirements of the Technical Specifications to correct an inconsistency associated with the monitoring of the containment mini-purge release, and to clarify actions following inoperability for 31 days.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Carl Stahle, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects I/II

Enclosures:

- 1. Amendment No. 29 to License No. DPR-18
- 2. Safety Evaluation

cc w/enclosures:
See next page

*See previous concurrence

OFC	:PDI-3	:PDI-3	:OGC	:DIR/PDI-3	:PSB	:	:
NAME	:*MRushbrook	:*CStahle:mw	:*Cunningham	:RWessman	:*JCraig	:	:
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AMENDMENT PACKAGE No. TO FACILITY OPERATING LICENSE NO. DPR-18

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

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Sincerely,

A handwritten signature in cursive script that reads "Carl Stahle".

Carl Stahle, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects I/II

Enclosures:

1. Amendment No. 2 to License No. DPR-18
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Roger W. Kober
Rochester Gas and Electric Corporation

R. E. Ginna Nuclear Power Plant

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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 FACILITY OPERATING LICENSE

Amendment No. 29
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 February 8, 1988 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-18 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 29, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Richard H. Wessman, Director
Project Directorate I-3
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 23, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 29

FACILITY OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

Revise Appendix "A" as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3.5-2	3.5-2*
----	3.5-2a**
3.5-4	3.5-4*
-----	3.5-4a**
-----	3.5-4b
3.5-20	3.5-20
-----	3.5-20a**
3.5-21	3.5-21
3.5-22	3.5-22
4.12-2	4.12-2

*No Change - Repositioned on page

**Indicates new page

- 3.5.3.2 When required by 3.5.3.1, with the number of operable accident monitoring instrumentation channels less than the Total Number of Channels shown in Table 3.5-3, either restore the inoperable channel(s) to operable status within 7 days, or be in at least hot shutdown within the next 12 hours.
- 3.5.3.3 When required by 3.5.3.1, with the number of operable accident monitoring instrumentation channels less than the Minimum Channels Operable requirements of Table 3.5-3 either restore the inoperable channel(s) to operable status within 48 hours or be in at least hot shutdown within the next 12 hours.
- 3.5.4 The radiation accident monitoring instrumentation channels shown in Table 3.5-6 shall be operable, whenever the reactor is at or above hot shutdown. With one or more radiation monitoring channels inoperable, take the action shown in Table 3.5-6. Startup may commence or continue consistent with the action statement.
- 3.5.5 Radioactive Effluent Monitoring Instrumentation
- 3.5.5.1 The radioactive effluent monitoring instrumentation shown in Table 3.5-5 shall be operable at all times with alarm and/or trip setpoints set to insure that the limits of Specification 3.9.1.1 and 3.9.2.1 are not exceeded. Alarm and/or trip setpoints shall be established in accordance with calculational methods set forth in the Offsite Dose Calculation Manual.

3.5.5.2 If the setpoint for a radioactive effluent monitor alarm and/or trip is found to be higher than required, one of the following three measures shall be taken immediately:

- (i) the setpoint shall be immediately corrected without declaring the channels inoperable; or
- (ii) immediately suspend the release of effluents monitored by the effected channel; or
- (iii) declare the channel inoperable.

3.5.5.3 If the number of channels which are operable is found to be less than required, take the action shown in Table 3.5-5. Exert best efforts to return the instruments to OPERABLE status within 31 days and, if unsuccessful, explain in the next Semiannual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

3.5.6 Control Room HVAC Detection Systems

3.5.6.1 During all modes of plant operation, detection systems for chlorine gas, ammonia gas and radioactivity in the control room HVAC intake shall be operable with setpoints to isolate air intake adjusted as follows:

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents. The alarm and/or trip setpoints for these instruments are calculated in accordance with the ODCM to ensure that alarm and/or trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The operability and use of this instrumentation is consistent with the requirements of General Design Criterion 64 of Appendix A to 10 CFR Part 50.

Control Room HVAC detection systems are designed to prevent the intake of chlorine, ammonia and radiation at concentrations which may prevent plant operators from performing their required functions. Concentrations which initiate isolation of the control room HVAC system have been established using the guidance of several established references (2-4).

The chlorine isolation setpoint is 1/3 of the toxicity limit of reference 2 but slightly greater than the short term exposure limit of reference 4. The ammonia setpoint is established at approximately 1/3 of the toxicity limit for anhydrous ammonia in reference 2 and equal to the short term exposure limit of reference 4. The setpoints for radioactivity correspond to the

maximum permissible concentrations of reference 3 for Cs-137, I-131 and Kr-85.

The mini-purge system is connected to the plant vent. 10 CFR Part 100 type releases via mini-purge are limited by an isolation signal generated from SI. 10 CFR Part 20 releases from mini-purge are considered to be similar to other plant ventilation releases and are monitored by R-10B, R-13, and R-14. R-14A may be a substitute for R-10B. Automatic isolation of mini-purge for 10 CFR Part 20 type releases is considered unnecessary due to the low flow associated with mini-purge and the continuous monitoring. However, the automatic isolation provisions using R11 or R12 provide additional margin for 10 CFR Part 20 type releases. Therefore, R-11 or R-12 is required to sample containment during mini-purge operation. To ensure the containment sample monitored by R-11 or R-12 is representative of the containment atmosphere, at least one recirculation fan is required to be in operation during mini-purge operation. Should R-11 and/or R-12 become inoperable, a 1 hour limit is chosen to be consistent with the generally accepted time for prompt action.

References

- 1) Updated FSAR - Section 7.2.
- 2) USNRC Regulatory Guide 1.78, June 1974, Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release.
- 3) 10 CFR 20 Appendix B, Table I.
- 4) Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment, 1982. Published by American Conference of Governmental Industrial Hygienists.

TABLE 3.5-5
Radioactive Effluent Monitoring Instrumentation

	<u>Minimum Channels Operable</u>	<u>Action</u>
1. Gross Activity Monitors (Liquid)		
a. Liquid Radwaste (R-18)	1	1
b. Steam Generator Blowdown (R-19)	1*	2
c. Turbine Building Floor Drains (R-21)	1	3
d. High Conductivity Waste (R-22)	1	1
e. Containment Fan Coolers (R-16)	1	3
f. Spent Fuel Pool Heat Exchanger (R-20)	1	3
2. Plant Ventilation		
a. Without Mini-Purge		
1. Noble Gas Activity (R-14) (Providing Alarm and Isolation of Gas Decay Tanks)	1	4
2. Particulate Sampler (R-13)	1	5
3. Iodine Sampler (R-10B or R-14A)	1	5
b. With Mini-Purge		
1. Noble Gas Activity (R-14)	1	4
2. Particulate Sampler (R-13)	1	5
3. Iodine Sampler (R-10B or R-14A)	1	5
4. Noble Gas Activity (R-12) or Particulate Sampler (R-11)	1++	8
3. Shutdown Purge		
a. Noble Gas Activity (R-12)	1+	8
b. Particulate Sampler (R-11)	1+	8

	<u>Minimum Channels Operable</u>	<u>Action</u>
c. Iodine Sampler (R-10A or R-12A)***	1+	5
4. Air Ejector Monitor (R-15 or R-15A)***	1**	6
5. Waste Gas System Oxygen Monitor	1	7

* Not required when Steam Generator Blowdown is being recycled (i.e. not released).

+ Required only during shutdown purges and required to sample the containment stack.

++ Required to sample containment during mini-purge operation

** Not required during Cold or Refueling Shutdown.

*** See Table 3.5-6

TABLE 3.5-5 (Continued)

Table Notation

- Action 1 - If the number of operable channels is less than required by the Minimum Channels Operable requirement, effluent releases from the tank may continue for up to 14 days, provided that prior to initiating a release:
1. At least two independent samples of the tank's contents are analyzed, in accordance with Specification 4.12.1.1.a, and
 2. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge line valving;
- Otherwise, suspend release of radioactive effluents via this pathway.
- Action 2 - When Steam Generator Blowdown is being released (not recycled) and the number of channels operable is less than required by the Minimum Channels Operable requirements, effluent releases via this pathway may continue provided grab samples are analyzed for gross radioactivity (beta or gamma) at a limit of detection of at most 10^{-7} uCi/gram:
1. At least once per 8 hours when the concentration of the secondary coolant is > 0.01 uCi/gram dose equivalent I-131.
 2. At least once per 24 hours when the concentration of the secondary coolant is ≤ 0.01 uCi/gram dose equivalent I-131.
- Action 3 - If the number of operable channels is less than required by the Minimum Channels operable requirement, effluent releases via this pathway may continue provided that at least once per 24 hours grab samples are analyzed for gross radioactivity (beta or gamma) at a limit of detection of at most 10^{-7} uCi/gm.
- Action 4 - If the number of operable channels is less than required by the Minimum Channels Operable requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 8 hours and these samples are analyzed for isotopic activity within 24 hours or R14A is operable and readings are reviewed at least once per 8 hours.

TABLE 3.5-5 (Continued)

Table Notation

- Action 5 - If the number of operable channels is less than required by the Minimum Channels Operable requirements, effluent releases via this pathway may continue provided samples are continuously collected as required by Table 4.12-2 Item E with auxiliary sampling equipment.
- Action 6 - If the number of operable channels is less than required by the Minimum Channels Operable and the Secondary Activity is $\leq 1 \times 10^{-4}$ uCi/gm, effluent releases may continue via this pathway provided grab samples are analyzed for gross radioactivity (beta or gamma) at least once per 24 hours. If the secondary activity is greater than 1×10^{-4} uCi/gm, effluent releases via this pathway may continue for up to 31 days provided grab samples are taken every 8 hours and analyzed within 24 hours.
- Action 7 - If the channel is inoperable, a sample of the gas from the in service gas decay tank shall be analyzed for oxygen content at least once every 4 hours.
- Action 8 - If the number of operable channels is less than required by the Minimum Channels Operable, or at least one containment fan cooler is not operating, within 1 hour terminate the purge.

- 4.12.1.2.a Cumulative dose contributions from liquid effluents shall be determined in accordance with the ODCM at least once per 31 days.
- 4.12.2 Gaseous Wastes
- 4.12.2.1 Release Rate
- 4.12.2.1.a The effluent continuous monitors as listed in Table 3.5-6 having provisions for the automatic termination of gas decay tank, shutdown purge or mini-purge releases, shall be used to limit releases within the values established in Specification 3.9.2.1 when monitor setpoint values are exceeded.
- 4.12.2.1.b The dose rate due to radioactive materials, other than noble gases, in gaseous effluents shall be determined in accordance with the methods of the ODCM by obtaining representative samples and performing analyses in accordance with the sampling and analysis program, specified in Table 4.12-2.
- 4.12.2.2 Dose (10 CFR Part 50, Appendix I); Gaseous Waste Treatment.
- 4.12.2.2.a Cumulative dose contributions from gaseous effluents shall be determined in accordance with the ODCM at least once every 31 days.
- 4.12.3 Waste Gas Decay Tanks
- The quantity of radioactive material contained in each waste gas decay tank shall be determined to be



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 29 TO FACILITY OPERATING LICENSE NO. DPR-18

ROCHESTER GAS AND ELECTRIC CORPORATION

R. E. GINNA NUCLEAR POWER PLANT

DOCKET NO. 50-244

1.0 INTRODUCTION

On February 8, 1988, Rochester Gas and Electric Corporation proposed revisions to the Technical Specifications associated with monitoring releases through the containment mini-purge system and to clarify action statements following inoperability of the mini-purge system for 31 days.

2.0 EVALUATION

Technical Specification Amendment No. 24, dated October 27, 1987, approved the GINNA mini-purge system and requirements for operations. The existing 48 inch containment purge system was isolated and it can only be utilized at cold or refueling shutdown. This system is now called Shutdown Purge in the proposed amendment. The mini-purge system is designed to pass through charcoal and HEPA filters and to exhaust into the plant vent. Since the mini-purge system is connected to the plant vent and the flow is small compared to the shutdown purge air flow or the plant ventilation air flows, the mini-purge is operated in accordance with the plant ventilation requirements and is also designed for automatic isolation capability for radioactivity releases. This amendment proposes to clarify the operational requirements for plant ventilation, with and without mini-purge, and shutdown purge. The changes are consistent with the previously established guidance under Amendment No. 24. The clarification specifies required actions that will be taken by the operator, including the required action should the 31 day period of inoperability occur. Existing radioactive limitations will continue to be applicable and isolation of the system will occur through existing protective features.

3. ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has

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been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The staff has evaluated the licensee's request to revise the Technical Specifications to correct an inconsistency associated with the monitoring of the containment mini-purge releases, and to clarify actions following inoperability for 31 days.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) 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: June 23, 1988

Principal Contributor: Carl Stahle