

August 30, 1993

Docket No. 50-244

Dr. Robert C. Mecredy  
Vice President, Nuclear Production  
Rochester Gas and Electric Corporation  
89 East Avenue  
Rochester, New York 14649

Dear Dr. Mecredy:

SUBJECT: ISSUANCE OF AMENDMENT NO. 53 TO FACILITY OPERATING LICENSE NO. DPR-18, R. E. GINNA NUCLEAR POWER PLANT (TAC NO. M83570)

The Commission has issued the enclosed Amendment No. 53 to Facility Operating License No. DPR-18 for the R. E. Ginna Nuclear Power Plant. This amendment is in response to your application dated April 23, 1992, as supplemented by August 6, 1993.

The amendment revises the snubber visual inspection schedule in the Technical Specifications (TS) by replacing it with an alternate visual inspection schedule as recommended by Generic Letter (GL) 90-09, "Alternate Requirements for Snubber Visual Inspection Intervals and Corrective Actions," dated December 11, 1990.

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

Sincerely,  
Original signed by  
Allen Johnson, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No.53 to License No. DPR-18
2. Safety Evaluation

cc w/enclosures:

See next page

OFFICE	LA:PDI-3	PM:PDI-3	OGC <del>Mecredy</del>	D:PDI-3	
NAME	S Little	AJohnson:mw	Mecredy	WButler	
DATE	8/11/93	8/11/93	8/11/93	8/13/93	1/1

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↓  
Subject to  
two changes

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Vice President, Nuclear Production  
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Sincerely,

A handwritten signature in cursive script that reads "Allen Johnson".

Allen Johnson, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 53 to  
License No. DPR-18
2. Safety Evaluation

cc w/enclosures:  
See next page

Dr. Robert C. Mecredy

Ginna

cc:

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AMENDMENT NO. 53 TO DPR-18 R. E. GINNA NUCLEAR POWER PLANT DATED August 30, 1993

DISTRIBUTION:

Docket File 50-244

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

ROCHESTER GAS AND ELECTRIC CORPORATION

DOCKET NO. 50-244

R. E. GINNA NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 53  
License No. DPR-18

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Rochester Gas and Electric Corporation (the licensee) dated April 23, 1992, 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 set forth in 10 CFR Chapter I;
  - 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:

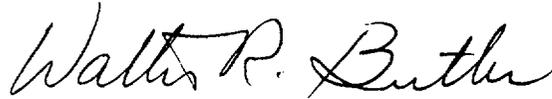
(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 53, 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 60 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 30, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 53

FACILITY OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

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

<u>Remove</u>	<u>Insert</u>
3.13-1	3.13-1
4.14-1	4.14-1
4.14-2	4.14-2
4.14-3	4.14-3
4.14-4	4.14-4
4.14-5	4.14-5
4.14-6	4.14-6
4.14-7	4.14-7
4.14-8	4.14-8
----	4.14-9
----	4.14-10

3.13 Snubbers

Limiting Condition for Operation

3.13.1 With RCS conditions above cold shutdown, all safety-related snubbers shall be operable. This specification does not apply to those snubbers installed on non safety-related systems if the snubber failure, and a resulting failure of the supported non safety-related system shown to be caused by that snubber failure, would have no adverse effect on any safety-related system.

Action

3.13.2 With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to operable status and perform an engineering evaluation per Specification 4.14.1f on the supported component or declare the supported system inoperable and follow the appropriate action statement for that system.

Basis

Snubbers are required to be operable to ensure that the structural integrity of the reactor coolant system and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads.

Snubbers may be replaced by rigid structural supports (bumpers) provided an analysis is performed to demonstrate that appropriate acceptance criteria are satisfied for design basis seismic and pipe break events and provided that the bumpers are inspected periodically in a manner appropriate for rigid structural supports.

4.14 Snubber Surveillance Requirements

4.14.1 Each snubber required by Specification 3.13 to be OPERABLE shall be demonstrated OPERABLE by the performance of the following inservice inspection program in addition to the requirements of Specification 4.2.

a. Inspection Types

As used in this specification, "type of snubber" shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers are categorized as inaccessible or accessible during reactor operation. Each of these categories (inaccessible and accessible) may be inspected independently according to the schedule determine by Table 4.14-1. The visual inspection interval for each type of snubber shall be determined based upon the criteria provided in Table 4.14-1.

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify that (1) the snubber has no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or

4.14.1.c. (continued)

supporting structure are functional, and (3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional. Snubbers which appear inoperable as a result of visual inspections shall be classified as unacceptable and may be reclassified acceptable for the purpose of establishing the next visual inspection interval, provided that: (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers, irrespective of type that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per Specification 4.14.1e. All snubbers found connected to an inoperable common hydraulic fluid reservoir shall be counted as unacceptable for determining the next inspection interval. A review and evaluation shall be performed and documented to justify continued operation with an unacceptable snubber. If continued operation cannot be justified, the snubber shall be declared inoperable and the ACTION requirement shall be met.

TABLE 4.14-1

## SNUBBER VISUAL INSPECTION INTERVAL

Population or Category (Notes 1 and 2)	NUMBER OF UNACCEPTABLE SNUBBERS (Ref. Note 7)		
	Column A	Column B	Column C
	Extend Interval (Notes 3 and 6)	Repeat Interval (Notes 4 and 6)	Reduce Interval (Notes 5 and 6)
1	0	0	1
80	0	0	2
100	0	1	4
150	0	3	8
200	2	5	13
300	5	12	25
400	8	18	36
500	12	24	48
750	20	40	78
1000 or greater	29	56	109

Note 1: The next visual inspection interval for a snubber population or category size shall be determined based upon the previous inspection interval and the number of unacceptable snubbers found during that interval. Snubbers may be categorized, based upon their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, this decision must be

TABLE 4.14-1 (continued)

documented before any inspection and shall be used as the basis upon which to determine the next inspection interval for that category.

- Note 2: Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. Use next lower integer for the value of the limit for Columns A, B, or C if that integer includes a fractional value of unacceptable snubbers as determined by interpolation.
- Note 3: If the number of unacceptable snubbers is equal to or less than the number in Column A, the next inspection interval may be twice the previous interval but not greater than 48 months.
- Note 4: If the number of unacceptable snubbers is equal to or less than the number in Column B but greater than the number in Column A, the next inspection interval shall be the same as the previous interval.
- Note 5: If the number of unacceptable snubbers is equal to or greater than the number in Column C, the next inspection interval shall be two-thirds of the previous interval. However, if the number of unacceptable snubbers is less than the number in Column C but greater than the number in Column B, the next interval shall be reduced proportionally by interpolation, that is, the previous interval shall be reduced by a factor that is one-third of the ratio of the difference between the number of unacceptable snubbers found during the previous interval and the number in Column B to the difference in the numbers in Column B and C.
- Note 6: The provisions of Specification Section 4.0 are applicable for all inspection intervals up to and including 48 months.
- Note 7: To determine the next surveillance interval, an unacceptable snubber may be reclassified as acceptable if it can be demonstrated that the snubber is operable in its as-found condition by performance if a functional test and if it satisfies the acceptance criteria for functional testing.

#### 4.14.1.d Functional Tests

At least once per 18 months during shutdown, a representative sample (at least 10% of the snubbers required by Specification 3.13) shall be functionally tested either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of Specification 4.14.1e, an additional 10% of the snubbers shall be functionally tested until no more failures are found or until all snubbers have been functionally tested. The representative sample selected for functional testing shall, as far as practical, include the various configurations, operating environments, range of sizes and capacities of snubbers.

In addition to the regular sample, snubbers placed in the same locations as snubbers which failed the previous functional test shall be retested at the time of the next functional test. Additionally, if a failed snubber has been repaired and reinstalled in another location, that failed snubber shall also be retested. These snubbers shall not be included in the regular sample.

If during the functional testing, additional sampling is required due to failure of only one type of snubber, the functional testing results shall be reviewed at that time to determine if additional samples should be limited to the type of snubber which has failed the functional testing.

Functional Test Acceptance Criteria

The snubber functional test shall verify that:

- 1) Activation (restraining action) is achieved within the specified range in both tension and compression;
- 2) Snubber bleed, or release rate where required, is present in both tension and compression, within the specified range;
- 3) Where required, the force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel; and
- 4) For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement is verified.

Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

f. Functional Test Failure Analysis

An analysis shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this analysis

4.14.1.f. (continued)

shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the operability of other snubbers, irrespective of type, which may be subject to the same failure mode. For the specific case of a snubber selected for functional testing which either fails to activate or fails to move, i.e., frozen-in-place, the cause will be evaluated and, if caused by manufacturer or design deficiency, all snubbers of the same type subject to the same defect shall be functionally tested or evaluated in a manner to ensure their operability. Any testing performed as part of this requirement shall be independent of the requirements stated in Specification 4.14.1d for snubbers not meeting the functional test acceptance criteria.

For any snubbers found inoperable, an engineering evaluation shall be performed on the components to which the inoperable snubbers are attached. The purpose of this engineering evaluation shall be to determine if the components to which the inoperable snubbers are attached were adversely affected by the inoperability of the snubbers in order to ensure that the component remains capable of meeting the designed service.

#### 4.14.1.g Snubber Seal Service Life Monitoring

The seal service life of hydraulic snubbers shall be monitored and seals replaced as required to ensure that the service life is not exceeded between surveillance inspections during a period when the snubber is required to be operable. The seal replacements shall be documented and the documentation shall be retained in accordance with Technical Specification 6.10.2.

#### Basis

Snubbers are provided to ensure that the structural integrity of the reactor coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. The visual inspection frequency is based on the number of unacceptable snubbers found during the previous inspection in proportion to the sizes of the various snubber populations or categories. A snubber is considered unacceptable if it fails the acceptance criteria delineated by Specification 4.14.1.c. The visual inspection interval is based upon the previous inspection interval and may be as long as two fuel cycles, not to exceed 48 months, depending on the number of unacceptable snubbers found during the previous visual inspection.

Basis (continued)

Unacceptable snubbers shall be evaluated to determine if they are inoperable. For inoperable snubbers the applicable action requirements shall be met. When a snubber is found inoperable, an engineering evaluation of the supported component is performed in order to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber. This evaluation is in addition to the determination of the snubber mode of failure. The engineering evaluation shall determine whether or not the snubber failure has imparted a significant effect on or caused degradation of the supported component or system, to ensure they remain capable of meeting the designed service.

When the cause of the rejection of a snubber is clearly established and remedied for that snubber and for any other snubbers that may be generically susceptible, and verified by inservice functional testing, that snubber may be exempted from being counted as inoperable. Generically susceptible snubbers are those which are of a specific make or model and have the same design features directly related to the snubber rejected or are those which are similarly located or exposed to the same environmental conditions such as temperature, radiation, and vibration. To determine the next surveillance interval, an unacceptable snubber may be reclassified as acceptable if it can be demonstrated that the snubber is operable in its as-found condition by performance of a functional test and if it satisfies the acceptance criteria for functional testing.

Basis (continued)

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at less than or equal to 18 month intervals. Observed failures of these sample snubbers shall require functional testing of additional units.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs. The service life of a snubber is evaluated via manufacturer input and engineering information through consideration of the snubber service conditions and functional design requirements. The only snubber components with service lives not expected to exceed plant life are seals and o-rings fabricated from certain seal materials. Therefore, a seal replacement program is required to monitor snubber seal and o-ring service life to assure snubber operability is not degraded due to exceeding component service life.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 53 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

By letters dated April 23, 1992, and August 6, 1993, the Rochester Gas and Electric Corporation (the licensee) submitted a request for changes to the R. E. Ginna Nuclear Power Plant (GNPP) Technical Specifications (TS). The requested changes proposed that the snubber visual inspection schedule in the existing TS be removed and replaced with an alternative visual inspection schedule as recommended by the NRC in Generic Letter (GL) 90-09, "Alternative Requirements For Snubber Visual Inspection Intervals and Corrective Actions," dated December 11, 1990. The August 6, 1993, letter contained administrative changes and minor corrections within the scope of the initial Federal Register notice.

The snubber visual inspection schedule in the existing TS is based on the permissible number of inoperable snubbers found during the previous visual inspection, irrespective of the total population of snubbers. A snubber is considered inoperable if it fails the acceptance criteria of the visual inspection as specified in TS. As a result, licensees with a large snubber population find the schedule excessively restrictive. The purpose of the alternative visual inspection schedule is to allow the licensee to perform visual inspections and corrective actions during plant outages without reduction of the confidence level provided by the existing visual inspection schedule. The new visual inspection schedule specifies the permissible number of inoperable snubbers for various snubber populations. The basic inspection interval is the normal fuel cycle, up to 24 months. This interval may be extended to as long as twice the fuel cycle or reduced to as small as two-thirds of the fuel cycle depending on the number of unacceptable snubbers found during the previous visual inspection.

2.0 EVALUATION

Snubbers are installed to ensure that the structural integrity of the reactor coolant system and all other safety-related systems is maintained during and following a seismic event. Snubbers are used to restrain piping or equipment during seismic events or transient loads, yet allow relatively unrestrained movements of the piping/equipment during normal heatup or cooldown operations. The purpose of the visual inspection surveillance requirement (TS 4.14) is to

ensure that no observable deficiencies exist with any snubber installation that would render a snubber inoperable.

Snubber inservice inspection requirements consist of visual inspection and functional testing. Visual inspection is intended to identify potential impairment to operability caused by leakage, corrosion or degradation due to environmental exposure. Functional testing typically involves removing the snubber from the system and performing testing on a specifically-designed test stand to verify its ability to operate within specified performance limits. In general, functional testing is intended to provide a 95% confidence level that 90 to 100% of the snubbers are operable within acceptable limits. The performance of the visual inspection is a separate process which is complimentary to the functional testing program and provides additional confidence in snubber operability. The staff finds the alternative visual inspection schedule provided in the proposed TS changes to be consistent with the schedule recommended in GL 90-09.

To support conformance with the guidance of GL 90-09, the licensee compared data gathered on GNPP's hydraulic and mechanical snubbers to the data reported by Brookhaven National Laboratory (BNL). The BNL report, "Development of Alternative Snubber Surveillance Requirements: Recommended Interim Snubber Surveillance Plan," dated June 12, 1989, was prepared for the NRC in support of GL 90-09. The methodology presented in the BNL report is the basis for GL 90-09. According to the licensee, the results of the data gathered on GNPP compared favorably to the data evaluated by BNL. The results from both GNPP and BNL data analyses showed that the failure rates found for visually inspected and functionally tested snubbers are low. In addition, the failure rates for GNPP's visual inspections also compared favorably to those of functionally tested snubbers. The visual inspections had failure rates of 6.0% and 4.0% for hydraulic and mechanical snubbers, respectively. The corresponding failure rate of snubbers when subjected to an actual test was 2.2%. These results are documented in Ginna Safety Evaluation Number NSL-0000-SE004, which has been internally reviewed and approved by Ginna's Plant Operations Review Committee (PORC).

The staff notes that the above-reported failure rates for GNPP are very compatible with the percentages of unacceptable snubbers indicated in the proposed visual inspection schedule. The staff also concurs with the licensee that the proposed amendment complies with the snubber reliability criterion that a minimum of 90% of the snubbers (in the group) be operable in the next inspection period. Based on the above information, the staff finds that the proposed alternative visual inspection schedule is consistent with the guidance contained in GL 90-09 and is acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes the surveillance requirements. The NRC 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (57 FR 58250). Accordingly, the 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 the amendment.

#### 5.0 CONCLUSION

Based on the above evaluation, the staff concludes that the licensee's proposed changes to the existing GNPP TS on snubber visual inspection schedule is consistent with the guidance of GL 90-09. The proposed alternative inspection schedule is considered acceptable.

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Arnold Lee

Date: August 30, 1993