

ATTACHMENT A

Revise the Technical Specification pages as follows:

Remove

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4.14-1
4.14-2
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4.14-4
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Insert

3.13-1
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SnubbersLimiting 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

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; or (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 inoper-able 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

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 acceptable 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

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.

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.

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.

ATTACHMENT B

DESCRIPTION

The proposed amendment redefines the snubber visual inspection schedule pursuant to guidance contained in Generic Letter 90-09. The current format of Specification 4.14.1 will also be modified to parallel the format delineated in the model contained in Generic Letter 90-09. Therefore, some editorial changes, in addition to changes to the basis, were made to ensure consistency.

The current schedule, described in Technical Specification 4.14.1a, is based only on the number of inoperable snubbers found during the previous inspection, irrespective of the size of the snubber population. The current inspection interval is based on a fuel cycle of up to 18 months, with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval. The inspection interval depends on the number of unacceptable snubbers found during the previous visual inspection.

The alternative inspection schedule, described in Generic Letter 90-09, is based on the number of unacceptable snubbers found during the previous inspection in proportion to the sizes of various snubber populations or categories. A snubber is considered unacceptable, in both cases, if it fails the acceptance criteria of the visual inspection. The alternative inspection interval is based on a fuel cycle of up to 24 months and may be as long as two fuel cycles, or 48 months for plants with other fuel cycles depending on the number of unacceptable snubbers found during the previous visual inspection.

SYSTEMS AND COMPONENTS AFFECTED

Safety-Related Hydraulic and Mechanical Snubbers

SAFETY FUNCTION OF AFFECTED SYSTEMS AND COMPONENTS

The safety function of Surveillance Requirement 4.14.1a (visual inspection requirement), is to ensure that no observable deficiencies exist with any snubber installation that would render a snubber inoperable. Snubbers are required 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, or dynamic restraints, are used to restrain piping or equipment during seismic events or transient loads, yet they allow relatively unrestrained movement of the piping/component during normal heatup or cooldown operations.

EFFECTS ON SAFETY

Snubber inservice inspection requirements consist of visual inspection and functional testing. Visual inspection is intended to detect potential impaired operability caused by leakage, corrosion or degradation due to environmental exposure. Functional testing typically involves removing the snubber and 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 percent 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.

Rochester Gas and Electric Corporation has compared data gathered on Ginna Station's hydraulic and mechanical snubbers to that reported by Brookhaven National Laboratory (BNL). The BNL report was prepared for the Commission, "Development of Alternative Snubber Surveillance Requirements: Recommended Interim Snubber Surveillance Plan," dated June 12, 1989 in support of Generic Letter 90-09. The methodology presented in the BNL report is the basis for Generic Letter 90-09. The results of the data gathered on Ginna Nuclear Power Station compared favorably to the data evaluated by BNL. The results, for both Ginna and BNL, showed that the percent failure rates found for visually examined and functionally tested snubbers are low. The failure rates for Ginna's visual examinations also compared favorably to functionally tested snubbers. The visual inspections had failure rates of 6.0% and 4.0% for the hydraulic and mechanical snubbers respectively. The corresponding failure rate when snubbers were subjected to an actual test was 2.2%. The results described above are documented in Ginna Safety Evaluation number NSL-0000-SE004. This safety evaluation was reviewed and approved by Ginna's Plant Operations Review Committee (PORC).

It is apparent, from the results for Ginna, that extending the visual inspection interval pursuant to the guidance contained in Generic Letter 90-09 is reasonable. It is emphasized that, based on the reliability analysis for extension of the visual inspection interval presented in the BNL study, the maximum permissible number of inoperable snubbers satisfying the reliability criterion depends on the group size and the future inspection period. Thus, the reduction in margin of safety is considered to be insignificant.

This 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. Further, the proposed change complies with the guidance contained in Generic Letter 90-09.

10CFR50.92 EVALUATION

The proposed change in the Ginna Technical Specifications does not involve a significant hazard consideration. The basis for this determination is documented in Ginna Safety Evaluation number NSL-0000-SE004. This safety evaluation was reviewed and approved by Ginna's Plant Operations Review Committee (PORC). This evaluation confirmed that historical maintenance and surveillance data for snubbers at Ginna does not invalidate an extension to the existing inspection interval, i.e. RG&E's experience is consistent with industry experience.

Further support for the basis for the above determination is as follows:

- There is no significant increase in the probability or consequences of an accident previously evaluated because accident conditions and assumptions are not affected by the proposed Technical Specification change. The effect on the availability of the snubbers due to an increase in the visual inspection interval has been shown to be negligible. Further, functional testing alone assures, with a 95% confidence level, that at least 90% of the snubbers are operable without any visual inspection, as assured by Technical Specification 4.14.1c (changed to 4.14.1d per the proposed amendment). This will ensure that system reliability remains essentially unchanged. Furthermore, the proposed change will reduce future occupational radiation exposure.
- The possibility of a new or different kind of accident from any accident previously evaluated is not created. In matters related to nuclear safety, all accidents are bounded by previous analysis. The proposed change does not add to or modify any equipment or system design nor does it involve any changes in the operation of any plant system. The absence of a hardware change means that the accident initiators remain unaffected, so no unique accident probability is created.
- The proposed amendment does not involve a significant reduction in the margin of safety as defined in the basis for any Technical Specification because the proposed amendment will continue to ensure, with 95% confidence, that at least 90 percent of the snubbers are operable, as assured by the calculations reported in the BNL report which is the basis for Generic Letter 90-09. Therefore, the function of the total population of snubbers is reasonably assured. Equipment reliability will be maintained and no Limiting Condition for Operation (LCO) or Limiting Safety System Setpoint (LSSS) would be affected. Thus, the reduction in margin of safety is considered to be insignificant.

CONCLUSION

On the basis of the above, RG&E has determined that the amendment request does not involve a significant hazards consideration.