

ATTACHMENT A  
TECHNICAL SPECIFICATION  
PAGE REVISIONS

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NO. 2  
DOCKET NO. 50-247  
NOVEMBER, 1992

9211190308 921112  
PDR ADOCK 05000247  
P PDR

#### 4.12 SHOCK SUPPRESSORS (SNUBBERS)

##### Applicability

Applies to the inspection and testing of all hydraulic snubbers listed in Table 3.12-1.

##### Objective

To verify that snubbers will perform their design functions in the event of a seismic or other transient dynamic event.

##### Specifications

The following surveillance requirements apply to those snubbers listed in Table 3.12-1.

##### A. VISUAL INSPECTION

Snubbers whose seal material has been demonstrated by operating experience, laboratory testing, or analysis to be compatible with the operating environment shall be visually inspected to verify operability in accordance with the following schedule: The visual inspection interval for each type of snubber shall be determined based upon the criteria provided below and the first inspection interval determined using this criteria shall be based upon the previous inspection interval as established by the requirements in effect before Amendment No. .

Size of Population or Category (Notes 1 & 2)	Number of Unacceptable Snubbers		
	Column A	Column B	Column C
	Extend Interval	Repeat Interval	Reduce Interval
	(Note 3)	(Note 4)	(Note 5)
1	0	0	1
20	0	0	1
40	0	0	1
60	0	0	1
80	0	0	2
90	0	0	3
100	0	1	4
120	0	1	5
130	0	2	6
140	0	2	7
150	0	3	8
160	0	3	9
170	0	3	10
180	1	4	11
190	1	4	12
200	2	5	13

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. This decision shall be made and 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. The next lower integer for the value of the limit for Columns A, B, and C shall be used 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 of 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 4.0.1 are applicable for all inspection intervals.

Snubbers are categorized in Table 3.12-1 as accessible or inaccessible during reactor operation. These two groups may be inspected independently according to the above schedule except as noted below.

If snubber inoperability is identified due to excessive fluid leakage from the external tubing associated with the twenty-four snubbers installed at the steam generators, this group of snubbers may be inspected independently according to the above schedule.

Visual inspection shall verify that (1) there is no visual indication of damage or impaired operability, (2) attachments to the foundation or supporting structure are secure, and (3) in those locations where snubber movement can be manually induced without disconnecting the snubber, the snubber has freedom of movement and is not frozen. Snubbers which appear

inoperable as a result of visual inspection 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 that may be generically susceptible, and (2) the affected snubber is functionally tested in the as-found condition and determined operable per Specification 4.12.C, as applicable. However, when a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be declared inoperable, and cannot be determined operable via functional testing for the purpose of establishing the next visual inspection period unless the test is started with the piston in the as-found setting, extending the piston rod in the tension mode direction. All snubbers 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 appropriate LCO action requirement shall be met.

B. FUNCTIONAL TESTING

1. Once each refueling outage a representative sample of 10% of all the safety-related hydraulic snubbers shall be functionally tested for operability, including verification of proper piston movement, lock-up rate and bleed. For each hydraulic snubber found inoperable, an additional 10% of the total installed of that type of hydraulic snubber shall be functionally tested. This additional testing will continue until no failures are found or until all snubbers of the same type have been functionally tested.

At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. the first snubber away from each reactor vessel nozzle,

2. snubbers within 5 feet of heavy equipment (valve, pump, turbine, motor, etc.), and
3. snubbers within 10 feet of the discharge from a safety relief valve.

Snubbers identified as "Especially Difficult to Remove" or in "High-Radiation Zones During Shutdown" shall also be included in the representative samples.\* Table 3.12-1 shall be used as the basis for the sampling plan.

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and currently installed in another position) and the spare snubber shall be retested. Test results of these snubbers may not be included for the re-sampling.

2. For the snubber(s) found inoperable, an engineering evaluation shall be performed on the components which are supported by the snubber(s). The purpose of this engineering evaluation shall be to determine if the components supported by the snubber(s) were adversely affected by the inoperability of the snubber(s) in order to ensure that the supported component remains capable of meeting its designed service.

---

\* Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if a justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions.

3. If any snubber selected for functional testing either fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated, and if found to be caused by a manufacturer or design deficiency, all snubbers of the same manufacturer and model which are susceptible to the same defect and located in a similar environment shall be functionally tested. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

C. FUNCTIONAL TEST ACCEPTANCE CRITERIA

The snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed, or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

D. RECORD OF SNUBBER SERVICE LIFE

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.n. Concurrently with the first visual inspection and at least once during every refueling outage, the installation and maintenance records for each snubber listed in Table 3.12-1 shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be re-evaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This re-evaluation, replacement, or reconditioning shall be indicated in the records.

## Basis

The visual inspection frequency is based upon maintaining a constant level of snubber protection. Performance of periodic visual inspections of snubbers complements the existing functional testing and provides additional confidence in snubber operability. The visual inspection interval for the snubbers is based on the number of unacceptable snubbers found during the previous inspection in proportion to the sizes of the various populations or categories and may be as long as two refueling cycles with good overall visual inspection results. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule.

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 operable 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 rejection of the snubber by visual inspection, and are similarly located or exposed to the same environmental conditions such as temperature, radiation, and vibration.

To further increase the assurance of snubber reliability, functional tests will be performed once each refueling cycle. Ten percent of the installed hydraulic snubbers represents an adequate sample for such tests. Selection of a representative sample of hydraulic snubbers provides a confidence level within acceptable limits that these supports will be in an operable condition. Observed failures of these sample snubbers shall require functional testing of additional units of the same type.

When a snubber is found inoperable, an engineering evaluation is performed, in addition to the determination of the snubber mode of failure, in order to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber. The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high-radiation area, in high-temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide a statistical basis for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operations.

#### Reference

- (1) Report: H. R. Erickson, Bergen Paterson to K. R. Goller, NRC, October 7, 1974; Subject: Hydraulic Shock Sway Arrestors
- (2) Generic Letter 90-09 "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions."

ATTACHMENT B  
SAFETY ASSESSMENT  
AND  
BASIS FOR NO SIGNIFICANT HAZARDS DETERMINATION

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NO. 2  
DOCKET NO. 50-247  
NOVEMBER, 1992

## Section I - Description of Change

The proposed change to Section 4.12 of the Indian Point Unit 2 (IP2) Technical Specification (TS) seeks to revise the schedule for visual inspection of snubbers in accordance with the guidance provided in Generic Letter 90-09. The proposed change replaces the visual inspection schedule with a new schedule based on unacceptable snubbers found during the previous inspection, the size of the various snubber population or categories, and the length of the previous inspection interval. This new schedule will allow for inspection intervals as great as 48 months +25%. The values in the proposed schedule were obtained by interpolation from the table provided in Generic Letter 90-09. Also included in the proposed amendment is a correction to a reference to a Technical Specification which had previously been eliminated.

## Section II - Safety Review

The proposed change specifies a schedule for visual inspection of snubbers that is based on the number of unacceptable snubbers found during the previous inspection, the total population or category size for each snubber type and the previous inspection interval. The existing TS surveillance interval is based on an 18 month operating cycle and does not take into account a 24 month operating cycle. The proposed inspection interval is applicable to a 24 month operating cycle and the interval may be increased to every other refueling outage period as long as acceptable overall visual inspection results are obtained based on the table provided in the Technical Specifications.

## Section III - No Significant Hazards Evaluation

In applying the standards of 10 CFR 50.92, we have concluded that the proposed Technical Specification change would not involve a significant hazards consideration based on the answers to the following questions:

1. Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response:

Operation of Indian Point 2 in accordance with the proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. As stated in NRC Generic Letter 90-09, the proposed revised schedule maintains the same confidence level as the existing schedule. The proposed change does not result in any physical change to the plant which could cause an increase in the probability or consequences of any previously evaluated accident.

2. Does the proposed license amendment create the possibility of a new or different kind of accident from any previously evaluated?

Response:

Operation of Indian Point 2 in accordance with the proposed license amendment does not create the probability of a new or different kind of accident from any accident previously evaluated.

The proposed amendment does not alter any plant operations, maintenance requirement, system design or functions other than the snubber visual inspection interval. The NRC staff has determined that the alternate visual inspection interval maintains the same confidence level of snubber operability (GL 90-09). Con Edison agrees with this determination. Therefore, no possibility of creating a new or different type of accident would result from the proposed amendment.

3. Does the proposed license amendment involve a significant reduction in the margin of safety?

Response:

Operation of Indian Point 2 in accordance with the proposed license amendment does not involve a significant reduction in a margin of safety. As stated above, the proposed amendment incorporates the alternate Technical Specification requirement for visual inspection of snubbers. These requirements were evaluated by NRC staff in Generic Letter 90-09. The NRC staff has determined that the alternate visual inspection interval maintains the same confidence level of snubber operability as the current requirements. Con Edison agrees with this determination. Therefore, the proposed license amendment does not involve a significant reduction in a margin of safety.

#### Section IV - Impact of Change

This change will not adversely impact the following:

- ALARA Program
- Environmental Qualification
- Emergency Plan
- FSAR or SER Conclusions
- Overall Plant Operations and Environment
- Security and Fire Protection Program
- Seismic Capabilities

#### Section V - Conclusions

The incorporation of this change: a) will not increase the probability or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not create the possibility for an accident or malfunction of a new or different kind from any previously evaluated in the Safety Analysis Report; c) will not reduce the margin of safety; and d) does not constitute an unreviewed safety question. Therefore, Con Edison has determined that the proposed amendment involves no significant hazards consideration as defined in 10 CFR 50.92.

The proposed changes have been reviewed by both the Station Nuclear Safety Committee and the Con Edison Nuclear Facilities Safety Committee. Both committees concur that the proposed changes do not represent a significant hazards consideration and will not cause any change in the types or an increase in the amounts of effluents or any change in the authorized power level of the facility.