ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION CHANGE FOR

NORTH ANNA UNIT 1

b. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visual indications 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, that the snubber has freedom of movement and is not frozen up. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing 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 Specifications 4.7.10.d and 4.7.10.e. When hydraulic snubbers which have uncovered fluid ports are tested for operability, the tests shall be performed by starting with the piston at the as-found setting and extending the piston rod in the tension mode direction. Snubbers which have been determined to be inoperable as a result of unexpected transients, isolated damage, or other random events, and can not be proven operable by functional testing for the same reasons, shall not be counted in determining the next visual inspection period when the provision in 4.7.10.c that failures are subject to an engineering evaluation of component structural integrity has been met and equipment has been restored to an operable state via repair and/or replacement as necessary.

c. Functional Tests

At least once per 18 months during shutdown, a representative sample of small bore snubbers which follows the expression $35\ (1 + \frac{c}{2})$,

where c=2 is the allowable number of small bore snubbers not meeting the acceptance criteria selected by the operator, shall be functionally tested either in-place or in a bench test. For each number of small bore snubbers above c which does not meet the functional test acceptance criteria of Specification 4.7.10.d or 4.7.10.e, an additional sample selected according to the expression

$$35\ (1 + \frac{c}{2})\ (\frac{2}{c + 1})^2\ (a - c)$$

shall be functionally tested, where a is the total number of small bore snubbers found inoperable during the functional testing of the representative sample.

Functional testing shall continue according to the expression

$b\ (35\ (1 + \frac{c}{2})^2)$ where b is the number of snubbers found inoperable in the previous re-sample, until no additional inoperable snubbers are found within a sample or until all small bore snubbers in Tables 3.7.4a and 3.7.4b have been functionally tested.

SURVEILLANCE REQUIREMENTS (Continued)

At least once per 18 months during shutdown, 10% of the large bore snubbers (snubbers greater than 50 kips) shall be functionally tested either in place, in a full snubber bench test, or in a snubber valve block bench test. For each large bore snubber that does not meet the functional test acceptance criteria of Specification 4.7.10.d an engineering evaluation is required to determine the failure mode. If the failure is determined to be generic, an additional 10% of that type of snubber shall be functionally tested. If the failure is determined to be non-generic, an additional 10% of that type of snubber will be tested during the next functional test period.

The representative samples selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative samples 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.).#

3. Snubbers within 10 feet of the discharge from a safety relief valve.

Snubbers identified in Tables 3.7.4a and 3.7.4b as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative samples.* Tables 3.7.4a and 3.7.4b may be used jointly or separately 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 installed in another position) and the spare snubber shall be retested. Test results of these snubbers may not be included for the re-sampling.

If any snubber selected for functional testing either fails to lock up 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 design subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

#The requirement to functionally test large snubbers greater than 50 kips around the steam generators and reactor coolant pumps, is exempt from functional testing for the representative sample of snubbers selected for testing during the Cycle 3 refueling and maintenance outage.

*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 at either the completion of their fabrication or at a subsequent date.

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION CHANGE FOR

NORTH ANNA UNIT 2

b. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visual indications 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, that the snubber has freedom of movement and is not frozen up. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing 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 Specifications 4.7.10.d and 4.7.10.e. When hydraulic snubbers which have uncovered fluid ports are tested for operability, the tests shall be performed by starting with the piston at the as-found setting and extending the piston rod in the tension mode direction. Snubbers which have been determined to be inoperable as a result of unexpected transients, isolated damage, or other random events, and can not be proven operable by functional testing for the same reasons, shall not be counted in determining the next visual inspection period when the provision in 4.7.10.c that failures are subject to an engineering evaluation of component structural integrity has been met and equipment has been restored to an operable state via repair and/or replacement as necessary.

c. Functional Tests

At least once per 18 months during shutdown, a representative sample of small bore snubbers which follows the expression $35 \left(1 + \frac{c}{2} \right)$, where c=2 is the allowable number of small bore snubbers not meeting the acceptance criteria selected by the operator, shall be functionally tested either in-place or in a bench test. For each number of small bore snubbers above c which does not meet the functional test acceptance criteria of Specification 4.7.10.d or 4.7.10.e, an additional sample selected according to the expression

$$35 \left(1 + \frac{c}{2}\right) \left(\frac{2}{c + 1} \right)^2 (a - c)$$

shall be functionally tested, where a is the total number of small bore snubbers found inoperable during the functional testing of the representative sample.

Functional testing shall continue according to the expression

$b \left(35 \left(1 + \frac{c}{2}\right)^2 \right)$ where b is the number of snubbers found inoperable in the previous re-sample, until no additional inoperable snubbers are found within a sample or until all small bore snubbers in Tables 3.7.4a and 3.7.4b have been functionally tested.

SURVEILLANCE REQUIREMENTS (Continued)

At least once per 18 months during shutdown, 10% of the large bore snubbers (snubbers greater than 50 kips) shall be functionally tested either in place, in a full snubber bench test, or in a snubber valve block bench test. For each large bore snubber that does not meet the functional test acceptance criteria of Specification 4.7.10.d an engineering evaluation is required to determine the failure mode. If the failure is determined to be generic, an additional 10% of that type of snubber shall be functionally tested. If the failure is determined to be non-generic, an additional 10% of that type of snubber will be tested during the next functional test period.

The representative samples selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative samples 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.).#

3. Snubbers within 10 feet of the discharge from a safety relief valve.

Snubbers identified in Tables 3.7.4a and 3.7.4b as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative samples.* Tables 3.7.4a and 3.7.4b may be used jointly or separately 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 installed in another position) and the spare snubber shall be retested. Test results of these snubbers may not be included for the re-sampling.

If any snubber selected for functional testing either fails to lock up 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 design subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

#The requirement to functionally test large snubbers greater than 50 kips, around the steam generators and reactor coolant pumps, is exempt from functional testing for the representative sample of snubbers selected for testing during the Cycle 1 refueling and maintenance outage.

*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 at either the completion of their fabrication or at a subsequent date.

ATTACHMENT 3

DISCUSSION OF PROPOSED CHANGES

DISCUSSION OF PROPOSED CHANGES

The proposed change will modify the method in which the operability of hydraulic snubbers with uncovered fluid ports is determined. The Technical Specifications presently require a hydraulic snubber to be declared inoperable if its fluid port has been found uncovered and that the snubber cannot be determined operable via functional testing for the purpose of establishing the next visual inspection interval. The proposed Technical Specification will permit the functional testing of snubbers which have been found with uncovered fluid ports as a method of determining snubber operability for the purpose of establishing the next visual inspection interval. When testing hydraulic snubbers which have uncovered fluid ports, the tests shall be performed by starting with the piston at the as-found setting and extending the piston rod in the tension mode direction.

Functionally testing a hydraulic snubber with an uncovered fluid port from the as-found condition will determine if the snubber would have functioned as designed. Testing a snubber from the as-found condition in the tension mode is a conservative method of testing because this requires fluid to be supplied to the snubber valve block and cylinder to accommodate piston rod movement. If it can be shown by a functional test from the as-found setting that a snubber with an uncovered fluid port functions properly, the snubber should have functioned properly, if required, when it was installed in the plant and was in fact operable. The probability of an accident is not increased and the margin of safety is not decreased by this change because functionally testing snubbers with uncovered fluid ports from the as-found condition is an acceptable method of determining snubber operability. This change is similar to another facility's Technical Specification requirements for snubbers with uncovered fluid ports.

The proposed change will add a statement concerning snubbers found to be inoperable as a result of physical damage sustained as a result of random events. The Technical Specifications presently allow a hydraulic snubber which was determined to be inoperable by visual inspection, to be determined operable for the purpose of establishing the next visual inspection interval if the cause of the rejection is clearly understood and a functional test determines the snubber to be operable. The proposed change will permit an inoperable snubber that cannot be determined operable by functional testing, to be declared operable for the purpose of establishing a new inspection interval if it can be determined that the snubber was rendered inoperable as a result of unexpected transients, isolated damage or other random events. Examples of events which would be considered random or isolated include an object inadvertently dropped on a snubber or a chainfall accidentally anchored on a snubber. An engineering evaluation of component structural integrity would still be performed after each failure.

If it can be determined that a snubber was rendered inoperable as a result of unexpected transients, isolated damage or other random events, similar failures would not be anticipated. Additional inspections of snubbers would therefore not be needed to determine overall snubber operability. The probability of an accident is not increased and the margin of safety is not decreased by this change because snubber failures which are determined to be isolated in nature do not affect overall snubber operability.

The proposed change also modifies and clarifies the number of small and large bore snubbers that require functional testing. Snubbers will be broken into two groups, small bore and large bore. The formula [35 (1 + C/2)] will be used to calculate only the initial sample size of small bore snubbers to be functionally tested. The initial sample size for large bore snubbers will be ten percent of the total number of large bore snubbers. The present Technical Specification does not separate small bore and large bore snubbers into groups or specify the number of large bore snubbers which must be tested. By separating small bore and large bore snubbers into groups and calculating a sample size for each group, a specific number of large bore snubbers will be tested. The total number of snubbers requiring testing would increase by the number of large bore snubbers tested because the formula 35 (1 + C/2) would be used to determine only the initial sample size for small bore snubbers. Generic Letter 84-13 recommends both the formula 35 (1 + C/2) and ten percent of the total number of each type snubber in the plant as methods to determine an initial sample size for functional testing. The method of selecting a ten percent sample size for large bore snubbers was selected because the formula 35 (1 + C/2) for initial sample size and the formula currently in the Technical Specification for determining an additional sample can not be applied to a small test group such as large bore snubbers.

In the event of small bore snubber failures, the proposed change will not alter the current method of testing additional small bore snubbers. The formula now present in the Technical Specifications will be used to calculate the number of snubbers in the additional sample to be functionally tested.

In the event of a large bore snubber failure, an engineering evaluation will be performed to determine if the failure is generic in nature. If the failure is determined to be generic in nature, an additional sample of ten percent of the large bore snubbers will be functionally tested during the current functional test period. If the failure is determined to be non-generic in nature, functional testing of an additional sample of ten percent of the large bore snubbers will be postponed until the next functional test period. A large maintenance effort is required to remove large bore snubbers which are then sent off site for testing. Testing an additional sample of ten percent of the large bore snubbers during the current test period is not warranted for a specific non-generic failure. Testing during the next test interval allows for scheduling of work to support the maintenance effort and will minimize the impact of snubber testing on plant operation. The probability of an accident is not increased and the margin of plant safety is not decreased by postponing functional testing until the next functional test period because the overall operability of large bore snubbers will not be affected.

The proposed change adds snubber valve block testing as a method of functionally testing large bore snubbers. A large maintenance effort is required to remove large bore snubbers because of their location. Piping, conduit, and power supply cables are often located in close proximity to large bore snubbers. This equipment must be cut and then reassembled when the entire snubber is removed to perform functional testing. Working in the areas where large bore snubbers are located is a radiological hazard. Most large bore snubbers are located in high radiation areas. Testing large bore snubber valve blocks would require the removal of only the valve block. This would greatly reduce personal exposure in addition to significantly reducing the effort required to test large bore snubbers.

Testing snubber valve blocks is an acceptable method of functionally testing snubbers. Technical Specifications require that bleed rate and lock-up be determined by a functional test. These parameters are based on fluid flow

through the valve block. The ASME O&M Working Group on Inservice Performance Testing of Snubbers has recommended subcomponent (i.e., valve block) testing as an acceptable method of functionally testing snubbers. Examination and Performance Testing of Nuclear Power Plant Dynamic Restraints (snubbers), O&M-4, Revision 1, Draft 4 dated 1-84 with changes from 12-84 meeting, Section 3.2.6.e states: "Where the physical size of the snubber, test equipment limitations or inaccessibility of location prevent inplace testing and bench testing, the snubber subcomponents shall be examined and tested in accordance with approved procedures." Additionally, North Anna has an Interim Program for testing large bore snubbers that has been reviewed by the staff of NRC Region II (IR 50-338/83-29 and 50-339/83-29). The margin of plant safety is not decreased by functionally testing only snubber valve blocks because the overall operability of large bore snubbers will not be affected.

50.59 Safety Review

Pursuant to 10 CFR 50.59, we have reviewed the proposed Technical Specification changes and have concluded that no unreviewed safety question exists since (i) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased by these proposed changes; (ii) the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not being created by these proposed changes; (iii) the margin of safety as defined in the basis for any technical specification is not reduced by these proposed changes because the operability and performance of the snubbers has not been affected by these changes.

50.92 Significant Hazards Review

The proposed changes do not pose a significant hazards consideration as defined in 10 CFR 50.92. The Commission has provided examples of changes that constitute no significant hazards consideration in Federal Register, Volume 48, page 14870. Example (ii) is a change that constitutes an additional limitation, restriction, or control not presently included in the technical specifications; for example, a more stringent surveillance requirement. Example (vii) is a change to make a license conform to changes in the regulations, where the license change results in very minor changes to facility operations clearly in keeping with the regulations. The proposed changes are similar to example (ii) in that more snubbers will initially undergo functional testing during each test period. The proposed changes are also similar to example (vii) in that they are in accordance with the guidance provided in Generic Letter 84-13 and a draft industry standard (ASME O&M-4), and similar to the Technical Specifications requirements for another facility.

Based on these examples, it has been concluded that the proposed changes do not pose a significant hazards consideration.

ATTACHMENT 4

APPLICATION FEE