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10 CFR 50.90

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April 30, 2014

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Request for Amendment to Revise Oyster Creek Nuclear Generating Station Snubber Surveillance Requirements

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC) requests an amendment to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License No. DPR-16 for Oyster Creek Nuclear Generating Station (OCNGS).

The proposed changes will revise OCNGS snubber surveillance requirements contained in TS. EGC has concluded that the proposed changes present no significant hazards consideration under the standards set forth in 10 CFR 50.92.

The proposed changes have been reviewed by the OCNGS Plant Operations Review Committee and approved by the Nuclear Safety Review Board in accordance with the requirements of the EGC Quality Assurance Program.

Attachment 1 provides an evaluation of the proposed changes, including a detailed description, technical and regulatory evaluations, and an environmental consideration. Attachment 2 provides the existing TS pages marked up to show the proposed changes. The marked up TS Bases page is provided for information only in Attachment 3. Attachment 4 contains a detailed comparison of the current TS 4.5.M Surveillance Requirements to the proposed ISI program requirements and justification for changes. Attachment 5 provides a copy of the proposed Snubber Inspection Program.

There are no regulatory commitments contained in this submittal.

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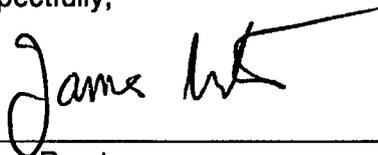
EGC requests approval of the proposed license amendment by April 30, 2015, with the amendment being implemented within 60 days of issuance.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), EGC is notifying the State of New Jersey of this application for license amendment by transmitting a copy of this letter and its attachments to the designated state official.

Should you have any questions regarding this submittal, please contact Ms. Stephanie J. Hanson at (610) 765-5143.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 30th day of April 2014.

Respectfully,



James Barstow
Director - Licensing and Regulatory Affairs
Exelon Generation Company, LLC

- Attachments:
1. Evaluation of Proposed Changes
 2. Markup of Technical Specifications Pages
 3. Markup of Technical Specification Bases Page (For Information Only)
 4. TS 4.5.M Surveillance Requirements Comparison to ASME OM Code Subsection ISTD
 5. Proposed Snubber Inspection Program

cc: USNRC Region I, Regional Administrator
USNRC Senior Resident Inspector, OCNGS
USNRC Project Manager, OCNGS
Manager, Bureau of Nuclear Engineering, New Jersey
Department of Environmental Protection
Mayor of Lacey Township, Forked River, NJ

ATTACHMENT 1

Evaluation of Proposed Changes

Oyster Creek Nuclear Generating Station

Renewed Facility Operating License No. DPR-16

Docket No. 50-219

**Subject: Request for Amendment to Revise Oyster Creek Nuclear Generating Station,
Snubber Surveillance Requirements**

- 1.0 SUMMARY DESCRIPTION**
- 2.0 DETAILED DESCRIPTION**
- 3.0 TECHNICAL EVALUATION**
- 4.0 REGULATORY EVALUATION**
 - 4.1 Applicable Regulatory Requirements/Criteria**
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1.0 SUMMARY DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC) requests an amendment to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License No. DPR-16 for Oyster Creek Nuclear Generating Station (OCNGS). The proposed changes will revise the TS surveillance requirements for snubbers to conform to the revised OCNGS Snubber Inspection Program.

2.0 DETAILED DESCRIPTION

OCNGS is currently in the fifth 10-year Inservice Inspection (ISI) interval, and is using the American Society of Mechanical Engineers (ASME) Section XI Code, 2007 Edition with the 2008 Addenda. The fifth 10-year ISI interval at OCNGS began on January 15, 2013. Currently, snubber inspection and testing are performed in accordance with the specific requirements of TS 4.5.M.

10 CFR 50.55a(g)(4)(ii) requires that inservice examination of components conducted during successive 120-month inspection intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in 10 CFR 50.55a(b) 12 months before the start of the 120-month inspection interval. If a revised inspection program for a facility conflicts with the TS for the facility, 10 CFR 50.55a(g)(5)(ii) requires licensees to apply to the Commission for amendment of the TS to conform the TS to the revised program.

For OCNGS, the inspection and testing of snubbers is performed in accordance with plant TS. OCNGS intends to adopt Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants," of the ASME OM Code, 2004 Edition through the 2006 Addenda, in place of the requirements for snubbers in the plant TS.

The purpose of this amendment request is to remove the specific surveillance requirements for demonstrating snubber operability from the TS since the inspection program has been revised to include the requirements of the OM Code Subsection ISTD in the Snubber Inspection Program. The proposed changes to TS 4.5.M are necessary to conform the Technical Specifications to the revised inspection program for snubbers.

The proposed changes to the OCNGS TS are summarized below:

1. TS Section 4.5.M would be revised to remove specific surveillance requirements for demonstrating snubber operability. The current requirements would be replaced by a reference to the "Snubber Inspection Program."
2. The "Snubber Inspection Program," as described in TS Section 4.5.M will provide a description of the snubber program requirements.

Attachment 2 provides the existing TS pages marked up to show the proposed changes. The marked up TS Bases page is provided for information only in Attachment 3. A comparison of the current TS 4.5.M requirements to the revised snubber program requirements and justification of the changes are provided in Attachment 4. Attachment 5 contains a copy of the proposed Snubber Inspection Program.

3.0 TECHNICAL EVALUATION

Licensees are required by 10 CFR 50.55a(g) or 10 CFR 50.55a(b)(3)(v) to perform the inspection and testing of snubbers in accordance with ASME B&PV Code, Section XI or the OM Code and the applicable addenda, except where the NRC has granted specific written relief pursuant to 10 CFR 50.55a(g)(6)(i), or authorized alternatives pursuant to 10 CFR 50.55a(a)(3). 10 CFR 50.55a(b)(3)(v)(B) states that licensees shall comply with the provisions for examining and testing snubbers in Subsection ISTD of the ASME OM Code and make appropriate changes to their Technical Specifications or licensee-controlled documents when using the 2006 Addenda or later editions and addenda of Section XI of the ASME B&PV Code. OCNCS is currently using the 2007 Edition with the 2008 Addenda of the Section XI ASME Code.

The proposed changes replace the specific TS requirements for snubber examination, testing and service life monitoring with a reference to the Snubber Inspection Program, thereby ensuring the TS remain consistent with the Snubber Inspection Program.

Snubbers will continue to be demonstrated OPERABLE by performance of the Snubber Inspection Program. This program will be required to be maintained in compliance with 10 CFR 50.55a per the proposed new TS Section. The program for inspection and testing of snubbers in accordance with ASME B&PV Code, Section XI or the OM Code and the applicable addenda as required by 10 CFR 50.55a(g) is required to include evaluation of supported components/systems when snubbers are found to be unacceptable.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 50.55a(g)(4)(ii) requires that inservice examination of components conducted during successive 120-month inspection intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in 10 CFR 50.55a(b) 12 months before the start of the 120-month inspection interval.

10 CFR 50.55a(b)(3)(v)(B) states that licensees shall comply with the provisions for examining and testing snubbers in Subsection ISTD of the ASME OM Code and make appropriate changes to their Technical Specifications or licensee-controlled documents when using the 2006 Addenda or later editions and addenda of Section XI of the ASME B&PV Code.

If a revised inspection program for a facility conflicts with the TS of the facility, 10 CFR 50.55a(g)(5)(ii) requires licensees to apply to the Commission for amendment of the TS to conform the TS to the revised inspection program for snubbers.

The proposed changes amend the TS surveillance requirements to conform the TS to the revised inspection program for snubbers which shall meet the requirements of 10 CFR 50.55a(g) except where the NRC has granted specific written relief, pursuant to 10 CFR 50.55a(g)(6)(i), or authorized alternatives pursuant to 10 CFR 50.55a(a)(3).

4.2 Precedents

The proposed changes to TS 4.5.M are similar to changes submitted by Public Service Enterprise Group (PSEG) Nuclear, LLC for Salem Generating Station, Units 1 and 2 and Dominion Nuclear Connecticut (DNC), Inc for Millstone Power Station. The applicable references for these changes are provided below:

1. Letter from R. E. Ennis (U.S. Nuclear Regulatory Commission) to T. Joyce (PSEG Nuclear, LLC), "Salem Nuclear Generating Station, Unit Nos. 1 and 2 – Issuance of Amendments RE: Technical Specification Requirements for Snubbers (TAC Nos. ME4796 AND ME4797)," dated August 25, 2011.
2. Letter from J. Kim (U.S. Nuclear Regulatory Commission) to D. A. Heacock (Dominion Nuclear), "Millstone Power Station, Unit 2 – Issuance of Amendment RE: Snubber Surveillance Requirements (TAC No. ME7221)," dated June 28, 2012.

4.3 No Significant Hazards Consideration

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC) requests an amendment to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License No. DPR-16 Oyster Creek Nuclear Generating Station (OCNGS). The proposed changes would revise the TS surveillance requirements for snubbers to conform to the revised OCNGS inservice inspection (ISI program).

EGC has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No

The proposed changes would revise TS 4.5.M to conform the TS to the revised Snubber Inspection Program. Snubber examination, testing and service life monitoring will continue to meet the requirements of 10 CFR 50.55a(g). Snubber examination, testing and service life monitoring is not an initiator of any accident previously evaluated. Therefore, the probability of an accident previously evaluated is not significantly increased.

Snubbers will continue to be demonstrated OPERABLE by performance of a program for examination, testing and service life monitoring in compliance with 10 CFR 50.55a or authorized alternatives. The proposed changes do not adversely affect plant operations, design functions or analyses that verify the capability of systems, structures, and components to perform their design functions. Therefore, the consequences of accidents previously evaluated are not significantly increased.

Based on the above, these proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No

The proposed changes do not involve any physical alteration of plant equipment. The proposed changes do not alter the method by which any safety-related system performs its function. As such, no new or different types of equipment will be installed, and the basic operation of installed equipment is unchanged. The methods governing plant operation and testing remain consistent with current safety analysis assumptions.

Therefore, it is concluded that these proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

Response: No

The proposed changes ensure snubber examination, testing and service life monitoring will continue to meet the requirements of 10 CFR 50.55a(g). Snubbers will continue to be demonstrated OPERABLE by performance of a program for examination, testing and service life monitoring in compliance with 10 CFR 50.55a or authorized alternatives.

Therefore, it is concluded that the proposed changes do not involve a significant reduction in a margin of safety.

4.4 Conclusions

In conclusion, based on the considerations discussed above, (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.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed amendment is confined to (i) changes to surety, insurance, and/or indemnity requirements; (ii) changes to recordkeeping, reporting, or administrative procedures or requirements; (iii) changes to the licensee's or permit holder's name, phone number, business or e-mail address; (iv) changes to the name, position, or title of an officer of the licensee or permit holder, including but not limited to, the radiation safety officer or quality assurance manager; or (v) changes to the format of the license or permit or otherwise makes editorial, corrective or other minor revisions, including the updating of NRC approved references. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(10). Therefore, pursuant to 10 CFR

51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. 10 CFR 50.55a, "Codes and standards."
2. American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) 2004 Edition through the 2006 Addenda.
3. American Society of Mechanical Engineers (ASME) Section XI, B&PV Code for Operation and Maintenance of Nuclear Power Plants 2007 Edition with the 2008 Addenda.

ATTACHMENT 2

Markup of Technical Specifications Pages

Oyster Creek Nuclear Generating Station

Renewed Facility Operating License No. DPR-16

Docket No. 50-219

REVISED TECHNICAL SPECIFICATIONS PAGES

TS Pages

4.5-6

4.5-7

4.5-8

4.5-9

4.5-17

4.5-18

Leakage at instrument fittings and valves
Venting an unisolated instrument or instrument line
Flushing or draining an instrument
Installation of a new instrument or instrument line

L. Suppression Chamber Surveillance

1. At the frequency specified in the Surveillance Frequency Control Program, the suppression chamber water level and temperature and pressure suppression system pressure shall be checked.
2. A visual inspection of the suppression chamber interior, including water line regions, shall be made at the frequency specified in the Surveillance Frequency Control Program.
3. Whenever heat from relief valve operation is being added to the suppression pool, the pool temperature shall be continually monitored and also observed until the heat addition is terminated.
4. Whenever operation of a relief valve is indicated and the suppression pool temperature reaches 160°F or above while the reactor primary coolant system pressure is greater than 180 psig, an external visual examination of the suppression chamber shall be made before resuming normal power operation.

M. Shock Suppressors (Snubbers)

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

1. Each snubber shall be demonstrated OPERABLE by performance of the following inspection program:

Snubber Inspection Program

~~a. Visual Inspections~~

~~Snubbers are categorized as inaccessible or accessible during reactor operation. Each of the categories (inaccessible and accessible) may be inspected independently according to the schedule determined by Table 4.5-1. The visual inspection interval for each type of snubber shall be determined based upon the criteria provided in Table 4.5-1.~~

INSERT 1

b. ~~Visual Inspection Acceptance Criteria~~

~~Visual inspections shall verify that: (1) that there are 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 as acceptable 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 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 4.5.M.d or 4.5.M.e. 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 requirements shall be met.~~

e. ~~Functional Tests~~

~~At least once every 24 months, a representative sample (10% of the total of each type of snubber in use in the plant) 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 4.5.M.d or 4.5.M.e, an additional 10% of that type of snubber shall be functionally tested. As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, mechanical or hydraulic.~~

~~The representative sample 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 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, meter, etc.).~~
- ~~3. Snubbers within 10 feet of the discharge from a safety relief valve.~~



~~In addition to the regular sample, snubbers which failed a 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 (if it is repaired and installed in another position) and the replacement snubber shall be retested. The results from testing of these snubbers are not included for determining additional sampling requirements.~~

~~For any snubber that fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated. If caused by manufacturer or design deficiency, actions shall be taken to ensure that all snubbers of the same design are not subject to the same defect.~~

d. Hydraulic Snubbers Functional Test Acceptance Criteria

~~The hydraulic 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 snubbers to withstand load without displacement shall be verified.~~

e. Mechanical Snubbers Functional Test Acceptance Criteria

~~The mechanical snubber functional test shall verify that:~~

- ~~1. The drag force to maintain movement of the snubber rod in either tension or compression is less than the specified maximum drag force.~~
- ~~2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.~~
- ~~3. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.~~



f. ~~Snubber Service Life Monitoring~~

~~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 6.10.2.1.~~

~~Concurrent with the first inservice visual inspection and at least once per 24 months thereafter, the installation and maintenance records for each snubber 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. Service life shall not at any time affect reactor operations.~~

N. Secondary Containment Isolation Valves

1. Each secondary containment isolation valve shall be demonstrated operable prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator by cycling the valve through at least one complete cycle of full travel. Following maintenance, repair or replacement work on the control or power circuit for the valves, the affected component shall be tested to assure it will perform its intended function in the circuit.
2. At the frequency specified in the Surveillance Frequency Control Program, all valves shall be tested for automatic closure by an isolation signal.

TABLE 4.5-1
~~SNUBBER VISUAL INSPECTION INTERVAL~~
 Page 1 of 2

NUMBER OF UNACCEPTABLE SNUBBERS

<u>Population or Category (Notes 1,2)</u>	<u>Column A Extend Interval (Notes 3,6)</u>	<u>Column B Repeat Interval (Notes 4,6)</u>	<u>Column C Reduce Interval (Notes 5,6)</u>
1	0	0	1
80	0	0	2
100	0	1	4

~~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, the decision on how to categorize the snubbers must be made and documented before any inspection and shall use that decision 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.~~

TABLE 4.5-1
SNUBBER VISUAL INSPECTION INTERVAL
Page 2 of 2

~~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: Each inspection interval shall be subject to the limitation of Technical Specification 1.24.~~

INSERT 1:

This program conforms to the examination, testing, and service life monitoring for dynamic restraints (snubbers) in accordance with 10 CFR 50.55a inservice inspection (ISI) requirements for supports. The program shall be in accordance with the following:

- a. This program shall meet 10 CFR 50.55a(g) ISI requirements for supports.
- b. The program shall meet the requirements for ISI of supports set forth in subsequent editions of the Code of Record and addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) that are incorporated by reference in 10 CFR 50.55a(b), subject to its limitations and modifications, and subject to Commission approval.
- c. The program shall, as allowed by 10 CFR 50.55a(b)(3)(v), meet Subsection ISTA, "General Requirements," and Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants," in lieu of Section XI of the ASME B&PV Code ISI requirements for snubbers, or meet authorized alternatives pursuant to 10 CFR 50.55a(a)(3).
- d. The 120-month program updates shall be made in accordance with 10 CFR 50.55a (including 10 CFR 50.55a(b)(3)(v)) subject to the limitations and modifications listed therein.

ATTACHMENT 3

Markup of Technical Specifications Bases Page (For Information Only)

Oyster Creek Nuclear Generating Station

Renewed Facility Operating License No. DPR-16

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REVISED TECHNICAL SPECIFICATIONS BASES PAGE

TS Bases Page

4.5-14

~~The snubber inspection frequency is based upon 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. A snubber is considered unacceptable if it fails to satisfy the acceptance criteria of the visual inspection. Snubbers may be categorized, based upon their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, that decision must be made and documented before any inspection and used as the basis upon which to determine the next inspection interval for that category.~~

~~If continued operation cannot be justified with an unacceptable snubber, the snubber shall be declared inoperable and the applicable action requirements met. To determine the next surveillance interval, the snubber may be reclassified as acceptable if it can be demonstrated that the snubber is operable in its as found condition by the performance of a functional test and if it satisfies the acceptance criteria for functional testing.~~

~~The next visual inspection interval may be twice, the same, or reduced by as much as two thirds of the previous inspection interval. This interval depends on the number of unacceptable snubbers found in proportion to the size of the population or category for each type of snubber included in the previous inspection. Table 4.5 1 establishes the length of the next visual inspection interval.~~

~~To further increase the assurance of snubber reliability, functional tests should be performed once each refueling cycle. These tests will include stroking of the snubbers to verify proper piston movement, lock up and bleed. Ten percent represents an adequate sample for such tests. Observed failures of these samples require testing of additional units.~~

After the containment oxygen concentration has been reduced to meet the specification initially, the containment atmosphere is maintained above atmospheric pressure by the primary containment inerting system. This system supplies nitrogen makeup to the containment so that the very slight leakage from the containment is replaced by nitrogen, further reducing the oxygen concentration. In addition, the oxygen concentration is continuously recorded and high oxygen concentration is annunciated. Therefore, a periodic check of oxygen concentration is adequate. This system also provides the capability for determining if there is gross leakage from the containment.

The drywell exterior was coated with Firebar D prior to concrete pouring during construction. The Firebar D separated the drywell steel plate from the concrete. After installation, the drywell liner was heated and expanded to compress the Firebar D to supply a gap between the steel drywell and the concrete. The gap prevents contact of the drywell wall with the concrete which might cause excessive local stresses during drywell expansion in a loss-of-coolant accident.

The surveillance program is being conducted to demonstrate that the Firebar D will maintain its integrity and not deteriorate throughout plant life. The surveillance frequency is adequate to detect any deterioration tendency of the material.⁽⁸⁾

The "Snubber Inspection Program" manages the requirement for demonstrating snubber operability (examination, testing and service life monitoring) as reflected in TS Section 4.5.M thereby ensuring the TS remains consistent with the ISI program. The program for ISI testing of snubbers in accordance with ASME OM Code and the applicable addenda as required by 10 CFR 50.55a(g) is required to include evaluation of supported components/ systems when snubbers are to be inoperable.



ATTACHMENT 4

TS 4.5.M SR Comparison to ISI Program Requirements

Oyster Creek Nuclear Generating Station

Renewed Facility Operating License No. DPR-16

Docket No. 50-219

OCNGS Snubber TS vs. OM Code Subsection ISTD

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
<p>4.5.M Shock Suppressors (Snubbers) As used in this specification, “type of snubber” shall mean snubbers of the same design and manufacturer, irrespective of capacity.</p>	<p>While ISTD does not have a generic definition like this, ISTD-4220(a) defines for visual exams what your grouping/definition can be for visuals and ISTD-5250 describes the requirements for Defined Test Plan Groups for selecting/scheduling functional tests.</p>	<p>Refer to TS 4.5.M.1.a Visual Inspection, and TS 4.5.M.c Functional Testing sections below.</p>
<p>4.5.M.1 Each snubber shall be demonstrated OPERABLE by performance of the following inspection program:</p>	<p>ASME OM Code – Subsection ISTD – Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants.</p>	<p>The Oyster Creek Snubber Inspection Program will be the inspection program used to ensure operability for snubbers by following the ASME OM Code Subsection ISTD.</p>
<p>4.5.M.1.a Visual Inspection Snubbers are categorized as inaccessible or accessible during reactor operation. Each of the categories (inaccessible and accessible) may be inspected independently according to the schedule determined by Table 4.5-1. The visual inspection interval for each type of snubber shall be determined based upon the criteria provided in Table 4.5-1.</p>	<p>ISTD-4220(a) requires all snubbers to be considered one population for examination, or they may be categorized as accessible and inaccessible.</p> <p>ISTD-4220(b) requires the decision to examine the snubbers as one population or as separate categories shall be made and documented before the scheduled examination begins and shall not be changed during the examination.</p> <p>ISTD-4252(b) requires inservice examinations to be conducted in accordance with Table ISTD-4252-1.</p>	<p>Table ISTD-4252-1 is equivalent to TS Table 4.5-1 for population/category sizes less than 150. Oyster Creek’s snubber population/category sizes are less than 150, therefore use of ISTD-4200 for snubber inservice examination in lieu of current TS 4.5.M.1.a does not change the number of snubbers required to be examined or the required examination intervals.</p>
<p>4.5.M.1.b Visual Inspection Acceptance Criteria Visual inspections shall verify that:</p> <p>(1) that there are no visible indications of damage or impaired OPERABILITY;</p> <p>(2) attachments to the foundation or supporting structure are functional; and</p> <p>(3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional.</p>	<p>ISTD-4210 states that inservice examination shall be a visual examination to identify physical damage, leakage, corrosion, or degradation that may have been caused by environmental exposure or operating conditions; and external characteristics that may indicate operational readiness of the snubber shall be examined.</p> <p>ISTD-4231 requires that examinations shall include observations for the following and the conditions shall be evaluated when found:</p> <p>(a) loose fasteners, or members that are corroded or deformed</p> <p>(b) disconnected components or other conditions that might interfere with the proper restraint of movement</p>	<p>10 CFR 50.55a(b)(3)(v) allows the use of Subsection ISTD for inservice examination requirements. Preservice and inservice examinations are required to be performed using the VT-3 visual examination method described in ASME Section XI, IWA-2213.</p> <p>The revised ISI program requirements for inservice examination do not differ significantly from the visual inspection acceptance criteria in TS 4.5.M.1.b.</p> <p>Examination of the snubber from pin-to-pin in accordance with ASME OM Code</p>

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
	<p>ISTD-4232 requires that examinations verify snubbers do not restrain thermal movement to an extent that unacceptable stresses could develop in the snubber, the pipe, or other equipment that the snubber is designed to protect or restrain. There should be no indication of binding, misalignment or deformation of the snubber.</p> <p>ISTD-4233 requires that examinations verify snubbers shall be free of defects that may be generic to particular designs as may be detected by visual examination.</p> <p>ASME Section XI, IWF-1300 and Figure IWF-1300-1(f) requires integral and non-integral attachments for snubbers shall be examined in accordance with the requirements of Subsection IWF.</p>	<p>Subsection ISTD and the attachments to the component or structure will be examined in accordance with ASME Section XI, Subsection IWF. This will encompass that which was examined in accordance with the Oyster Creek TS.</p>
<p>4.5.M.1.b Visual Inspection Acceptance Criteria Snubbers which appear inoperable as a result of visual inspections shall be classified as unacceptable and may be reclassified as acceptable for the purpose of establishing the next visual inspection interval, providing that:</p> <p>(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</p> <p>(2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per Specification 4.5.M.d or 4.5.M.e. 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 requirements shall be</p>	<p>ISTD-4240 permits snubbers classified as unacceptable during inservice examination to be tested in accordance with the requirements of ISTD-5210. Results that satisfy the operational readiness test criteria of ISTD-5210 shall be used to accept the snubber, provided the test demonstrates that the unacceptable condition did not affect operational readiness.</p> <p>ISTD-4233 requires that fluid supply or content for hydraulic snubbers shall be observed. If the fluid is less than the minimum amount, the installation shall be identified as unacceptable, unless a test establishes that the performance of the snubber is within specified limits. Tests shall be performed in accordance with ISTD-5210. The initial test shall start with the piston at the as-found setting and be performed in the extension (tension) direction, or in a mode that more closely resembles the operating and design requirements of the snubber.</p> <p>ISTD-4270 requires that snubbers that do not meet examination requirements of ISTD-4230 shall be evaluated to determine the root cause of the unacceptability.</p>	<p>The revised ISI program requirements for evaluation and corrective action for inservice examination are equivalent to those of current TS 4.5.M.1.b for visual examination acceptance criteria and meet the requirements of ISTD.</p>

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
met.	<p>ISTD-4280 requires that unacceptable snubbers shall be adjusted, repaired, modified, or replaced.</p> <p>ISTD-1800 requires that an evaluation shall be performed of the system(s) or components of which an unacceptable snubber is a part, for possible damage to the supported system or component.</p>	
<p>4.5.M.c Functional Testing At least once every 24 months, a representative sample (10% of the total of each type of snubber in use in the plant) shall be functionally tested either in place or in a bench test.</p> <p>For each snubber that does not meet the functional test acceptance criteria of Specification 4.5.M.d or 4.5.M.e, an additional 10% of that type of snubber shall be functionally tested. As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, mechanical or hydraulic.</p>	<p>ISTD-5252 Defined Test Plan Group (DTPG) Alternatives. Except as required by ISTD-5253, the total snubber population may be considered one DTPG, or alternatively, differences in design, application, size, or type may be considered in establishing DTPGs.</p> <p>ISTD-5200 requires snubber operational readiness testing to be performed each fuel cycle. Testing shall be performed during normal system operation, or during system or plant outages.</p> <p>ISTD-5240 states that snubber testing may begin no earlier than 60 days before a scheduled refueling outage.</p> <p>ISTD-5261 requires snubbers of each DTPG to be tested using either:</p> <p>(a) the 10% testing sample plan (b) the 37 testing sample plan</p> <p>ISTD-5223 and ISTD-5224 permit snubbers to be tested in their installed location or in a bench test.</p> <p>ISTD-5271 requires snubbers that do not meet test requirements specified in ISTD-5210 or ISTD-5230 to be evaluated to determine the root cause of the failure.</p> <p>ISTD-5330 requires the snubbers of each DTPG and failure mode group (FMG) to be tested as required. Testing is complete when the mathematical expressions of ISTD-5331 are satisfied, or all snubbers in the DTPG or FMG have been tested.</p> <p>ISTD-5331 requires that testing shall</p>	<p>The frequency of snubber testing in the revised program is unchanged from the frequency specified in current TS 4.5.M.c.</p> <p>The revised program provides greater flexibility in permitting testing to be performed during modes other than shutdown. However, as noted in Generic Letter 91-04:</p> <p>"The staff concludes that the TS need not restrict surveillances as only being performed during shutdown. Nevertheless, safety dictates that when refueling interval surveillances are performed during power operation, licensees give proper regard for their effect on the safe operation of the plant. If the performance of a refueling interval surveillance during plant operation would adversely affect safety, the licensee should postpone the surveillance until the unit is shut down for refueling or is in a condition or mode that is consistent with the safe conduct of that surveillance."</p> <p>Oyster Creek assesses and manages risk in accordance with 10 CFR 50.65(a)(4) prior to performing maintenance and surveillance activities both at power and during shutdown. Activities are scheduled to</p>

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
	<p>satisfy the mathematical expressions as follows:</p> <p>(a) for each DTPG $N \geq 0.1n + C(0.1n/2)$</p> <p>(b) for each FMG $N_F \geq C_F(0.1n/2)$</p> <p>Per ISTD-5322, additional tests are not required for an isolated failure.</p>	<p>minimize outage times for TS required equipment.</p> <p>Oyster Creek plans to use the 10% sample plan. The initial sample size in the revised program is as large as the size specified in current TS 4.5.M.c.</p>
<p>4.5.M.c Functional Tests (continued) The representative sample 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 sample shall include snubbers from the following three categories:</p> <ol style="list-style-type: none"> 1. The first snubber away from each reactor vessel nozzle 2. Snubbers within five feet of heavy equipment (valve, pump, turbine, motor, etc.) 3. Snubbers within ten feet of the discharge from a safety relief valve 	<p>ISTD-5311(a) requires the initial sample to include as practicable representation from the DTPG based on the significant features (i.e., the various designs, configurations, operating environments, sizes, and capacities) and based on the ratio of the number of snubbers of each significant feature, to the total number of snubbers in the DTPG. Initial sample selection shall be random.</p> <p>As an alternative, ISTD-5311(b) requires the initial sample to be generally representative, as in ISTD-5311(a) but allows the sample to be selected from those snubbers scheduled for seal replacement or other activities related to service life monitoring.</p>	<p>Since the snubbers of a DTPG are of the same design, configuration, and operating environment, and only a few snubbers are of different size and capacity, the representative sample would only vary slightly.</p> <p>Initial sample composition requirements are less detailed in the revised program than those in current TS 4.5.M.c. However, the revised program requirements continue to ensure initial sample selection is random and representative.</p>
<p>4.5.M.c Functional Tests (continued) 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. The results from testing of these snubbers are not included for determining additional sampling</p>	<p>ISTD-5500 requires that snubbers placed in the same location as snubbers that failed the previous inservice operational readiness test shall be retested at the time of next operational readiness testing unless the cause of the failure is clearly established and corrected. Retests in accordance with ISTD-5500 shall not be considered a part of inservice operational readiness testing sample selection requirements.</p>	<p>The revised program requirement is equivalent to the current TS 4.5.M.c requirement to retest a replacement snubber installed in place of a failed snubber. Retesting is required, unless the cause of the original failure was clearly established and corrected. The revised program does not require retest during the next test period of failed snubbers that are repaired and installed in another position. However, the corrective action requirements for unacceptable snubbers in</p>

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
requirements.		ISTD-5280, including testing, provide adequate assurance of OPERABILITY for failed snubbers that are repaired and installed in another position.
<p>4.5.M.c Functional Tests (continued) For any snubber that fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated. If caused by manufacturer or design deficiency, actions shall be taken to ensure that all snubbers of the same design are not subject to the same defect.</p>	<p>ISTD-5271 states that snubbers that do not meet test requirements shall be evaluated to determine the root cause of the failure.</p> <p>ISTD-5272 states that snubbers found unacceptable according to operational readiness test requirements should be assigned to FMGs unless the failure is isolated or unexplained. FMGs shall include all unacceptable snubbers with the same failure mode and all other snubbers with similar potential for similar failure.</p> <p>As an alternative to additional testing for design or manufacturing FMGs, ISTD-5323 requires no additional testing when all snubbers in the FMGs are replaced or modified in accordance with ISTD-1600. If replacement or modification is not performed in accordance with ISTD-5323, additional testing is required in accordance with ISTD- 5324. Testing is required to continue until the acceptance limit is satisfied or all snubbers in the FMG have been tested.</p>	<p>The revised program requirements for manufacturer or design deficiencies require replacement or modification of all snubbers in the FMG or additional testing until the mathematical expression of ISTD-5331(b) is satisfied or all snubbers in the FMG have been tested. This may result in fewer snubbers being tested after a test failure. However, the revised program requirements provide adequate assurance of snubber OPERABILITY because all potentially affected snubbers will be replaced or modified; or the acceptance limit for additional testing will be met, demonstrating an acceptable level of reliability.</p>
<p>4.5.M.1.d Hydraulic Snubbers Functional Test Acceptance Criteria The hydraulic snubber functional test shall verify that:</p> <p>1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.</p> <p>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 snubbers to withstand load without</p>	<p>ISTD-5210 Test Parameters</p> <p>a) Activation is within the specified range of velocity or acceleration in tension and in compression.</p> <p>b) Release rate is within the specified range in tension and in compression.</p>	<p>The revised ISI program requirements for hydraulic snubber acceptance criteria are equivalent to those of current TS 4.5.M.1.d.</p> <p>Oyster Creek does not have any snubbers specifically required to not displace under continuous load.</p>

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
displacement shall be verified.		
<p>4.5.M.1.e Mechanical Snubbers Functional Test Acceptance Criteria</p> <p>1. The drag force to maintain movement of the snubber rod in either tension or compression is less than the specified maximum drag force.</p> <p>2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.</p> <p>3. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.</p>	<p>ISTD-5210 Test Parameters</p> <p>a) Activation is within the specified range of velocity or acceleration in tension and in compression.</p> <p>b) Release rate is within the specified range in tension and in compression.</p> <p>c) For mechanical snubbers, drag force is within specified limits, in tension and in compression.</p>	<p>The revised ISI program requirements for mechanical snubber acceptance criteria are equivalent to those of current TS 4.5.M.1.e.</p> <p>Oyster Creek does not have any snubbers specifically required to not displace under continuous load.</p>
<p>4.5.M.f Snubber Service Life Monitoring</p> <p>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 TS 6.10.2.1.</p> <p>Concurrent with the first inservice visual inspection and at least once per 24 months thereafter, the installation and maintenance records for each snubber 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</p>	<p>ISTD-6100 requires initial snubber service life to be predicted based on manufacturer's recommendation or design review.</p> <p>ISTD-6200 requires service life to be evaluated at least once each fuel cycle. If the evaluation indicates that service life will be exceeded before the next scheduled system or plant outage, one of the following actions shall be taken:</p> <p>(a) the snubber shall be replaced with a snubber for which the service life will not be exceeded before the next scheduled system or plant outage</p> <p>(b) technical justification shall be documented for extending the service life to or beyond the next scheduled system or plant outage</p> <p>(c) the snubber shall be reconditioned</p>	<p>The service life evaluation requirements in ISTD-6100, ISTD-6200 and ISTD-6300 are equivalent to the requirements in current TS 4.5.M.f.</p> <p>Oyster Creek TS 6.10.2.1 states that records of inservice inspections performed pursuant to these Technical Specifications shall be retained for the duration of the Facility Operating License. This requirement remains unchanged.</p>

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
<p>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. Service life shall not at any time affect reactor operations.</p>	<p>such that its service life will be extended to or beyond the next scheduled system or plant outage</p> <p>ISTD-6300 requires causes for any examination or testing failures shall be determined and considered in establishing or reestablishing service life.</p>	
<p>TS Table 4.5-1 Snubber Visual Inspection Interval</p> <p>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, the decision on how to categorize the snubbers must be made and documented before any inspection and shall use that decision as the basis upon which to determine the next inspection interval for that category.</p> <p>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.</p> <p>Note 3: If the number of unacceptable snubbers is equal</p>	<p>ISTD-4220(a) requires all snubbers to be considered one population for examination, or they may be categorized as accessible and inaccessible.</p> <p>ISTD-4220(b) requires the decision to examine the snubbers as one population or as separate categories shall be made and documented before the scheduled examination begins and shall not be changed during the examination.</p> <p>ISTD-4252(b) requires inservice examinations to be conducted in accordance with Table ISTD-4252-1.</p>	<p>Table ISTD-4252-1 is equivalent to TS Table 4.5-1 for population/category sizes less than 150. Oyster Creek's snubber population/category sizes are less than 150; therefore use of ISTD in lieu of TS is equivalent for the site.</p>

Oyster Creek Technical Specification (TS)	ASME OM Code 2004 Edition through 2006 Addenda – Subsection ISTD	Justification for Change
<p>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.</p> <p>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.</p> <p>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.</p> <p>Note 6: Each inspection interval shall be subject to the limitation of Technical Specification 1.24.</p>		

Notes / Assumptions / References:

1. Code of Record for this comparison: ASME OM Code 2004 Edition through the 2006 Addenda.
2. Oyster Creek snubber population consists of 2 defined test plan groups (DTPG) – Mechanical (Inaccessible) and Hydraulic (Accessible) snubbers.

ATTACHMENT 5

Proposed Snubber Inspection Program

Oyster Creek Nuclear Generating Station

Renewed Facility Operating License No. DPR-16

Docket No. 50-219

Exelon Generation Company, LLC
Oyster Creek Generating Station 5th Interval
Snubber Inspection Program

**Snubber Administrative
Program Document**

Fifth Ten-Year Inspection Interval

AES Document: OC-472623-RP06

Prepared By



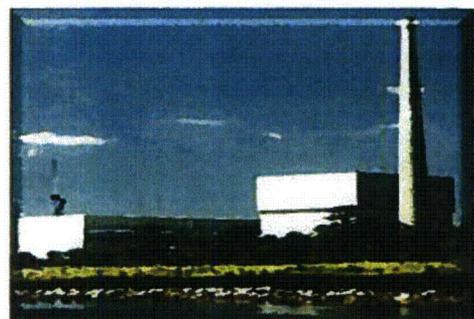
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REVISION APPROVAL SHEET

TITLE: Snubber Inspection Program
Fifth Ten-Year Inspection Interval
Oyster Creek Generating Station

AES DOCUMENT: OC-472623-RP06

REVISION: 0

PROGRAM ACCEPTANCE

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APPROVED: John Clark / 11/22/13
John Clark
Manager, Programs

Each time this document is revised, the Revision Approval Sheet will be signed and the following Revision Control Sheet should be completed to provide a detailed record of the revision history. The signatures above apply only to the changes made in the revision noted. If historical signatures are required, Oyster Creek Generating Station archives should be retrieved.



REVISION CONTROL SHEET

Major changes should be outlined within the table below. Minor editorial and formatting revisions are not required to be logged.

REVISION	DATE	REVISION SUMMARY
0	11/22/13	Initial issuance. (This Snubber Administrative Program Document was developed by Automated Engineering Services as part of the Fifth Interval ISI Program update.)

Note: 1. This Snubber Administrative Program Document (Sections 1 - 6 inclusive) is controlled by the Oyster Creek Generating Station Engineering Programs Group.



REVISION SUMMARY

SECTION	EFFECTIVE PAGES	REVISION	DATE
Preface	1-7	0	11/22/13
1.0	8-14	0	11/22/13
2.0	15-25	0	11/22/13
3.0	26-30	0	11/22/13
4.0	31-34	0	11/22/13
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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

This Snubber Administrative Program Document establishes and defines the Snubber Inspection Program requirements. The primary purpose of this Snubber Inspection Program is to maintain the operational readiness of all Safety Related (Class 1, 2, and 3) and Non-Safety Related snubbers by periodically examining, testing, and monitoring service life to fulfill applicable plant operating commitments, American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI (ASME Section XI), and ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) requirements.

The Fifth Inservice Inspection (ISI) Interval is effective from January 15, 2013 through January 14, 2023 for Oyster Creek Generating Station (OCGS). With the update to the ISI Program for the Fifth ISI Interval for ISI Class 1, 2, and 3 components, including their supports, Exelon Generation Company, LLC (Exelon) has elected to update the Snubber Inspection Program documentation at this time. The ASME OM Code of Record for the Fifth Interval Snubber Inspection Program is the 2004 Edition through the 2006 Addenda.

Per 10CFR50.55a(b)(3)(v)(B), OCGS will use Subsection ISTD of the ASME OM Code 2004 Edition through the 2006 Addenda for the Fifth Interval Snubber Inspection Program. This is a change from the previous intervals when OCGS was committed to using Technical Specifications for the inspection of Snubbers.

Paragraph ISTA-3120(d) of ASME OM Code allows an inspection interval to be extended or decreased by as much as one year, and Paragraph ISTA-3120(e) allows an inspection interval to be extended when a unit is out of service continuously for six months or more. The extension may be taken for a period of time not to exceed the duration of the outage.



1.2 Background

The construction permit for OCGS was issued on December 15, 1964. The Reactor Primary System (i.e., Reactor Vessel, Reactor Recirculating Piping, Isolation Condensers and all piping, pumps, and valves up to the first isolation valve with the exception of the Feedwater System where the break is at the second isolation valve) was fabricated, inspected and tested in accordance with the ASME Boiler and Pressure Vessel Code, Section I, Power Boilers, 1962 Edition and addenda plus the Nuclear Code Cases applicable on December 11, 1963.

1.3 Fourth Interval Snubber Inspection Program

The OCGS Fourth Interval Snubber Inspection Program was developed in accordance with the requirements of OCGS Technical Specifications (TS) 3.5.A.8 and 4.5.M in lieu of the requirements of ASME Section XI, 1995 Edition through the 1996 Addenda per Relief Request R-38. The TS snubber visual examination program inspects safety related snubbers and incorporates the alternate snubber visual examination requirements delineated in Nuclear Regulatory Commission (NRC) Generic Letter (GL) 90-09, "Alternate Requirements for Snubber Visual Inspection Intervals and Corrective Actions." GL 90-09 was accepted by the NRC in the Safety Evaluation Report (SER) dated September 6, 1998. The general requirements of ASME Section XI, Subsection IWA for examination methods and personnel qualifications still applied.

At the end of the Fourth ISI Interval and in preparation for the Fifth ISI Interval, OCGS sent Relief Request R-41 to the NRC to request a three month extension from the original end date. This relief request was approved by the NRC and the changes allowed OCGS to extend from the original Fourth ISI Interval to beyond one year.

Therefore, the OCGS Fourth ISI Interval was effective from October 14, 2002 through January 14, 2013.

1.4 Fifth Interval Snubber Inspection Program

Pursuant to 10CFR50.55a(g), licensees are required to update their ISI Programs to meet the requirements of ASME Section XI once every ten years or inspection interval. The ISI Program is required to comply with the latest Edition and Addenda of ASME Section XI incorporated by reference in 10CFR50.55a twelve months prior to the start of the interval per 10CFR50.55a(g)(4)(ii). Based on this date, the latest Edition and Addenda of ASME Section XI referenced in 10CFR50.55a(b)(2) twelve months prior to the start of the Fifth ISI Interval was the 2007 Edition with the 2008 Addenda.



Concurrently, the OCGS Fifth Interval Snubber Administrative Program Document was developed in accordance with the requirements of 10CFR50.55a and the ASME OM Code, 2004 Edition through the 2006 Addenda, subject to the limitations and modifications contained within Paragraph (b) of the regulation. These limitations and modifications are detailed in Table 1.5-1 of this section. This Fifth Interval Snubber Administrative Program Document addresses Subsection ISTA, Subsection ISTD, approved ASME Code Cases, approved alternatives through relief requests and SER's, and utilizes the inspection requirements as defined therein.

The OCGS Fifth ISI Interval is effective from January 15, 2013 through January 14, 2023. However, OCGS operations are planned to cease by the end of 2019 as previously announced.

1.5 Code of Federal Regulations 10CFR50.55a Requirements

There are certain Paragraphs in 10CFR50.55a that list the limitations, modifications, and/or clarifications to the implementation requirements of ASME OM Code, Subsection ISTD. These Paragraphs in 10CFR50.55a that are applicable to OCGS are detailed in Table 1.5-1.



TABLE 1.5-1
CODE OF FEDERAL REGULATIONS 10CFR50.55a REQUIREMENTS

10CFR50.55a Paragraphs	Limitations, Modifications, and Clarifications
10CFR50.55a(b)(3)(v)(B)	<p>(ISI) Subsection ISTD: Article IWF-5000, "Inservice Inspection Requirements for Snubbers," of the ASME B&PV Code, Section XI, must be used when performing inservice inspection examinations and tests of snubbers at nuclear power plants, except as conditioned in Paragraph (b)(3)(v)(B) of this section. (B) Licensees shall comply with the provisions for examining and testing snubbers in Subsection ISTD of the ASME OM Code and make appropriate changes to their technical specifications or licensee-controlled documents when using the 2006 Addenda and later editions and addenda of Section XI of the ASME B&PV Code.</p>
10CFR50.55a(b)(6)	<p><i>Operation and Maintenance of Nuclear Power Plants Code Cases:</i> Licensees may apply the ASME Operation and Maintenance Nuclear Power Plants Code Cases listed in Regulatory Guide 1.192 without prior NRC approval subject to the following:</p> <p>(i) When a licensee initially applies a listed Code Case, the licensee shall apply the most recent version of that Code Case incorporated by reference in this paragraph.</p> <p>(ii) If a licensee has previously applied a Code Case and a later version of the Code Case is incorporated by reference in this paragraph, the licensee may continue to apply, to the end of the current 120-month interval, the previous version of the Code Case as authorized or may apply the later version of the Code Case, including any NRC-specified conditions placed on its use.</p> <p>(iii) Application of an annulled Code Case is prohibited unless a licensee previously applied the listed Code Case prior to it being listed as annulled in Regulatory Guide 1.192. If a licensee has applied a listed Code Case that is later listed as annulled in Regulatory Guide 1.192, the licensee may continue to apply the Code Case to the end of the current 120-month interval.</p>



1.6 Code Cases

Per 10CFR50.55a(b)(6), ASME Code Cases that have been determined to be suitable for use in the Snubber Inspection Program by the NRC are listed in Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code". The approved Code Cases in Regulatory Guide 1.192, which are being utilized by OCGS, are included in Section 2.1.1. The most recent version of a given Code Case incorporated in the revision of Regulatory Guide 1.192 referenced in 10CFR50.55a(b)(6)(i) at the time it is applied within the Snubber Inspection Program shall be used. The latest version of Regulatory Guide 1.192 incorporated into this document is Revision 0. As this guide is revised, newly approved Code Cases will be assessed for plan implementation at OCGS per Paragraph ISTA-3200(e) and proposed for use in revisions to the Snubber Administrative Program Document.

The use of other Code Cases (than those listed in Regulatory Guide 1.192) may be authorized by the Director of the Office of Nuclear Reactor Regulation upon request pursuant to 10CFR50.55a(a)(3). Code Cases not approved for use in Regulatory Guide 1.192, which are being utilized by OCGS through associated relief requests, are included in Section 5.0.

1.7 Relief Requests

In accordance with 10CFR50.55a, when a licensee either proposes alternatives to ASME OM Code requirements which provide an acceptable level of quality and safety, determines compliance with ASME OM Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, or determines that specific ASME OM Code requirements for inservice inspection or testing are impractical, the licensee shall notify the NRC and submit information to support the determination.

The submittal of this information will be referred to in this document as a "Relief Request". Relief Requests for the Fifth Interval Snubber Inspection Program document. The text of the Relief Requests contained in Section 5.0 will demonstrate one of the following: the proposed alternatives provide an acceptable level of quality and safety per 10CFR50.55a(a)(3)(i), compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety per 10CFR50.55a(a)(3)(ii), or the code requirements are considered impractical per 10CFR50.55a(g)(5)(iii).

Per 10CFR50.55a Paragraphs (a)(3) and (g)(6)(i), the Director of the Office of Nuclear Reactor Regulation will evaluate relief requests and "may grant such relief and may impose such alternative requirements as it determines is authorized



by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility”.



2.0 BASIS FOR SNUBBER INSPECTION PROGRAM

2.1 ASME OM Code Examination and Testing Requirements

As required by the 10CFR50.55a, this Program was developed in accordance with the requirements detailed in the 2004 Edition through the 2006 Addenda of the ASME OM Code, Subsection ISTD, approved ASME Code Cases, and approved alternatives through relief requests and Safety Evaluations (SE's).

2.1.1 ASME OM Code Cases

As referenced by 10CFR50.55a(b)(6) and allowed by NRC Regulatory Guide 1.192, the following Code Cases can be incorporated into the OCGS Snubber Inspection Program if they meet the requirements of Paragraph ISTA-3130(b) and (c).

OMN-13 Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants. Regulatory Guide 1.192.

Additional Code Cases invoked in the future shall be in accordance with those approved for use in the latest published revision of Regulatory Guide 1.192 or 10CFR50.55a at that time.

2.2 Augmented Examination and Testing Requirements

Augmented examination and testing requirements are those examinations and tests that are performed above and beyond the requirements of ASME OM Code. These examinations and tests are those that will be performed in addition to the requirements of ASME OM Code on a routine basis during the Fifth Interval Snubber Inspection Program. There are currently no augmented examinations and tests performed by OCGS that are not specifically addressed by the ASME OM Code.

2.3 Snubber Scope

This OCGS Snubber Inspection Program applies to the snubber functional testing and visual examinations, and service life monitoring from pin connection to pin connection, and is conducted in accordance with the ASME OM Code. This program includes all snubbers necessary to protect the primary coolant pressure boundary and any other safety system or components that are required to perform a specific function in shutting down a reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident (i.e., all safety-related snubbers.)



2.4 Snubber Drawings and Details

OCGS has two (2) types of snubbers (Mechanical and Hydraulic). Drawings for these snubbers can be found in the vendor manuals VM-OC-0026 for Pacific Scientific Mechanical Snubbers, and VM-OC-0006 for Hydraulic Shock and Sway Arrestors.

This section of the document includes information with regard to the actual snubber population and the different types, models, and sizes of snubbers utilized by OCGS. A complete listing of all the OCGS ASME OM Code snubbers within the scope of the visual examination and functional testing requirements is provided in the program database and in Table 2.4-1.



TYPE	POSITION	SYSTEM / DESCRIPTION	LOCATION	PIMS ID NUMBER	ALT I.D.# (GP #)
MECHANICAL	N-1-1	NORTH STEAM	DRYWELL 27'	411-0029B	MS-1-S7
MECHANICAL	N-1-2	NORTH STEAM	DRYWELL 27'	411-0029A	MS-1-S6
MECHANICAL	N-1-3	NORTH STEAM	DRYWELL 48'	411-0027	MS-1-S5
MECHANICAL	N-1-4	NORTH STEAM	DRYWELL 49'	411-0026	MS-1-S4
MECHANICAL	N-1-5	NORTH STEAM	DRYWELL 48'	411-0024	MS-1-S3
MECHANICAL	N-1-6	NORTH STEAM	DRYWELL 49'	411-0023	MS-1-S2
MECHANICAL	N-1-7	NORTH STEAM	DRYWELL 55'	411-0022	MS-1-S1
MECHANICAL	S-1-1	SOUTH STEAM	DRYWELL 26'	411-0009B	MS-1-S14
MECHANICAL	S-1-2	SOUTH STEAM	DRYWELL 26'	411-0009A	MS-1-S13
MECHANICAL	S-1-3	SOUTH STEAM	DRYWELL 48'	411-0007	MS-1-S12
MECHANICAL	S-1-4	SOUTH STEAM	DRYWELL 49'	411-0006	MS-1-S11
MECHANICAL	S-1-5	SOUTH STEAM	DRYWELL 48'	411-0004	MS-1-S10
MECHANICAL	S-1-6	SOUTH STEAM	DRYWELL 49'	411-0003	MS-1-S9
MECHANICAL	S-1-7	SOUTH STEAM	DRYWELL 55'	411-0002	MS-1-S8
MECHANICAL	N-2-1	NORTH FEED	DRYWELL 30'	422-0027A	RF-2-S6
MECHANICAL	N-2-2	NORTH FEED	DRYWELL 30'	422-0027B	RF-2-S6A
MECHANICAL	N-2-3	NORTH FEED	DRYWELL 51'	422-0025	RF-2-S5
MECHANICAL	N-2-4	NORTH FEED	DRYWELL 47'	422-0024	RF-2-S5A
MECHANICAL	N-2-5	NORTH FEED	DRYWELL 48'	422-0021	RF-2-S4
MECHANICAL	N-2-7	NORTH FEED	DRYWELL 48'	422-0017	RF-2-S1
MECHANICAL	N-2-8	NORTH FEED	DRYWELL 47'	422-0018	RF-2-S2
MECHANICAL	S-2-1	SOUTH FEED	DRYWELL 30'	422-0012A	RF-2-S11
MECHANICAL	S-2-2	SOUTH FEED	DRYWELL 30'	422-0012B	RF-2-S12
MECHANICAL	S-2-3	SOUTH FEED	DRYWELL 51'	422-0010	RF-2-S9
MECHANICAL	S-2-4	SOUTH FEED	DRYWELL 47'	422-0009	RF-2-S10
MECHANICAL	S-2-5	SOUTH FEED	DRYWELL 48'	422-0006	RF-2-S4A
MECHANICAL	S-2-7	SOUTH FEED	DRYWELL 48'	422-0002	RF-2-S8
MECHANICAL	S-2-8	SOUTH FEED	DRYWELL 48'	422-0003	RF-2-S7
MECHANICAL	N-14-1	ISO CONDENSER	DRYWELL 58'	211-0002	NE-2-S1
MECHANICAL	N-14-2	ISO CONDENSER	DRYWELL 67'	211-0004	NE-2-S3A
MECHANICAL	N-14-3	ISO CONDENSER	DRYWELL 85'	211-0005B	NE-2-S3
MECHANICAL	N-14-4	ISO CONDENSER	DRYWELL 85'	211-0005A	NE-2-S2
MECHANICAL	N-14-5	ISO CONDENSER	DRYWELL 62'	211-0022	NE-2-S4
MECHANICAL	N-14-6	ISO CONDENSER	DRYWELL 67'	211-0023	NE-2-S5
MECHANICAL	N-14-7	ISO CONDENSER	DRYWELL 85'	211-0025A	NE-2-S6



TYPE	POSITION	SYSTEM / DESCRIPTION	LOCATION	PIMS ID NUMBER	ALT I.D.# (GP #)
MECHANICAL	N-14-8	ISO CONDENSER	DRYWELL 85'	211-0025\B	NE-2-S7
MECHANICAL	N-14-9	ISO CONDENSER	DRYWELL 89'	211-0058\A	NE-5-S1
MECHANICAL	N-14-10	ISO CONDENSER	DRYWELL 88'	211-0058\B	NE-5-S2
MECHANICAL	N-14-11	ISO CONDENSER	DRYWELL 88'	211-0039\A	NE-5-S3
MECHANICAL	N-14-12	ISO CONDENSER	DRYWELL 85'	211-0039\B	NE-5-S4
MECHANICAL	16-1	CLEANUP	DRYWELL 60'	215-0014\A	ND-1-S1
MECHANICAL	16-2	CLEANUP	DRYWELL 60'	215-0014\B	ND-1-S2
MECHANICAL	16-3	CLEANUP	DRYWELL 60'	215-0004\A	ND-10-S1
MECHANICAL	16-4	CLEANUP	DRYWELL 60'	215-0004\B	ND-10-S2
MECHANICAL	17-1	S/D COOLING	DRYWELL 58'	214-0019\A	NU-2-S1
MECHANICAL	17-2	S/D COOLING	DRYWELL 58'	214-0019\B	NU-2-S2
MECHANICAL	17-3	S/D COOLING	DRYWELL 48'	214-0002	NU-1-S1
MECHANICAL	17-4	S/D COOLING	DRYWELL 49'	214-0004	NU-1-S2
MECHANICAL	17-5	S/D COOLING	DRYWELL 42'	214-0006\A	NU-1-S3
MECHANICAL	17-6	S/D COOLING	DRYWELL 42'	214-0006\B	NU-1-S4
MECHANICAL	N-20-1	N CORE SPRAY	DRYWELL 61'	212-0005\A	NZ-3-S2A
MECHANICAL	N-20-2	N CORE SPRAY	DRYWELL 61'	212-0005\B	NZ-3-S2B
MECHANICAL	N-20-3	N CORE SPRAY	DRYWELL 65'	212-0002	NZ-3-S3
MECHANICAL	N-20-4	N CORE SPRAY	DRYWELL 67'	212-0001	NZ-3-S4
MECHANICAL	S-20-2	S CORE SPRAY	DRYWELL 98'	212-0051	NZ-3-S8
MECHANICAL	75-26	AUG FUEL POOL	RX BLDG 84'	251-0053	NN-1-S27
MECHANICAL	N-E-1	EMRV NORTH	DRYWELL 47'	212-0163	SV-1-S1
MECHANICAL	N-E-2	EMRV NORTH	DRYWELL 47'	212-0165	SV-1-S2
MECHANICAL	S-E-1	EMRV SOUTH	DRYWELL 47'	212-0155	SV-1-S3
MECHANICAL	S-E-2	EMRV SOUTH	DRYWELL 44'	212-0158	SV-1-S4
MECHANICAL	S-E-3	EMRV SOUTH	DRYWELL 51'	212-0159	SV-1-S5
MECHANICAL	A-1	A RECIRC	DRYWELL 30'	223-0009\A	NG-A-S3
MECHANICAL	A-2	A RECIRC	DRYWELL 30'	223-0009\B	NG-A-S4
MECHANICAL	A-3	A RECIRC	DRYWELL 15'	223-0010\A	NG-A-S5



TYPE	POSITION	SYSTEM / DESCRIPTION	LOCATION	PIMS ID NUMBER	ALT I.D.# (GP #)
MECHANICAL	A-4	A RECIRC	DRYWELL 15'	223-0010\B	NG-A-S6
MECHANICAL	B-1	B RECIRC	DRYWELL 30'	223-0020\A	NG-B-S3
MECHANICAL	B-2	B RECIRC	DRYWELL 30'	223-0020\B	NG-B-S4
MECHANICAL	B-3	B RECIRC	DRYWELL 15'	223-0021\A	NG-B-S5
MECHANICAL	B-4	B RECIRC	DRYWELL 15'	223-0021\B	NG-B-S6
MECHANICAL	C-1	C RECIRC	DRYWELL 30'	223-0031\A	NG-C-S3
MECHANICAL	C-2	C RECIRC	DRYWELL 30'	223-0031\B	NG-C-S4
MECHANICAL	C-3	C RECIRC	DRYWELL 15'	223-0032\A	NG-C-S5
MECHANICAL	C-4	C RECIRC	DRYWELL 15'	223-0032\B	NG-C-S6
MECHANICAL	D-1	D RECIRC	DRYWELL 30'	223-0042\A	NG-D-S3
MECHANICAL	D-2	D RECIRC	DRYWELL 30'	223-0042\B	NG-D-S4
MECHANICAL	D-3	D RECIRC	DRYWELL 15'	223-0043\A	NG-D-S5
MECHANICAL	D-4	D RECIRC	DRYWELL 15'	223-0043\B	NG-D-S6
MECHANICAL	E-1	E RECIRC	DRYWELL 30'	223-0053\A	NG-E-S3
MECHANICAL	E-2	E RECIRC	DRYWELL 30'	223-0053\B	NG-E-S4
MECHANICAL	E-3	E RECIRC	DRYWELL 15'	223-0054\A	NG-E-S5
MECHANICAL	E-4	E RECIRC	DRYWELL 15'	223-0054\B	NG-E-S6
MECHANICAL	SDV1	S D VOLUME	RX BLDG 25'	225-0046	NC-1
MECHANICAL	51/23	CORE SPRAY 2	RX BLDG 59'	212-0070	NZ-2-S15A
MECHANICAL	51/24	CORE SPRAY 2	RX BLDG 59'	212-0071	NZ-2-S15B
HYDRAULIC	-19/6	CONT. SPRAY	RX BLDG 19'	241-0114\B	NQZ-1-S12
HYDRAULIC	-19/7	CONT. SPRAY	RX BLDG 19'	241-0114\A	NQZ-1-S11
HYDRAULIC	-19/8	CONT. SPRAY	RX BLDG 19'	241-0109\B	NQZ-1-S10
HYDRAULIC	-19/9	CONT. SPRAY	RX BLDG 19'	241-0109\A	NQZ-1-S9
HYDRAULIC	-19/10	CONT. SPRAY	RX BLDG 19'	241-0106\B	NQZ-1-S8



TYPE	POSITION	SYSTEM / DESCRIPTION	LOCATION	PIMS ID NUMBER	ALT I.D.# (GP #)
HYDRAULIC	-19/11	CONT. SPRAY	RX BLDG 19'	241-0106\A	NQZ-1-S7
HYDRAULIC	-19/12	CONT. SPRAY	RX BLDG 19'	241-0100\B	NQZ-1-S6
HYDRAULIC	-19/13	CONT. SPRAY	RX BLDG 19'	241-0100\A	NQZ-1-S5
HYDRAULIC	-19/14	CONT. SPRAY	RX BLDG 19'	241-0098\B	NQZ-1-S4
HYDRAULIC	-19/15	CONT. SPRAY	RX BLDG 19'	241-0098\A	NQZ-1-S3
HYDRAULIC	-19/16	CONT. SPRAY	RX BLDG 19'	241-0094\B	NQZ-1-S2
HYDRAULIC	-19/17	CONT. SPRAY	RX BLDG 19'	241-0094\A	NQZ-1-S1
HYDRAULIC	-19/18	CORE SPRAY	RX BLDG 19'	212-0025	NZ-2-S1
HYDRAULIC	-19/19	CORE SPRAY	RX BLDG 19'	212-0023	NZ-2-S2
HYDRAULIC	15/1	A FEEDWATER	FEED PUMP RM	422-1017	RF-1-S1
HYDRAULIC	15/2	B FEEDWATER	FEED PUMP RM	422-1018	RF-1-S2
HYDRAULIC	17/1	C FEEDWATER	FEED PUMP RM	422-1019	RF-1-S3
HYDRAULIC	20/1	CORE SPRAY	RX BLDG 20'	212-0021	NZ-2-S3
HYDRAULIC	20/2	CORE SPRAY	RX BLDG 20'	212-0020	NZ-2-S4
HYDRAULIC	20/5	CORE SPRAY	RX BLDG 20'	212-0086	NZ-2-S10
HYDRAULIC	20/6	CORE SPRAY	RX BLDG 20'	212-0085	NZ-2-S11
HYDRAULIC	23/1	CORE SPRAY	RX BLDG 23'	212-0074	NZ-2-S13
HYDRAULIC	23/2	CORE SPRAY	RX BLDG 23'	212-0078	NZ-2-S12
HYDRAULIC	23/3	CONT. SPRAY	RX BLDG 23'	241-0032	NQ-2-S14
HYDRAULIC	23/4	CONT. SPRAY	RX BLDG 23'	241-0035	NQ-2-S13
HYDRAULIC	23/5	CONT. SPRAY	RX BLDG 23'	241-0034	NQ-2-S12
HYDRAULIC	23/6	CONT. SPRAY	RX BLDG 23'	241-0037	NQ-2-S11
HYDRAULIC	23/7	CONT. SPRAY	RX BLDG 23'	241-0039	NQ-2-S10
HYDRAULIC	51/5	CORE SPRAY	RX BLDG 51'	212-0015	NZ-2-S5
HYDRAULIC	51/6	CORE SPRAY	RX BLDG 51'	212-0040	NZ-2-S9
HYDRAULIC	51/7	CORE SPRAY	RX BLDG 51'	212-0013	NZ-2-S6
HYDRAULIC	51/8	CORE SPRAY	RX BLDG 51'	212-0011	NZ-2-S7
HYDRAULIC	51/9	CORE SPRAY	RX BLDG 51'	212-0009	NZ-2-S8
HYDRAULIC	51/10	CORE SPRAY	RX BLDG 51'	212-0007	NZ-3-S1
HYDRAULIC	51/11	S/D COOLING	RX BLDG 51'	214-0025	NU-2-S5
HYDRAULIC	51/12	S/D COOLING	RX BLDG 51'	214-0024	NU-2-S5A
HYDRAULIC	51/14	S/D COOLING	RX BLDG 51'	214-0027	NU-2-S9
HYDRAULIC	51/15	S/D COOLING	RX BLDG 51'	214-0035	NU-2-S10
HYDRAULIC	51/20	S/D COOLING	RX BLDG 51'	214-0008	NU-1-S5
HYDRAULIC	51/21	CORE SPRAY	RX BLDG 51'	212-0068	NZ-2-S14
HYDRAULIC	51/22	CORE SPRAY	RX BLDG 51'	212-0065	NZ-2-S15
HYDRAULIC	75/1	CORE SPRAY	RX BLDG 75'	212-0062	NZ-2-S17
HYDRAULIC	75/2	CORE SPRAY	RX BLDG 75'	212-0063	NZ-2-S16



TYPE	POSITION	SYSTEM / DESCRIPTION	LOCATION	PIMS ID NUMBER	ALT I.D.# (GP #)
HYDRAULIC	75/3	CORE SPRAY	RX BLDG 75'	212-0058	NZ-3-S5
HYDRAULIC	75/4	CORE SPRAY	RX BLDG 75'	212-0060	NZ-2-S18
HYDRAULIC	75/5	CORE SPRAY	RX BLDG 75'	212-0055	NZ-3-S6
HYDRAULIC	75/7	ISO CONDENSER	RX BLDG 75'	211-0127	NONE
HYDRAULIC	75/8	ISO CONDENSER	RX BLDG 75'	211-0006	NE-2-S15
HYDRAULIC	75/9	ISO CONDENSER	RX BLDG 75'	211-0041	NE-5-S6
HYDRAULIC	75/10	ISO CONDENSER	RX BLDG 75'	211-0015	NE-2-S9
HYDRAULIC	75/11	ISO CONDENSER	RX BLDG 75'	211-0016	NE-2-S8
HYDRAULIC	75/12	ISO CONDENSER	RX BLDG 75'	211-0014	NE-2-S10
HYDRAULIC	75/13	ISO CONDENSER	RX BLDG 75'	211-0028	NE-2-S20
HYDRAULIC	75/14	ISO CONDENSER	RX BLDG 75'	211-0128	NONE
HYDRAULIC	75/15	ISO CONDENSER	RX BLDG 75'	211-0030	NE-2-S19
HYDRAULIC	75/16	ISO CONDENSER	RX BLDG 75'	211-0065	NE-1-S1
HYDRAULIC	75/17	ISO CONDENSER	RX BLDG 75'	211-0019	NE-2-S13
HYDRAULIC	75/18	ISO CONDENSER	RX BLDG 75'	211-0020	NE-2-S14
HYDRAULIC	75/19	ISO CONDENSER	RX BLDG 75'	211-0012	NE-2-S11
HYDRAULIC	75/20	ISO CONDENSER	RX BLDG 75'	211-0010	NE-2-S12
HYDRAULIC	75/21	ISO CONDENSER	RX BLDG 75'	211-0032	NE-2-S21
HYDRAULIC	75/22	ISO CONDENSER	RX BLDG 75'	211-0034	NE-2-S18
HYDRAULIC	75/23	ISO CONDENSER	RX BLDG 75'	211-0047	NE-1-S8
HYDRAULIC	75/24	ISO CONDENSER	RX BLDG 75'	211-0046	NE-1-S7
HYDRAULIC	75/25	ISO CONDENSER	RX BLDG 75'	211-0036	NE-2-S17
HYDRAULIC	95/1	ISO CONDENSER	RX BLDG 95'	211-0066	NE-1-S5
HYDRAULIC	95/2	ISO CONDENSER	RX BLDG 95'	211-0070	NE-1-S3
HYDRAULIC	95/3	ISO CONDENSER	RX BLDG 95'	211-0071	NE-1-S3A
HYDRAULIC	95/4	ISO CONDENSER	RX BLDG 95'	211-0073	NE-1-S4
HYDRAULIC	95/5	ISO CONDENSER	RX BLDG 95'	211-0050	NE-1-S12A
HYDRAULIC	95/6	ISO CONDENSER	RX BLDG 95'	211-0048	NE-1-S12
HYDRAULIC	95/7	ISO CONDENSER	RX BLDG 95'	211-0052	NE-1-S9
HYDRAULIC	95/8	ISO CONDENSER	RX BLDG 95'	211-0053	NE-1-S10
HYDRAULIC	95/9	ISO CONDENSER	RX BLDG 95'	211-0055	NE-1-S11

2.5 Technical Approach and Positions

When the requirements of ASME OM Code are not easily interpreted, OCGS has the option to review general licensing/regulatory requirements and industry practice to determine a practical method of implementing the Code requirements. The Technical Approach and Position (TAP) documents contained in this section have been provided to clarify OCGS's implementation of ASME OM Code requirements. Currently OCGS does not have any TAP's, however, an index which is used to summarize each technical approach and position is included in Table 2.5-1.



TABLE 2.5-1
TECHNICAL APPROACH AND POSITIONS INDEX

Position Number	Revision Date²	Status¹	(Program) Description of Technical Approach and Position
IST-XX			

Note 1: Technical Approach and Position Status Options: Active - Current Snubber Inspection Program Technical Approach and Position is being utilized at OCGS; Deleted - Technical Approach and Position is no longer being utilized at OCGS.

Note 2: The revision listed is the latest revision of the subject technical approach and position. The date noted in the second column is the date of the Snubber Administrative Program Document revision when the Technical Approach and Position was incorporated into the document.



3.0 SNUBBER PLAN

The OCGS Snubber Plan includes equipment dynamic restraints (snubbers) as defined in ASME OM Code 2004 Edition through the 2006 Addenda, Paragraph ISTA-2000. Procedures ER-AA-330-004 "Visual Examination of Snubbers", ER-AA-330-010 "Snubber Functional Testing", and ER-AA-330-011 "Snubber Service Life Monitoring", implement the ASME OM Code Snubber Plan.

3.1 Nonexempt ISI Class Supports

The OCGS ISI Class 1, 2, and 3 nonexempt supports are those which do not meet the exemption criteria of Paragraph IWF-1230 of ASME Section XI. A summary of the OCGS ASME Section XI nonexempt supports is included in Section 7.0 of the ISI Program Plan.

3.1.1 Identification of ISI Class 1, 2, and 3 Nonexempt Supports

ISI Class 1, 2, and 3 supports are identified on the ISI Isometric and Component Sketches listed in Section 2.4, Table 2.4.1 of the OCGS ISI Program Plan. Supports are identified by controlled OCGS individual support detail drawings.

3.2 Snubber General Requirements

3.2.1 As allowed by 10CFR50.55a(b)(3)(v)(B), OCGS will use Subsection ISTD, "Inservice Testing of Dynamic Restraints (Snubbers) In Light Water Reactor Power Plants," ASME Operation and Maintenance of Nuclear Power Plants Code (ASME OM Code), 2004 Edition through the 2006 Addenda, to meet the visual examination, functional testing, and service life monitoring requirements for safety-related and non safety-related snubbers. This approach is consistent with ASME Section XI, Paragraph IWF-1220, which excludes inservice inspection of snubbers and defers to the ASME OM Code for examination, testing, and monitoring requirements.

Procedure ER-AA-330-004 implements the visual inspection program for safety-related and non safety-related snubbers. Procedures ER-AA-330-010, ER-AA-330-011, and station surveillance test procedures are used to implement the functional testing and service life monitoring requirements for safety-related and non safety-related snubbers.

The ASME OM Code specifies the functional testing and visual examination, and service life monitoring requirements for snubbers in the ASME OM Code, Subsection ISTD. ASME Section XI also has



inspection requirements for supports that apply to snubbers, as well as to other supports. This Snubber Plan is in place to provide a link between the functional testing and visual examination of the snubbers performed at OCGS per the ASME OM Code and the ASME Section XI visual examination requirements.

The general requirements of ASME Section XI, Subsection IWA, such as examination methods, personnel qualifications, etc., will still apply. Additionally, examination of integral and non-integral attachments, all repairs, replacements, records and reports will be performed in accordance with ASME Section XI.

3.3 Visual Examination, Functional Testing, and Service Life Monitoring Program

- 3.3.1 The visual examination of all snubbers included in this program shall be performed in accordance with procedures ER-AA-330-004 and ER-AA-335-016. The required examination schedule is determined by Paragraph ISTD-4252 and Table ISTD-4252-1 of the ASME OM Code.

Visual Examinations shall be performed by individuals qualified in accordance with OCGS procedures.

The ASME Section XI visual examination boundary of a support containing a snubber is defined in Figure IWF-1300-1(f). This boundary does not include the snubber pin-to-pin and does not include the connections to the snubber assembly (pins) per Paragraph IWF-1300(h).

This results in the remaining ASME Section XI requirements for VT-3 visual examinations of the snubber attachment hardware including bolting and clamps. The ASME Section XI ISI Program uses Subsection IWF to define the inspection requirements for all ISI Class 1, 2, and 3 supports, regardless of type. The ISI Program maintains the Code Class snubbers in the support populations subject to inspection per Subsection IWF. This is done to facilitate scheduling, preparation including insulation removal, and inspection requirements of the snubber attachment hardware (e.g., bolting and clamps).

It should be noted that the examination of snubber welded attachments will be performed in accordance with the ASME Section XI Subsections IWB, IWC, and IWD welded attachment examination requirements (e.g., Examination Categories B-K, C-C, and D-A).

- 3.3.2 The functional testing of snubbers shall be performed in accordance with procedure ER-AA-330-010. Functional testing shall be scheduled every fuel cycle in accordance with the ASME OM Code. Snubbers are grouped



into Defined Test Plan Groups (DTPG's) by design type, in accordance with Paragraph ISTD-5252 for testing purposes. Snubbers at OCGS will be tested using the 10% sample plan. (See Section 3.3.2.2 below for Testing Sample Plan options.)

Functional testing of snubbers can be performed as a sampling of the entire snubber population per Article ISTD-5000.

3.3.2.1 Defined Test Plan Group (DTPG)

The DTPGs shall include all snubbers except replacement snubbers and snubbers repaired or adjusted as a result of not meeting the examination acceptance requirements of Subarticle ISTD-4200. These snubbers shall be exempt for the concurrent test interval.

Except as required by Paragraph ISTD-5253, the total snubber population may be considered one DTPG, or alternatively, differences in design, application, size, or type may be considered in establishing DTPG's.

The snubbers at Oyster Creek will be split into two (2) DTPG's = Mechanical Snubbers (Inaccessible) and Hydraulic Snubbers (Accessible).

3.3.2.2 Testing Sample Plans

The snubbers of each DTPG shall be tested using the following:

- (a) the 10% testing sample plan

Nonmandatory Appendix D includes a comparison of sample plans. Snubber testing plans are presented in flow chart form in Nonmandatory Appendix E. A test plan shall be selected for each DTPG before the scheduled testing begins.

- 3.3.3 Service life monitoring of snubbers shall be performed in accordance with Article ISTD-6000 with the use of Nonmandatory Appendix F providing supplemental guidance. Additional implementation requirements for Service Life Monitoring are described in procedure ER-AA-330-011. Snubbers shall be replaced or reconditioned 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 replacement or reconditioning shall be documented and records retained in accordance with ASME OM Code, ASME Section XI and OCGS procedures.



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.

3.4 Visual Examination, Functional Testing, and Service Life Monitoring Results

- 3.4.1 The results of the visual examinations and the functional tests will be evaluated using the criteria of the ASME OM Code and plant procedures. ASME Section XI provisions may be used for supplemental guidance.

Snubbers that do not appear to conform to the Visual Examination requirements of procedure ER-AA-330-004, shall be reported for evaluation and appropriate corrective action.

Snubbers that do not appear to conform to the visual examination acceptance requirements and are later confirmed as operable as a result of functional testing may be declared operable for the purpose of establishing the next visual inspection interval, providing that the unacceptable condition did not affect operational readiness.

Snubbers that do not meet the operability testing acceptance criteria shall be evaluated to determine the cause of the failure and appropriate corrective action taken.

The service life of all snubbers is evaluated using manufacturing input and engineering information gained through consideration of the snubber service conditions and inservice functional test results.

3.5 Reports/Records

- 3.5.1 The visual examination and functional testing results will be recorded and kept in accordance with ASME OM Code and plant procedures. Repair and replacement records and reports will be kept in accordance with ASME Section XI.

Records of the service life of all hydraulic and mechanical snubbers listed in this program, including the date at which the service life commences or expires, and associated installation and maintenance records will be maintained.



4.0 SNUBBER SUMMARY TABLE

4.1 Snubber Inspection Summary Table

10CFR50.55a(b)(3)(v)(B) "Codes and Standards" allows usage of ASME OM Code, Subsection ISTD.

The following Table 4.1-1 provides a summary of the ASME OM Code, Subsection ISTD, Snubber visual examinations and functional testing for the Fifth Snubber Interval at OCGS.

The format of the Snubber Inspection Summary Table is as depicted below and provides the following information:

ASME OM Code Subsection (with Subsection Description)	OM Subarticle Number	Subarticle Number Description	Exam Requirements	Totals	Frequency	Relief Request/ TAP Number	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(1) ASME OM Code Subsection:

Provides the applicable ASME OM Code subsection number and a description as obtained from Subsection ISTD. Only applicable subsections to OCGS are identified.

(2) OM Subarticle Number:

Provides the subarticle number as identified in Subsection ISTD. Only those subarticle numbers applicable to OCGS are identified.

(3) Subarticle Number Description:

Provides the subarticle description as identified in Subsection ISTD. Identifies the methods selected to be performed at OCGS.

(4) Examination Requirements:

Provides the visual examination and functional testing methods required by Subsection ISTD.



(5) Totals:

Provides the total number of snubbers that pertain to that subarticle of Subsection ISTD. Note that the total number of snubbers are subject to change after completion of plant modifications and design changes.

(6) Frequency:

Provides the frequency for visual examinations and functional testing as addressed in Subsection ISTD and approved ASME OM Code Cases.

(7) Relief Requests/TAP Number:

Provides a listing of Relief Request/TAP Numbers to specific snubber components. Relief requests and TAP Numbers that generically apply to all components, or an entire class are not listed. If a Relief Request/TAP Number is identified, see the corresponding relief request in Section 5.0 or the TAP Number in Section 2.5.

(8) Notes:

Provides a listing of program notes applicable to the Subsection ISTD subarticle number. If a program note number is identified, see the corresponding program note in Table 4.1-2.



**TABLE 4.1-1
SNUBBER INSPECTION SUMMARY TABLE**

ASME OM Code Subsection (with Subsection Description)	OM Subarticle Number	Subarticle Number Description	Exam Requirements	Totals	Frequency	Relief Request/ TAP Number	Notes
ISTD Snubber Examinations	ISTD-4220	Accessible Snubbers - Hydraulic	Visual, VT-3	74	Every Cycle		1 3
		Inaccessible Snubbers - Mechanical	Visual, VT-3	84	Every Refuel Outage		1 3
ISTD Snubber Testing	ISTD-5240	10% Functional Test Plan – Hydraulic Type Snubbers (Accessible)	Functional Testing	74	Every Cycle		2
		10% Functional Test Plan – Mechanical Type Snubbers (Inaccessible)	Functional Testing	84	Every Refuel Outage		2



TABLE 4.1-2
SNUBBER INSPECTION SUMMARY TABLE PROGRAM NOTES

Note #	Note Summary
1	Examinations performed per Code Case OMN-13, "Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants."
2	Per the ASME OM Code, Subsection ISTD, 2004 Edition through the 2006 Addenda, Paragraph ISTD-5240 "Test Frequency."
3	Per the ASME OM Code, Subsection ISTD, 2004 Edition through the 2006 Addenda, Paragraph ISTD-4250 "Inservice Examination Intervals."



5.0 RELIEF REQUESTS FROM ASME OM Code

This section contains relief requests written per 10CFR50.55a(a)(3)(i) for situations where alternatives to ASME requirements provide an acceptable level of quality and safety; per 10CFR50.55a(a)(3)(ii) for situations where compliance with ASME requirements results in a hardship or an unusual difficulty without a compensating increase in the level of quality and safety; and per 10CFR50.55a(g)(5)(iii) for situations where ASME requirements are considered impractical.

The following NRC guidance was utilized to determine the correct 10CFR50.55a paragraph citing for OCGS relief requests. 10CFR50.55a(a)(3)(i) and 10CFR50.55a(a)(3)(ii) provide alternatives to the requirements of ASME, while 10CFR50.55a(g)(5)(iii) recognizes situational impracticalities.

10CFR50.55a(a)(3)(i): Cited in relief requests when alternatives to the ASME requirements which provide an acceptable level of quality and safety are proposed.

10CFR50.55a(a)(3)(ii): Cited in relief requests when compliance with the ASME requirements is deemed to be a hardship or unusual difficulty without a compensating increase in the level of quality and safety.

10CFR50.55a(g)(5)(iii): Cited in relief requests when conformance with ASME requirements is deemed impractical.

An index for OCGS relief requests is included in Table 5.0-1. The "I5R-XX" relief requests are applicable to Snubbers.

The following relief requests are subject to change throughout the inspection interval (e.g., NRC approval, withdrawal). Changes to NRC approved alternatives (other than withdrawal) require NRC approval.



**TABLE 5.0-1
RELIEF REQUEST INDEX**

Relief Request	Revision Date³	Status²	(Program) Description/ Approval Summary¹
ISR-XX			

Note 1: The NRC grants relief requests pursuant to 10CFR50.55a(g)(6)(i) when Code requirements cannot be met and proposed alternatives do not meet the criteria of 10CFR50.55(a)(3). The NRC authorizes relief requests pursuant to 10CFR50.55a(3)(i) if the proposed alternatives would provide an acceptable level of quality and safety or under 10CFR50.55a(3)(ii) if compliance with the specified requirements would result in hardship or unusual difficulties without a compensating increase in the level of safety.

Note 2: This column represents the status of the latest revision. Relief Request Status Options: Authorized - Approved for use in an NRC SE (See Note 1); Granted - Approved for use in an NRC SE (See Note 1); Authorized Conditionally - Approved for use in an NRC SE which imposes certain conditions; Denied - Use denied in an NRC SE; Expired - Approval for relief has expired; Withdrawn - Relief has been withdrawn by OCGS; Not Required - The NRC has deemed the relief unnecessary in an SE or RAI; Cancelled - Relief has been cancelled by OCGS prior to issue; Submitted - Relief has been submitted to the NRC by the station and is awaiting approval; Pending - Relief has been awaiting station and Corporate review and submittal to the NRC.

Note 3: The revision listed is the latest revision of the subject relief request. The date this revision became effective is the date of the approving SE which is listed in the fourth column of the table. The date noted in the second column is the date of the Snubber Administrative Program Document revision when the relief request was incorporated into the document.



6.0 REFERENCES

The references used to develop this Snubber Administrative Program Document include:

6.1 NRC References

- 6.1.1 Code of Federal Regulations, Title 10, Energy.
 - Part 50, Paragraph 50.55a, "Codes and Standards."
 - Part 50, Paragraph 2, "Definitions," the definition of "Reactor Coolant Pressure Boundary."
- 6.1.2 Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code."

6.2 Industry References

- 6.2.1 ASME Boiler and Pressure Vessel Code, Section XI, Division 1, "Inservice Inspection of Nuclear Power Plant Components," the 2007 Edition through the 2008 Addenda. (5th ISI Interval).
- 6.2.2 ASME Boiler and Pressure Vessel Code, Section III, Division 1, "Rules For Construction of Nuclear Power Plant Components," the 2007 Edition through the 2008 Addenda.
- 6.2.3 ASME OM Code, "Code for Operation and Maintenance of Nuclear Power Plants," the 2004 Edition through the 2006 Addenda (Subsection ISTD).

6.3 Licensee References

- 6.3.1 Oyster Creek Generating Station, Updated Final Safety Analysis Report (UFSAR).
- 6.3.2 Oyster Creek Generating Station, Technical Specifications (TS).
- 6.3.3 Oyster Creek Generating Station, Operational Quality Assurance Plan (QAP).
- 6.3.4 Oyster Creek Generating Station ISI Program Plan (ER-OC-330-5001), Fifth Ten-Year Inservice Inspection Interval.
- 6.3.5 Oyster Creek Generating Station ISI Classification Basis Document (ER-OC-330-5002), Fifth Ten-Year Inservice Inspection Interval.
- 6.3.6 Oyster Creek Generating Station ISI Selection Document (ER-OC-330-5003), Fifth Ten-Year Inservice Inspection Interval.
- 6.3.7 Oyster Creek Generating Station License Renewal Application, July 2005.
- 6.3.8 Procedure ER-AA-330, "Conduct of Inservice Inspection Activities."
- 6.3.9 Procedure ER-AA-330-003, "Inservice Inspection of Section XI Component Supports."
- 6.3.10 Procedure ER-AA-330-004, "Visual Examination of Snubbers."
- 6.3.11 Procedure ER-AA-330-009, "ASME Section XI Repair/Replacement Program."



- 6.3.12 Procedure ER-AA-330-010, "Snubber Functional Testing."
- 6.3.13 Procedure ER-AA-330-011, "Snubber Service Life Monitoring Program."
- 6.3.14 Procedure ER-AA-335-016, "VT-3 Visual Examination of Component Supports, Attachments, and Interiors of Reactor Vessels."
- 6.3.15 Procedure EP-011, "Methodology for Assigning and Maintaining the Quality Classification of Components."

6.4 License Renewal References

- 6.4.1 None.

