



Sean T. O'Connor
General Manager, Engineering
Harris Nuclear Plant
5413 Shearon Harris Road
New Hill NC 27562-9300

919.362.3140

10 CFR 50.55a(b)

October 29, 2014
Serial: HNP-14-112

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

Shearon Harris Nuclear Power Plant, Unit 1
Docket No. 50-400/Renewed License No. NPF-63

Subject: Snubber Program Plan

Ladies and Gentlemen:

Enclosed is the Harris Snubber Program Plan, submitted in accordance with ISTA-3200, Administrative Requirements, of American Society of Mechanical Engineering Code for Operation and Maintenance of Nuclear Power Plants, which is incorporated by reference into 10 CFR 50.55a(b).

This document contains no new regulatory commitments.

Please refer any questions regarding this submittal to John Caves at (919) 362-2406.

Sincerely,

A handwritten signature in blue ink that reads 'Sean T. O'Connor'.

Sean T. O'Connor

Enclosure: Snubber Program Plan

cc: Mr. J. D. Austin, NRC Sr. Resident Inspector, HNP
Ms. M. Barillas, NRC Project Manager, HNP
Mr. V. M. McCree, NRC Regional Administrator, Region II



Sean T. O'Connor
General Manager, Engineering
Harris Nuclear Plant
5413 Shearon Harris Road
New Hill NC 27562-9300

919.362.3140

10 CFR 50.55a(b)

October 29, 2014
Serial: HNP-14-112

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

Shearon Harris Nuclear Power Plant, Unit 1
Docket No. 50-400/Renewed License No. NPF-63

Subject: Snubber Program Plan

Ladies and Gentlemen:

Enclosed is the Harris Snubber Program Plan, submitted in accordance with ISTA-3200, Administrative Requirements, of American Society of Mechanical Engineering Code for Operation and Maintenance of Nuclear Power Plants, which is incorporated by reference into 10 CFR 50.55a(b).

This document contains no new regulatory commitments.

Please refer any questions regarding this submittal to John Caves at (919) 362-2406.

Sincerely,

Sean T. O'Connor

Enclosure: Snubber Program Plan

cc: Mr. J. D. Austin, NRC Sr. Resident Inspector, HNP
Ms. M. Barillas, NRC Project Manager, HNP
Mr. V. M. McCree, NRC Regional Administrator, Region II

Serial: HNP-14-112

Enclosure

Shearon Harris Nuclear Power Plant, Unit No. 1
Docket No. 50-400/Renewed License No. NPF-63

Snubber Program Plan

Date of Document Completion: October 29, 2014

Name and Address of Owner: Duke Energy Progress, Inc.
410 South Wilmington Street
Raleigh, North Carolina 27601

Name and Address of Plant: Shearon Harris Nuclear Power Plant
5413 Shearon Harris Road
New Hill, North Carolina 27562

Name and Number Designation of Unit: Unit No. 1

Commercial Service Date for the Unit: May 2, 1987



Information Use

HARRIS UNIT 1
ADMINISTRATIVE PROCEDURE

AD-EG-HNP-1618

SNUBBER PROGRAM PLAN

REVISION 1

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 2 of 96

REVISION SUMMARY
PRR 715702
DESCRIPTION
Step 2.0.4 revised from "For the fourth HNP interval..." to "For the third HNP interval...". This is a MINOR revision per AD-DC-ALL-0201 Step 5.9.1.2.m correction of nontechnical information.

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 PURPOSE	5
2.0 SCOPE	5
3.0 DEFINITIONS	6
4.0 RESPONSIBILITIES	7
5.0 INSTRUCTIONS	11
5.1 General	11
5.2 Snubber Program Plan	11
5.3 Snubber Program Plan Development and Revision	11
5.4 IDDEAL Software Suite	12
5.5 Test and Examination Scheduling	12
5.6 Snubber Categorization	13
5.7 Visual Examination	14
5.8 Operational Readiness Testing	16
5.9 Defined Test Plan Group (DTPG)	18
5.10 Testing Sample Plans	19
5.11 Testing Sample Plan Selection	19
5.11.1 The 10% Testing Sample Plan	19
5.11.2 The 37 Testing Sample Plan	20
5.12 Sample Expansion	22
5.13 Snubber Replacement	23
5.14 Snubber Deletion	23
5.15 Transient Dynamic Events	24
5.16 Service Life Monitoring	24
6.0 RECORDS	26

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 4 of 96

TABLE OF CONTENTS
(continued)

<u>SECTION</u>	<u>PAGE</u>
7.0 REFERENCES	26
 <u>ATTACHMENT</u>	
1 Visual Examination of Snubbers	28
2 Guidance for Evaluating Visual Examination Indications	29
3 Sample Visual Examination Data Sheet	30
4 General Snubber Information	31
5 Mechanical Snubber Functional Test Acceptance Criteria	32
6 Hydraulic Snubber Functional Test Acceptance Criteria	33
7 Initial Predicted Service Life	34
8 Relief Requests	35
9 Safety Related/Safety Significant Snubber Listing.....	36
10 Non-Safety Related Snubber Listing	96

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 5 of 96

1.0 PURPOSE

1. The purpose of the Snubber program is to provide a systematic method for identification of periodic examination, testing, and service life monitoring of nuclear power plant dynamic restraints (Snubbers) and to establish the requirements for Preservice and Inservice testing, examination, and service life monitoring to assess their operational readiness. {7.1.1}, {7.1.2}
2. The Snubber program plan identifies:
 - Components subject to testing, examination, and monitoring
 - Responsibilities
 - Methods
 - Intervals
 - Parameters to be measured and evaluated
 - Criteria for evaluating the results
 - Corrective action
 - Record keeping.

2.0 SCOPE

1. These requirements apply to the ASME OM Code scope of Snubbers, which are those Snubbers used in systems that 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.
2. For Safety or Safety Significant Snubbers, outside of the applicable Code scope above, such as any remaining ASME Code Class (1, 2, and 3) Snubbers, Snubbers which support safety related analytical boundaries, or those non-safety related Snubbers with seismic support responsibilities, these are included within the program scope.
3. In keeping with good engineering practices and to provide reasonable assurance of structural reliability, any remaining Snubbers not identified above (typically Non-Safety related) may be included in the program and at least periodically inspected or monitored.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 6 of 96

2.0 SCOPE (continued)

4. For the third HNP interval dating 5/2/2007 to 5/1/2017, the following bases requirements apply:
 - Tech Spec 3/4.7.8
 - PLP-106 Attachment 4
 - ASME OM Code 2001 Edition through 2003 Addenda (includes Code Case OMN-13, Rev. 0)
 - Reg Guide 1.192, June 2003
 - Code Case OMN-13, Rev. 0

3.0 DEFINITIONS

1. **Acceptable:** A Snubber that has been examined or tested and is shown to be capable of performing its design function.
2. **Accessible:** Snubbers that can be readily examined or tested during normal plant operations without exposing plant personnel to undue hazards or dose.
3. **Defined Test Plan Group (DTPG):** A population of Snubbers selected for testing in accordance with either of the Snubber testing sample plans.
4. **Degraded:** Any Snubber that has an examination or testing parameter that is approaching, but has not met or exceeded the limits of the acceptance criteria.
5. **Failure Mode Group (FMG):** A group of Snubbers that have failed and those other Snubbers that have similar potential for similar failure.
6. **Inaccessible:** Snubbers that are located in environments which make it impractical for the Snubbers to be examined under normal plant operations without exposing plant personnel to undue hazards (e.g. radiation or extreme heat).
7. **Safety-Significant Snubbers:** Snubbers designated as non-safety but determined that their failure or the failure of the system on which they are installed would have an adverse effect on any safety-related system.
8. **Service Life:** The period of time an item is expected to meet the operational readiness requirements without maintenance.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 7 of 96

3.0 DEFINITIONS (continued)

9. **Transient Dynamic Event:** An unexpected or potentially damaging occurrence, which was determined from, reviews of operating data or during a visual inspection/examination such as a water/steam hammer, earthquake or similar event.
10. **Unacceptable:** Snubbers that do not meet examination or testing acceptance criteria.

4.0 RESPONSIBILITIES

NOTE

The general roles and responsibilities for the execution of NGD Engineering Programs are outlined in AD-EG-ALL-1600. Specific activities and responsibilities for those organizations and individuals that are involved with the implementation of the Snubber Program at HNP are outlined below.

4.1 Plant Engineering Supervisor

1. Ensures that the Snubber programs are effectively managed and implemented to meet regulatory, process, and procedure requirements.

4.2 Fleet Snubber Program Manager

1. Serves in a governance and oversight role.
2. Provides strategic and technical direction to Site Snubber Program Managers.
3. Develops the Fleet Snubber Health Report.
4. Reviews of the Site Snubber Health Reports.

4.3 Site Snubber Program Manager

1. Establishes, prepares and maintains Snubber testing and examination Program Plans, implementing procedures, and schedules.
2. Identifies examination and testing requirements for Snubbers as identified in the Snubber Program Plan and maintains the IDDEAL Software Suite Database (SnubbWorks) for Snubbers.
3. Coordinates the performance of scheduled and non-scheduled Snubber examination, testing, preventative maintenance, and condition monitoring activities.

<p style="text-align: center;">SNUBBER PROGRAM PLAN</p>	<p style="text-align: right;">AD-EG-HNP-1618</p>
	<p style="text-align: right;">Rev. 1</p>
	<p style="text-align: right;">Page 8 of 96</p>

4.3 Site Snubber Program Manager (continued)

4. Selects and identifies Snubbers for examination, testing and service life activities.
5. Reviews test and examination results for acceptability.
6. Evaluates results of examinations and tests found not meeting the parameters required to prove operational readiness.
7. Generates corrective actions; Action Requests (AR's), Condition Reports (CR's), and Work Requests (WR's) as required.
8. Determines the extent of additional examinations, tests, or repairs which may be required following the discovery of an unsatisfactory Snubber condition.
9. Establishes, monitors, and tracks the Service Life of installed Snubbers through Service Life Monitoring.
10. Prepares the scope list for Snubber functional testing and visual examination.
11. Selects the Snubber populations to be examined and tested. Identifies the applicable procedures required to satisfy the examination or testing requirements per the Snubber Program Plan.
12. Submits the required outage scope to Outage and Scheduling.
13. Submits the required outage scope to ALARA for development of ALARA Plan.
14. Develops the Job Safety Analysis (JSA), if required.
15. Manages the scope, content, additions, deletions, expansions and corrections of the outage scope.
16. Compares current recorded results with prior results.
17. Identifies Code requirements which cannot be achieved due to impracticality or hardship and initiates actions (Relief Request) necessary to notify the NRC as required.
18. Establishes industry contacts with ASME OM Code committee representatives, peers at other nuclear utilities, and outside consultants, as necessary, to ensure that the Snubber examination and testing Program properly utilizes external operating experience.
19. When notified, reviews plant design changes and revises the Snubber Program Plan, as necessary.
20. Maintains qualifications required for Snubber Program Manager.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 9 of 96

4.4 Plant Maintenance

1. Performs Snubber functional testing, records results of the Snubber test(s), and reports the findings on the appropriate data sheet(s).
2. Notifies Program Manager of test results.
3. Performs Snubber repairs, rebuilds, or replacement activities under the Snubber Program as required.

4.5 NDE Inspection Services

1. Performs preparation activities required for the performance of Work Orders that solely perform Snubber Visual Examinations including, but not limited to, the following tasks as they become necessary.
 - ALARA Planning
 - WO and Schedule Input
 - WO and Schedule Reviews
 - Resource Identification
2. Prepares examination packages for use by examination personnel, including Data Sheets for recording data.
3. Serves as a point of contact for Examiners when issues arise with performance or scheduling of an exam.
4. Forwards Examination Data Sheets to Program Manager.
5. Consults Program Manager when questions of scope or acceptability arise.
6. Develops and maintains procedures for conducting NDE VT-3 Visual Exams.
7. Provides individual to serve as the ISI Coordinator.

4.6 QC Organization

1. Provides Certified NDE VT-3 Examiners for performance of Snubber Visual Examinations through employee or contract resources.
2. Conducts Snubber As Found and As Left Visual Exams per the schedule.
3. Updates WOs and Schedule as activities are completed.
4. Assists ISI Coordinator with planning and scheduling efforts for Visual Exams, including performance of WO and Schedule reviews.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 10 of 96

4.7 Certified NDE VT-3 Examiners

1. Records As Found and As Left condition of the Snubber.
2. Reports findings of the examination on an appropriate Data Sheet (if no Data Sheet provided, use the sheet included in Attachment 3, Sample Visual Examination Data Sheet).
3. Returns completed Data Sheet to ISI Coordinator (during outages) or the Program Manager (online) in a timely manner.
4. Generates a CR and notifies the control room, when necessary (see Attachment 1, Visual Examination of Snubbers for guidance).

4.8 Design Engineering

1. Performs evaluations on piping systems or components when unsatisfactory Snubber examination or test results occur.
2. Notifies Program Manager of plant design changes that may impact the Snubber Program, as applicable.

4.9 Regulatory Affairs

1. Processes relief requests and Snubber Program Plan document submittals to the Regulatory Authorities.

4.10 Maintenance Planning Organization

1. Plans WOs associated with Snubber Visual Examination, Testing, or Service Life activities.

4.11 Outage and Scheduling Organization

1. Schedules activities associated with Snubber Visual Examination, Testing, or Service Life requirements.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 11 of 96

5.0 INSTRUCTIONS

5.1 General

1. Periodically, the Snubber Program Plan may be subject to revision during the ten-year interval. Reasons for revision include, but are not limited to:
 - Incorporation of Relief Requests
 - Incorporation of Code Cases
 - NRC Regulatory Guides, notices and bulletins, as applicable
 - Augmented examinations
 - Modifications to the plant that impact the Snubber Program
2. Generation and revision to the Snubber Program Plan shall be made in accordance with this procedure.

5.2 Snubber Program Plan

1. 10-year Updates
 - a. Once every 10 years, the Snubber Program requires updating to the edition and addenda as specified in 10 CFR 50.55a.
 - b. Snubber Program Plans shall be filed with the regulatory authorities as required by ASME OM, ISTA-3200.
2. When a change to the plant impacts the Program, revise per Section 5.3.
3. Changes to the program testing or inspection methodologies may require the Snubber Program Plan to be resubmitted to the regulatory authorities.

5.3 Snubber Program Plan Development and Revision

1. The Snubber Program Plan shall be developed and issued through Passport. Initiate and revise the documents via the PRR process per AD-DC-ALL-0201.
2. The Program Manager and a peer reviewer shall review all revisions of the Snubber Program Plan. The supervisor approves revisions.
3. During the implementation of the Snubber Program Plan, and within 6 months of completion of a refueling outage, revise the Snubber Program Plan, as applicable. Identify all changes in a revision in the Revision History.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 12 of 96

5.4 IDDEAL Software Suite

1. IDDEAL Software Suite is a non-QA (Level “U” software per CSP-NGGC-2505, Software Quality Assurance and Configuration Control of Business Computer Systems) software program used as a back-up to store component information, examination and testing history, and examination and testing schedules used to administer and implement the ISI, IST, Snubber, IWE/IWL, and QC BOP Programs. Nuclear Computing Systems maintains the program.
2. Snubbworks®, as one of the IDDEAL applications, is a Microsoft® Access based computer program, is used as a tool to manage the Snubber Program information. This software program is used to organize pertinent data and records to assist with Snubber examination, testing, and service life monitoring purposes. The information contained in Snubbworks® is not QA, but can be used to produce documents or lists which, when verified, can be used as QA records.
3. Examination and Test reports generated from the SnubbWorks software shall be used to document examinations and examination results, unless otherwise directed by the Program Manager. When vendor procedures are used to perform examinations and testing (such as In-Place testing of Large-Bore RCP and Steam Generator Snubbers) the vendor data sheets shall contain the Code required information for a complete examination.
4. NDE and Snubber inspection and testing personnel, performing on site work, may have their certifications and qualifications entered into IDDEAL Certworks or SnubbWorks.
5. Equipment calibration documentation shall be reviewed prior to Snubber examination and testing. Snubbworks shall be updated reflecting the current equipment identification and current due dates for calibration.

5.5 Test and Examination Scheduling

1. Test and examination scheduling routinely coincide with refueling outages. Performing testing and examinations during refueling outages allows for improved accessibility, environmental conditions conducive for examination methods, reducing exposure (ALARA) and enhanced scheduling.
2. Examinations may be performed during plant operation (on-line) or during refueling outages, as conditions allow.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 13 of 96

5.5 Test and Examination Scheduling (continued)

3. Functional testing, for Test Plan credit, may be performed during plant operation (on-line) or during refueling outages, but must not start more than 60 days prior to the scheduled start of the refueling outage and must be completed prior to the start-up following the refueling outage.

5.6 Snubber Categorization

1. All of the Snubbers shall be considered one population for examination. Alternatively, they may be categorized individually as accessible or inaccessible.
2. 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. For HNP, all Snubbers are considered one population for examination.
3. When recombining categories into one population, the shorter interval of the categories shall be used.

5.7 Visual Examination

1. Snubbers shall be visually examined on the required schedule in accordance with ASME OM and evaluated to determine their operational readiness. Snubbers determined to be unacceptable based on the visual examination acceptance criteria at any time during the interval shall be counted in determining the subsequent examination interval. Examination intervals shall be determined in accordance with Table ISTD-4252-1 (reproduced below in Table 1, Visual Examination Intervals), unless alternative intervals are utilized per Code Case OMN-13 (as endorsed by the NRC).

Table 1, Visual Examination Intervals

Population or Category Size [Note 1]	Number of Unacceptable Snubbers		
	Column A (Extended Interval) [Notes 2 and 3]	Column B (Interval Same as Previous) [Notes 2, 4 and 5]	Column C (Interval Reduction to 2/3) [Notes 2, 5 and 6]
1	0	0	1
80	0	0	2
100	0	1	4
150	0	3	8
200	2	5	13
300	5	12	25
400	8	18	36
500	12	24	48
750	20	40	78
≥1000	29	56	109

Notes:

1. Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. The next lower integer shall be used when interpolation results in a fraction.
2. The basic interval shall be the normal fuel cycle up to 24 months. The examination interval may be as great as twice, the same, or as small as fractions of the previous interval as required by the following Notes. The examination interval may vary ±25% of the current interval.
3. If the number of unacceptable snubbers is equal to or less than the number in Column A, then the next examination interval may be increased to twice the previous examination interval, not to exceed 48 months. In that case, the next examination according to the previous interval may be skipped.
4. If the number of unacceptable snubbers exceeds the number in Column A, but is equal to or less than the number in Column B, then the next visual examination shall be conducted at the same interval as the previous interval.
5. If the number of unacceptable snubbers exceeds the number in Column B, but is equal to or less than the number in Column C, then the next examination interval shall be decreased to two-thirds of the previous examination interval or, in accordance with the interpolation between Columns B and C, in proportion to the exact number of unacceptable snubbers.
6. If the number of unacceptable snubbers exceeds the number in Column C, then the next examination interval shall be decreased to two-thirds of the previous interval.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 15 of 96

5.7 Visual Examination (continued)

2. Any unacceptable/unsatisfactory or degraded Snubber condition reported on the applicable inspection/test report sheet, or any noted anomaly identified during the current examination period, shall have an evaluation performed by an individual knowledgeable in Snubber operability requirements.
 - a. Evaluation shall be performed to determine the type and cause of the visual examination discrepancy and effect on the operability of the Snubber and related component(s).
 - b. If the condition is determined to be generic, then additional examinations may be required, or, if an isolated case, a Work Request may be issued to correct any discrepancies found.
 - c. The Program Manager or designee shall initiate a CR on any Snubber determined to be unacceptable/unsatisfactory.
3. The Visual As Found examination for Safety Related/Safety Significant Snubbers shall be performed before the Snubber is disconnected or removed for any reason. This examination is to determine that there are no visible indications of damage or impaired functional ability due to physical damage, leakage, corrosion, or degradation from environmental exposure or operating conditions.
4. As required by 10CFR50.55a(b)(3)(v)(A) all Preservice and Inservice Visual Examinations must be performed using the VT-3 visual examination method described in IWA-2213.
5. An augmented scope is invoked whenever a visual examination is to be performed as a supplemental scope, outside of the code requirements of this program.
6. Current Interval Requirements:
 - a. In lieu of the requirements of Table ISTD-4252-1, Snubbers are visually examined once every ten years in accordance with Code Case OMN-13. At any point in the extended interval, if examination data results in a failure to satisfy OMN-13 requirements then the frequency of examinations shall immediately revert to the requirements of Table ISTD-4252-1.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 16 of 96

5.8 Operational Readiness Testing

1. Safety Related/Safety Significant Snubbers shall be tested for operational readiness during each fuel cycle.
 - a. Tests are required to be in accordance with a specified sampling plan.
 - b. Testing may be performed during normal system operation, or during system or plant outages, however, testing shall begin no earlier than 60 days prior to the scheduled start of a refueling outage (unless otherwise approved by the regulatory authorities) and must be completed prior to the return to power.
 - c. Non-Safety Related Snubbers may be tested at the discretion of the Program Manager.
 - d. Non-safety Snubbers are considered a part of their respective DTPGs along with Safety Related/Safety Significant Snubbers, and are tested with the same methods.
2. Snubbers shall be tested in their As Found condition regarding the parameters to be tested to the fullest extent practicable.
 - a. Test methods shall not alter the condition of a Snubber to the extent that the results do not represent the As Found Snubber condition.
 - b. Snubbers may be tested in their installed location or may be removed from the field installation and bench tested in accordance with approved procedures.
 - c. Snubbers shall not be subjected to prior preventive or corrective maintenance (pre-conditioning) specifically for the purpose of meeting the applicable examination or testing requirements.
3. Snubbers that are maintained or repaired by removing or adjusting a Snubber part, that can affect the results of the applicable tests required by this program, shall be examined and tested in accordance with the applicable requirements before returning to service. Additionally, the applicable installation requirements shall be met. The requirements selected shall ensure that the parameters that may have been affected are verified to be acceptable by suitable examination and tests.

<p style="text-align: center;">SNUBBER PROGRAM PLAN</p>	<p style="text-align: right;">AD-EG-HNP-1618</p>
	<p style="text-align: right;">Rev. 1</p>
	<p style="text-align: right;">Page 17 of 96</p>

5.8 Operational Readiness Testing (continued)

4. The applicable site maintenance procedures shall govern the removal and reinstallation of plant installed Snubbers. Each Safety Related/Safety Significant Snubber shall have an As Found Visual Examination performed prior to removal activities and an As Left Visual Examination following reinstallation in accordance with any applicable site examination or surveillance instruction(s). Non-Safety Snubber visual examination requirements shall be as directed in Section 5.7.

5. For each Safety Related/Safety Significant Snubber determined to be unacceptable by operational readiness testing, additional Snubbers shall be tested.
 - a. Testing scope expansion is required for failed Snubbers that are part of a functional testing sample plan (i.e. 10% or 37 sample plan).
 - b. An evaluation of failed Snubbers is required and will be documented in accordance with the Corrective Action Program.
 - c. An Engineering Evaluation shall be performed on the components to which the failed Snubbers were attached. The purpose of this Engineering Evaluation will be to determine if the components to which the inoperable Snubbers are attached were adversely affected by the inoperability of the Snubbers in order to ensure that the component remains capable of meeting the designed service.

6. For each Non-Safety Related Snubber determined to be unacceptable by operational readiness testing, additional samples may be required as determined under the Corrective Action Program by the type of failure and extent of condition as warranted.
 - a. Non-safety Snubbers are included in DTPGs with all other Snubbers, and so refer to Section 5.8 Step 5 for requirements.

7. Degraded Snubbers are repaired or replaced as a preventive maintenance action.
 - a. Failure mode grouping and scope expansion is not required for degraded Snubbers.
 - b. Additional Snubbers may be tested or replaced at the discretion of Program Manager based on the cause of the degradation for service life monitoring purposes.
 - c. Information learned from the degraded Snubbers shall be considered in the service life monitoring program as applicable.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 18 of 96

5.8 Operational Readiness Testing (continued)

8. Test equipment failure during functional testing may invalidate that day's testing.
 - a. Failed testing equipment will be repaired or replaced. If it can be determined exactly when the failure happened, only the affected Snubbers shall be retested.
 - b. If it cannot be determined when the failure happened, then as a minimum, all Snubbers tested with the failed equipment during the day of the equipment failure shall be re-tested.
9. Test results will be reviewed for adverse trends which will help establish the service life of specific Snubbers or locations.
10. Each Snubber in a parallel or multiple-Snubber installation shall be identified and counted individually. Fractional sample sizes shall be rounded up to the next integer.

5.9 Defined Test Plan Group (DTPG)

1. The DTPGs shall include all Safety Related/Safety Significant Snubbers except the following; the following shall be exempt from DTPG selection for the concurrent testing interval:
 - a. Replacement Snubbers and Snubbers repaired or adjusted as a result of not meeting acceptance requirements.
 - b. Snubbers placed in the same location as Snubbers that failed the previous Inservice operational readiness test.
2. Except as required in Step 3 below, the total Safety Related/Safety Significant Snubber population may be considered one DTPG, or alternatively, differences in design, application, size, or type may be considered in establishing DTPGs.
3. Snubbers attached to the steam generator shall be a separate DTPG.
4. There are 3 DTPGs for testing:
 - a. All mechanical Snubbers (1339 Snubbers)
 - b. Steam Generator hydraulic Snubbers (12 Snubbers)
 - c. Main Steam hydraulic Snubbers (27 Snubbers)

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 19 of 96

5.9 Defined Test Plan Group (DTPG) (continued)

5. In addition to the testing performed in each DTPG, Snubbers placed in the same location as Snubbers that failed the previous Inservice operational readiness test shall be retested unless the cause of the failure is clearly established and corrected. Any testing done for this purpose shall not be considered part of the DTPG sample selection requirements in Section 5.10, Testing Sample Plans.

5.10 Testing Sample Plans

1. A test plan shall be selected for each DTPG before the scheduled testing begins.
2. The test plan shall be used throughout the refueling outage tests for that DTPG and any failure mode group (FMG) that is derived from it.
3. For unacceptable Snubber(s), the additional testing shall continue in the DTPG or FMG.
4. For HNP DTPGs, the following test plans are chosen:
 - a. Mechanical Snubber DTPG: 37 Plan
 - b. Steam Generator Hydraulic DTPG: 10% Plan
 - c. Main Steam Hydraulic DTPG: 10% Plan

5.11 Testing Sample Plan Selection

NOTE
The Safety Related/Safety Significant Sample Plan for a DTPG functional testing shall be either the 10% or 37 Plan.

5.11.1 The 10% Testing Sample Plan

1. The initial sample shall be 10% of the DTPG.
2. The Safety Related/Safety Significant sample shall include 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.
3. Selection of the representative Safety Related/Safety Significant Snubbers shall be random.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 20 of 96

5.11.1 The 10% Testing Sample Plan (continued)

4. The sample may also be selected from Safety Related/Safety Significant Snubbers concurrently scheduled for seal replacement or other similar activity related to service life monitoring. The Snubbers shall be tested on a generally rotational basis to coincide with the service life monitoring activity.
5. When additional Safety Related/Safety Significant samples are required, they shall meet the mathematical expression below.
6. The test sample plan is completed when the mathematical expression below is satisfied, or all Snubbers have been tested.
7. Testing shall satisfy the mathematical expressions as follows:

- a. For each DTPG

$$N \geq 0.1n + C(0.1n / 2)$$

where:

N	=	total number of Snubbers tested that were selected from the DTPG
n	=	number of Snubbers in the DTPG
C	=	total number of unacceptable Snubbers found in the DTPG (excluding those counted for FMG tests)

- b. For each FMG:

$$N_f \geq C_f(0.1n / 2)$$

where:

N_f	=	all Snubbers selected and tested from the FMG after the FMG was established from the DTPG
C_f	=	total number of unacceptable Snubbers in the FMG, plus those found in the DTPG and used to establish the FMG
n	=	number of Snubbers in the DTPG

5.11.2 The 37 Testing Sample Plan

1. An initial Safety Related/Safety Significant sample of 37 Snubbers shall be selected randomly from each Snubber plan DTPG.
2. When additional Safety Related/Safety Significant samples are required, then they shall meet the mathematical expression below.
3. The test sample plan is completed when the mathematical expression below is satisfied, or all Snubbers have been tested.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 21 of 96

5.11.2 The 37 Testing Sample Plan (continued)

4. Testing shall satisfy the mathematical expressions as follows:

a. For each DTPG:

$$N \geq 36.49 + 18.18C$$

where:

N	=	total number of Snubbers tested that were selected from the DTPG
C	=	total number of unacceptable Snubbers found in the DTPG (excluding those counted in FMG tests), plus one for each applicable FMG requiring additional tests

Thus if a FMG has failures which require additional tests, regardless of the number of failures in that FMG, 'C' will only be increased only by a count of 1 for each FMG.

NOTE

For each Snubber removed from 'N' and included in 'NF', another Snubber will need to be selected from the original DTPG and functionally tested for inclusion into 'N' so the mathematical expression can be satisfied.

b. For each FMG requiring additional tests

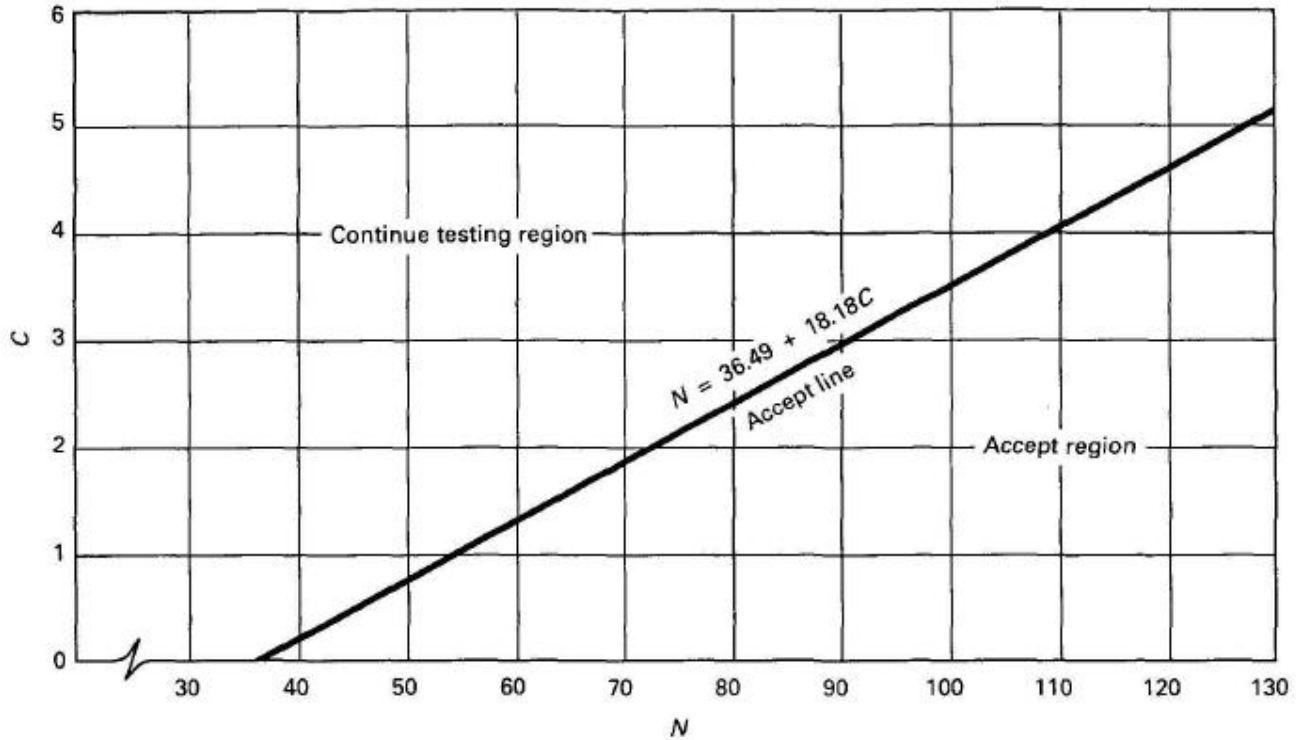
$$N_F \geq 18.18C_F$$

where:

N _F	=	all Snubbers selected and tested AFTER the FMG was established from the DTPG
C _F	=	total number of unacceptable Snubbers in the FMG, plus those found in the DTPG and used to establish the FMG

5.11.2 The 37 Testing Sample Plan (continued)

Figure 1, 37 Test Sample Plan



5.12 Sample Expansion

1. After determination that a Safety Related/Safety Significant Snubber is unacceptable, an additional test plan sample shall be established. Failures found by the retesting conducted in Section 5.9 Step 5 do not require additional testing in accordance with Section 5.12, Sample Expansion, but shall be evaluated for appropriate corrective action.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 23 of 96

5.12 Sample Expansion (continued)

2. For the Safety Related/Safety Significant 10% Plan Failures - When an unacceptable Snubber has not been assigned to an FMG, the additional sample shall be taken from the DTPG. As practicable, the additional sample shall include the following:
 - a. Snubbers of the same manufacturer's design;
 - b. Snubbers immediately adjacent to those found unacceptable;
 - c. Snubbers from the same piping system;
 - d. Snubbers from other piping systems that have similar operating conditions such as temperature, humidity, vibration, and radiation; and
 - e. Snubbers that are previously untested.
3. For the Safety Related/Safety Significant 37 Plan Failures - Additional samples shall be selected randomly from the remaining population of the DTPG, and from untested Snubbers of the FMG as applicable.
4. In addition to the required test plan sample expansion an FMG test population may be established. The unacceptable Snubber may be categorized into a failure mode group (FMG), containing all unacceptable Snubbers that have a given failure and all other Snubbers evaluated to be subject to the same failure.

5.13 Snubber Replacement

1. Any replacement or modified Snubber(s) shall have a proven suitability for the application and environment.
2. Replacement or modified Snubbers shall be examined and tested before placing into service.

5.14 Snubber Deletion

1. Snubbers may be deleted from the plant based on analysis of the affected piping system. When an unacceptable Snubber is deleted, the deleted Snubber shall nevertheless be considered in its respective examination population, examination category, or failure mode group (FMG) for determining the corrective action.
2. The number of deleted Snubbers that failed or passed tests or examinations prior to being deleted will be used in determining examination or testing frequencies.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 24 of 96

5.15 Transient Dynamic Events

1. If a transient dynamic event (e.g., water hammer, steam hammer) occurs that may affect Snubber operability, then the affected Snubbers and systems shall be reviewed and any appropriate corrective action taken.
2. At a minimum, a visual examination shall be performed on all Snubbers attached to the affected sections of systems that have experienced potentially damaging transients as determined from a review of operational data.
3. In addition to satisfying the visual examination acceptance criteria of this procedure, freedom-of-motion of mechanical Snubbers shall be verified by at least one of the following methods:
 - a. Manually induced Snubber movement
 - b. Evaluation of in-place Snubber piston setting
 - c. Stroking the mechanical Snubber through its full range of travel
 - d. Functional testing of the Snubber

5.16 Service Life Monitoring

1. The object of service life monitoring is to identify service and environmental conditions that can adversely affect Snubber performance.
 - a. Service life varies with manufacturer recommendations, design limits, installed environmental conditions and materials, and should be adjusted based on plant experience and technical data to ensure that the Snubber(s) operational readiness is achieved throughout its intended install life.
 - b. Service Life Monitoring is required for all Safety Related/Safety Significant Snubbers.
 - c. Service Life Monitoring of Non-Safety Related Snubber is not addressed by the ASME OM Code and is at the discretion of the Program.
2. A record of the service life of each Snubber in the program shall be maintained.
 - a. The Snubber service life record shall include the Snubber installed location, manufacturer/model, serial number, installed date, rebuild date, and service life expiration date for each applicable Snubber.
 - b. When Snubbers are rebuilt or overhauled, then the service life shall be updated which will provide future statistical bases for consideration of Snubber service life.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 25 of 96

5.16 Service Life Monitoring (continued)

- c. Initial predicted service life for all components is listed in Attachment 7, Initial Predicted Service Life.
 - d. Service Life listing is in Attachment 9, Safety Related/Safety Significant Snubber Listing and Attachment 10, Non-Safety Related Snubber Listing.
- 3. Service life for Snubbers shall be evaluated at least once each fuel cycle and adjustments made as warranted.
 - a. The service life shall be reviewed and necessary actions taken to ensure that the service life of all installed Snubbers will not be exceeded during the next operating cycle.
 - b. This evaluation can be documented in outage reports, summaries, or other methods.
- 4. All data from Preservice and Inservice examinations and tests, maintenance events, transient dynamic events, industry peers, manufacturers, laboratory analysis, and other service life monitoring activities will be evaluated for indications of Snubber degradation or other anomalies.
 - a. Results of this evaluation shall be used to identify Snubbers that are subject to degradation and to identify severe operating environments not previously identified.
 - b. These results may also be used to reduce or extend the service life of Snubbers or any of their subcomponents
- 5. If the evaluation indicates that service life will be exceeded before the next scheduled system or plant outage, then one of the following actions shall be taken:
 - 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;
 - b. Technical justification shall be documented for extending the service life to or beyond the next scheduled system or plant outage;
 - c. The Snubber shall be reconditioned such that its service life will be extended to or beyond the next scheduled system or plant outage.
- 6. For Mechanical Snubbers considered to be in a "harsh environment", periodic hand stroking is done in order to redistribute the grease and maintain their service life.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 26 of 96

6.0 RECORDS

No records are generated from this procedure.

7.0 REFERENCES

7.1 Commitments

1. ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) 2001 Edition through 2003 Addenda
 - a. Code Case OMN-13, Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants
2. Code of Federal Regulations: 10 CFR 50.55a, Codes and Standards

7.2 Procedures

1. [AD-DC-ALL-0201](#), Development and Maintenance of Controlled Procedure Manual Procedures
2. [AD-EG-ALL-1000](#), Conduct of Engineering
3. [AD-EG-ALL-1006](#), Conduct of Technical Program Engineering
4. [AD-EG-ALL-1600](#), Engineering Programs
5. [AD-EG-ALL-1618](#), Snubber Program Plan
6. [ADM-NGGC-0115](#), Preconditioning of Structures, Systems & Components
7. [ADM-NGGC-0203](#), Preventive Maintenance and Surveillance Testing Administration
8. [CM-M0231](#), Hydraulic Snubbers
9. [CSP-NGGC-2505](#), Software Quality Assurance and Configuration Control of Business Computer Systems
10. [EGR-NGGC-0009](#), Engineering Change Product Selection and Initiation
11. [EST-215](#), Snubber Surveillance
12. [MMP-004](#), Installation of Pipe Supports
13. [MST-M0033](#), Mechanical Snubber Operational (Functional) Test
14. [PD-EG-ALL-1618](#), Snubber Program – Description

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 27 of 96

7.2 Procedures (continued)

15. [PLP-106](#), Technical Specification Equipment List Program and Core Operating Limits Report

7.3 Miscellaneous Documents

1. FSAR Table 16.3-4, Snubbers
2. INPO EPG-07, Snubbers
3. IWA-2213, VT-3 Examination
4. [NDEP-0613](#), VT-3 Visual Examination of Nuclear Power Plant Components
5. [VM-NUN](#), Snubbers (Basic-PSA)
6. [VM-NZI](#), Snubbers (Paul Munroe/Enertech)
7. [VM-VOU](#), Snubbers (Lisega, Inc.)
8. Regulatory Guide 1.192, Operation and Maintenance Code Case Applicability, ASME OM Code
9. Regulatory Guide 1.193, ASME Code Cases Not Approved for Use

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 28 of 96

ATTACHMENT 1

Page 1 of 1

Visual Examination of Snubbers

The following should be considered, in addition to guidance from NDEP-0613 and MMP-004, for the Visual Examination of Snubbers:

1. Per Section 5.7 Step 4, Snubber Visual Exams must be conducted using the VT-3 method, however they are conducted pin to pin only.
2. Measurement of Snubber setting:
 - a. As a part of any Snubber Visual Exam, the setting of the Snubber shall be measured.
 - b. Many Snubbers have markings on the outside to provide the general setting, however, since this is not always provided or consistent (some Snubbers at HNP have been discovered to have the scale be in metric while most are in standard units), this scale shall not be used.
 - c. An actual measurement (in inches) shall be taken for the setting with a scale/ruler/tape measure from the center of the "zero mark" on the Snubber. If this mark does not exist (or cannot be determined due to Snubber being turned, etc.), measure from the base of the shaft, and make a note on the Data Sheet that this was done so that Engineering can compensate for the difference in measurements.
3. Indications
 - a. A list of notable indications and guidance for evaluating them is included in Attachment 2, Guidance for Evaluating Visual Examination Indications.
4. Photographs
 - a. In order to better track the condition of Snubbers in the plant as well as make finding/examining the Snubbers easier, a photograph should be taken of each Snubber as a part of the exam.
 - b. The following shots should be taken:
 - From the ground toward the Snubber (to ease in locating it in the future)
 - A wide shot of the Snubber (preferably so that the setting can be seen)
 - A close-up of any indications/anomalies
 - c. These photos should be turned over to the Program Manager along with the datasheet for the exam.
5. Indications Possibly Affecting Operability
 - a. The Program Manager has the primary responsibility for writing condition reports when the situation requires it.
 - b. It is the responsibility of the examiner to provide a completed datasheet with the indication listed to the Program Manager in a timely manner so that the Program Manager can evaluate the condition
 - c. Should the Program Manager not be available when an indication that could affect operability is discovered (see Step 5.d), the examiner who discovered the condition will:
 - Initiate a CR.
 - Notify the control room.
 - Provide a completed datasheet to Engineering.
 - d. A condition is considered not to affect operability when it cannot be evaluated "unacceptable" per Attachment 2, meaning that "Option 3" is not listed for that particular indication.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 29 of 96

ATTACHMENT 2

Page 1 of 1

Guidance for Evaluating Visual Examination Indications

The guidance listed below corresponds to the VT-3 visual examination criteria. NDEP-613 is utilized for examination methodology. Indications identified during the performance of the visual examination can be categorized into the three types of evaluations:

1. **Accept As Is:** Minor indications which have no impact on operability of the snubber and do not require corrective actions to be performed;
2. **Evaluate Degraded:** indications which require corrective measures to ensure continued operability (currently operable). Additional actions such as functional testing may be required to determine this condition;
3. **Evaluate Unsat:** indications which resulted in the snubber being inoperable

Listed below is general guidance to determining the appropriate evaluation category. Final determination of results is at the discretion of the qualified Program Manager:

- Degraded/deformed support members (1, 2 or 3)
- Support structure attachments not secure (1, 2 or 3)
- Shaft imperfections (1, 2 or 3)
- Missing locking devices (2)
- Mechanical interferences (2 or 3)
- Snubber misaligned (2 or 3)
- Large gaps under baseplate (1 or 2)
- Spherical bearing bound/requiring lubrication (2)
- Spherical bearing not properly seated (2 or 3)
- Hydraulic fluid leaking from the snubber main body (2 or 3)
- Hydraulic fluid leaking from the snubber fluid reservoir (2 or 3)
- Hydraulic fluid weepage (2)
- Snubber fluid at or below the zero mark (2 or 3)
- Setting +/- thermal movement will bottom/top out Snubber (2 or 3)

The following are conditions that shall be considered non-relevant:

- Fabrication marks (e.g., from punching, layout, bending, rolling, and machining);
- Chipped or discolored paint;
- Weld spatter on other than close tolerance machined or sliding surfaces;
- Scratches and surface abrasion marks (except on hydraulic snubber piston rods);
- General conditions acceptable by material, design, or construction specifications.

Sample Visual Examination Data Sheet



Snubber Visual Examination

This is a QA Record
Report No: _____
Page 1 of 1

Plant/Unit: _____

Procedure No: _____

Exam No: _____

Mark No: _____

System: _____

Line Type: _____

Line Desc: _____

Outage No: _____

Revision: _____

Building/Room: _____

Elevation: _____

Row/Column: _____

Map No: _____

TPNS No: _____

As Found As Left PSI

WO/WR No: _____

Component No: _____

Serial No: _____

Manufacturer: _____

Model: _____

Size: _____

Resolution	Technique	Equipment	Lighting	Tools
_____	<input type="radio"/> Direct <input type="radio"/> Remote <input type="radio"/> See Comments	<input type="radio"/> Mirror <input type="radio"/> Magnifier <input type="radio"/> See Comments	<input type="radio"/> Ambient <input type="radio"/> Flashlight <input type="radio"/> Droplight	<input type="radio"/> Scale <input type="radio"/> Tape Measure <input type="radio"/> Level <input type="radio"/> Micrometer <input type="radio"/> Comparator <input type="radio"/> Other <input type="radio"/> Caliper <input type="radio"/> Weld Gauge

	Sat	Unsat	N/A		Sat	Unsat	N/A
Component support identified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Movement obstructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Component installed / orientated per design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Close tolerance surfaces / corrosion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No signs of physical damage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Corrosion / material / scratches on piston rod	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Structural steel attachments / embedment plates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Reservoir sightglass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attachment items not bent / damaged / deformed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fluid connections and seals loose / leaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snubber attachments / connections not loose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Assembly / valve block / body / fittings leaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Broken / missing cotter pins / load pins / snap rings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Reservoir shipping plug not installed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No signs of weak, stripped threads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vent not obstructed or damaged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No loose / missing parts / locknuts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Reservoir orientation / vent port at top	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supporting structure and foundations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fluid clarity / no suspended solids	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concrete anchors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fluid Level: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No cracked / chipped concrete / grout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Pin to Pin Setting: _____			
Weld integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Piston Rod Setting: _____			
Spherical bearings functional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	System Temperature: <input type="radio"/> Hot <input type="radio"/> Cold _____			
End attachment gaps and tolerances	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Supplemental data attached: <input type="radio"/> Yes <input type="radio"/> No			
Anchor points for binding / excess movement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				

Comments: _____

Examiner Name: _____

Examiner Name: _____

Level: _____

Level: _____

Exam Date: _____

Exam Date: _____

EXAMINATION EVALUATION AND OVERVIEW Sat Unsat N/A

There are no signs of damage or impaired operability.

Attachments to the supporting structure are secure.

Fasteners for the attachment of the snubber to the component and to the snubber are functional.

OVERALL RESULTS: ACCEPTABLE DEGRADED UNACCEPTABLE

EVALUATION COMMENTS:

Reviewed By: _____

Reviewed By: _____

Level: _____

Level: _____

Date: _____

Date: _____

General Snubber Information

Qualification testing of the mechanical Snubbers at HNP was performed by Pacific Scientific Co. in accordance with ASME Boiler and Pressure Bessel Code Section III, Subsection NF, 1977 Edition including Snubber 1978 Addenda and ASME Code Case 16444-4.

Qualification testing of the Paul Munroe hydraulic Snubbers at HNP was performed by Paul Munroe Hydraulics Inc. in accordance with ASME III, Subsection NF, 1980 Edition including winter 1981 Addenda and ASME Code Cases N71-10 and N-249-1.

Liseqa Snubbers are constructed in accordance with ASME III, Subsection NF, 1980 Edition including Winter 1981 Addenda, and ASME Code Cases in accordance with Regulatory Guide 1.85 (now incorporated in Reg. Guide 1.84). Load Ratings for PSA mechanical Snubbers:

Many Snubbers were removed from the plant during the SG replacement (ESR 97-807)

Many Snubbers were removed for having < 1/8" thermal movement

Load Ratings for PSA Mechanical Snubbers

PSA Size	Bergen-Patterson Size	Design / Normal / Upset Load (lbs.)	Emergency (lbs.)	Faulted (lbs.)
0.25	0.35	350	450	500
0.50	0.65	650	850	850
1	1.5	1,500	2,000	2,100
3	6	6,000	8,000	9,000
10	15	15,000	20,000	22,100
35	50	50,000	66,600	72,400
100	120	12,000	160,000	160,000

The HNP Snubbers have been added to EDB per EC 70710 by their plant location (e.g., MS-H-0141 or SG-H-0323A).

Historically, various forms of the location identifier (e.g., SG-H-0323A; SG-323A; SG-H-323) have been used throughout the years in the work order and AR titles such that searching for historical information takes trial and error.

The hanger drawings are listed in Passport under the Controlled Documents with format: 1-AF-H-00001

Where:

The first number (1) is the Unit

AF is the system

H signifies hanger

The five digit number is the unique location

Mechanical Snubber Functional Test Acceptance Criteria

1. Mechanical snubbers shall be tested to verify that:
 - a. Activation (restraining action) is achieved within the specified range in both tension and compression.
 - b. Drag force of the snubber is within the specified range in both directions of travel.
 - c. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand the load without displacement.
2. The Activation (Acceleration) Test Criteria is as follows:
 - a. Activation tests are to be performed between 10% and 100% of rated load.
 - b. The limiting acceleration of the snubber shall be less than or equal to 0.02g in both tension and compression. Values that exceed 0.02g may be acceptable based on analysis. Snubbers that exceed 0.02g, but are found to be acceptable will be classified as degraded and will be repaired or replaced.
3. The following table is used to determine the allowable drag forces for inservice testing of the different sizes of snubbers.

	Mechanical Snubber Size and Rated Load (lbs)						
	1/4 (350)	1/2 (650)	1 (1500)	3 (6000)	10 (15,000)	35 (50,000)	100 (120,000)
Minimum Pipe Size (in.) for 3% allowable drag	1.5	2	3	6	8	24	32

Notes:

1. The above table applies to ASME Class 2, 3 and ANSI B31.1 piping. Snubbers on pipe sizes other than shown above have a 2% allowable drag value.
2. Drag forces <3% of the snubber rated load is acceptable for all ASME Class 1 piping regardless of pipe size. Any increase in drag force limits for snubbers on Class 1 systems requires approval from Westinghouse Electric Corporation.
3. Drag forces in excess of this table but <5% may be acceptable based on an analysis of piping stresses compared to ASME allowable stresses. Thermal analysis is required to increase drag forces or forces imposed on piping. Snubbers in this range shall be categorized as degraded and should be replaced or repaired as a preventive maintenance action.
4. A drag force limit of 2% of rated load shall apply to Preservice testing of new or repaired snubbers

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 33 of 96

ATTACHMENT 6

Page 1 of 1

Hydraulic Snubber Functional Test Acceptance Criteria

This functional test acceptance criteria is derived from snubber assembly drawing EMDRAC 1364-038363 and from Westinghouse Letter 96-CQL-078. Functional parameters are listed in VM-NZI for each bore size of Paul Munroe snubber. The lower limit for activation and bleed for the Liseqa snubber(s) is the same as the Paul Munroe criteria. The upper limits are from VM-VOU.

14" BORE 1300 kip PAUL MUNROE STEAM GENERATOR SNUBBERS

Rod Velocity to Initiate Snubbing Action (activation)	6-10 in./min.
Bleed Rate (rod velocity while activated)	0.10 - 0.35 in./min.
Drag Force (total internal friction) - see note 1	5000 lb. max.

10" BORE PAUL MUNROE MAIN STEAM SYSTEM SNUBBERS

Rod Velocity to Initiate Snubbing Action (activation)	6-20 in./min.
Bleed Rate (rod velocity while activated)	1-6 in./min.
Drag Force (total internal friction) - see note 1	less than 7000 lb.

8" BORE PAUL MUNROE MAIN STEAM SYSTEM SNUBBERS

Rod Velocity to Initiate Snubbing Action (activation)	6-20 in./min.
Bleed Rate (rod velocity while activated)	1-6 in./min.
Drag Force (total internal friction) - see note 1	4000 lb. max.

TYPE 3092 LISEGA HYDRAULIC SNUBBERS

Reaction Velocity at Room Temperature (RT)	6 - 14.17 in./min.
Bypass Velocity at Normal Load (FN) and (RT)	1 - 4.72 in./min

5" BORE PAUL MUNROE MAIN STEAM SYSTEM SNUBBERS AND TYPE 3072 LISEGA SNUBBERS

Rod velocity at faulted load (no lock-up)	Max. 30 in./min.
Drag Force - see note 1	3000 lb. max.

Notes:

1. Drag force testing are not required for Inservice testing on hydraulic snubbers.
2. Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 34 of 96

ATTACHMENT 7

Page 1 of 1

Initial Predicted Service Life

1. Initial snubber service life shall be predicted based on manufacturer's recommendation and design review.
2. Actual service life determinations are made based on the effects of the environment and service conditions on the snubber service life, test and examination results and other applicable factors. Reduced actual/expected service lives different from the initial service life listed above may be established for failed or degraded Snubbers exposed to similar environmental and service conditions as those which have been found failed or degraded may also be assigned reduced actual/expected service lives. Reduced service life snubbers may be tested or replaced at a higher frequency. Actual/expected service life may also be extended based on evaluation (i.e., seal life studies, etc.)
3. Environmental or service conditions that exceed the manufacturer's qualification basis for snubber service will be identified and evaluated per EGR-NGGC-0009.
4. The initial recommended service life of Pacific Scientific mechanical snubbers is 40 years as described in VM-NUN. These snubbers contain no parts that require periodic replacement to comply with the 40-year lifespan and no preventive maintenance is recommended or required. The initial service life is based on Pacific Scientific Standard Design Specification Report DR1319 that lists the environmental conditions to which the snubbers are qualified. Basic-PSA has since revised DR1319 stating that the service life may be extended to 60 years with appropriate maintenance and operation. Additional information is found in the "Mechanical Shock Arrestors Service Life Extension Program & Preventive Maintenance Recommendations" DR3020 on indefinitely extending the service life beyond the initial service life of 40 years.
5. The service life of the Paul Munroe/ENERTECH hydraulic snubbers is 40 years per VM-NZI. The critical components of the hydraulic snubbers are the Tefzel seals that are qualified for 40 years of service and do not require periodic replacement to maintain operability.
6. VM-NZI contains recommendations for determining fluid quality and suggests changing the fluid at 5-year intervals. The process used at HNP to determine fluid quality is to sample and analyze the fluid from each snubber when it is functional tested. If the fluid meets the criteria for used fluid per VM-NZI, then it can remain in the snubber. If the fluid does not meet the criteria, then it will be replaced or reconditioned and reused. The results of the analysis are used to trend snubber degradation. Historically, the larger particle sizes indicate snubber degradation and wear.
7. Paul Munroe Hydraulic snubber rod wiper and chevron seals on the 8", 10" and 14" bore snubbers are typically replaced at 10-year intervals. This interval is based on discussions with the vendor and the observed condition of these noncritical seals when removed. HNP has experienced no snubber failures as a result of this 10-year replacement interval. The service life of these seals is determined primarily by exposure to radiation and high temperature. The Main Steam system hydraulic snubbers at HNP are not exposed to any radiation and the Steam Generator snubbers receive relatively low levels of exposure. Temperatures in these locations are well under the design limits of the seals. Other parts including drain/fill port gaskets, fill valves, relief valves, reservoir seals, and springs are replaced as needed. Additional parts replacement is not necessary unless a problem develops.
8. Per VM-VOU, Lisega snubbers have a primary seal replacement interval of 23 years, unless a problem is observed.

SNUBBER PROGRAM PLAN	AD-EG-HNP-1618
	Rev. 1
	Page 35 of 96

ATTACHMENT 8
Page 1 of 1

Relief Requests

No Relief Requests currently applicable to HNP.

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
AF-H-0001	PSA-1	21746	MST 272 25D N7 W5	36-001	10/10/2010	480	1/12/1986	12/8/1989	1/12/2026
AF-H-0013	PSA-1	8822	MST 272 25D N9 W6	36-002	10/10/2010	480	1/12/1986	10/26/1989	1/12/2026
AF-H-0022	PSA-3	16385	MST 265 27FZ S13 E10	36-003	10/11/2010	480	1/12/1986	10/26/1989	1/12/2026
AF-H-0043	PSA-1	15596	MST 272 27D S2 W5	36-004	10/10/2010	480	1/12/1986	3/21/1991	1/12/2026
AF-H-0052	PSA-3	12526	MST 265 25FZ N18 E9	36-005	11/26/2013	480	1/12/1986	10/2/2001	1/12/2026
AF-H-0060	PSA-3	16364	MST 271 27D N6 W9	36-006	10/13/2010	480	1/12/1986	12/6/1989	1/12/2026
AF-H-0080	PSA-3	12601	MST 265 27FZ N7 9E	36-007	10/11/2010	480	1/12/1986	4/3/1991	1/12/2026
AF-H-0167	PSA-1/2	16171	RAB 271 27C S1 E14	34-001	9/26/2013	480	1/12/1986	3/26/1994	1/12/2026
AF-H-0170	PSA-3	18625	RAB 271 27C N4 E3	34-002	10/17/2010	480	1/12/1986	11/14/1989	1/12/2026
AF-H-0189	PSA-3	16401	RAB 272 27C S5 E4	34-003	3/12/2012	480	3/1/2012	3/12/2012	3/1/2052
AF-H-0197A	PSA-1/4	37301	RAB 269 26C N4 E5	34-004	9/26/2013	480	1/12/1986	5/2/1987	1/12/2026
AF-H-0197B	PSA-1/4	37091	RAB 269 26C N4 E5	34-005	9/26/2013	480	3/7/2012	5/11/2012	3/7/2052
AF-H-0213	PSA-1/4	37081	RAB 269 26C N7 E3	34-006	9/26/2013	480	1/12/1986	11/15/1989	1/12/2026
AF-H-0232	PSA-1	15613	RAB 273 27C S5 E3	34-007	3/25/2009	480	3/17/2009	3/25/2009	3/17/2049
AF-H-0256	PSA-1	8826	RAB 269 27C N1 E5	34-008	9/10/2013	480	1/12/1986	9/30/1992	1/12/2026
AF-H-0274	PSA-1	8771	RAB 270 27C S4 E5	34-009	9/10/2013	480	1/12/1986	8/12/1988	1/12/2026
AF-H-0279A	PSA-1/4	35158	RAB 270 27C N8 E4	34-010	10/17/2010	480	1/12/1986	10/24/1989	1/12/2026
AF-H-0279B	PSA-1/4	37154	RAB 270 27C N8 E4	34-011	10/17/2010	480	1/12/1986	3/21/1991	1/12/2026
AF-H-0286A	PSA-10	6520	CONT 264 R50 AZ290	10-021	4/29/2012	480	3/1/2012	4/29/2012	3/1/2052
AF-H-0286B	PSA-10	6253	CONT 264 R50 AZ290	10-021	4/29/2012	480	2/29/2012	4/29/2012	2/29/2052
AF-H-0296	PSA-10	6427	CONT 266 R48 AZ030	10-008	4/18/2009	480	4/9/2009	4/27/2009	4/9/2049
AF-H-0298	PSA-10	6372	CONT 268 R40 AZ030	11-010	4/24/2009	480	1/12/1986	12/8/1989	1/12/2026
AF-H-0299	PSA-3	16419	CONT 268 R39 AZ030	11-008	4/24/2009	480	1/12/1986	8/13/1988	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
AF-H-0309A	PSA-10	41387	CONT 268 R39 AZ271	12-019	4/21/2009	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0309B	PSA-10	41399	CONT 268 R39 AZ271	12-019	4/21/2009	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0311A	PSA-3	18634	CONT 269 R39 AZ273	12-020	11/15/2013	480	8/19/2013	11/15/2013	8/19/2053
AF-H-0311B	PSA-3	12521	CONT 269 R39 AZ273	12-020	11/19/2013	480	8/23/2013	11/19/2013	8/23/2053
AF-H-0320A	PSA-10	17078	CONT 265 R48 AZ227	10-033	5/13/2012	480	3/2/2012	5/11/2012	3/2/2052
AF-H-0320B	PSA-10	6382	CONT 265 R48 AZ227	10-033	4/25/2009	480	1/12/1986	10/30/2004	1/12/2026
AF-H-0326	PSA-3	17530	CONT 265 R48 AZ179	10-001	4/23/2012	480	3/8/2012	4/23/2012	3/8/2052
AF-H-0327	PSA-3	7022	CONT 266 R48 AZ181	10-039	4/23/2012	480	3/8/2012	4/23/2012	3/8/2052
AF-H-0328A	PSA-10	16338	CONT 265 R48 AZ179	10-002	4/21/2012	480	1/12/1986	4/17/2000	1/12/2026
AF-H-0328B	PSA-10	17077	CONT 265 R48 AZ179	10-002	4/21/2012	480	1/12/1986	4/19/2006	1/12/2026
AF-H-0333	PSA-10	6016	CONT 265 R47 AZ150	10-004	4/18/2009	480	1/12/1986	8/13/1988	1/12/2026
AF-H-0334	PSA-10	6893	CONT 266 R40 AZ150	13-004	9/26/2013	480	1/12/1986	12/2/1989	1/12/2026
AF-H-0335	PSA-3	16455	CONT 268 R39 AZ150	13-006	10/7/2010	480	7/23/2010	10/11/2010	7/23/2050
AF-H-0336	PSA-3	41151	CONT 288 R39 AZ150	18-005	10/24/2010	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0362	PSA-10	41390	CONT 263 R50 AZ267	10-025	4/25/2009	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0366	PSA-10	13318	CONT 265 R50 AZ259	10-027	10/2/2010	480	7/23/2010	10/5/2010	7/23/2050
AF-H-0367	PSA-3	41178	CONT 265 R53 AZ255	10-028	4/25/2009	480	1/12/1986	9/24/2001	1/12/2026
AF-H-0368	PSA-10	16337	CONT 278 R39 AZ150	13-002	4/21/2009	480	1/12/1986	11/26/1989	1/12/2026
AF-H-0369	PSA-3	12610	CONT 278 R39 AZ150	13-007	4/21/2009	480	1/12/1986	4/9/1991	1/12/2026
AF-H-0390A	PSA-3	17573	CONT 264 R48 AZ304	10-018	10/13/2007	480	1/12/1986	5/2/1987	1/12/2026
AF-H-0390B	PSA-3	17476	CONT 264 R48 AZ304	10-018	10/13/2007	480	1/12/1986	10/30/2001	1/12/2026
AF-H-0391A	PSA-3	41754	CONT 264 R48 AZ326	10-015	10/13/2007	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0391B	PSA-3	41753	CONT 264 R48 AZ326	10-015	10/13/2007	480	1/12/1986	8/18/2001	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
AF-H-0392	PSA-3	41464	CONT 278 R39 AZ030	11-009	4/24/2009	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0393	PSA-3	17475	CONT 276 R39 AZ030	11-007	4/24/2009	480	1/12/1986	4/29/2003	1/12/2026
AF-H-0398	PSA-1	15630	RAB 275 27C N5 E4	34-012	10/17/2010	480	1/12/1986	4/30/2006	1/12/2026
AF-H-0415	PSA-3	16423	MST 273 27D S4 W6	36-008	10/10/2010	480	1/12/1986	11/19/1989	1/12/2026
AF-H-0425	PSA-1/4	21351	MST 267 27FZ S11 W3	36-009	10/3/2010	480	1/12/1986	11/18/1989	1/12/2026
AF-H-0427	PSA-1	1983	MST 266 27FZ S2 W3	36-010	10/11/2010	480	1/12/1986	10/30/2010	1/12/2026
AF-H-0428A	PSA-1/4	21336	MST 267 27FZ S1 W3	36-011	10/13/2010	480	1/12/1986	3/21/1991	1/12/2026
AF-H-0428B	PSA-1/4	21331	MST 267 27FZ S1 W3	36-012	10/13/2010	480	1/12/1986	3/21/1991	1/12/2026
AF-H-0430	PSA-1/2	18714	MST 265 27FZ S2 W3	36-014	10/11/2010	480	1/12/1986	8/22/1988	1/12/2026
AF-H-0431A	PSA-1/4	37119	MST 267 27FZ N8 W3	36-014	10/12/2010	480	1/12/1986	4/4/1991	1/12/2026
AF-H-0431B	PSA-1/4	37300	MST 267 27FZ N8 W3	36-015	10/12/2010	480	1/12/1986	4/4/1991	1/12/2026
AF-H-0433A	PSA-1/2	17864	MST 266 27FZ N7 W3	36-016	10/3/2010	480	1/12/1986	4/8/1991	1/12/2026
AF-H-0433B	PSA-1/2	6579	MST 266 27FZ N7 W3	36-017	10/3/2010	480	1/12/1986	4/8/1991	1/12/2026
AF-H-0435	PSA-1/2	6576	MST 266 27FZ S8 W3	36-018	5/15/2012	480	1/12/1986	12/1/1989	1/12/2026
AF-H-0436	PSA-1/4	17981	MST 267 27FZ S8 W3	36-019	10/3/2010	480	1/12/1986	3/19/2009	1/12/2026
AF-H-0438	PSA-1/2	7276	MST 266 27FZ N3 W3	36-020	10/13/2010	480	1/12/1986	12/9/1989	1/12/2026
AF-H-0439A	PSA-1/4	16274	MST 266 27FZ N1 W3	36-021	10/12/2010	480	1/12/1986	11/24/1989	1/12/2026
AF-H-0439B	PSA-1/4	37019	MST 266 27FZ N1 W3	36-022	10/12/2010	480	1/12/1986	3/21/1991	1/12/2026
AF-H-0441	PSA-1/2	7278	MST 267 27FZ N12 W3	36-023	10/12/2010	480	1/12/1986	11/22/1989	1/12/2026
AF-H-0442A	PSA-1/4	17957	MST 267 27FZ N11 W3	36-024	11/13/2013	480	1/12/1986	12/6/1989	1/12/2026
AF-H-0442B	PSA-1/4	37151	MST 267 27FZ N11 W3	36-025	11/13/2013	480	1/12/1986	11/13/2013	1/12/2026
AF-H-0466	PSA-1	11034	CONT 265 R53 AZ285	10-022	10/13/2007	480	1/12/1986	12/6/1989	1/12/2026
AF-H-0479	PSA-1	11088	MST 266 27FZ S15 W2	36-026	10/11/2010	480	1/12/1986	12/7/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
AF-H-0481	PSA-1	8773	MST 266 27FZ S5 W2	36-027	10/11/2010	480	1/12/1986	12/1/1989	1/12/2026
AF-H-0483	PSA-1	10981	MST 266 27FZ N5 W2	36-028	10/11/2010	480	1/12/1986	12/8/1989	1/12/2026
AF-H-0670	PSA-3	11918	CONT 291 R39 AZ030	16-004	10/24/2010	480	1/12/1986	10/30/2004	1/12/2026
AF-H-0673	PSA-3	40260	CONT 291 R39 AZ270	17-001	10/24/2010	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0675	PSA-3	40261	CONT 278 R39 AZ270	12-018	4/22/2009	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0676	PSA-10	17067	CONT 278 R39 AZ270	12-024	5/13/2012	480	2/29/2012	5/8/2012	2/29/2052
AF-H-0677	PSA-10	17065	CONT 263 R49 AZ270	10-041	4/24/2012	480	3/1/2012	4/22/2012	3/1/2052
AF-H-0678	PSA-3	41157	CONT 291 R38 AZ137	18-007	5/12/2003	480	1/12/1986	8/18/2001	1/12/2026
AF-H-0681A	PSA-3	12486	CONT 265 R48 AZ137	10-030	4/25/2009	480	1/12/1986	5/1/2003	1/12/2026
AF-H-0681B	PSA-3	41465	CONT 265 R48 AZ137	10-030	4/25/2009	480	1/12/1986	8/18/2001	1/12/2026
BD-H-0002	PSA-1/2	19044	CONT 259 R46 AZ138	03-015	4/26/2012	480	1/12/1986	4/4/1991	1/12/2026
BD-H-0004	PSA-1	8763	CONT 258 R47 AZ138	03-016	4/26/2012	480	1/12/1986	12/8/1989	1/12/2026
BD-H-0005	PSA-1/4	39053	CONT 257 R47 AZ139	03-014	4/26/2012	480	1/12/1986	4/17/1997	1/12/2026
BD-H-0009	PSA-1/4	14964	CONT 257 R47 AZ145	03-022	4/26/2012	480	1/12/1986	10/7/1992	1/12/2026
BD-H-0011	PSA-1	16105	CONT 257 R48 AZ153	03-024	11/22/2013	480	8/21/2013	11/22/2013	8/21/2053
BD-H-0015A	PSA-1	10944	CONT 257 R48 AZ184	04-003	10/11/2007	480	1/12/1986	4/4/1991	1/12/2026
BD-H-0015B	PSA-1	9222	CONT 257 R48 AZ184	04-003	10/11/2007	480	1/12/1986	4/4/1991	1/12/2026
BD-H-0019	PSA-1/4	36211	CONT 258 R46 AZ018	02-019	5/6/2012	480	1/12/1986	5/14/2003	1/12/2026
BD-H-0022A	PSA-1/4	37175	CONT 258 R46 AZ018	02-018	11/20/2013	480	8/14/2013	11/20/2013	8/14/2053
BD-H-0022B	PSA-1/4	21327	CONT 258 R46 AZ018	02-018	5/6/2012	480	1/12/1986	8/26/1988	1/12/2026
BD-H-0029	PSA-1	8815	CONT 257 R49 AZ019	02-011	5/6/2012	480	1/12/1986	8/18/1988	1/12/2026
BD-H-0031A	PSA-1	11008	CONT 257 R49 AZ002	02-015	4/24/2012	480	1/12/1986	12/7/1989	1/12/2026
BD-H-0031B	PSA-1	11086	CONT 257 R49 AZ002	02-015	4/24/2012	480	1/12/1986	12/7/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
BD-H-0036	PSA-1	41964	CONT 266 R30 AZ158	13-023	4/21/2009	480	1/12/1986	10/11/2001	1/12/2026
BD-H-0040A	PSA-1	11092	CONT 266 R36 AZ156	13-028	4/21/2009	480	1/12/1986	4/21/2000	1/12/2026
BD-H-0040B	PSA-1	14408	CONT 266 R36 AZ156	13-028	4/21/2009	480	1/12/1986	4/21/2000	1/12/2026
BD-H-0044A	PSA-1	24837	CONT 263 R40 AZ156	13-032	4/21/2009	480	1/12/1986	4/20/1997	1/12/2026
BD-H-0044B	PSA-1	14243	CONT 263 R40 AZ156	13-032	4/21/2009	480	1/12/1986	4/20/1997	1/12/2026
BD-H-0046	PSA-3	16384	CONT 262 R41 AZ152	13-001	10/7/2010	480	7/23/2010	10/11/2010	7/23/2050
BD-H-0049	PSA-1	14314	CONT 259 R39 AZ156	09-034	10/11/2010	480	7/23/2010	10/11/2010	7/23/2050
BD-H-0051A	PSA-1	15597	CONT 257 R40 AZ153	09-038	4/29/2009	480	1/12/1986	10/30/2007	1/12/2026
BD-H-0051B	PSA-1	10940	CONT 257 R40 AZ153	09-038	4/29/2009	480	1/12/1986	10/30/2004	1/12/2026
BD-H-0071A	PSA-1	15614	CONT 257 R40 AZ033	07-007	10/6/2010	480	7/23/2010	10/10/2010	7/23/2050
BD-H-0071B	PSA-1	14248	CONT 258 R40 AZ033	07-007	10/6/2010	480	7/23/2010	10/10/2010	7/23/2050
BD-H-0073	PSA-3	17519	CONT 255 R50 AZ273	05-069	11/14/2013	480	1/12/1986	8/18/1988	1/12/2026
BD-H-0074	PSA-1	15664	CONT 256 R49 AZ263	04-025	11/20/2013	480	8/22/2013	11/20/2013	8/22/2053
BD-H-0077	PSA-3	12510	CONT 257 R49 AZ270	05-085	11/14/2013	480	1/12/1986	10/18/2007	1/12/2026
BD-H-0080	PSA-10	16300	CONT 258 R41 AZ272	08-024	4/27/2009	480	1/12/1986	10/30/2001	1/12/2026
BD-H-0095	PSA-1/2	6113	CONT 256 R49 AZ271	05-071	11/14/2013	480	1/12/1986	3/29/1994	1/12/2026
BD-H-0097	PSA-1/2	19053	CONT 257 R48 AZ274	05-064	11/14/2013	480	2/20/2009	4/19/2009	2/20/2049
BD-H-0104A	PSA-1	15642	RAB 251 15GY N2 W7	21-001	9/13/2013	480	1/12/1986	9/5/1995	1/12/2026
BD-H-0104B	PSA-1	11042	RAB 251 15GY N2 W7	21-002	9/13/2013	480	1/12/1986	9/5/1995	1/12/2026
BD-H-0169	PSA-1	11060	RAB 252 38GY S3 W11	21-003	5/4/2006	480	1/12/1986	10/28/1998	1/12/2026
BD-H-0196A	PSA-1	8599	RAB 250 39B S5 W12	30-001	9/14/2010	480	7/23/2010	9/24/2010	7/23/2050
BD-H-0196B	PSA-1	21750	RAB 250 39B S5 W12	30-002	9/14/2010	480	7/23/2010	9/24/2010	7/23/2050
BD-H-0209	PSA-1	9890	RAB 251 27FZ 3N 3W	21-004	9/26/2013	480	1/12/1986	11/20/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
BD-H-0223	PSA-3	16378	RAB 250 34FZ 2S 6W	21-005	9/19/2013	480	1/12/1986	8/29/1988	1/12/2026
BD-H-0237A	PSA-3	12489	RAB 248 39D S6 W1	30-003	9/29/2007	480	1/12/1986	10/30/2007	1/12/2026
BD-H-0237B	PSA-3	17553	RAB 248 39D S6 W1	30-004	3/31/2009	480	3/17/2009	3/31/2009	3/17/2049
BD-H-0349A	PSA-1	8741	CONT 264 R41 AZ046	11-002	5/9/2012	480	3/7/2012	5/7/2012	3/7/2052
BD-H-0349B	PSA-1	8725	CONT 264 R41 AZ046	11-002	5/9/2012	480	3/7/2012	5/6/2012	3/7/2052
BD-H-0351A	PSA-1/4	35143	CONT 263 R40 AZ033	11-006	4/24/2009	480	1/12/1986	11/4/1998	1/12/2026
BD-H-0351B	PSA-1/4	37252	CONT 263 R40 AZ033	11-006	4/24/2009	480	1/12/1986	11/4/1998	1/12/2026
BD-H-0353	PSA-1	15599	CONT 266 R38 AZ276	12-009	4/21/2009	480	1/12/1986	11/4/1998	1/12/2026
BD-H-0357	PSA-1/4	41665	CONT 266 R40 AZ280	12-014	4/21/2009	480	1/12/1986	10/11/2001	1/12/2026
BD-H-0362	PSA-1	11012	CONT 259 R39 AZ272	08-025	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
BD-H-0364	PSA-1	11073	CONT 259 R37 AZ272	08-026	4/27/2009	480	1/12/1986	10/30/2004	1/12/2026
BD-H-0367	PSA-1	10989	CONT 257 R48 AZ166	03-032	5/9/2012	480	1/12/1986	10/18/2001	1/12/2026
BD-H-0371	PSA-1/4	9550	CONT 258 R48 AZ264	04-024	10/9/2007	480	1/12/1986	12/7/1989	1/12/2026
BD-H-0373	PSA-3	16377	CONT 259 R48 AZ262	04-023	10/9/2007	480	1/12/1986	10/26/1989	1/12/2026
BD-H-0375	PSA-1/2	7308	CONT 259 R41 AZ259	08-013	4/27/2009	480	1/12/1986	4/29/2003	1/12/2026
BD-H-0390	PSA-1	11004	CONT 257 R49 AZ030	02-009	4/22/2012	480	1/12/1986	10/17/2007	1/12/2026
BD-H-0421A	PSA-1/2	7315	CONT 263 R40 AZ276	12-017	4/21/2009	480	1/12/1986	4/30/2000	1/12/2026
BD-H-0421B	PSA-1/2	8796	CONT 263 R40 AZ276	12-017	4/21/2009	480	1/12/1986	10/30/2001	1/12/2026
BD-H-0422	PSA-1	10938	CONT 264 R40 AZ280	12-016	4/21/2009	480	1/12/1986	4/30/2000	1/12/2026
BD-H-0423	PSA-1	11040	CONT 265 R40 AZ280	12-015	4/21/2009	480	1/12/1986	4/21/2003	1/12/2026
BD-H-0428	PSA-1/4	26037	CONT 258 R39 AZ276	08-020	4/27/2009	480	1/12/1986	12/8/1989	1/12/2026
BD-H-0429	PSA-1/4	14786	CONT 258 R39 AZ276	08-021	4/27/2009	480	1/12/1986	4/29/2003	1/12/2026
BD-H-0489	PSA-1/4	37226	CONT 264 R38 AZ030	11-012	11/23/2013	480	8/14/2013	11/25/2013	8/14/2053

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
BD-H-0491	PSA-1/4	7297	CONT 262 R38 AZ030	11-011	4/24/2009	480	1/12/1986	10/30/2004	1/12/2026
BD-H-0504	PSA-1/4	35132	CONT 258 R39 AZ037	07-008	4/21/2009	480	2/20/2009	4/26/2009	2/20/2049
BD-H-0506	PSA-1	11083	CONT 259 R38 AZ037	07-009	10/6/2010	480	7/23/2010	10/10/2010	7/23/2050
BD-H-0507	PSA-1	41427	CONT 259 R39 AZ037	07-012	4/26/2009	480	1/12/1986	10/11/2001	1/12/2026
BD-H-0517A	PSA-1/2	16858	RAB 244 39B S11 W6	24-055	4/8/2006	480	1/12/1986	4/7/1997	1/12/2026
BD-H-0517B	PSA-1/2	17846	RAB 244 39B S11 W6	24-056	4/8/2006	480	1/12/1986	4/7/1997	1/12/2026
BD-H-0518A	PSA-1/2	19062	RAB 244 39B S12 W6	24-057	9/10/2013	480	1/12/1986	4/7/1997	1/12/2026
BD-H-0518B	PSA-1/2	19088	RAB 244 39B S12 W6	24-058	9/10/2013	480	1/12/1986	4/7/1997	1/12/2026
BD-H-0525	PSA-1	16097	RAB 252 39D S9 W9	30-005	10/14/2013	480	1/12/1986	12/1/1989	1/12/2026
BD-H-0527	PSA-1	15604	RAB 250 39D S8 W9	30-006	10/14/2013	480	1/12/1986	9/25/2001	1/12/2026
BD-H-0529A	PSA-1/4	37274	RAB 248 39D S8 W7	30-007	11/9/2013	480	8/13/2013	11/12/2013	8/13/2053
BD-H-0529B	PSA-1/4	21352	RAB 248 39D S8 W7	30-008	11/9/2013	480	8/13/2013	11/12/2013	8/13/2053
BD-H-0549	PSA-1/4	9561	CONT 263 @ S/G C	13-005	4/21/2009	480	1/12/1986	4/23/2009	1/12/2026
BD-H-0550	PSA-1/4	9564	CONT 263 @ S/G C	13-030	4/21/2006	480	7/27/2010	10/11/2010	7/27/2050
BD-H-0555	PSA-1/4	8203	CONT 262 @ S/G B	12-021	4/22/2009	480	1/12/1986	3/27/1991	1/12/2026
BD-H-0556	PSA-1/4	35875	CONT 263 @ S/G B	12-022	4/22/2009	480	1/12/1986	11/11/1989	1/12/2026
BD-H-0586	PSA-1/4	9560	CONT 266 R38 AZ284	12-013	10/2/2007	480	1/12/1986	10/30/2007	1/12/2026
BD-H-0589	PSA-1	41702	CONT 266 R29 AZ277	12-010	4/21/2009	480	1/12/1986	10/11/2001	1/12/2026
BD-H-0591	PSA-1/4	12126	CONT 258 R49 AZ264	04-026	10/9/2007	480	1/12/1986	3/29/1991	1/12/2026
BD-H-0592	PSA-1/2	6559	CONT 257 R48 AZ272	05-068	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
BD-H-0593	PSA-1/4	35135	CONT 256 R48 AZ274	05-066	11/14/2013	480	3/16/2009	4/19/2009	3/16/2049
BD-H-0594	PSA-1/4	14874	CONT 258 R48 AZ271	05-070	11/14/2013	480	1/12/1986	10/30/2007	1/12/2026
BD-H-0604	PSA-1	41697	CONT 266 R36 AZ278	12-012	4/21/2009	480	1/12/1986	10/11/2001	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
BD-H-0610	PSA-1	41698	CONT 259 R39 AZ157	09-036	4/29/2009	480	1/12/1986	10/11/2001	1/12/2026
BD-H-0611	PSA-1	8207	CONT 259 R42 AZ138	09-046	4/29/2009	480	1/12/1986	4/30/2006	1/12/2026
BD-H-0613	PSA-1	41426	CONT 265 R29 AZ277	12-011	4/21/2009	480	1/12/1986	10/11/2001	1/12/2026
BD-H-0614	PSA-1/4	37245	CONT 260 R40 AZ018	07-013	10/6/2010	480	7/27/2010	10/10/2010	7/27/2050
BD-H-3229	PSA-1	41428	CONT 255 R59 AZ268	05-073	11/18/2013	480	1/12/1986	10/11/2001	1/12/2026
BR-H-1843	PSA-1/4	8206	RAB 243 45JZ S5 W4	31-001	9/17/2013	480	1/12/1986	8/23/1988	1/12/2026
BR-H-1844	PSA-1/4	35152	RAB 253 45JZ S5 W4	31-002	9/18/2013	480	1/12/1986	10/29/1998	1/12/2026
BR-H-2621	PSA-1	14369	RAB 251 41JZ N6 W2	31-003	10/14/2013	480	1/12/1986	10/1/1992	1/12/2026
CC-H-0005	PSA-1	9887	CONT 256 R41 AZ007	07-016	4/26/2009	480	1/12/1986	11/15/1989	1/12/2026
CC-H-0010	PSA-1	7712	CONT 255 R41 AZ007	02-024	4/24/2012	480	1/12/1986	4/30/2006	1/12/2026
CC-H-0067	PSA-1/2	18485	CONT 256 R51 AZ174	03-030	5/9/2012	480	1/12/1986	11/20/1989	1/12/2026
CC-H-0074	PSA-1/4	10370	CONT 255 R51 AZ146	03-035	4/26/2012	480	1/12/1986	4/9/1991	1/12/2026
CC-H-0078	PSA-1	15643	CONT 255 R48 AZ139	03-018	4/26/2012	480	1/12/1986	10/30/2007	1/12/2026
CC-H-0080A	PSA-1/4	37034	CONT 255 R48 AZ131	03-045	5/13/2012	480	1/12/1986	4/27/2003	1/12/2026
CC-H-0080B	PSA-1/4	14796	CONT 255 R48 AZ131	03-045	5/13/2012	480	1/12/1986	11/13/1989	1/12/2026
CC-H-0082	PSA-1	15632	CONT 256 R48 AZ133	03-042	11/21/2013	480	8/26/2013	11/22/2013	8/26/2053
CC-H-0085A	PSA-1/4	24009	CONT 255 R46 AZ133	03-038	5/13/2012	480	7/27/2010	10/5/2010	7/27/2050
CC-H-0085B	PSA-1/4	35873	CONT 255 R46 AZ133	03-038	4/25/2012	480	7/27/2010	10/5/2010	7/27/2050
CC-H-0088	PSA-1	10916	CONT 255 R41 AZ132	09-048	4/29/2009	480	1/12/1986	4/9/1991	1/12/2026
CC-H-0093A	PSA-10	17081	RAB 250 23C S2 E3	24-001	8/27/2013	480	1/12/1986	5/3/2003	1/12/2026
CC-H-0093B	PSA-10	7106	RAB 250 23C S2 E3	24-002	8/27/2013	480	1/12/1986	5/3/2003	1/12/2026
CC-H-0353A	PSA-3	17468	RAB 250 42C S6 W10	29-005	11/9/2013	480	8/23/2013	11/12/2013	8/23/2053
CC-H-0353B	PSA-3	16357	RAB 250 42C S6 W10	29-006	9/20/2013	480	3/17/2009	3/26/2009	3/17/2049

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CC-H-0356	PSA-10	6233	RAB 248 43D S11 E7	29-007	9/13/2013	480	1/12/1986	4/8/1991	1/12/2026
CC-H-0357	PSA-10	14854	RAB 248 43D S11 E11	29-008	9/13/2013	480	1/12/1986	9/6/1995	1/12/2026
CC-H-0376A	PSA-35	4868	RAB 250 28C S1 E3	24-059	9/17/2013	480	1/12/1986	9/1/1988	1/12/2026
CC-H-0376B	PSA-35	8568	RAB 250 28C S1 E3	24-060	9/17/2013	480	1/12/1986	11/30/1989	1/12/2026
CC-H-0391	PSA-3	18598	RAB 247 36C N5 W12	24-003	11/23/2013	480	1/12/1986	11/23/1989	1/12/2026
CC-H-0401	PSA-10	5774	RAB 248 36D S4 W7	25-001	9/14/2013	480	1/12/1986	8/26/1988	1/12/2026
CC-H-0417	PSA-3	16395	RAB 245 38G S10 W8	22-001	9/19/2013	480	1/12/1986	10/25/1989	1/12/2026
CC-H-0420A	PSA-1	21765	RAB 243 38G S4	22-002	3/8/2012	480	3/2/2012	3/8/2012	3/2/2052
CC-H-0420B	PSA-1	15592	RAB 243 38G S4	22-003	3/8/2012	480	3/1/2012	3/8/2012	3/1/2052
CC-H-0421A	PSA-3	17563	RAB 257 32F N8 W5	21-006	8/31/2010	480	7/23/2010	8/31/2010	7/23/2050
CC-H-0421B	PSA-1	16066	RAB 257 32F N8 W5	21-007	8/31/2010	480	7/23/2010	9/14/2010	7/23/2050
CC-H-0427A	PSA-3	18616	RAB 243 38FV S4	22-004	8/31/2010	480	7/23/2010	9/14/2010	7/23/2050
CC-H-0427B	PSA-3	12611	RAB 243 38FV S4	22-005	8/31/2010	480	7/23/2010	9/14/2010	7/23/2050
CC-H-0457	PSA-10	6424	RAB 248 42D N14 W10	29-001	10/14/2013	480	1/12/1986	3/22/1994	1/12/2026
CC-H-0459	PSA-10	14686	RAB 249 43D S16 E7	29-009	9/13/2013	480	1/12/1986	12/7/1989	1/12/2026
CC-H-0461A	PSA-3	17585	RAB 251 42D S8 E12	29-010	9/19/2013	480	1/12/1986	10/1/1992	1/12/2026
CC-H-0461B	PSA-3	17568	RAB 251 42D S8 E12	29-011	9/19/2013	480	1/12/1986	10/1/1992	1/12/2026
CC-H-0463	PSA-10	7084	RAB 253 41D N4 E12	29-012	9/19/2013	480	1/12/1986	11/24/1989	1/12/2026
CC-H-0465A	PSA-10	6247	RAB 250 36C N6 W12	24-004	10/17/2010	480	1/12/1986	4/30/2006	1/12/2026
CC-H-0465B	PSA-10	6368	RAB 250 36C N6 W12	24-005	10/17/2010	480	1/12/1986	4/30/2006	1/12/2026
CC-H-0466A	PSA-3	17461	RAB 250 36D S8 E12	24-006	8/27/2013	480	1/12/1986	9/25/2001	1/12/2026
CC-H-0466B	PSA-3	12536	RAB 250 36D S8 E12	24-007	8/27/2013	480	1/12/1986	9/25/2001	1/12/2026
CC-H-0476	PSA-10	6257	RAB 249 36C S11	24-008	9/17/2013	480	1/12/1986	11/14/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CC-H-0496A	PSA-10	13804	RAB 247 31D N8 E5	24-009	9/17/2013	480	1/12/1986	10/30/2007	1/12/2026
CC-H-0496B	PSA-10	5956	RAB 247 31D N8 E5	24-010	9/17/2013	480	1/12/1986	5/2/1987	1/12/2026
CC-H-0503A	PSA-1	15625	RAB 245 31D N16 E3	24-011	9/17/2013	480	1/12/1986	9/5/1995	1/12/2026
CC-H-0503B	PSA-1	8768	RAB 245 31D N16 E3	24-012	9/17/2013	480	1/12/1986	9/5/1995	1/12/2026
CC-H-0570A	PSA-1/2	18609	RAB 245 41GZY N5 E4	27-001	9/19/2013	480	1/12/1986	12/6/1989	1/12/2026
CC-H-0570B	PSA-1/2	18488	RAB 245 41GZY N5 E4	27-002	9/19/2013	480	1/12/1986	12/6/1989	1/12/2026
CC-H-0681	PSA-1	11101	RAB 239 42GZ N2 E3	27-003	4/27/2006	480	1/12/1986	4/19/2000	1/12/2026
CC-H-0692	PSA-1/2	19085	RAB 243 29FZ N2 W4	22-006	7/16/2007	480	1/12/1986	9/11/1995	1/12/2026
CC-H-0715	PSA-1	10987	CONT 256 R52 AZ348	05-025	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
CC-H-0779	PSA-1/2	17011	RAB 247 42JZ N4 E5	31-004	9/19/2013	480	1/12/1986	10/1/1992	1/12/2026
CC-H-0807	PSA-1/2	8772	CONT 245 R54 AZ232	04-048	10/10/2007	480	1/12/1986	4/30/2000	1/12/2026
CC-H-0821	PSA-1	15628	CONT 243 R61 AZ243	04-043	11/14/2013	480	3/5/2012	4/23/2012	3/5/2052
CC-H-0822	PSA-1/2	8777	CONT 243 R62 AZ243	04-044	11/18/2013	480	8/14/2013	11/18/2013	8/14/2053
CC-H-0882A	PSA-10	6426	RAB 250 18C S15 W2	24-013	10/17/2010	480	1/12/1986	9/24/2001	1/12/2026
CC-H-0882B	PSA-10	17080	RAB 250 18C S15 W2	24-014	10/17/2010	480	1/12/1986	9/24/2001	1/12/2026
CC-H-0916	PSA-3	17467	RAB 247 15D N12 E12	24-015	9/23/2013	480	1/12/1986	12/2/1989	1/12/2026
CC-H-0918	PSA-3	17452	RAB 247 15C N12 W1	24-016	10/3/2013	480	1/12/1986	12/8/1989	1/12/2026
CC-H-0950A	PSA-10	6384	RAB 250 15B S4 W4	24-017	10/3/2013	480	1/12/1986	12/8/1989	1/12/2026
CC-H-0950B	PSA-10	14692	RAB 250 15B S4 W4	24-018	10/3/2013	480	1/12/1986	12/9/1989	1/12/2026
CC-H-0990	PSA-1	11098	RAB 251 36B N4 W15	24-019	10/3/2013	480	1/12/1986	10/23/1989	1/12/2026
CC-H-1056	PSA-1/4	37021	RAB 247 42D S11 E7	29-002	10/14/2013	480	1/12/1986	12/9/1989	1/12/2026
CC-H-1442	PSA-1/2	6582	CONT 257 R47 AZ221	04-013	11/14/2013	480	7/26/2010	10/5/2010	7/26/2050
CC-H-1443	PSA-1	8789	CONT 255 R50 AZ215	04-074	10/10/2007	480	1/12/1986	9/23/2001	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CC-H-1444	PSA-1	14270	CONT 257 R50 AZ216	04-073	10/10/2007	480	1/12/1986	11/30/1989	1/12/2026
CC-H-1446	PSA-1/2	18947	CONT 256 R52 AZ210	04-069	10/10/2007	480	1/12/1986	12/8/1989	1/12/2026
CC-H-1448	PSA-1/4	14911	CONT 256 R52 AZ199	04-002	11/12/2013	480	7/27/2010	10/14/2010	7/27/2050
CC-H-1457	PSA-1/4	37082	CONT 257 R49 AZ130	03-002	4/25/2012	480	1/12/1986	12/8/1989	1/12/2026
CC-H-1459A	PSA-1/2	6556	CONT 257 R41 AZ125	09-011	5/2/2009	480	1/12/1986	4/4/1991	1/12/2026
CC-H-1459B	PSA-1/2	17331	CONT 257 R41 AZ125	09-011	5/2/2009	480	1/12/1986	4/4/1991	1/12/2026
CC-H-1461	PSA-1/2	18957	CONT 257 R49 AZ135	03-037	4/26/2012	480	1/12/1986	12/9/1989	1/12/2026
CC-H-1468	PSA-3	17531	CONT 257 R51 AZ174	03-031	5/9/2012	480	1/12/1986	10/31/1989	1/12/2026
CC-H-1471	PSA-1/4	21334	CONT 269 R37 AZ165	13-026	5/12/2012	480	3/1/2012	5/11/2012	3/1/2052
CC-H-1472	PSA-1/4	37077	CONT 269 R37 AZ165	13-025	4/20/2009	480	3/16/2009	5/2/2009	3/16/2049
CC-H-1475	PSA-1/2	8789	CONT 262 R43 AZ113	13-020	4/21/2009	480	1/12/1986	9/25/2001	1/12/2026
CC-H-1476A	PSA-1/4	37211	CONT 263 R43 AZ113	13-019	4/21/2009	480	1/12/1986	11/22/1989	1/12/2026
CC-H-1476B	PSA-1/4	37238	CONT 263 R43 AZ113	13-019	4/21/2009	480	1/12/1986	11/22/1989	1/12/2026
CC-H-1478	PSA-1/2	6112	CONT 257 R42 AZ119	09-013	5/2/2009	480	1/12/1986	11/24/1989	1/12/2026
CC-H-1479	PSA-1/4	37363	CONT 257 R41 AZ121	09-012	4/29/2009	480	1/12/1986	4/3/1991	1/12/2026
CC-H-1480	PSA-1/2	18948	CONT 263 R41 AZ121	13-017	4/21/2009	480	1/12/1986	4/9/1991	1/12/2026
CC-H-1482	PSA-1/4	37218	CONT 264 R41 AZ122	13-016	4/21/2009	480	1/12/1986	5/2/1987	1/12/2026
CC-H-1486	PSA-1/4	37241	CONT 265 R41 AZ228	12-033	10/7/2010	480	7/27/2010	10/10/2010	7/27/2050
CC-H-1487	PSA-1/4	37071	CONT 265 R41 AZ228	12-034	10/7/2010	480	7/27/2010	10/10/2010	7/27/2050
CC-H-1489	PSA-1/2	18921	CONT 258 R41 AZ228	08-034	4/27/2009	480	1/12/1986	3/27/1991	1/12/2026
CC-H-1490	PSA-1/4	37140	CONT 258 R41 AZ228	08-035	11/19/2013	480	1/12/1986	11/19/2013	1/12/2026
CC-H-1491	PSA-1	10992	CONT 255 R39 AZ230	08-031	11/25/2013	480	4/6/2009	4/27/2009	4/6/2049
CC-H-1514	PSA-1	9870	CONT 256 R51 AZ262	04-027	10/9/2007	480	1/12/1986	12/7/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CC-H-1519	PSA-1/4	7255	CONT 256 R52 AZ331	05-030	11/19/2013	480	7/27/2010	10/14/2010	7/27/2050
CC-H-1584	PSA-3	17527	RAB 251 18C S15 W1	24-020	7/30/2013	480	1/12/1986	11/25/1989	1/12/2026
CC-H-1585	PSA-1/4	37271	RAB 252 18C S14 W1	24-021	8/13/2013	480	1/12/1986	11/4/1989	1/12/2026
CC-H-1587	PSA-1/4	37212	RAB 252 18C S13 W3	24-022	11/23/2013	480	1/12/1986	11/20/1989	1/12/2026
CC-H-1612	PSA-1/4	37261	CONT 256 R41 AZ132	09-001	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
CC-H-1623A	PSA-1/4	35151	CONT 225 R63 AZ260	01-033	5/14/2012	480	3/1/2012	5/11/2012	3/1/2052
CC-H-1623B	PSA-1/4	37216	CONT 225 R63 AZ260	01-033	5/11/2012	480	1/12/1986	5/2/1987	1/12/2026
CC-H-1651	PSA-1	8885	CONT 259 R36 AZ002	07-040	4/26/2009	480	1/12/1986	12/8/1989	1/12/2026
CC-H-1652	PSA-1/4	14583	CONT 255 R38 AZ004	07-025	11/16/2013	480	8/14/2013	11/17/2013	8/14/2053
CC-H-1668	PSA-3	12569	CONT 245 R61 AZ208	04-060	10/10/2007	480	1/12/1986	11/20/1989	1/12/2026
CC-H-1672A	PSA-1/4	36245	CONT 254 R41 AZ240	08-029	12/5/2013	480	3/16/2009	4/27/2009	3/16/2049
CC-H-1672B	PSA-1/4	37222	CONT 254 R41 AZ240	08-029	11/20/2013	480	8/14/2013	11/21/2013	8/14/2053
CC-H-1673	PSA-1	24832	CONT 261 R41 AZ240	12-028	12/5/2013	480	1/12/1986	4/8/1991	1/12/2026
CC-H-1680	PSA-1/4	35153	CONT 267 R40 AZ123	13-013	4/21/2009	480	1/12/1986	12/2/1989	1/12/2026
CC-H-1682	PSA-1/2	17009	CONT 261 R46 AZ119	13-014	10/3/2007	480	1/12/1986	10/30/2007	1/12/2026
CC-H-1683	PSA-1/2	7318	CONT 261 R46 AZ119	13-015	10/7/2010	480	7/26/2010	10/11/2010	7/26/2050
CC-H-1684	PSA-1/4	37076	CONT 256 R41 AZ168	09-035	5/2/2009	480	1/12/1986	5/2/1987	1/12/2026
CC-H-1687	PSA-1/2	17850	CONT 250 R42 AZ134	09-047	4/29/2009	480	1/12/1986	11/2/1989	1/12/2026
CC-H-1733	PSA-1	9886	CONT 255 R60 AZ215	04-063	10/10/2007	480	1/12/1986	10/28/1989	1/12/2026
CC-H-1770	PSA-1/4	37224	RAB 204 34FV S1 E7	19N-001	10/18/2013	480	1/12/1986	11/18/1989	1/12/2026
CC-H-1780A	PSA-1	11103	RAB 247 18C S9 W5	24-023	10/17/2010	480	1/12/1986	10/28/1998	1/12/2026
CC-H-1780B	PSA-1	3416	RAB 247 18C S9 W5	24-024	10/17/2010	480	1/12/1986	10/28/1998	1/12/2026
CC-H-1785	PSA-1	15646	RAB 252 36B N3 W12	24-025	9/21/2010	480	7/23/2010	9/24/2010	7/23/2050

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CC-H-1787	PSA-1/2	16862	RAB 251 23B N6 W14	24-026	10/3/2013	480	1/12/1986	3/23/1994	1/12/2026
CC-H-1788	PSA-1/2	18469	RAB 251 23B N8 W16	24-027	10/3/2013	480	1/12/1986	10/30/2004	1/12/2026
CC-H-1790	PSA-1/2	17840	RAB 251 23B N11 W14	24-028	10/17/2010	480	2/20/2009	3/5/2009	2/20/2049
CC-H-1838A	PSA-10	9179	RAB 250 42D N9 E12	29-003	10/14/2013	480	1/12/1986	10/19/2004	1/12/2026
CC-H-1838B	PSA-10	8771	RAB 250 42D N9 E12	29-004	10/14/2013	480	1/12/1986	10/19/2004	1/12/2026
CC-H-1868	PSA-1/4	37255	CONT 244 R61 AZ238	04-047	11/18/2013	480	8/13/2013	11/18/2013	8/13/2053
CC-H-1869	PSA-1/4	36243	CONT 244 R61 AZ238	04-046	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
CC-H-1912	PSA-1	11102	CONT 256 R40 AZ109	09-016	4/29/2009	480	1/12/1986	9/25/2001	1/12/2026
CC-H-1913	PSA-1/2	18722	CONT 256 R40 AZ109	09-017	4/29/2009	480	1/12/1986	12/6/1989	1/12/2026
CC-H-1915	PSA-1	24861	CONT 257 R51 AZ349	05-023	11/14/2013	480	1/12/1986	10/28/1989	1/12/2026
CC-H-1916	PSA-1/4	15001	CONT 257 R51 AZ349	05-022	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
CC-H-1925A	PSA-1	14269	CONT 256 R39 AZ351	07-038	5/6/2012	480	2/27/2012	5/6/2012	2/27/2052
CC-H-1925B	PSA-1	15660	CONT 256 R39 AZ351	07-038	5/6/2012	480	3/6/2012	5/6/2012	3/6/2052
CC-H-1946	PSA-1/4	37209	RAB 244 29FZ S7 W2	22-007	10/14/2013	480	1/12/1986	12/7/1989	1/12/2026
CC-H-1955	PSA-1/4	37087	RAB 252 31C N4 E12	24-029	9/11/2013	480	1/12/1986	3/26/1991	1/12/2026
CC-H-2055	PSA-1	11090	RAB 255 32FV N9 W4	21-008	9/19/2013	480	1/12/1986	11/28/1989	1/12/2026
CC-H-2056	PSA-1	10993	RAB 246 32FV N10 W3	22-008	8/20/2013	480	1/12/1986	4/5/1991	1/12/2026
CC-H-2071	PSA-1/4	37092	CONT 258 R42 AZ108	09-015	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
CC-H-2113	PSA-1/4	37244	CONT 255 R41 AZ011	07-014	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
CC-H-2148	PSA-1/4	37088	CONT 249 R41 AZ357	07-028	11/19/2013	480	8/14/2013	11/19/2013	8/14/2053
CC-H-2149A	PSA-1/4	35133	CONT 257 R41 AZ356	07-029	11/18/2013	480	8/14/2013	11/19/2013	8/14/2053
CC-H-2149B	PSA-1/4	21347	CONT 257 R41 AZ356	07-029	11/18/2013	480	8/13/2013	11/19/2013	8/13/2053
CC-H-2151	PSA-1/4	14904	CONT 258 R40 AZ006	07-017	12/3/2013	480	1/12/1986	5/2/1987	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CC-H-2153A	PSA-1/4	12499	CONT 260 R40 AZ021	07-011	12/3/2013	480	1/12/1986	9/8/1995	1/12/2026
CC-H-2153B	PSA-1/4	12499	CONT 260 R40 AZ021	07-011	12/3/2013	480	1/12/1986	9/8/1995	1/12/2026
CC-H-2155A	PSA-1/4	14959	CONT 268 R41 AZ231	12-029	5/4/2012	480	3/8/2012	4/30/2012	3/8/2052
CC-H-2155B	PSA-1/4	35131	CONT 268 R41 AZ231	12-029	5/13/2012	480	2/29/2012	4/29/2012	2/29/2052
CC-H-2157	PSA-1/4	15505	CONT 268 R41 AZ229	12-030	10/7/2010	480	7/27/2010	10/10/2010	7/27/2050
CC-H-2160A	PSA-1/2	18975	CONT 259 R41 AZ346	07-033	11/22/2013	480	8/14/2013	11/22/2013	8/14/2053
CC-H-2160B	PSA-1	11061	CONT 259 R41 AZ346	07-033	11/22/2013	480	8/22/2013	11/22/2013	8/22/2053
CC-H-2162	PSA-1/2	18504	CONT 268 R41 AZ346	11-015	11/16/2013	480	8/15/2013	11/18/2013	8/15/2053
CC-H-2164A	PSA-1/4	37251	CONT 269 R41 AZ351	07-036	5/3/2012	480	3/5/2012	4/29/2012	3/5/2052
CC-H-2164B	PSA-1/4	14747	CONT 269 R41 AZ351	07-036	5/3/2012	480	2/29/2012	4/29/2012	2/29/2052
CC-H-2167	PSA-1/4	37233	CONT 259 R41 AZ356	07-030	4/26/2009	480	1/12/1986	12/6/1989	1/12/2026
CC-H-2168A	PSA-1/4	10435	CONT 259 R40 AZ359	07-026	4/26/2009	480	1/12/1986	11/3/1998	1/12/2026
CC-H-2168B	PSA-1/4	35147	CONT 259 R40 AZ359	07-026	4/26/2009	480	1/12/1986	11/3/1998	1/12/2026
CC-H-2171	PSA-1/4	14312	CONT 256 R41 AZ351	07-034	5/8/2012	480	3/8/2012	5/8/2012	3/8/2052
CC-H-2178	PSA-1/4	37237	CONT 259 R41 AZ240	08-030	12/5/2013	480	1/12/1986	5/2/1987	1/12/2026
CF-H-0009	PSA-1/2	7275	MST 269 27FZ S5 E7	36-029	10/11/2010	480	3/16/2009	4/21/2009	3/16/2049
CF-H-0021	PSA-1/2	18954	MST 272 27FZ S4 W1	36-030	11/14/2013	480	8/14/2013	11/14/2013	8/14/2053
CF-H-0027	PSA-1/2	8774	MST 269 27FZ N4 E8	36-031	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
CF-H-0039	PSA-1/2	8797	MST 272 27FZ N4 E2	36-123	10/12/2010	480	1/12/1986	4/6/1997	1/12/2026
CF-H-0041	PSA-1/2	18472	MST 272 27FZ N5 W2	36-124	5/15/2012	480	1/12/1986	4/30/2006	1/12/2026
CF-H-0048	PSA-1/2	16846	MST 272 27FZ N14 W2	36-032	11/11/2013	480	8/14/2013	11/12/2013	8/14/2053
CF-H-0049	PSA-1/2	8788	MST 268 27FZ N14 E7	36-033	10/11/2010	480	1/12/1986	4/29/2003	1/12/2026
CH-H-0064	PSA-1/2	16844	RAB 191 20FZ S4 E2	19S-002	9/23/2013	480	3/16/2009	4/1/2009	3/16/2049

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CH-H-0065	PSA-1/2	17858	RAB 192 20FZ S5 E2	19S-003	9/23/2013	480	1/12/1986	9/26/2001	1/12/2026
CH-H-1739	PSA-1	10956	RAB 267 36C S8 E8	34-013	9/11/2013	480	1/12/1986	10/22/1989	1/12/2026
CS-H-0008	PSA-3	17557	RAB 245 18D W3	25-002	9/25/2013	480	1/12/1986	12/9/1989	1/12/2026
CS-H-0009	PSA-3	17471	RAB 247 18D N6 W3	25-003	9/25/2013	480	1/12/1986	11/27/1989	1/12/2026
CS-H-0010	PSA-3	17523	RAB 240 18D S2 W7	25-004	9/25/2013	480	1/12/1986	8/31/1988	1/12/2026
CS-H-0020	PSA-1	11020	RAB 244 28E S5 E11	25-005	9/25/2013	480	1/12/1986	9/6/1995	1/12/2026
CS-H-0025	PSA-3	17544	RAB 240 36D N2 W7	25-006	9/19/2013	480	2/20/2009	3/10/2009	2/20/2049
CS-H-0032A	PSA-1	15667	RAB 248 31D S5 W3	26-001	9/13/2013	480	1/12/1986	4/4/1991	1/12/2026
CS-H-0032B	PSA-1	15620	RAB 248 31D S5 W3	26-002	9/13/2013	480	1/12/1986	4/4/1991	1/12/2026
CS-H-0039A	PSA-1	8731	RAB 244 31E S3 E11	25-007	9/17/2013	480	3/8/2012	5/13/2012	3/8/2052
CS-H-0039B	PSA-1	10950	RAB 244 31E S3 E11	25-008	9/17/2013	480	1/12/1986	4/21/2000	1/12/2026
CS-H-0041A	PSA-1	14225	RAB 244 31E S3 E11	25-009	9/17/2013	480	1/12/1986	10/29/1998	1/12/2026
CS-H-0041B	PSA-1	15640	RAB 244 31E S3 E11	25-010	9/17/2013	480	1/12/1986	10/29/1998	1/12/2026
CS-H-0085	PSA-1	14407	RAB 244 41FWY N6 W9	27-004	9/19/2013	480	1/12/1986	12/7/1989	1/12/2026
CS-H-0108	PSA-3	17469	RAB 244 22FX S3 E5	22-009	9/19/2013	480	1/12/1986	9/26/2001	1/12/2026
CS-H-0149	PSA-1/4	16285	RAB 243 31D S7 W5	25-011	9/17/2013	480	1/12/1986	4/9/1997	1/12/2026
CS-H-0168	PSA-1/4	36193	RAB 245 42D S5 W14	29-013	10/3/2013	480	1/12/1986	10/29/1998	1/12/2026
CS-H-0355	PSA-1	9214	CONT 250 R54 AZ319	05-043	11/15/2013	480	8/19/2013	11/15/2013	8/19/2053
CS-H-0356	PSA-1/2	18676	CONT 250 R54 AZ320	05-045	11/13/2013	480	3/1/2012	5/6/2012	3/1/2052
CS-H-0359	PSA-1	8814	CONT 250 R49 AZ319	05-042	11/13/2013	480	1/12/1986	4/30/2012	1/12/2026
CS-H-0360	PSA-1	16112	CONT 250 R49 AZ319	05-035	11/13/2013	480	3/7/2012	5/7/2012	3/7/2052
CS-H-0362	PSA-1	10961	CONT 250 R52 AZ319	05-040	11/13/2013	480	2/29/2012	5/6/2012	2/29/2052
CS-H-0363	PSA-1	9219	CONT 250 R52 AZ319	05-044	11/13/2013	480	3/5/2012	5/4/2012	3/5/2052

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CS-H-0364	PSA-1	21770	CONT 247 R53 AZ320	05-034	11/11/2013	480	7/23/2010	10/16/2010	7/23/2050
CS-H-0366	PSA-3	12523	CONT 257 R18 AZ329	06-002	5/3/2012	480	7/15/2010	10/9/2010	7/15/2050
CS-H-0379	PSA-1	25187	CONT 237 R47 AZ297	05-050	11/12/2013	480	3/8/2012	4/29/2012	3/8/2052
CS-H-0382	PSA-3	16360	CONT 237 R42 AZ297	05-084	11/11/2013	480	3/5/2012	4/24/2012	3/5/2052
CS-H-0383	PSA-3	11919	CONT 236 R46 AZ285	05-079	11/13/2013	480	1/12/1986	8/27/1988	1/12/2026
CS-H-0385	PSA-3	26486	CONT 237 R48 AZ290	05-002	11/11/2013	480	3/6/2012	5/7/2012	3/6/2052
CS-H-0387	PSA-1	9225	CONT 237 R49 AZ288	05-077	11/12/2013	480	1/12/1986	12/8/1989	1/12/2026
CS-H-0389	PSA-1	15585	CONT 238 R49 AZ288	05-076	11/12/2013	480	1/12/1986	9/25/2001	1/12/2026
CS-H-0392	PSA-1/4	37318	CONT 242 R46 AZ291	05-005	11/11/2013	480	3/7/2012	4/29/2012	3/7/2052
CS-H-0398	PSA-3	17454	CONT 240 R40 AZ005	07-022	10/2/2007	480	1/12/1986	10/30/2007	1/12/2026
CS-H-0399	PSA-3	17504	CONT 240 R40 AZ005	07-021	4/26/2009	480	1/12/1986	4/6/1994	1/12/2026
CS-H-0402	PSA-1	11013	CONT 240 R41 AZ358	07-027	4/26/2009	480	1/12/1986	5/1/2003	1/12/2026
CS-H-0403	PSA-3	17551	CONT 240 R41 AZ355	07-031	4/26/2009	480	1/12/1986	8/12/1989	1/12/2026
CS-H-0423	PSA-1	15652	CONT 246 R47 AZ210	04-008	11/16/2013	480	8/26/2013	11/17/2013	8/26/2053
CS-H-0426	PSA-1	11085	CONT 245 R40 AZ208	08-002	4/27/2009	480	1/12/1986	8/27/1989	1/12/2026
CS-H-0427	PSA-3	12582	CONT 255 R40 AZ208	08-001	4/21/2009	480	3/17/2009	4/27/2009	3/17/2049
CS-H-0432	PSA-3	10663	CONT 257 R23 AZ211	08-003	5/15/2012	480	3/8/2012	5/14/2012	3/8/2052
CS-H-0490A	PSA-1	16116	RAB 261 42D S2 W12	37-001	11/20/2013	480	8/23/2013	11/22/2013	8/23/2053
CS-H-0490B	PSA-1	9883	RAB 261 42D S2 W12	37-002	11/20/2013	480	8/19/2013	11/22/2013	8/19/2053
CS-H-0535	PSA-1	9221	CONT 245 R61 AZ189	04-075	11/14/2013	480	3/5/2012	4/23/2012	3/5/2052
CS-H-0577	PSA-1/4	35140	RAB 266 41GZY N2 W5	35-001	10/14/2013	480	1/12/1986	11/15/1989	1/12/2026
CS-H-0583A	PSA-1	10947	RAB 270 41GZY N2 E3	35-002	10/14/2013	480	8/19/2013	11/23/2013	8/19/2053
CS-H-0583B	PSA-1	16073	RAB 270 41GZY N2 E3	35-003	10/14/2013	480	2/28/2012	3/15/2012	2/28/2052

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CS-H-0659	PSA-1/2	6114	RAB 250 41FWY N7 W15	28-001	6/26/2007	480	1/12/1986	11/2/1998	1/12/2026
CS-H-0733	PSA-1	24851	CONT 240 R38 AZ136	09-045	4/29/2009	480	1/12/1986	11/30/1989	1/12/2026
CS-H-0736	PSA-1/2	18977	CONT 240 R36 AZ129	09-027	11/19/2013	480	8/15/2013	11/19/2013	8/15/2053
CS-H-0740	PSA-1	10959	CONT 278 R41 AZ295	14-015	10/20/2010	480	7/23/2010	10/21/2010	7/23/2050
CS-H-0747A	PSA-1	9865	CONT 265 R41 AZ308	14-012	4/25/2009	480	1/12/1986	4/23/2000	1/12/2026
CS-H-0747B	PSA-1	8800	CONT 265 R41 AZ308	14-012	4/25/2009	480	1/12/1986	4/23/2000	1/12/2026
CS-H-0756	PSA-1	9220	CONT 241 R41 AZ297	06-003	10/16/2010	480	7/23/2010	10/20/2010	7/23/2050
CS-H-0757	PSA-1	10925	CONT 241 R41 AZ297	06-001	4/24/2009	480	1/12/1986	4/29/2009	1/12/2026
CS-H-0759	PSA-1	10985	CONT 244 R46 AZ298	05-052	11/12/2013	480	3/7/2012	4/29/2012	3/7/2052
CS-H-0760	PSA-1	25206	CONT 241 R46 AZ298	05-012	11/11/2013	480	3/7/2012	4/29/2012	3/7/2052
CS-H-0761	PSA-1/4	37316	CONT 241 R47 AZ298	05-049	11/12/2013	480	3/7/2012	4/29/2012	3/7/2052
CS-H-0763	PSA-1/4	18979	CONT 239 R48 AZ294	05-055	11/12/2013	480	2/29/2012	4/29/2012	2/29/2052
CS-H-0764	PSA-1/4	20037	CONT 240 R48 AZ294	05-056	11/12/2013	480	3/7/2012	4/29/2012	3/7/2052
CS-H-0803	PSA-1/4	14652	CONT 259 R42 AZ330	07-051	4/26/2009	480	1/12/1986	11/2/1989	1/12/2026
CS-H-0812	PSA-1/4	37068	CONT 258 R50 AZ343	05-026	11/18/2013	480	1/12/1986	11/14/1989	1/12/2026
CS-H-0837A	PSA-1/4	37265	CONT 258 R50 AZ270	05-072	11/14/2013	480	1/12/1986	4/30/2006	1/12/2026
CS-H-0837B	PSA-1/4	37009	CONT 258 R50 AZ270	05-072	11/14/2013	480	1/12/1986	4/30/2006	1/12/2026
CS-H-0862	PSA-3	17485	RAB 243 28E S4 E15	25-012	9/25/2013	480	1/12/1986	11/23/1989	1/12/2026
CS-H-0867	PSA-1/4	37075	RAB 245 41FWY S2 W2	27-005	4/7/2004	480	1/12/1986	9/5/1995	1/12/2026
CS-H-1043	PSA-1/2	7303	CONT 242 R50 AZ175	03-029	5/9/2012	480	1/12/1986	4/30/2003	1/12/2026
CS-H-1075	PSA-1	15617	RAB 245 38GY N4 W10	22-010	9/19/2013	480	1/12/1986	9/19/2013	1/12/2026
CS-H-1077	PSA-1	14335	RAB 246 39GY S3 W6	22-011	9/28/2007	480	1/12/1986	10/30/2007	1/12/2026
CS-H-1099	PSA-1	16099	RAB 254 31D N2 W11	26-006	10/14/2013	480	1/12/1986	10/30/2004	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CS-H-1103A	PSA-1/2	6545	RAB 253 31D N10 W12	26-004	9/25/2013	480	1/12/1986	4/5/1991	1/12/2026
CS-H-1103B	PSA-1/2	8807	RAB 253 31D N10 W12	26-005	9/25/2013	480	1/12/1986	4/5/1991	1/12/2026
CS-H-1204A	PSA-1/4	9491	CONT 258 R51 AZ221	04-049	10/10/2007	480	1/12/1986	12/7/1989	1/12/2026
CS-H-1204B	PSA-1/4	7179	CONT 258 R51 AZ221	04-049	10/10/2007	480	1/12/1986	12/7/1989	1/12/2026
CS-H-1309	PSA-1	14363	RAB 258 41E N8 W8	28-002	6/26/2007	480	1/12/1986	12/7/1989	1/12/2026
CS-H-1311	PSA-1	7804	RAB 258 41E N7 W8	28-003	9/19/2013	480	1/12/1986	5/2/1987	1/12/2026
CS-H-1414	PSA-1/4	37169	RAB 256 20FV N2	21-009	9/19/2013	480	1/12/1986	3/25/1991	1/12/2026
CS-H-1415	PSA-1/2	18973	RAB 257 20FV N2 W9	21-010	9/26/2013	480	1/12/1986	11/18/1989	1/12/2026
CS-H-1416	PSA-1/4	37097	RAB 256 20FV N2 W9	21-011	9/13/2013	480	1/12/1986	12/2/1989	1/12/2026
CS-H-1418	PSA-3	17492	RAB 246 20FV N2 W12	22-012	11/23/2013	480	1/12/1986	5/2/1987	1/12/2026
CS-H-1465	PSA-3	12509	RAB 251 31D S8 W11	26-003	9/19/2013	480	1/12/1986	10/17/2007	1/12/2026
CS-H-1594A	PSA-1/4	37006	RAB 255 20F N5 E10	23-001	11/11/2013	480	1/12/1986	10/18/2004	1/12/2026
CS-H-1594B	PSA-1/4	14969	RAB 255 20F N5 E10	23-002	11/11/2013	480	1/12/1986	10/18/2004	1/12/2026
CS-H-1693A	PSA-1	14319	RAB 254 32E N16 W4	23-003	11/11/2013	480	1/12/1986	3/22/1994	1/12/2026
CS-H-1693B	PSA-1	14375	RAB 254 32E N16 W4	23-004	11/11/2013	480	1/12/1986	3/22/1994	1/12/2026
CS-H-1830	PSA-1	15658	RAB 255 41E N4 W7	28-004	9/19/2013	480	1/12/1986	5/2/2003	1/12/2026
CS-H-1960	PSA-1/4	14876	RAB 257 41FY N6 E12	28-005	3/17/2009	480	3/16/2009	3/17/2009	3/16/2049
CS-H-2029	PSA-1/4	35071	RAB 250 42FW S5 W9	28-006	6/26/2007	480	1/12/1986	4/14/1997	1/12/2026
CS-H-2657	PSA-1/4	7289	RAB 258 41E N3 W7	28-007	3/17/2009	480	3/16/2009	3/17/2009	3/16/2049
CS-H-2692A	PSA-1/2	18939	RAB 251 41FY N4 W10	28-008	6/26/2007	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2692B	PSA-1/2	18949	RAB 251 41FY N4 W10	28-009	6/26/2007	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2722	PSA-1/4	36266	RAB 265 42F S8 W3	35-004	9/11/2013	480	7/27/2010	9/20/2010	7/27/2050
CS-H-2730	PSA-1	15644	RAB 265 42F S1 W3	35-005	9/10/2013	480	1/12/1986	12/2/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CS-H-2757A	PSA-1/4	14315	RAB 246 41E N3 W5	27-006	4/27/2006	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2757B	PSA-1/4	14875	RAB 246 41E N3 W5	27-007	4/27/2006	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2866	PSA-1/4	16286	CONT 255 R48 AZ140	03-020	4/26/2012	480	1/12/1986	12/7/1989	1/12/2026
CS-H-2868	PSA-1/2	18916	CONT 255 R48 AZ132	03-043	5/13/2012	480	1/12/1986	12/5/1989	1/12/2026
CS-H-2871	PSA-1	8743	CONT 255 R40 AZ130	09-009	4/29/2012	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2877	PSA-1	25183	CONT 255 R58 AZ239	04-045	10/10/2007	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2883	PSA-1	8797	CONT 255 R47 AZ234	04-017	10/10/2007	480	1/12/1986	11/19/1989	1/12/2026
CS-H-2885	PSA-1	25182	CONT 255 R46 AZ238	04-018	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2887A	PSA-1/4	26913	CONT 255 R41 AZ240	08-028	4/21/2009	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2887B	PSA-1/4	15045	CONT 255 R41 AZ240	08-028	4/21/2009	480	1/12/1986	5/2/1987	1/12/2026
CS-H-2927A	PSA-1	24726	CONT 248 R54 AZ315	05-036	11/13/2013	480	3/5/2012	5/4/2012	3/5/2052
CS-H-2927B	PSA-1	8630	CONT 248 R54 AZ315	05-036	11/13/2013	480	2/28/2012	5/4/2012	2/28/2052
CS-H-2931	PSA-1	41701	CONT 248 R52 AZ318	05-038	11/11/2013	480	2/28/2012	5/7/2012	2/28/2052
CS-H-2935	PSA-1/4	6458	CONT 259 R32 AZ001	07-042	4/26/2009	480	1/12/1986	3/29/1991	1/12/2026
CS-H-2962	PSA-1	14405	CONT 255 R35 AZ001	07-043	10/2/2007	480	1/12/1986	10/30/2007	1/12/2026
CS-H-2983	PSA-1/4	37007	CONT 257 R41 AZ117	09-014	4/29/2009	480	1/12/1986	8/25/1988	1/12/2026
CS-H-3010	PSA-1/4	37062	RAB 257 41EY S3 W9	28-010	6/26/2007	480	1/12/1986	5/2/1987	1/12/2026
CS-H-3048	PSA-1/2	7296	CONT 236 R46 AZ289	05-001	11/30/2013	480	8/14/2013	11/30/2013	8/14/2053
CS-H-3049	PSA-1/2	18971	CONT 236 R46 AZ288	05-081	11/12/2013	480	1/12/1986	4/30/2007	1/12/2026
CS-H-3052	PSA-3	17521	CONT 237 R49 AZ288	05-078	11/12/2013	480	1/12/1986	11/18/1989	1/12/2026
CS-H-3056	PSA-1	25176	CONT 240 R37 AZ140	09-043	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
CS-H-3057A	PSA-1	16111	CONT 242 R38 AZ140	09-044	4/29/2009	480	1/12/1986	11/20/1989	1/12/2026
CS-H-3057B	PSA-1	15606	CONT 242 R38 AZ140	09-044	4/29/2009	480	1/12/1986	11/20/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CS-H-3105	PSA-1	11113	RAB 245 38H S2 E10	22-013	7/16/2007	480	1/12/1986	4/6/1997	1/12/2026
CS-H-3137	PSA-1/2	6566	RAB 271 41E N3 W6	35-006	10/14/2013	480	7/26/2010	9/14/2010	7/26/2050
CS-H-3140	PSA-1/4	21330	RAB 262 41E N5 W8	35-007	9/13/2013	480	1/12/1986	11/26/1989	1/12/2026
CS-H-3189	PSA-1/2	18968	RAB 254 20FV N2 W13	21-012	9/13/2013	480	1/12/1986	11/26/1989	1/12/2026
CS-H-3197	PSA-1/2	8768	RAB 257 20FZ N2 W3	21-013	9/13/2013	480	1/12/1986	9/25/2001	1/12/2026
CS-H-3208A	PSA-1	10914	CONT 240 R40 AZ003	07-024	11/20/2013	480	1/12/1986	5/2/1987	1/12/2026
CS-H-3208B	PSA-1	10913	CONT 240 R40 AZ003	07-024	11/20/2013	480	1/12/1986	5/2/1987	1/12/2026
CS-H-3236	PSA-1/2	8803	CONT 236 R48 AZ297	05-009	11/13/2013	480	3/1/2012	5/1/2012	3/1/2052
CS-H-3237	PSA-1/2	8783	CONT 236 R48 AZ294	05-053	11/12/2013	480	3/16/2009	4/21/2009	3/16/2049
CS-H-3238	PSA-3	18631	CONT 240 R47 AZ294	05-011	11/13/2013	480	3/7/2012	4/29/2012	3/7/2052
CS-H-3239	PSA-1	9862	CONT 239 R48 AZ293	05-054	11/12/2013	480	3/6/2012	4/29/2012	3/6/2052
CS-H-3240	PSA-3	12525	CONT 237 R48 AZ293	05-010	11/11/2013	480	3/6/2012	4/27/2012	3/6/2052
CS-H-3241	PSA-1	5212	CONT 237 R48 AZ291	05-007	11/11/2013	480	3/1/2012	4/27/2012	3/1/2052
CS-H-3242	PSA-1	14310	CONT 288 R43 AZ298	15-056	5/1/2012	480	3/6/2012	4/29/2012	3/6/2052
CS-H-3259	PSA-1/4	37266	CONT 239 R47 AZ291	05-006	11/11/2013	480	3/7/2012	4/27/2012	3/7/2052
CS-H-3260	PSA-1/4	33919	CONT 240 R47 AZ292	05-008	11/11/2013	480	3/8/2012	4/27/2012	3/8/2052
CS-H-3262	PSA-3	12515	CONT 248 R51 AZ309	05-046	11/13/2013	480	3/6/2012	4/29/2012	3/6/2052
CS-H-3292	PSA-1	9847	CONT 240 R38 AZ046	09-002	10/15/2007	480	1/12/1986	12/2/1989	1/12/2026
CS-H-3349	PSA-1/2	6583	RAB 244 41E N5 W8	27-008	4/27/2006	480	1/12/1986	4/21/2000	1/12/2026
CS-H-3598	PSA-1/4	37029	CONT 260 R31 AZ242	08-008	4/27/2009	480	1/12/1986	4/30/2000	1/12/2026
CS-H-3634A	PSA-1/4	15236	CONT 258 R41 AZ351	07-035	5/3/2012	480	3/7/2012	4/29/2012	3/7/2052
CS-H-3634B	PSA-1/4	37070	CONT 258 R41 AZ351	07-035	5/3/2012	480	3/8/2012	4/29/2012	3/8/2052
CS-H-3636	PSA-1/4	37303	CONT 258 R41 AZ354	07-032	10/6/2010	480	7/27/2010	10/10/2010	7/27/2050

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CS-H-4418A	PSA-3	12540	CONT 242 R39 AZ006	07-019	4/26/2009	480	1/12/1986	10/30/2004	1/12/2026
CS-H-4418B	PSA-3	17522	CONT 242 R39 AZ006	07-019	4/26/2009	480	1/12/1986	1/14/2008	1/12/2026
CS-H-4430	PSA-1	8131	CONT 240 R39 AZ006	07-020	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
CS-H-4436	PSA-1/4	8200	CONT 259 R32 AZ001	07-041	4/26/2009	480	1/12/1986	12/7/1989	1/12/2026
CS-H-4450	PSA-1/4	7257	CONT 261R30 AZ239	08-007	11/21/2013	480	8/13/2013	11/21/2013	8/13/2053
CS-H-4468	PSA-1/4	16478	CONT 260 R31 AZ123	09-021	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
CS-H-4469	PSA-1/4	21337	CONT 262 R31 AZ123	13-022	4/21/2009	480	1/12/1986	12/9/1989	1/12/2026
CS-H-4471	PSA-1/4	12024	CONT 262 R30 AZ122	13-021	4/21/2009	480	1/12/1986	4/9/1991	1/12/2026
CS-H-4477	PSA-1/4	10455	CONT 262 R27 AZ111	13-018	4/21/2009	480	1/12/1986	10/7/1992	1/12/2026
CS-H-4514	PSA-1/2	8773	RAB 240 41FWY S2 W2	27-009	9/29/2007	480	1/12/1986	10/30/2007	1/12/2026
CS-H-4523	PSA-1/4	7074	CONT 260 R29 AZ298	07-050	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
CT-H-0203A	PSA-3	16366	TK/RAB 251 12E S7 W3	40-001	11/22/2013	480	1/12/1986	12/7/1989	1/12/2026
CT-H-0203B	PSA-3	16397	TK/RAB 251 12E S7 W3	40-002	11/22/2013	480	1/12/1986	12/7/1989	1/12/2026
CT-H-0220	PSA-10	6448	RAB 219 22E S8 E3	38-001	10/24/2013	480	1/12/1986	11/7/1989	1/12/2026
CT-H-0235A	PSA-3	16394	RAB 192 20FV S2 W10	19S-004	9/23/2013	480	1/12/1986	12/9/1989	1/12/2026
CT-H-0235B	PSA-3	18619	RAB 192 20FV S2 W10	19S-005	9/23/2013	480	1/12/1986	12/9/1989	1/12/2026
CT-H-0235C	PSA-1	15594	RAB 192 20FV S2 W10	19S-006	9/23/2013	480	8/26/2013	9/24/2013	8/26/2053
CT-H-0235D	PSA-1	10936	RAB 192 20FV S2 W10	19S-007	9/23/2013	480	1/12/1986	12/9/1989	1/12/2026
CT-H-0236	PSA-3	17502	RAB 192 20FV S2 W10	19S-008	9/23/2013	480	1/12/1986	10/22/1989	1/12/2026
CT-H-0273	PSA-35	8572	RAB 226 39E S12 E5	38-002	10/24/2013	480	1/12/1986	11/15/1989	1/12/2026
CT-H-0290A	PSA-3	17457	RAB 192 34FV N2 W10	19N-009	9/10/2013	480	1/12/1986	9/30/1992	1/12/2026
CT-H-0290B	PSA-3	12563	RAB 192 34FV N2 W10	19N-010	9/10/2013	480	8/23/2013	9/12/2013	8/23/2053
CT-H-0290C	PSA-1	8802	RAB 192 34FV N2 W10	19N-011	9/10/2013	480	1/12/1986	5/3/2003	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
CT-H-0290D	PSA-1	24874	RAB 192 34FV N2 W10	19N-012	9/10/2013	480	1/12/1986	5/3/2003	1/12/2026
CT-H-0291	PSA-10	4845	RAB 193 34FV N2 W10	19N-013	9/10/2013	480	1/12/1986	4/3/1991	1/12/2026
CT-H-0301	PSA-10	8764	RAB 195 20FZ N2 E4	19S-014	9/26/2013	480	1/12/1986	8/24/1988	1/12/2026
CT-H-0323A	PSA-1	11054	RAB 245 32FZ S1 E4	22-014	9/21/2010	480	7/21/2010	9/24/2010	7/21/2050
CT-H-0323B	PSA-1	11077	RAB 245 32FZ S1 E4	22-015	9/21/2010	480	7/23/2010	9/24/2010	7/23/2050
CT-H-0354	PSA-3	16412	RAB 249 22FZ N7 W10	21-038	9/26/2013	480	1/12/1986	10/25/1989	1/12/2026
CT-H-0798	PSA-1/4	37364	RAB 197 16FV N14 W8	19S-015	11/15/2013	480	8/14/2013	11/16/2013	8/14/2053
CT-H-0864	PSA-1	15633	RWST Tank Pit - Bottom of Ladder	41-001	5/6/2012	480	1/12/1986	5/2/1987	1/12/2026
CT-H-0865	PSA-10	9169	RAB 193 16FV N10 W4	19S-016	9/23/2013	480	1/12/1986	12/2/1989	1/12/2026
CT-H-0871	PSA-1	9019	RAB 199 20FV S6 W9	19S-017	9/23/2013	480	1/12/1986	10/25/1989	1/12/2026
CT-H-0968	PSA-1	4484	RAB 196 36G N4 E9	19N-018	9/10/2013	480	1/12/1986	11/15/1989	1/12/2026
CT-H-0969	PSA-1	15668	RAB 196 36G N4 E9	19N-019	11/13/2013	480	8/19/2013	11/13/2013	8/19/2053
DW-H-0186	PSA-1/4	35068	CONT 251 R47 AZ290	05-003	11/13/2013	480	3/5/2012	4/28/2012	3/5/2052
DW-H-0188A	PSA-1	10978	CONT 251 R60 AZ283	05-060	11/14/2013	480	1/12/1986	10/26/1989	1/12/2026
DW-H-0188B	PSA-1	11072	CONT 251 R60 AZ283	05-060	11/13/2013	480	1/12/1986	10/26/1989	1/12/2026
DW-H-0440	PSA-1	14313	CONT 251 R60 AZ282	05-062	11/13/2013	480	1/12/1986	8/10/1988	1/12/2026
DW-H-0441	PSA-1/4	37069	CONT 249 R60 AZ282	05-063	11/13/2013	480	1/12/1986	4/4/1991	1/12/2026
DW-H-0442	PSA-1	15627	CONT 249 R60 AZ283	05-061	11/13/2013	480	7/23/2010	10/5/2010	7/23/2050
EA-H-0060	PSA-1/2	8764	DGB 261 2B S11 W14	42-001	9/25/2013	480	1/12/1986	8/23/1988	1/12/2026
EA-H-0061	PSA-1/2	8760	DGB 262 3B S11 W15	42-002	9/17/2013	480	1/12/1986	11/26/1989	1/12/2026
EA-H-0072	PSA-1/2	18484	DGB 261 2B S11 W7	42-003	9/25/2013	480	3/16/2009	3/24/2009	3/16/2049
EA-H-0073	PSA-1/2	8759	DGB 261 3B S11 W7	42-004	9/17/2013	480	1/12/1986	5/2/1987	1/12/2026
FP-H-0788	PSA-1	9882	RAB 242 22FV S4 W4	22-017	9/19/2013	480	1/12/1986	5/3/2003	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
FP-H-1391	PSA-1	15621	RAB 252 25FZ N8 W5	21-014	9/19/2013	480	1/12/1986	8/31/1988	1/12/2026
FP-H-1392	PSA-1	10969	RAB 252 25FZ N1 W6	21-015	4/16/2009	480	1/12/1986	11/4/1989	1/12/2026
FP-H-1393	PSA-3	18623	RAB 252 25FZ N2 W6	21-016	4/26/2006	480	1/12/1986	10/23/1989	1/12/2026
FP-H-2307	PSA-1	15666	RAB 252 25FZ N4 W4	21-017	9/1/2010	480	7/23/2010	9/14/2010	7/23/2050
FW-H-0087	PSA-35	4871	TB 272 27AY N16 W2	43-001	11/26/2013	480	1/12/1986	10/7/1992	1/12/2026
FW-H-0098	PSA-10	6231	MST 271 27E N10 W17	36-034	10/13/2010	480	1/12/1986	10/2/1992	1/12/2026
FW-H-0101	PSA-10	6525	CONT 266 R53 AZ280	10-023	4/25/2009	480	1/12/1986	11/24/1989	1/12/2026
FW-H-0103	PSA-35	5200	CONT 275 R48 AZ300	10-020	10/1/2007	480	1/12/1986	10/30/2007	1/12/2026
FW-H-0105	PSA-35	5201	CONT 275 R48 AZ325	10-016	4/26/2009	480	1/12/1986	12/8/1989	1/12/2026
FW-H-0106A	PSA-35	8576	CONT 276 R48 AZ347	10-012	10/13/2010	480	7/15/2010	10/14/2010	7/15/2050
FW-H-0106B	PSA-35	5202	CONT 276 R48 AZ358	10-012	10/13/2010	480	3/12/2012	10/14/2010	3/12/2052
FW-H-0108	PSA-35	5199	CONT 275 R48 AZ000	10-010	4/26/2009	480	1/12/1986	11/30/1989	1/12/2026
FW-H-0110	PSA-35	8544	CONT 275 R48 AZ012	10-009	10/12/2010	480	7/15/2010	10/23/2010	7/15/2050
FW-H-0113	PSA-3	16416	CONT 268 R48 AZ270	10-024	5/4/2012	480	3/6/2012	4/30/2012	3/6/2052
FW-H-0118	PSA-10	5877	CONT 271 R52 AZ260	10-026	4/25/2009	480	1/12/1986	10/27/1998	1/12/2026
FW-H-0120	PSA-35	4978	CONT 275 R48 AZ236	10-032	4/18/2009	480	1/12/1986	4/27/2009	1/12/2026
FW-H-0122	PSA-35	8567	CONT 275 R48 AZ206	10-035	11/19/2013	480	8/13/2013	11/19/2013	8/13/2053
FW-H-0125	PSA-35	5207	CONT 275 R48 AZ180	10-040	4/29/2012	480	3/12/2012	4/29/2012	3/12/2052
FW-H-0126A	PSA-35	8579	CONT 273 R48 AZ183	10-036	4/29/2012	480	3/13/2012	4/29/2012	3/13/2052
FW-H-0126B	PSA-35	12581	CONT 273 R48 AZ183	10-036	4/29/2012	480	3/9/2012	4/29/2012	3/9/2052
FW-H-0129	PSA-35	12520	CONT 275 R48 AZ150	10-003	4/25/2009	480	1/12/1986	5/2/1987	1/12/2026
FW-H-0145	PSA-35	5203	TB 269 27AY N20 E3	43-002	9/17/2013	480	1/12/1986	10/24/1989	1/12/2026
FW-H-0156	PSA-10	41847	MST 270 27E W8	36-035	10/11/2010	480	1/12/1986	10/16/2010	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
FW-H-0172	PSA-35	4866	TB 275 27B N10 E11	43-003	10/14/2013	480	1/12/1986	3/28/1991	1/12/2026
FW-H-0184	PSA-10	6531	MST 271 27E S10 W18	36-036	10/3/2010	480	1/12/1986	12/2/1989	1/12/2026
FW-H-0208	PSA-35	8583	CONT 275 R48 AZ338	10-014	10/13/2010	480	7/15/2010	10/14/2010	7/15/2050
FW-H-0215A	PSA-35	41848	CONT 275 R48 AZ137	10-005	4/25/2009	480	1/12/1986	8/31/2001	1/12/2026
FW-H-0215B	PSA-35	41849	CONT 275 R48 AZ137	10-005	4/25/2009	480	1/12/1986	8/31/2001	1/12/2026
FW-H-0455A	PSA-1/4	21329	MST 272 27FZ S7 W3	36-040	5/1/2012	480	3/8/2012	4/30/2012	3/8/2052
FW-H-0455B	PSA-1/4	37204	MST 274 27FZ S7 W3	36-041	10/12/2010	480	1/12/1986	12/2/1989	1/12/2026
FW-H-0456	PSA-1/2	8767	MST 271 27FZ S7 W3	36-042	10/13/2010	480	1/12/1986	8/19/1988	1/12/2026
FW-H-0457	PSA-1/2	8775	MST 271 27FZ N7 W3	36-043	10/12/2010	480	1/12/1986	9/30/1992	1/12/2026
FW-H-0463	PSA-1/2	8757	MST 272 27FZ S14 W2	36-044	10/13/2010	480	1/12/1986	10/18/1989	1/12/2026
FW-H-0465A	PSA-1/4	37061	MST 272 27FZ N3 W3	36-045	10/12/2010	480	1/12/1986	3/23/1994	1/12/2026
FW-H-0465B	PSA-1/4	37055	MST 272 27FZ N3 W3	36-046	10/12/2010	480	1/12/1986	3/23/1994	1/12/2026
FW-H-0466	PSA-1/2	7290	MST 272 27FZ N3 W3	36-047	10/11/2010	480	1/12/1986	3/21/1991	1/12/2026
FW-H-0469	PSA-1	11030	MST 272 27FZ S2 W2	36-048	10/11/2010	480	1/12/1986	10/26/1989	1/12/2026
FW-H-0470	PSA-1	11010	MST 272 27FZ S2 W2	36-049	10/11/2010	480	1/12/1986	4/27/2003	1/12/2026
FW-H-0475	PSA-1/2	6106	MST 272 27FZ N13 W3	36-050	4/23/2012	480	3/1/2012	4/22/2012	3/1/2052
FW-H-0477	PSA-1/2	8800	MST 272 27FZ N12 W9	36-051	10/12/2010	480	1/12/1986	11/22/1989	1/12/2026
FW-H-0479	PSA-1	8786	MST 272 27FZ N8 W2	36-052	10/11/2010	480	1/12/1986	4/26/2000	1/12/2026
FW-H-0480	PSA-1	8755	MST 272 27FZ N7 W2	36-053	10/11/2010	480	1/12/1986	12/6/1989	1/12/2026
FW-H-0483A	PSA-1/2	18496	MST 272 27FZ N5 W1	36-054	10/12/2010	480	3/16/2009	4/21/2009	3/16/2049
FW-H-0483B	PSA-1/2	18677	MST 272 27FZ N5 W1	36-055	10/12/2010	480	3/16/2009	4/21/2009	3/16/2049
FW-H-0515	PSA-10	17069	MST 271 27FZ N10 E6	36-056	10/12/2010	480	1/12/1986	11/21/1989	1/12/2026
FW-H-0518	PSA-10	4330	MST 272 27FZ N5 E6	36-057	5/15/2012	480	4/9/2009	5/12/2012	4/9/2049

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
FW-H-0521	PSA-10	17064	MST 272 27FZ N15 E6	36-058	10/11/2010	480	1/12/1986	12/6/1989	1/12/2026
FW-H-0555	PSA-1/4	37131	CONT 262 R42 AZ025	11-013	5/4/2012	480	3/7/2012	5/3/2012	3/7/2052
FW-H-0700A	PSA-1/4	35126	CONT 263 @ S/G B	12-023	10/7/2010	480	7/27/2010	10/10/2010	7/27/2050
FW-H-0700B	PSA-1/4	37280	CONT 263 @ S/G B	12-023	10/7/2010	480	7/27/2010	10/10/2010	7/27/2050
FW-H-0710	PSA-1/4	14865	CONT 263 R62 AZ230	13-008	4/21/2009	480	1/12/1986	11/25/1989	1/12/2026
FW-H-0801	PSA-35	8596	CONT 283 R39 AZ270	12-025	11/23/2013	480	8/13/2013	11/25/2013	8/13/2053
FW-H-0804	PSA-35	12518	CONT 275 R39 AZ270	12-026	5/13/2012	480	3/13/2012	5/9/2012	3/13/2052
MD-H-0184	PSA-1/2	19045	RAB 252 39C S5 E10	24-030	8/20/2013	480	1/12/1986	10/22/1989	1/12/2026
MD-H-1082A	PSA-1/4	37333	CONT 230 R62 AZ215	01-044	5/16/2012	480	1/12/1986	4/17/1997	1/12/2026
MD-H-1082B	PSA-1/4	37366	CONT 230 R62 AZ215	01-044	5/16/2012	480	1/12/1986	11/11/1989	1/12/2026
MD-H-1099	PSA-3	7379	RAB 230 34G S2 E2	20-001	8/27/2013	480	1/12/1986	11/6/1989	1/12/2026
MD-H-1101	PSA-3	16373	RAB 231 34G N5 E2	20-002	9/10/2013	480	1/12/1986	11/22/1989	1/12/2026
MD-H-1102	PSA-3	9100	RAB 230 34G N7 E2	20-003	9/10/2013	480	1/12/1986	11/21/1989	1/12/2026
MS-H-0003	PSA-100	772	CONT 295 @ S/G A	16-005	10/2/2010	480	7/22/2010	10/9/2010	7/22/2050
MS-H-0004	PSA-100	671	CONT 297 @ S/G A	16-007	4/18/2009	480	1/12/1986	12/8/1989	1/12/2026
MS-H-0006A	PSA-100	776	CONT 294 @ S/G A	16-006	10/2/2010	480	1/12/1986	4/19/2000	1/12/2026
MS-H-0006B	PSA-100	655	CONT 294 @ S/G A	16-006	10/2/2010	480	1/12/1986	4/18/2009	1/12/2026
MS-H-0007A	PSA-100	1890	CONT 281 R48 AZ350	10-013	10/16/2010	480	7/22/2010	10/23/2010	7/22/2050
MS-H-0007B	PSA-100	660	CONT 281 R48 AZ350	10-013	10/16/2010	480	7/22/2010	10/23/2010	7/22/2050
MS-H-0008A	PSA-35	8575	CONT 278 R48 AZ359	10-011	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0008B	PSA-35	8595	CONT 278 R48 AZ359	10-011	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0010A	PSA-35	12583	CONT 278 R48 AZ325	10-017	4/26/2009	480	1/12/1986	10/30/2004	1/12/2026
MS-H-0010B	PSA-35	5003	CONT 278 R48 AZ325	10-017	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0012	PSA-35	12516	CONT 278 R48 AZ300	10-019	10/16/2010	480	7/15/2010	10/20/2010	7/15/2050
MS-H-0014	PSA-100	667	CONT 312 R49 AZ270	17-005	4/19/2009	480	1/12/1986	11/28/1989	1/12/2026
MS-H-0015	PSA-100	665	CONT 313 R48 AZ270	17-006	4/19/2009	480	1/12/1986	10/30/2004	1/12/2026
MS-H-0016	PSA-100	668	CONT 297 R48 AZ270	17-004	10/16/2010	480	7/22/2010	10/21/2010	7/22/2050
MS-H-0020A	PSA-100	1897	CONT 289 R47 AZ270	17-003	4/18/2009	480	1/12/1986	4/8/1997	1/12/2026
MS-H-0020B	PSA-100	774	CONT 289 R47 AZ270	17-003	10/2/2010	480	7/22/2010	10/21/2010	7/22/2050
MS-H-0023	PSA-100	759	CONT 294 @ S/G C	18-003	4/18/2009	480	1/12/1986	9/3/1988	1/12/2026
MS-H-0024	PSA-100	761	CONT 297 @ S/G C	18-002	4/18/2009	480	1/12/1986	4/4/1991	1/12/2026
MS-H-0026A	PSA-100	654	CONT 295 @ S/G C	18-001	10/2/2010	480	7/22/2010	10/9/2010	7/22/2050
MS-H-0026B	PSA-100	775	CONT 295 @ S/G C	18-001	10/2/2010	480	7/22/2010	10/9/2010	7/22/2050
MS-H-0027A	PSA-35	8574	CONT 278 R48 AZ180	10-038	5/4/2012	480	3/9/2012	4/29/2012	3/9/2052
MS-H-0027B	PSA-35	8590	CONT 278 R48 AZ180	10-038	5/4/2012	480	3/12/2012	4/29/2012	3/12/2052
MS-H-0028A	PSA-100	1894	CONT 276 R48 AZ182	10-037	5/13/2012	480	3/16/2012	5/5/2012	3/16/2052
MS-H-0028B	PSA-100	1898	CONT 276 R48 AZ182	10-037	5/13/2012	480	3/15/2012	5/4/2012	3/15/2052
MS-H-0030A	PSA-100	656	CONT 278 R47 AZ206	10-034	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0030B	PSA-100	758	CONT 278 R47 AZ206	10-034	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0032	PSA-35	4180	CONT 278 R48 AZ236	10-031	4/26/2009	480	1/12/1986	12/8/1989	1/12/2026
MS-H-0034A	PM-5	003-1565	MST 278 27E S10 W18	36-062	11/10/2013	480	1/12/1986	11/11/2013	1/12/2026
MS-H-0034B	PM-5	001-1561	MST 278 27E S10 W18	36-063	10/11/2010	480	1/12/1986	4/1/1994	1/12/2026
MS-H-0041A	PM-5	002-1563	MST 278 27E W18	36-064	10/11/2010	480	1/12/1986	4/9/1994	1/12/2026
MS-H-0041B	PM-5	002-1564	MST 278 27E W18	36-065	10/11/2010	480	1/12/1986	9/5/1995	1/12/2026
MS-H-0049A	PM-5	003-1566	MST 278 27E N10 W18	36-066	4/23/2012	480	1/12/1986	4/22/2012	1/12/2026
MS-H-0049B	PM-5	SPARE-2083	MST 278 27E N10 W18	36-067	10/7/2010	480	10/2/2010	10/16/2010	10/2/2050

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0063A	PM-8	003-1557	RAB 310 27D S3 W5	45-001	4/19/2009	480	1/12/1986	4/14/1997	1/12/2026
MS-H-0063B	PM-8	003-1558	RAB 310 27D S3 W5	45-002	4/11/2006	480	1/12/1986	10/29/1998	1/12/2026
MS-H-0064	PM-8	001-1553	MST 310 27D N5 W5	36-068	11/12/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0065A	PM-8	MOD-2084	RAB 310 27D N5 W5	45-003	10/3/2010	480	1/12/1986	10/16/2010	1/12/2026
MS-H-0065B	LI-9 Type 3092	61338/09	RAB 310 27D N5 W5	45-004	4/11/2006	276	11/13/1998	11/18/1998	11/13/2021
MS-H-0066	PM-8	002-1555	RAB 310 27D N12 W5	45-005	11/24/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0074	PM-8	002-1556	RAB 310 27D S12 W5	45-006	5/22/2012	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0075	PM-8	001-1554	MST 310 27D S5 W5	36-069	4/11/2006	480	1/12/1986	8/5/1988	1/12/2026
MS-H-0076A	PSA-3	18585	MST 280 25E N8 W10	36-070	10/4/2010	480	1/12/1986	10/30/2004	1/12/2026
MS-H-0076B	PSA-3	17480	MST 280 25E N8 W10	36-071	10/4/2010	480	1/12/1986	10/30/2004	1/12/2026
MS-H-0079A	PSA-10	6884	MST 284 25E N8 W19	36-072	10/12/2010	480	1/12/1986	10/30/2007	1/12/2026
MS-H-0079B	PSA-10	6248	MST 284 25E N8 W19	36-073	10/12/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0084A	PSA-3	17450	MST 282 25E N18 W10	36-074	10/12/2010	480	1/12/1986	4/6/1997	1/12/2026
MS-H-0084B	PSA-3	17444	MST 282 25E N18 W10	36-099	10/12/2010	480	1/12/1986	4/6/1997	1/12/2026
MS-H-0087A	PSA-10	6229	MST 284 27E S3 W14	36-075	10/4/2010	480	1/12/1986	4/30/2006	1/12/2026
MS-H-0087B	PSA-10	17066	MST 284 27E S3 W14	36-076	10/4/2010	480	1/12/1986	4/30/2006	1/12/2026
MS-H-0092A	PSA-3	17516	MST 280 27E N7 W10	36-077	10/12/2010	480	1/12/1986	4/27/2003	1/12/2026
MS-H-0092B	PSA-3	12494	MST 280 E27 N7 W10	36-078	10/12/2010	480	1/12/1986	10/30/2007	1/12/2026
MS-H-0095A	PSA-10	6254	MST 284 27E N7 W14	36-079	10/12/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0095B	PSA-10	6243	MST 284 27E N7 W14	36-080	10/12/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0100	PSA-3	18599	RAB 319 27D N1 E3	45-007	5/1/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0101	PSA-10	13537	RAB 319 27D N1 E3	45-008	11/13/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0103	PSA-10	6242	RAB 319 27D S15 E3	45-009	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0104	PSA-10	6395	RAB 319 27D S15 E3	45-010	4/27/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0106	PSA-10	6234	RAB 319 25D S4 E3	45-011	11/22/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0110	PSA-3	12609	RAB 319 27D N2 E13	45-012	4/24/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0111	PSA-3	17498	RAB 319 27D N1 E13	45-013	4/24/2012	480	1/12/1986	4/26/2006	1/12/2026
MS-H-0113	PSA-10	6374	RAB 319 27D S15 E13	45-014	11/11/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0114	PSA-10	6237	RAB 319 27D S15 E13	45-015	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0116	PSA-10	14696	RAB 319 25D S4 E13	45-016	11/13/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0120	PSA-3	12518	RAB 319 27C N2 W2	45-017	4/24/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0121	PSA-10	6251	RAB 319 27C N1 W2	45-018	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0123	PSA-10	6397	RAB 319 27C S15 W2	45-019	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0124	PSA-10	6228	RAB 319 27C S15 W2	45-020	11/22/2013	480	1/12/1986	1/14/2008	1/12/2026
MS-H-0126	PSA-10	6052	RAB 319 25C S4 W2	45-021	4/27/2012	480	1/12/1986	5/9/2003	1/12/2026
MS-H-0130	PSA-3	17560	RAB 319 27C N1 E6	45-022	11/14/2013	480	8/22/2013	11/15/2013	8/22/2053
MS-H-0131	PSA-3	17572	RAB 319 27C N1 E6	45-023	11/9/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0133	PSA-3	12519	RAB 319 27C S16 E7	45-024	11/22/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0136	PSA-10	13321	RAB 319 25C S4 E8	45-025	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0140	PSA-3	18646	RAB 317 27B N2 W12	45-026	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0141	PSA-10	4853	RAB 317 27B N1 W12	45-027	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0143	PSA-10	6373	RAB 317 27B S15 W12	45-028	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0144	PSA-10	6447	RAB 317 27B S15 W12	45-029	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0146	PSA-10	6383	RAB 317 25B S5 W12	45-030	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0160A	PSA-1	16082	RAB 317 27D S2 E3	45-031	4/27/2012	480	1/12/1986	5/5/2003	1/12/2026
MS-H-0160B	PSA-1	11074	RAB 317 27D S2 E3	45-032	4/27/2012	480	1/12/1986	5/8/2003	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0161	PSA-10	5946	RAB 317 28D N1 E3	45-033	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0162	PSA-10	6359	RAB 317 28D N1 E3	45-034	11/14/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0163	PSA-3	7383	RAB 317 29D N4 E4	45-035	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0165A	PSA-3	16421	RAB 314 29D N6 E3	45-036	4/27/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0165B	PSA-3	17577	RAB 314 29D N6 E3	45-037	4/27/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0167A	PSA-3	16424	MST 282 27E N3 W9	36-081	10/12/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0167B	PSA-3	16363	MST 282 27E N3 W9	36-082	10/12/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0170	PSA-1	14373	MST 276 27E N4 W13	36-083	10/12/2010	480	1/12/1986	3/21/1991	1/12/2026
MS-H-0171A	PSA-1	15622	MST 275 27E N10 W13	36-084	10/13/2010	480	1/12/1986	12/7/1989	1/12/2026
MS-H-0171B	PSA-1	9863	MST 275 27E N10 W13	36-085	10/13/2010	480	1/12/1986	12/7/1989	1/12/2026
MS-H-0173A	PSA-3	18641	MST 282 27E N13 W9	36-086	10/13/2010	480	1/12/1986	10/26/1998	1/12/2026
MS-H-0173B	PSA-3	7388	MST 282 27E N13 W9	36-087	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0176	PSA-10	4772	MST 275 27E N14 W13	36-088	10/13/2010	480	1/12/1986	10/19/2004	1/12/2026
MS-H-0185	PSA-10	6530	RAB 271 29D S1 E7	34-014	11/12/2013	480	1/12/1986	4/9/1991	1/12/2026
MS-H-0187	PSA-1	16107	RAB 271 28C N13 W8	34-015	11/12/2013	480	1/12/1986	4/8/1991	1/12/2026
MS-H-0193	PSA-1	14374	RAB 261 28C N3 E2	34-016	4/10/2006	480	1/12/1986	4/5/1991	1/12/2026
MS-H-0197A	PSA-1/4	9503	RAB 252 28B W14	24-032	11/12/2013	480	1/12/1986	9/25/1992	1/12/2026
MS-H-0197B	PSA-1/4	37178	RAB 252 28B W14	24-033	11/12/2013	480	1/12/1986	9/25/1992	1/12/2026
MS-H-0198	PSA-3	11959	RAB 252 28B W14	24-034	11/12/2013	480	1/12/1986	4/8/1991	1/12/2026
MS-H-0200	PSA-1	14306	RAB 244 28B W15	24-035	11/12/2013	480	1/12/1986	11/28/1989	1/12/2026
MS-H-0202A	PSA-1/2	7286	RAB 245 28B W12	24-036	11/12/2013	480	1/12/1986	4/8/1991	1/12/2026
MS-H-0202B	PSA-1/2	8782	RAB 245 28B W12	24-037	11/12/2013	480	1/12/1986	4/8/1991	1/12/2026
MS-H-0206	PSA-35	8584	RAB 310 27C S5 W9	45-038	11/18/2013	480	1/12/1986	5/2/1987	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0209	PSA-100	658	RAB 310 27C S5 E9	45-039	4/27/2012	480	1/12/1986	4/21/2006	1/12/2026
MS-H-0210	PM-8	003-1552	RAB 310 27C S5 E9	45-040	4/11/2006	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0213A	PM-10	001/004-MOD-2085	TB 302 35B N8 E6	44-001	11/10/2013	480	1/1/2011	5/23/2012	1/1/2051
MS-H-0213B	PM-10	001-MOD-1542	TB 302 35B N18 E6	44-001	11/10/2013	480	10/1/2013	11/19/2013	10/1/2053
MS-H-0214A	PSA-100	1899	TB 303 35B S5 E6	44-002	5/10/2012	480	1/12/1986	4/30/2006	1/12/2026
MS-H-0214B	PSA-100	659	TB 303 35B S5 E6	44-002	5/10/2012	480	1/12/1986	4/30/2006	1/12/2026
MS-H-0219	PM-10	003-1548	TB 302 40B N2 E6	44-003	11/24/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0224	PSA-100	649	RAB 310 27C N5 W9	45-041	4/28/2012	480	1/12/1986	4/26/2009	1/12/2026
MS-H-0227	PSA-35	42491	RAB 315 27C N5 E9	45-061	11/14/2013	480	1/12/1986	10/9/2007	1/12/2026
MS-H-0228	PM-8	002-1551	RAB 310 27C N5 E10	45-042	4/11/2006	480	1/12/1986	4/10/1997	1/12/2026
MS-H-0232A	PSA-100	777	TB 309 35B S5 E6	44-005	5/9/2012	480	1/12/1986	11/4/2004	1/12/2026
MS-H-0232B	PSA-100	1883	TB 309 35B S5 E6	44-005	5/9/2012	480	1/12/1986	4/15/2006	1/12/2026
MS-H-0233A	PM-10	001-1544	TB 307 35B N8 E6	44-006	10/12/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0233B	PM-10	001-1545	TB 307 35B N18 E6	44-006	11/27/2013	480	1/12/1986	9/4/1995	1/12/2026
MS-H-0237A	PM-8	001-1549	TB 307 40B N6 E5	44-007	4/8/2006	480	1/12/1986	4/8/1994	1/12/2026
MS-H-0237B	PM-8	001-1550	TB 307 40B N6 E5	44-007	4/8/2006	480	1/12/1986	4/9/1997	1/12/2026
MS-H-0345	PSA-100	736	TB 308 27B N8 E5	44-009	4/8/2006	480	1/12/1986	11/5/1989	1/12/2026
MS-H-0359A	PSA-1	14378	RAB 317 27C S1 W2	45-043	11/14/2013	480	2/29/2012	5/10/2012	2/29/2052
MS-H-0359B	PSA-1	14316	RAB 317 27C S1 W2	45-044	11/14/2013	480	3/7/2012	5/10/2012	3/7/2052
MS-H-0361	PSA-3	18635	RAB 317 28C N2 W2	45-045	11/12/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0362	PSA-10	17079	RAB 317 28C N1 W2	45-046	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0364	PSA-3	17520	RAB 322 29C N9 W1	45-047	4/28/2012	480	1/12/1986	10/8/2001	1/12/2026
MS-H-0365A	PSA-3	12490	RAB 314 29C N6 W2	45-048	4/30/2012	480	1/12/1986	10/8/2001	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0365B	PSA-3	18624	RAB 314 29C N6 W2	45-049	4/30/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0369A	PSA-1	9687	RAB 317 27D S1 E13	45-050	11/22/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0369B	PSA-1	8744	RAB 317 27D S1 E13	45-051	11/22/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0371	PSA-3	17580	RAB 317 28D N2 E13	45-052	11/13/2013	480	1/12/1986	10/1/2001	1/12/2026
MS-H-0372	PSA-10	6367	RAB 317 28D N1 E13	45-053	4/30/2012	480	1/12/1986	10/2/2001	1/12/2026
MS-H-0374	PSA-3	12473	RAB 317 29D N4 E13	45-054	4/30/2012	480	1/12/1986	10/2/2001	1/12/2026
MS-H-0375A	PSA-3	17562	RAB 314 29D N6 E13	45-055	4/30/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0375B	PSA-3	16381	RAB 314 29D N6 E13	45-056	4/30/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-0410A	PSA-1	8841	RAB 256 28B N13 W7	24-038	10/17/2010	480	2/29/2012	4/30/2006	2/29/2052
MS-H-0410B	PSA-1	9889	RAB 256 28B N13 W7	24-039	10/17/2010	480	1/12/1986	4/30/2006	1/12/2026
MS-H-0415A	PSA-3	17440	TB 277 30B N8 E3	43-004	10/14/2013	480	3/2/2012	5/9/2012	3/2/2052
MS-H-0415B	PSA-3	17479	TB 277 30B N8 E3	43-004	10/14/2013	480	3/6/2012	5/11/2012	3/6/2052
MS-H-0561	PSA-1/2	7289	RAB 270 23E N7 E7	34-017	4/16/2009	480	3/16/2009	5/1/2009	3/16/2049
MS-H-0575A	PSA-1	14286	RAB 272 23C N11 E3	34-018	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0575B	PSA-1	11006	RAB 272 23C N11 E3	34-019	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0577A	PSA-1	24831	RAB 271 26C S5 E4	34-020	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0577B	PSA-1	15659	RAB 271 26C S5 E4	34-021	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0581A	PSA-1	14331	RAB 271 26B S5 W11	34-022	4/16/2009	480	4/6/2009	5/1/2009	4/6/2049
MS-H-0581B	PSA-1	24930	RAB 271 26B S5 W11	34-023	11/12/2013	480	8/21/2013	11/13/2013	8/21/2053
MS-H-0614A	PSA-1	8847	RAB 272 26C S9 E5	34-024	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0614B	PSA-1	15651	RAB 272 26C S9 E5	34-025	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0619A	PSA-1	24891	RAB 271 23B N16 W13	34-026	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0619B	PSA-1	11069	RAB 271 23B N16 W13	34-027	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0650A	PSA-1	15609	RAB 271 26C S5 E2	34-028	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0650B	PSA-1	15663	RAB 271 26C S5 E2	34-029	4/16/2009	480	1/12/1986	5/1/2009	1/12/2026
MS-H-0652A	PSA-1	15657	RAB 271 26C S4 E3	34-030	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0652B	PSA-1	9209	RAB 271 26C S4 E3	34-031	4/16/2009	480	2/20/2009	5/1/2009	2/20/2049
MS-H-0656A	PSA-1/4	36267	RAB 271 26B S5 W10	34-032	11/15/2013	480	8/14/2013	11/16/2013	8/14/2053
MS-H-0656B	PSA-1/4	8209	RAB 271 26B S5 W10	34-033	4/16/2009	480	3/16/2009	5/1/2009	3/16/2049
MS-H-0685A	PSA-1	11082	RAB 271 43C N9 E4	34-034	4/16/2009	480	2/20/2009	5/1/2009	2/20/2049
MS-H-0685B	PSA-1	8787	RAB 271 23C N9 E4	34-035	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0689A	PSA-1	10984	RAB 272 26C S6 E7	34-036	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0689B	PSA-1	9217	RAB 272 26C S6 E7	34-037	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0693A	PSA-1	14275	RAB 271 23B N16 W12	34-038	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0693B	PSA-1	25193	RAB 271 23B N16 W12	34-039	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0725	PSA-1	15662	RAB 271 23C N7 E6	34-040	4/16/2009	480	2/20/2009	5/1/2009	2/20/2049
MS-H-0727	PSA-1	10974	RAB 272 26C S9 E6	34-041	5/15/2012	480	3/17/2009	5/1/2009	3/17/2049
MS-H-0917	PSA-1	14309	MST 273 27E S11 E5	36-089	10/10/2010	480	1/12/1986	4/8/1991	1/12/2026
MS-H-0919	PSA-1	15629	MST 273 27E S3 E5	36-090	10/10/2010	480	4/6/2009	4/24/2009	4/6/2049
MS-H-0921	PSA-1	10995	MST 273 27E N4 E6	36-091	11/12/2013	480	8/26/2013	11/25/2013	8/26/2053
MS-H-0924	PSA-1	16064	MST 273 27E N5 E7	36-092	5/15/2012	480	3/5/2012	5/12/2012	3/5/2052
MS-H-0925	PSA-1	14251	MST 274 27E N4 W3	36-093	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0965	PSA-1	5197	MST 275 27E N10 E6	36-094	10/13/2010	480	1/12/1986	8/22/1988	1/12/2026
MS-H-0966	PSA-1	14258	MST 274 27E N14 E6	36-095	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0967	PSA-1	14242	MST 274 27E N14 E6	36-096	10/13/2010	480	1/12/1986	3/26/1994	1/12/2026
MS-H-0970	PSA-1	11064	MST 273 27E N14 E6	36-097	11/14/2013	480	8/23/2013	11/15/2013	8/23/2053

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0971	PSA-1	10972	MST 275 27E N14 W3	36-098	10/13/2010	480	1/12/1986	1/14/2008	1/12/2026
MS-H-0972	PSA-1/2	18943	MST 275 27E N14 W3	36-100	10/13/2010	480	1/12/1986	10/18/1989	1/12/2026
MS-H-0980	PSA-1	11079	MST 272 27E N12 E4	36-101	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0982	PSA-1/4	37093	MST 272 27E N9 E4	36-102	10/13/2010	480	1/12/1986	10/24/1989	1/12/2026
MS-H-0984	PSA-1	10935	MST 272 27E N4 E4	36-103	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0986	PSA-1	11049	MST 272 27E S3 E5	36-104	10/10/2010	480	1/12/1986	12/6/1989	1/12/2026
MS-H-0988	PSA-1	10953	MST 273 25E N8 E5	36-105	10/10/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0990A	PSA-1	8952	MST 273 25E N14 E5	36-106	10/10/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0990B	PSA-1	8605	MST 273 25E N14 E5	36-107	10/10/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0993	PSA-1	16118	MST 273 27E S5 E2	36-108	11/14/2013	480	8/26/2013	11/15/2013	8/26/2053
MS-H-0994	PSA-1	14260	MST 273 27E S5 W3	36-109	10/10/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0995	PSA-1/2	18955	MST 273 27E S5 W4	36-110	10/10/2010	480	1/12/1986	10/26/1989	1/12/2026
MS-H-0999	PSA-1	9198	MST 273 25E N9 W2	36-111	5/17/2012	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1003	PSA-1	11031	MST 272 27E S4 E3	36-112	10/10/2010	480	1/12/1986	12/9/1989	1/12/2026
MS-H-1005	PSA-1	14287	MST 272 27E S8	36-113	10/10/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1015	PSA-1	16087	MST 273 25D N6 W21	36-114	10/10/2010	480	1/12/1986	3/21/1991	1/12/2026
MS-H-1018	PSA-1	16062	MST 273 27D S4 W21	36-115	10/10/2010	480	1/12/1986	12/2/1989	1/12/2026
MS-H-1027	PSA-1	11000	MST 272 27D N11 W17	36-116	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1048	PSA-1	10954	RAB 272 20C N10 E1	34-042	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-1052	PSA-1	9873	RAB 272 26C S3 E4	34-043	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-1057	PSA-1	14391	RAB 271 26B S4 W9	34-044	4/16/2009	480	3/17/2009	5/1/2009	3/17/2049
MS-H-1109	PSA-10	6441	MST 300 25E N7 W13	36-117	10/12/2010	480	4/9/2009	4/24/2009	4/9/2049
MS-H-1111	PSA-10	8162	MST 300 27E S1 W13	36-121	10/12/2010	480	1/12/1986	5/2/1987	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-1113	PSA-10	6390	MST 300 27E N8 W13	36-122	10/12/2010	480	1/12/1986	10/2/2001	1/12/2026
MS-H-1282	PSA-10	6529	RAB 319 27C N3 E7	45-057	4/30/2012	480	1/12/1986	5/9/2003	1/12/2026
MS-H-1283	PSA-3	7389	RAB 319 27B W17	45-058	5/1/2012	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1284	PSA-3	16448	RAB 322 27C S11 E6	45-059	4/27/2012	480	1/12/1986	5/8/2003	1/12/2026
MS-H-1285	PSA-3	17565	RAB 319 27C S11 E6	45-060	4/27/2012	480	1/12/1986	10/8/2001	1/12/2026
MS-H-1290	PSA-1/4	37287	RAB 319 27D S10 W5	45-062	11/11/2013	480	1/12/1986	11/12/2013	1/12/2026
MS-H-1292	PSA-1/4	9538	RAB 319 27D N10 W5	45-063	5/1/2012	480	3/16/2009	4/22/2009	3/16/2049
MS-H-1301A	PSA-1/4	14615	RAB 238 28B N7 W15	24-041	9/10/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1301B	PSA-1/4	15238	RAB 238 28B N7 W15	24-042	5/15/2012	480	3/1/2012	5/14/2012	3/1/2052
MS-H-1321	PSA-1	14277	MST 272 25E N5 E9	36-118	10/10/2010	480	1/12/1986	3/26/1994	1/12/2026
MS-H-1322	PSA-1/4	37079	MST 273 27E S8 E10	36-119	10/10/2010	480	1/12/1986	10/30/2007	1/12/2026
MS-H-1326	PSA-1	10996	MST 273 27E N7 E10	36-120	10/13/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1389A	PSA-1/2	18986	RAB 250 28B N9 W8	24-043	11/12/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1389B	PSA-1/2	18984	RAB 250 28B N9 W8	24-044	11/12/2013	480	1/12/1986	5/2/1987	1/12/2026
MS-H-1390	PSA-1	8849	RAB 256 28B N14 W7	24-045	11/12/2013	480	1/12/1986	4/19/2000	1/12/2026
MS-H-1391	PSA-1	8837	RAB 258 28B N17 W6	24-046	11/12/2013	480	1/12/1986	10/22/1989	1/12/2026
MS-H-1392	PSA-1	11115	RAB 272 28B N16 W2	34-045	11/12/2013	480	8/23/2013	11/12/2013	8/23/2053
MS-H-1403	PSA-1	16102	RAB 265 28C N4 E2	34-046	11/12/2013	480	1/12/1986	9/30/1992	1/12/2026
MS-H-1406	PSA-1/4	37073	RAB 247 28B N8 W12	24-047	10/17/2010	480	1/12/1986	4/8/1991	1/12/2026
PM-H-0129	PSA-1	8792	RAB 245 34G S5 E3	22-018	8/20/2013	480	1/12/1986	8/26/1988	1/12/2026
PM-H-0130	PSA-1	8818	RAB 244 34G S3 E1	22-019	9/19/2013	480	1/12/1986	10/25/1989	1/12/2026
PM-H-0232A	PSA-3	12613	RAB 249 27D S7 E5	24-048	11/20/2013	480	8/19/2013	11/21/2013	8/19/2053
PM-H-0232B	PSA-3	16399	RAB 249 27D S7 E5	24-049	11/20/2013	480	8/23/2013	11/21/2013	8/23/2053

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0002A	PSA-35	8588	CONT 253 R20 AZ308	06-015	5/3/2012	480	7/15/2010	10/11/2010	7/15/2050
RC-H-0002B	PSA-35	8570	CONT 253 R20 AZ308	06-015	5/3/2012	480	7/15/2010	10/11/2010	7/15/2050
RC-H-0006	PSA-35	5204	CONT 258 R36 AZ326	06-006	5/3/2012	480	7/15/2010	10/21/2010	7/15/2050
RC-H-0031	PSA-3	16444	CONT 256 R52 AZ321	05-033	11/18/2013	480	3/7/2012	5/6/2012	3/7/2052
RC-H-0037A	PSA-1/2	17328	CONT 289 R37 AZ320	15-019	4/30/2012	480	3/2/2012	4/28/2012	3/2/2052
RC-H-0037B	PSA-1/2	6560	CONT 289 R37 AZ320	15-019	4/30/2012	480	3/9/2012	4/28/2012	3/9/2052
RC-H-0038	PSA-3	18630	CONT 288 R34 AZ313	15-010	4/19/2009	480	1/12/1986	4/25/2000	1/12/2026
RC-H-0042	PSA-1/2	6107	CONT 292 R39 AZ318	15-023	4/19/2009	480	1/12/1986	12/2/1989	1/12/2026
RC-H-0046	PSA-1	25195	CONT 292 R42 AZ313	15-030	11/15/2013	480	8/19/2013	11/15/2013	8/19/2053
RC-H-0048A	PSA-1	8144	CONT 292 @ PZR	15-034	4/19/2009	480	1/12/1986	10/30/2007	1/12/2026
RC-H-0048B	PSA-1	15588	CONT 292 @ PZR	15-034	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0049	PSA-1	15638	CONT 292 R45 AZ308	15-038	4/28/2012	480	3/2/2012	4/28/2012	3/2/2052
RC-H-0050	PSA-1	15618	CONT 290 R44 AZ308	15-044	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0051	PSA-1/2	8322	CONT 290 R44 AZ308	15-041	10/5/2010	480	7/26/2010	10/9/2010	7/26/2050
RC-H-0053	PSA-3	18633	CONT 292 @ PZR	15-055	4/19/2009	480	4/9/2009	4/24/2009	4/9/2049
RC-H-0054	PSA-1	15626	CONT 295 @ PZR	15-058	4/20/2009	480	1/12/1986	5/2/2003	1/12/2026
RC-H-0059A	PSA-1/4	15172	CONT 284 R41 AZ311	15-033	4/25/2009	480	1/12/1986	9/27/2001	1/12/2026
RC-H-0059B	PSA-1/4	14678	CONT 284 R41 AZ311	15-033	4/25/2009	480	1/12/1986	9/27/2001	1/12/2026
RC-H-0064	PSA-1/2	6570	CONT 289 @ PZR	15-035	4/19/2009	480	1/12/1986	12/5/1989	1/12/2026
RC-H-0065	PSA-1	10945	CONT 288 @ PZR	15-042	4/19/2009	480	1/12/1986	8/27/1988	1/12/2026
RC-H-0067	PSA-3	12583	CONT 258 R18 AZ240	08-010	4/27/2009	480	1/12/1986	4/30/2000	1/12/2026
RC-H-0068	PSA-3	17472	CONT 259 R18 AZ236	08-009	4/21/2009	480	3/17/2009	4/27/2009	3/17/2049
RC-H-0069	PSA-3	17449	CONT 264 R18 AZ238	12-005	10/7/2010	480	7/23/2010	10/9/2010	7/23/2050

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0070	PSA-1	11007	CONT 263 R18 AZ240	12-006	10/7/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0073	PSA-3	12491	CONT 264 R18 AZ267	12-007	4/21/2009	480	1/12/1986	11/23/1989	1/12/2026
RC-H-0075A	PSA-3	26485	CONT 263 R18 AZ269	12-008	4/21/2009	480	1/12/1986	11/4/1998	1/12/2026
RC-H-0075B	PSA-3	12542	CONT 263 R18 AZ269	12-008	4/21/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0077	PSA-1	7713	CONT 263 R19 AZ300	14-001	5/14/2012	480	2/28/2012	5/13/2012	2/28/2052
RC-H-0080	PSA-1	11052	CONT 263 R29 AZ311	14-006	4/25/2009	480	1/12/1986	10/30/2004	1/12/2026
RC-H-0082	PSA-1	41700	CONT 264 R39 AZ314	14-008	5/12/2012	480	3/6/2012	4/27/2012	3/6/2052
RC-H-0083	PSA-3	18626	CONT 264 R39 AZ314	14-009	4/25/2009	480	3/8/2012	5/5/2012	3/8/2052
RC-H-0087	PSA-3	16433	CONT 257 R33 AZ342	11-018	4/22/2009	480	1/12/1986	11/9/1989	1/12/2026
RC-H-0088	PSA-1	9878	CONT 262 R32 AZ342	11-019	4/22/2009	480	4/6/2009	4/27/2009	4/6/2049
RC-H-0089	PSA-3	17511	CONT 259 R38 AZ334	06-008	5/12/2012	480	3/17/2009	4/27/2009	3/17/2049
RC-H-0090	PSA-10	6241	CONT 260 R39 AZ334	06-010	5/3/2012	480	7/23/2010	10/11/2010	7/23/2050
RC-H-0092	PSA-3	18608	CONT 261 R38 AZ333	06-009	5/3/2012	480	4/9/2009	4/27/2009	4/9/2049
RC-H-0093	PSA-3	17459	CONT 261 R38 AZ333	06-011	11/18/2013	480	8/23/2013	11/18/2013	8/23/2053
RC-H-0095	PSA-3	12498	CONT 261 R38 AZ324	06-007	5/3/2012	480	3/17/2009	4/27/2009	3/17/2049
RC-H-0096	PSA-1	14253	CONT 262 R39 AZ322	06-012	5/3/2012	480	7/23/2010	10/10/2010	7/23/2050
RC-H-0100	PSA-1	25208	CONT 273 R41 AZ311	14-011	11/14/2013	480	8/19/2013	11/15/2013	8/19/2053
RC-H-0121	PSA-1	14285	CONT 253 R56 AZ228	04-050	11/12/2013	480	8/21/2013	11/13/2013	8/21/2053
RC-H-0123	PSA-1	11093	CONT 255 R56 AZ220	04-055	11/11/2013	480	7/23/2010	10/5/2010	7/23/2050
RC-H-0126	PSA-3	26482	CONT 254 R56 AZ210	04-061	11/14/2013	480	3/17/2009	4/19/2009	3/17/2049
RC-H-0127	PSA-1/2	17338	CONT 253 R56 AZ210	04-062	11/11/2013	480	8/14/2013	11/12/2013	8/14/2053
RC-H-0130	PSA-1/4	37358	CONT 253 R56 AZ201	04-072	11/14/2013	480	7/27/2010	10/14/2010	7/27/2050
RC-H-0133	PSA-1	15631	CONT 253 R56 AZ193	04-001	11/13/2013	480	7/23/2010	10/9/2010	7/23/2050

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0134	PSA-1/2	4804	CONT 247 R56 AZ191	04-076	5/12/2012	480	3/1/2012	5/6/2012	3/1/2052
RC-H-0136	PSA-1	14379	CONT 248 R56 AZ191	04-077	11/21/2013	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0143	PSA-3	16431	CONT 234 R64 AZ202	01-045	5/17/2012	480	1/12/1986	4/9/1991	1/12/2026
RC-H-0144	PSA-1	11015	CONT 233 R62 AZ202	01-042	5/16/2012	480	4/6/2009	4/27/2009	4/6/2049
RC-H-0145	PSA-10	6246	CONT 257 R58 AZ218	04-059	11/12/2013	480	8/20/2013	11/13/2013	8/20/2053
RC-H-0146	PSA-10	13800	CONT 256 R58 AZ218	04-056	11/11/2013	480	8/20/2013	11/13/2013	8/20/2053
RC-H-0148	PSA-3	12581	CONT 259 R47 AZ219	04-011	11/15/2013	480	8/21/2013	11/16/2013	8/21/2053
RC-H-0151A	PSA-3	17508	CONT 272 R40 AZ218	12-001	4/21/2009	480	4/9/2009	4/29/2009	4/9/2049
RC-H-0151B	PSA-3	17490	CONT 272 R40 AZ218	12-001	4/21/2009	480	3/17/2009	4/29/2009	3/17/2049
RC-H-0153A	PSA-3	18637	CONT 277 R39 AZ216	12-003	4/21/2009	480	3/17/2009	4/29/2009	3/17/2049
RC-H-0153B	PSA-3	12524	CONT 277 R39 AZ216	12-003	5/15/2012	480	3/6/2012	5/15/2012	3/6/2052
RC-H-0154A	PSA-10	4688	CONT 277 R39 AZ213	12-002	10/11/2010	480	7/23/2010	10/12/2010	7/23/2050
RC-H-0154B	PSA-10	6393	CONT 277 R39 AZ213	12-002	10/11/2010	480	7/23/2010	10/12/2010	7/23/2050
RC-H-0162	PSA-1/2	19074	CONT 303 R47 AZ309	15-046	4/19/2009	480	1/12/1986	9/8/1995	1/12/2026
RC-H-0163	PSA-1/4	36215	CONT 300 R46 AZ308	15-043	4/19/2009	480	1/12/1986	4/30/2006	1/12/2026
RC-H-0164	PSA-1/4	21350	CONT 303 R46 AZ308	15-045	4/19/2009	480	1/12/1986	4/30/2003	1/12/2026
RC-H-0167	PSA-1/4	14590	CONT 303 R40 AZ316	15-028	4/19/2009	480	1/12/1986	12/6/1989	1/12/2026
RC-H-0168	PSA-1/4	29905	CONT 303 R40 AZ316	15-026	10/5/2010	480	7/27/2010	10/9/2010	7/27/2050
RC-H-0200	PSA-10	5050	CONT 308 @ PZR	15-050	4/19/2009	480	1/12/1986	11/21/1989	1/12/2026
RC-H-0201	PSA-10	13331	CONT 308 @ PZR	15-047	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0202	PSA-10	14818	CONT 310 @ PZR	15-048	4/19/2009	480	1/12/1986	11/28/1989	1/12/2026
RC-H-0204	PSA-35	4862	CONT 302 @ PZR	15-029	4/19/2009	480	1/12/1986	12/5/1989	1/12/2026
RC-H-0205A	PSA-10	6385	CONT 305 @ PZR	15-018	4/19/2009	480	1/12/1986	10/29/1998	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0205B	PSA-10	6370	CONT 305 @ PZR	15-018	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0208	PSA-35	4580	CONT 297 @ PZR	15-022	4/19/2009	480	1/12/1986	4/6/1994	1/12/2026
RC-H-0210	PSA-10	6396	CONT 308 @ PZR	15-032	4/19/2009	480	3/1/2009	4/27/2009	3/1/2049
RC-H-0211	PSA-35	8582	CONT 308 @ PZR	15-037	11/19/2013	480	8/13/2013	11/19/2013	8/13/2053
RC-H-0212	PSA-10	6394	CONT 308 @ PZR	15-049	4/19/2009	480	3/16/2009	4/27/2009	3/16/2049
RC-H-0215	PSA-10	6534	CONT 308 @ PZR	15-017	4/19/2009	480	3/16/2009	4/27/2009	3/16/2049
RC-H-0216	PSA-10	6524	CONT 308 @ PZR	15-024	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0217	PSA-10	6377	CONT 308 @ PZR	15-016	4/19/2009	480	3/16/2009	4/27/2009	3/16/2049
RC-H-0220	PSA-1	16085	CONT 309 @ PZR	15-074	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0221	PSA-3	12535	CONT 309 @ PZR	15-076	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0222	PSA-3	17538	CONT 309 @ PZR	15-004	4/19/2009	480	1/12/1986	11/14/1989	1/12/2026
RC-H-0224	PSA-3	12550	CONT 310 @ PZR	15-009	4/21/2009	480	1/12/1986	9/7/1995	1/12/2026
RC-H-0225	PSA-3	10662	CONT 310 @ PZR	15-007	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0228	PSA-3	12513	CONT 307 @ PZR	15-062	4/19/2009	480	1/12/1986	11/9/1989	1/12/2026
RC-H-0229	PSA-3	12511	CONT 307 @ PZR	15-063	4/19/2009	480	3/17/2009	4/24/2009	3/17/2049
RC-H-0230A	PSA-3	10667	CONT 307 @ PZR	15-060	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0230B	PSA-3	17443	CONT 307 @ PZR	15-060	5/15/2012	480	3/5/2012	5/13/2012	3/5/2052
RC-H-0231	PSA-3	17571	CONT 307 @ PZR	15-064	11/23/2013	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0232	PSA-1	12602	CONT 307 @ PZR	15-065	4/19/2009	480	1/12/1986	9/27/2001	1/12/2026
RC-H-0234	PSA-1	8793	CONT 306 @ PZR	15-068	4/19/2009	480	1/12/1986	12/8/1989	1/12/2026
RC-H-0235	PSA-1	11053	CONT 307 @ PZR	15-072	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0236	PSA-3	12591	CONT 307 @ PZR	15-071	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0238	PSA-3	12600	CONT 307 @ PZR	15-006	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0239	PSA-3	12508	CONT 307 @ PZR	15-005	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0241	PSA-3	17552	CONT 308 @ PZR	15-069	4/19/2009	480	1/12/1986	9/8/1995	1/12/2026
RC-H-0244	PSA-1	7729	CONT 308 @ PZR	15-066	4/19/2009	480	1/12/1986	10/27/1989	1/12/2026
RC-H-0246A	PSA-1	24804	CONT 307 @ PZR	15-061	4/19/2009	480	1/12/1986	3/28/1991	1/12/2026
RC-H-0246B	PSA-1	24919	CONT 307 @ PZR	15-061	4/19/2009	480	1/12/1986	3/28/1991	1/12/2026
RC-H-0250A	PSA-10	5997	CONT 283 R29 AZ302	14-002	10/20/2010	480	7/23/2010	10/21/2010	7/23/2050
RC-H-0250B	PSA-10	14823	CONT 283 R29 AZ302	14-002	10/20/2010	480	7/23/2010	10/21/2010	7/23/2050
RC-H-0251A	PSA-10	14694	CONT 283 R29 AZ302	14-004	4/25/2009	480	1/12/1986	1/18/2008	1/12/2026
RC-H-0251B	PSA-10	17068	CONT 283 R29 AZ302	14-004	4/25/2009	480	1/12/1986	4/30/2000	1/12/2026
RC-H-0252A	PSA-35	12519	CONT 298 R29 AZ302	15-003	4/19/2009	480	1/12/1986	10/18/1992	1/12/2026
RC-H-0252B	PSA-35	11621	CONT 298 R29 AZ302	15-003	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0256	PSA-3	16418	CONT 307 @ PZR	15-073	4/19/2009	480	1/12/1986	4/10/1997	1/12/2026
RC-H-0258A	PSA-3	12549	CONT 306 @ PZR	15-001	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0258B	PSA-3	12482	CONT 306 @ PZR	15-001	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0279	PSA-1/2	8763	RAB 255 29FZ S1 W7	21-018	9/19/2013	480	1/12/1986	10/25/1989	1/12/2026
RC-H-0280	PSA-1/2	8765	RAB 254 29FZ N3 W8	21-019	4/26/2006	480	1/12/1986	11/23/1989	1/12/2026
RC-H-0370A	PSA-3	18648	CONT 251 R62 AZ342	05-029	11/14/2013	480	1/12/1986	9/26/2001	1/12/2026
RC-H-0370B	PSA-3	17528	CONT 251 R62 AZ342	05-029	11/14/2013	480	1/12/1986	9/26/2001	1/12/2026
RC-H-0372	PSA-1	14398	CONT 247 R51 AZ315	05-037	11/13/2014	480	3/1/2012	5/6/2012	3/1/2052
RC-H-0401	PSA-1	25162	CONT 250 R62 AZ215	04-064	11/16/2013	480	8/21/2013	11/19/2013	8/21/2053
RC-H-0405	PSA-1/4	41666	RAB 256 27FZ N13 W7	21-020	9/28/2010	480	7/27/2010	9/28/2010	7/27/2050
RC-H-0406	PSA-1/4	37063	RAB 256 27FZ N13 W7	21-021	4/23/2009	480	1/12/1986	4/9/1997	1/12/2026
RC-H-0407A	PSA-1/4	35124	RAB 253 29FZ S5 W7	21-022	4/26/2006	480	1/12/1986	9/30/1992	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0407B	PSA-1/4	8208	RAB 253 29FZ S5 W7	21-023	4/26/2006	480	1/12/1986	9/30/1992	1/12/2026
RC-H-0409	PSA-1/2	6115	RAB 255 29FZ S8 W7	21-024	11/11/2013	480	1/12/1986	4/6/1994	1/12/2026
RC-H-0410	PSA-1/2	8794	RAB 254 29FZ S8 W7	21-025	11/11/2013	480	1/12/1986	12/8/1989	1/12/2026
RC-H-0412A	PSA-10	6236	CONT 253 R24 AZ335	06-005	5/3/2012	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0412B	PSA-10	14697	CONT 253 R24 AZ335	06-005	5/3/2012	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0444	PSA-3	18627	CONT 262 R38 AZ314	14-007	5/5/2012	480	3/7/2012	5/5/2012	3/7/2052
RC-H-0447	PSA-3	16420	CONT 301 @ PZR	15-057	11/20/2013	480	8/22/2013	11/20/2013	8/22/2053
RC-H-0449A	PSA-3	12570	CONT 232 R62 AZ201	01-046	5/17/2012	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0449B	PSA-3	17564	CONT 232 R62 AZ201	01-046	11/20/2013	480	8/19/2013	11/20/2013	8/19/2053
RC-H-0457	PSA-1/4	14296	CONT 253 R56 AZ294	05-058	11/16/2013	480	7/27/2010	10/14/2010	7/27/2050
RC-H-0459	PSA-1/4	9530	CONT 253 R56 AZ286	05-059	11/13/2013	480	3/16/2009	4/19/2009	3/16/2049
RC-H-0461	PSA-3	17503	CONT 253 R56 AZ278	05-065	11/12/2013	480	3/17/2009	4/19/2009	3/17/2049
RC-H-0463	PSA-1/2	18967	CONT 253 R61 AZ275	05-067	11/12/2013	480	2/20/2009	4/19/2009	2/20/2049
RC-H-0468	PSA-3	17548	CONT 253 R56 AZ262	04-029	10/9/2007	480	1/12/1986	11/30/1989	1/12/2026
RC-H-0472	PSA-3	12545	CONT 253 R56 AZ254	04-037	10/9/2007	480	1/12/1986	11/28/1989	1/12/2026
RC-H-0474	PSA-1	8764	CONT 253 R56 AZ249	04-041	10/9/2007	480	1/12/1986	4/8/1991	1/12/2026
RC-H-0480	PSA-1	8784	CONT 251 R58 AZ219	04-057	10/10/2007	480	1/12/1986	11/19/1989	1/12/2026
RC-H-0481	PSA-1	8807	CONT 252 R58 AZ218	04-058	10/10/2007	480	1/12/1986	3/30/1994	1/12/2026
RC-H-0486A	PSA-1	8855	CONT 307 @ PZR	15-067	4/19/2009	480	1/12/1986	4/30/2006	1/12/2026
RC-H-0486B	PSA-1	24907	CONT 307 @ PZR	15-067	4/19/2009	480	1/12/1986	11/30/1989	1/12/2026
RC-H-0487	PSA-1	16110	CONT 310 @ PZR	15-059	4/19/2009	480	1/12/1986	11/10/1989	1/12/2026
RC-H-0491	PSA-10	9147	CONT 306 @ PZR	15-053	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0492A	PSA-35	8581	CONT 302 @ PZR	15-020	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0492B	PSA-35	8587	CONT 302 @ PZR	15-020	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0493A	PSA-35	8593	CONT 280 @ PZR	15-013	4/19/2009	480	1/12/1986	9/9/1995	1/12/2026
RC-H-0493B	PSA-35	8594	CONT 280 @ PZR	15-013	4/19/2009	480	1/12/1986	9/9/1995	1/12/2026
RC-H-0494	PSA-10	16297	CONT 306 @ PZR	15-054	4/19/2009	480	1/12/1986	4/8/1991	1/12/2026
RC-H-0495A	PSA-3	12500	CONT 280 R25 AZ310	14-003	4/25/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0495B	PSA-3	11924	CONT 280 R25 AZ310	14-003	4/25/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0496A	PSA-35	8589	CONT 280 R29 AZ320	14-005	4/25/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0496B	PSA-35	8571	CONT 280 R29 AZ320	14-005	4/25/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0498A	PSA-3	17558	CONT 251 R56 AZ206	04-068	11/11/2013	480	8/22/2013	11/12/2013	8/22/2053
RC-H-0498B	PSA-3	18645	CONT 251 R56 AZ206	04-068	11/11/2013	480	8/20/2013	11/12/2013	8/20/2053
RC-H-0499	PSA-3	11922	CONT 251 R56 AZ206	04-070	11/11/2013	480	8/22/2013	11/12/2013	8/22/2053
RC-H-0500	PSA-3	16365	CONT 252 R60 AZ204	04-067	11/11/2013	480	8/19/2013	11/12/2013	8/19/2053
RC-H-0501	PSA-3	18607	CONT 251 R59 AZ204	04-071	11/13/2013	480	2/20/2009	5/3/2009	2/20/2049
RC-H-0512	PSA-1/4	36202	CONT 315 R31 AZ310	15-008	4/19/2009	480	1/12/1986	11/9/1989	1/12/2026
RC-H-0528	PSA-1/4	37089	CONT 265 R41 AZ298	14-014	4/25/2009	480	1/12/1986	11/3/1998	1/12/2026
RC-H-0529	PSA-1/4	36212	CONT 264 R41 AZ299	14-013	10/5/2010	480	7/27/2010	10/9/2010	7/27/2050
RC-H-0532A	PSA-3	12484	CONT 231 R62 AZ340	01-014	5/10/2012	480	7/23/2010	10/14/2010	7/23/2050
RC-H-0532B	PSA-3	18597	CONT 231 R62 AZ340	01-014	5/10/2012	480	7/23/2010	10/14/2010	7/23/2050
RC-H-0537	PSA-1	7806	RAB 246 34G S4 E2	22-020	10/9/2007	480	1/12/1986	11/14/1989	1/12/2026
RC-H-0538	PSA-1	11050	RAB 245 34G S3 E2	22-021	11/14/2013	480	8/26/2013	11/15/2013	8/26/2053
RC-H-0602	PSA-1/2	18501	CONT 257 R62 AZ258	04-039	10/6/2007	480	1/12/1986	11/23/1989	1/12/2026
RC-H-0609	PSA-1/4	14774	CONT 250 R63 AZ255	04-040	10/9/2007	480	1/12/1986	11/15/1989	1/12/2026
RC-H-0640	PSA-3	12514	CONT 267 R40 AZ313	14-010	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0650	PSA-1	24928	CONT 236 R62 AZ204	04-066	11/11/2013	480	8/19/2013	11/12/2013	8/19/2053
RC-H-0653	PSA-1/4	37023	CONT 253 R56 AZ240	04-042	10/9/2007	480	1/12/1986	11/23/1989	1/12/2026
RC-H-0657	PSA-10	6392	CONT 261 R40 AZ219	12-032	4/21/2009	480	1/12/1986	11/24/1989	1/12/2026
RC-H-0658	PSA-10	6252	CONT 261 R40 AZ218	12-031	11/23/2013	480	8/14/2013	11/25/2013	8/14/2053
RC-H-0659A	PSA-3	17453	CONT 273 R40 AZ218	12-004	4/21/2009	480	2/20/2009	4/29/2009	2/20/2049
RC-H-0659B	PSA-3	18642	CONT 273 R40 AZ218	12-004	4/21/2009	480	3/17/2009	4/29/2009	3/17/2049
RC-H-0664	PSA-10	9177	CONT 306 R38 AZ309	15-014	4/19/2009	480	4/9/2009	4/27/2009	4/9/2049
RC-H-0665	PSA-10	14691	CONT 306 R38 AZ309	15-011	4/21/2009	480	1/12/1986	4/6/1994	1/12/2026
RC-H-0666	PSA-10	6366	CONT 306 R42 AZ327	15-052	10/5/2010	480	7/23/2010	10/9/2010	7/23/2050
RC-H-0667	PSA-10	6364	CONT 305 @ PZR	15-051	4/19/2009	480	1/12/1986	12/7/1989	1/12/2026
RC-H-0670	PSA-1/2	6562	RAB 254 29FZ S7 W7	21-026	3/14/2012	480	3/1/2012	3/14/2012	3/1/2052
RC-H-0677	PSA-1/4	37022	CONT 256 R63 AZ259	04-038	11/18/2013	480	3/16/2009	4/27/2009	3/16/2049
RC-H-0737	PSA-1/4	37067	CONT 293 R26 AZ294	15-077	10/5/2010	480	7/27/2010	10/9/2010	7/27/2050
RC-H-0778	PSA-1	11003	CONT 230 R62 AZ202	01-043	5/16/2012	480	1/12/1986	10/30/2004	1/12/2026
RC-H-0779A	PSA-35	12523	CONT 277 R40 AZ218	12-035	10/11/2010	480	7/15/2010	10/14/2010	7/15/2050
RC-H-0779B	PSA-35	12580	CONT 277 R40 AZ218	12-035	10/11/2010	480	7/15/2010	10/14/2010	7/15/2050
RC-H-0781A	PSA-10	6371	CONT 306 @ PZR	15-075	5/1/2012	480	3/2/2012	4/28/2012	3/2/2052
RC-H-0781B	PSA-10	13566	CONT 306 @ PZR	15-075	5/1/2012	480	3/1/2012	4/29/2012	3/1/2052
RC-H-0782A	PSA-3	12483	CONT 306 @ PZR	15-070	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0782B	PSA-3	11931	CONT 306 @ PZR	15-070	4/19/2009	480	1/12/1986	5/2/1987	1/12/2026
RC-H-0783	PSA-10	5150	CONT 290 @ PZR	15-002	4/19/2009	480	1/12/1986	12/9/1989	1/12/2026
RC-H-0893	PSA-1/4	14878	CONT 297 @ PZR	15-012	4/19/2009	480	1/12/1986	4/6/1994	1/12/2026
RC-H-0896	PSA-1/4	15205	CONT 300 @ PZR	15-015	4/19/2009	480	1/12/1986	12/2/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RC-H-0897	PSA-1/4	37046	CONT 297 @ PZR	15-036	4/19/2009	480	1/12/1986	10/30/2004	1/12/2026
RC-H-0900	PSA-1/4	6999	CONT 300 @ PZR	15-039	4/19/2009	480	1/12/1986	11/28/1989	1/12/2026
RC-H-0901A	PSA-1/4	14681	CONT 299 @ PZR	15-021	5/1/2012	480	2/29/2012	4/28/2012	2/29/2052
RC-H-0901B	PSA-1/4	35002	CONT 299 @ PZR	15-021	5/1/2012	480	2/27/2012	4/28/2012	2/27/2052
RC-H-0904	PSA-1/4	15218	CONT 299 @ PZR	15-025	4/19/2009	480	3/16/2009	4/24/2009	3/16/2049
RC-H-0920	PSA-1	8775	CONT 239 R34 AZ126	09-023	4/29/2009	480	1/12/1986	9/27/2001	1/12/2026
RC-H-0921	PSA-35	5359	CONT 308 @ PZR	15-031	4/19/2009	480	1/12/1986	11/27/1989	1/12/2026
RC-H-0922	PSA-35	5394	CONT 309 @ PZR	15-040	4/19/2009	480	1/12/1986	12/9/1989	1/12/2026
RC-H-0923	PSA-35	4579	CONT 308 @ PZR	15-027	4/19/2009	480	1/12/1986	12/9/1989	1/12/2026
RH-H-0011	PSA-3	17495	RAB 245 38E N7 W7	22-022	8/20/2013	480	1/12/1986	11/15/1989	1/12/2026
RH-H-0033	PSA-10	6526	RAB 205 20FZ W6	19S-020	10/24/2013	480	1/12/1986	4/1/1991	1/12/2026
RH-H-0038	PSA-3	17555	RAB 211 22E N8 W5	19S-021	11/1/2013	480	1/12/1986	12/8/1989	1/12/2026
RH-H-0039	PSA-1/4	37326	RAB 213 16FX N7	19S-022	10/24/2013	480	1/12/1986	4/1/1991	1/12/2026
RH-H-0042	PSA-3	15643	RAB 210 32FX N8 E11	19N-023	9/13/2013	480	1/12/1986	2/24/2009	1/12/2026
RH-H-0063	PSA-3	16367	RAB 208 34FZ S2 E7	19N-024	10/18/2013	480	1/12/1986	11/23/1989	1/12/2026
RH-H-0067	PSA-3	12575	RAB 240 18E S2 E9	25-013	9/25/2013	480	2/20/2009	2/24/2009	2/20/2049
RH-H-0072	PSA-3	12580	RAB 248 20FZ S5 E4	21-039	9/26/2013	480	1/12/1986	12/2/1989	1/12/2026
RH-H-0083	PSA-1/2	8762	RAB 243 16FZ N3 E5	22-024	5/5/2012	480	7/26/2010	9/24/2010	7/26/2050
RH-H-0086	PSA-1/2	7316	RAB 238 16FZ N3 E1	22-025	9/23/2013	480	1/12/1986	8/21/1988	1/12/2026
RH-H-0107	PSA-1	14389	RAB 239 41FWY S3 W7	27-010	9/19/2013	480	1/12/1986	11/29/1989	1/12/2026
RH-H-0113A	PSA-35	4182	CONT 251 R19 AZ182	09-030	4/29/2009	480	1/12/1986	5/1/2003	1/12/2026
RH-H-0113B	PSA-35	12584	CONT 251 R19 AZ182	09-030	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
RH-H-0116	PSA-35	4581	CONT 247 R19 AZ245	08-011	4/27/2009	480	1/12/1986	11/26/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RH-H-0118	PSA-35	4864	CONT 234 R19 AZ245	01-031	5/7/2012	480	3/12/2012	5/7/2012	3/12/2052
RH-H-0119	PSA-10	5950	CONT 234 R18 AZ238	01-032	5/10/2012	480	2/29/2012	5/7/2012	2/29/2052
RH-H-0141A	PSA-10	9138	CONT 251 R19 AZ356	07-044	4/26/2009	480	1/12/1986	10/30/2007	1/12/2026
RH-H-0141B	PSA-10	5876	CONT 251 R19 AZ356	07-044	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
RH-H-0142A	PSA-10	4784	CONT 251 R19 AZ356	07-045	4/26/2009	480	1/12/1986	10/15/1992	1/12/2026
RH-H-0142B	PSA-10	4692	CONT 251 R19 AZ356	07-045	4/26/2009	480	1/12/1986	4/3/1991	1/12/2026
RH-H-0144A	PSA-10	6244	CONT 246 R19 AZ295	06-017	5/5/2012	480	7/23/2010	10/11/2010	7/23/2050
RH-H-0144B	PSA-10	6203	CONT 246 R19 AZ295	06-017	5/5/2012	480	7/23/2010	10/11/2010	7/23/2050
RH-H-0145	PSA-35	12515	CONT 247 R19 AZ295	06-016	10/5/2010	480	7/15/2010	10/11/2010	7/15/2050
RH-H-0146	PSA-35	12575	CONT 234 R19 AZ305	01-018	10/5/2007	480	1/12/1986	12/8/1989	1/12/2026
RH-H-0155	PSA-1/4	37279	RAB 239 38FZ N1 E3	22-026	4/26/2006	480	1/12/1986	11/5/1989	1/12/2026
RH-H-0158A	PSA-3	18600	RAB 222 36E S2 W4	20-016	8/13/2013	480	3/1/2012	3/18/2012	3/1/2052
RH-H-0158B	PSA-3	41153	RAB 222 36E S2 W4	20-017	8/13/2013	480	3/1/2012	3/18/2012	3/1/2052
RH-H-0165A	PSA-1	11076	RAB 248 18D N2 W12	25-014	9/25/2013	480	1/12/1986	9/20/2001	1/12/2026
RH-H-0165B	PSA-1	14289	RAB 248 18D N2 W12	25-015	9/25/2013	480	1/12/1986	9/20/2001	1/12/2026
RH-H-0166	PSA-3	17460	RAB 240 18D N4 W14	25-016	9/25/2013	480	1/12/1986	12/6/1989	1/12/2026
RH-H-0167	PSA-3	16362	RAB 240 18E N4 E3	25-017	9/25/2013	480	1/12/1986	11/8/1989	1/12/2026
RH-H-0168	PSA-10	14855	RAB 241 20E S1 W2	22-027	9/25/2013	480	1/12/1986	8/21/1988	1/12/2026
RH-H-0169A	PSA-1	15623	RAB 231 20E S3 W4	20-018	11/26/2013	480	7/23/2010	9/20/2010	7/23/2050
RH-H-0169B	PSA-1	8733	RAB 231 20E S3 W4	20-019	11/26/2013	480	3/1/2012	3/6/2012	3/1/2052
RH-H-0176A	PSA-3	12574	RAB 248 22FZ S2 E4	21-040	9/26/2013	480	1/12/1986	10/22/1998	1/12/2026
RH-H-0176B	PSA-3	12595	RAB 248 22FZ S2 E4	21-041	9/26/2013	480	1/12/1986	5/2/1987	1/12/2026
RH-H-0177	PSA-1	24825	RAB 238 16E N3 W1	22-030	9/23/2013	480	1/12/1986	11/6/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RH-H-0178	PSA-1	14368	RAB 238 16E N3 W1	22-031	9/23/2013	480	1/12/1986	4/1/1991	1/12/2026
RH-H-0179	PSA-1	11048	RAB 238 16FZ N3 W2	22-032	9/23/2013	480	1/12/1986	12/1/1989	1/12/2026
RH-H-0188	PSA-3	16435	RAB 208 20E S2 W8	19S-025	10/24/2013	480	1/12/1986	10/22/1989	1/12/2026
RH-H-0189A	PSA-3	16453	RAB 207 34E N3 W4	19N-026	10/18/2013	480	1/12/1986	4/1/1991	1/12/2026
RH-H-0189B	PSA-3	18639	RAB 207 34E N3 W4	19N-027	10/18/2013	480	1/12/1986	4/1/1991	1/12/2026
RH-H-0206A	PSA-1/4	14790	RAB 243 20E N2 W2	22-033	9/19/2013	480	1/12/1986	4/3/1991	1/12/2026
RH-H-0206B	PSA-1/4	7004	RAB 243 20E N2 W2	22-034	9/19/2013	480	1/12/1986	4/30/2000	1/12/2026
RH-H-0265A	PSA-1	24725	RAB 245 39FZ S4 E9	22-035	9/19/2013	480	1/12/1986	4/9/1991	1/12/2026
RH-H-0265B	PSA-1	8813	RAB 245 39FZ S4 E9	22-036	9/19/2013	480	1/12/1986	4/9/1991	1/12/2026
RH-H-0275	PSA-10	6375	RAB 240 36E N2 E10	25-018	10/14/2013	480	1/12/1986	8/26/1988	1/12/2026
RH-H-0290	PSA-1	11043	RAB 199 34FV E8	19N-028	9/19/2013	480	1/12/1986	10/21/1989	1/12/2026
RH-H-0295	PSA-1/2	6108	RAB 238 38FZ S10 E3	22-037	8/13/2013	480	1/12/1986	12/6/1989	1/12/2026
RH-H-0297A	PSA-1	16065	RAB 240 36D N2 W14	25-019	9/19/2013	480	7/23/2010	9/24/2010	7/23/2050
RH-H-0297B	PSA-1	15670	RAB 240 36D N2 W14	25-020	9/19/2013	480	7/23/2010	9/24/2010	7/23/2050
RH-H-0300	PSA-1	15654	RAB 240 34E N2 E9	25-021	9/19/2013	480	1/12/1986	11/15/1989	1/12/2026
RH-H-0301	PSA-3	12546	RAB 238 34E N1 E4	25-022	9/19/2013	480	1/12/1986	11/23/1989	1/12/2026
RH-H-0302	PSA-3	12475	RAB 240 34E N1 E3	25-023	9/19/2013	480	1/12/1986	3/22/1994	1/12/2026
RH-H-0303	PSA-3	12506	RAB 248 36D W12	25-024	9/19/2013	480	1/12/1986	12/1/1989	1/12/2026
RH-H-0307	PSA-1/4	12127	RAB 198 34FV N1 E8	19N-029	11/23/2013	480	1/12/1986	10/22/1989	1/12/2026
RH-H-0314A	PSA-1	14278	RAB 245 39FZ S4 W5	22-038	4/26/2006	480	1/12/1986	10/4/1992	1/12/2026
RH-H-0314B	PSA-1	8796	RAB 245 39FZ S4 W5	22-039	4/26/2006	480	1/12/1986	10/4/1992	1/12/2026
RH-H-0316A	PSA-3	16410	RAB 245 39FV S4 E7	22-040	8/13/2013	480	1/12/1986	10/21/1989	1/12/2026
RH-H-0316B	PSA-3	16415	RAB 245 39FV S4 E7	22-041	8/13/2013	480	1/12/1986	5/2/2003	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
RH-H-0350	PSA-1	16078	RAB 213 38FZ S7 W3	19N-030	11/6/2013	480	1/12/1986	8/20/1988	1/12/2026
RH-H-0353	PSA-1	15590	RAB 243 20FZ S7 E6	22-042	9/25/2013	480	1/12/1986	12/1/1989	1/12/2026
RH-H-0364	PSA-35	12577	CONT 250 R19 AZ179	09-029	4/29/2009	480	1/12/1986	4/5/1991	1/12/2026
SF-H-0470A	PSA-3	12562	FHB 238 41MX N5 W7	33-001	10/24/2013	480	1/12/1986	10/30/2004	1/12/2026
SF-H-0470B	PSA-3	17451	FHB 238 41MX N5 W7	33-002	10/24/2013	480	1/12/1986	3/27/2003	1/12/2026
SF-H-0880	PSA-1	16076	FHB 245 31N N3 E7	33-003	10/14/2013	480	7/23/2010	9/14/2010	7/23/2050
SF-H-0881	PSA-1	8791	FHB 248 31N N7 E7	33-004	10/14/2013	480	1/12/1986	8/16/1988	1/12/2026
SF-H-0891	PSA-3	17534	FHB 251 31N S11 E8	33-005	10/18/2013	480	1/12/1986	10/26/1989	1/12/2026
SF-H-0911	PSA-10	6428	FHB 251 31N S13 E6	33-006	10/24/2013	480	1/12/1986	8/30/1988	1/12/2026
SF-H-0918A	PSA-10	4676	FHB 247 31N S8 E4	33-007	10/24/2013	480	3/1/2009	3/31/2009	3/1/2049
SF-H-0918B	PSA-10	5087	FHB 247 31N S8 E4	33-008	10/24/2013	480	3/16/2009	3/31/2009	3/16/2049
SF-H-1199	PSA-1/2	6574	RAB 241 27L S12 E5	32-001	9/10/2013	480	1/12/1986	8/29/1988	1/12/2026
SF-H-1200A	PSA-1	11002	RAB 248 27L S11 E5	32-002	10/14/2013	480	1/12/1986	8/1/1988	1/12/2026
SF-H-1200B	PSA-1	15619	RAB 248 27L S11 E5	32-003	10/14/2013	480	1/12/1986	8/1/1988	1/12/2026
SF-H-1305	PSA-3	16388	FHB 247 42N S4 E15	33-009	10/24/2013	480	1/12/1986	8/16/1988	1/12/2026
SG-H-0305B	PM-14	305	S/G B	17-012	10/28/2010	480	1/12/1986	11/1/1998	1/12/2026
SG-H-0306A	PM-14	309	S/G A	16-012	11/26/2013	480	1/12/1986	11/26/2013	1/12/2026
SG-H-0307C	PM-14	307	S/G C	18-009	10/28/2010	480	1/12/1986	5/2/1987	1/12/2026
SG-H-0308A	PM-14	328	S/G A	16-013	11/26/2013	480	1/12/1986	11/26/2013	1/12/2026
SG-H-0309B	PM-14	303	S/G B	17-013	10/28/2010	480	1/12/1986	5/2/1987	1/12/2026
SG-H-0310C	PM-14	310	S/G C	18-010	10/6/2010	480	1/12/1986	5/2/1987	1/12/2026
SG-H-0312B	PM-14	312	S/G B	17-014	5/19/2012	480	1/12/1986	5/2/1987	1/12/2026
SG-H-0313B	PM-14	313	S/G B	17-015	5/19/2012	480	1/12/1986	11/1/1998	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SG-H-0314C	PM-14	314	S/G C	18-011	10/28/2010	480	1/12/1986	11/1/1998	1/12/2026
SG-H-0323A	PM-14	311	S/G A	16-014	11/26/2013	480	1/12/1986	5/2/1987	1/12/2026
SG-H-0325C	PM-14	325	S/G C	18-012	10/6/2010	480	1/12/1986	5/2/1987	1/12/2026
SG-H-0326A	PM-14	326	S/G A	16-015	11/26/2013	480	1/12/1986	4/11/1997	1/12/2026
SI-H-0001	PSA-10	6227	RAB 251 38G S9 W3	21-027	9/19/2013	480	1/12/1986	11/26/1989	1/12/2026
SI-H-0005	PSA-3	18609	RAB 251 38G S7 E6	21-028	8/13/2013	480	1/12/1986	11/19/1989	1/12/2026
SI-H-0009	PSA-10	8164	RAB 249 38FZ S5 W4	21-046	3/28/2006	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0011A	PSA-3	18622	RAB 248 34FZ N7 E2	21-042	4/16/2009	480	1/12/1986	3/3/2009	1/12/2026
SI-H-0011B	PSA-3	17507	RAB 248 34FZ N7 E2	21-043	5/15/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0020	PSA-3	12492	RAB 251 29FZ S3 W5	21-029	4/26/2006	480	1/12/1986	12/7/1989	1/12/2026
SI-H-0021	PSA-3	16441	RAB 251 29FZ N1 W6	21-030	9/26/2013	480	1/12/1986	8/26/1988	1/12/2026
SI-H-0023	PSA-10	17074	RAB 249 29FZ N3 W6	21-044	9/26/2013	480	1/12/1986	5/2/2003	1/12/2026
SI-H-0026	PSA-10	6389	RAB 249 29FZ N8 W2	21-045	9/19/2013	480	1/12/1986	3/26/1994	1/12/2026
SI-H-0028	PSA-35	12522	RAB 193 22FZ S5 W5	19S-031	9/26/2013	480	1/12/1986	10/25/1989	1/12/2026
SI-H-0030A	PSA-10	4397	RAB 193 22FX S7 W9	19S-032	9/27/2013	480	1/12/1986	10/30/2007	1/12/2026
SI-H-0030B	PSA-10	16302	RAB 193 22FX S7 W9	19S-032	9/27/2013	480	1/12/1986	10/22/1998	1/12/2026
SI-H-0032	PSA-10	8676	RAB 193 20FX N10 W3	19S-034	9/27/2013	480	1/12/1986	10/21/1989	1/12/2026
SI-H-0058	PSA-3	12520	RAB 243 29FZ N3 E10	22-048	9/25/2013	480	1/12/1986	4/6/1997	1/12/2026
SI-H-0060A	PSA-3	17524	RAB 248 29E N2 W5	22-049	9/25/2013	480	1/12/1986	10/5/1992	1/12/2026
SI-H-0060B	PSA-3	16359	RAB 248 29E N2 W5	22-050	9/25/2013	480	1/12/1986	10/5/1992	1/12/2026
SI-H-0062	PSA-1	10962	RAB 245 22FV S7 W5	22-051	9/26/2013	480	1/12/1986	11/30/1989	1/12/2026
SI-H-0096	PSA-1	41699	RAB 243 34FV S2 E6	22-052	3/26/2012	480	3/6/2012	3/26/2012	3/6/2052
SI-H-0114A	PSA-10	6040	CONT 250 R47 AZ014	02-017	4/24/2012	480	1/12/1986	9/26/2001	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0114B	PSA-10	6532	CONT 250 R47 AZ014	02-017	4/24/2012	480	1/12/1986	9/26/2001	1/12/2026
SI-H-0116	PSA-10	9134	CONT 250 R47 AZ006	02-016	4/24/2012	480	1/12/1986	11/24/1989	1/12/2026
SI-H-0118	PSA-35	12524	CONT 250 R46 AZ350	05-018	11/16/2013	480	3/13/2012	5/6/2012	3/13/2052
SI-H-0119A	PSA-35	41851	CONT 253 R39 AZ347	07-037	5/8/2012	480	3/12/2012	5/5/2012	3/12/2052
SI-H-0119B	PSA-35	4865	CONT 253 R39 AZ347	07-037	5/8/2012	480	3/12/2012	5/6/2012	3/12/2052
SI-H-0122	PSA-35	4578	CONT 258 R33 AZ350	07-039	4/26/2009	480	1/12/1986	12/9/1989	1/12/2026
SI-H-0131A	PSA-10	6897	CONT 249 R48 AZ246	04-020	10/9/2007	480	1/12/1986	12/7/1989	1/12/2026
SI-H-0131B	PSA-10	6568	CONT 249 R48 AZ246	04-020	10/9/2007	480	1/12/1986	12/7/1989	1/12/2026
SI-H-0133A	PSA-35	8585	CONT 249 R48 AZ231	04-016	10/10/2007	480	1/12/1986	4/14/1997	1/12/2026
SI-H-0133B	PSA-35	8578	CONT 249 R48 AZ231	04-016	10/10/2007	480	1/12/1986	4/14/1997	1/12/2026
SI-H-0141A	PSA-3	17462	CONT 258 R27 AZ123	09-020	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0141B	PSA-3	17510	CONT 258 R27 AZ123	09-020	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0142A	PSA-3	17466	CONT 258 R31 AZ130	09-024	5/2/2009	480	1/12/1986	4/8/1991	1/12/2026
SI-H-0142B	PSA-3	17494	CONT 258 R31 AZ130	09-024	5/2/2009	480	1/12/1986	4/8/1991	1/12/2026
SI-H-0144A	PSA-3	12567	CONT 258 R39 AZ130	09-010	4/29/2012	480	3/6/2012	5/5/2012	3/6/2052
SI-H-0144B	PSA-3	18596	CONT 258 R39 AZ130	09-010	4/29/2012	480	3/8/2012	5/5/2012	3/8/2052
SI-H-0146	PSA-3	12592	CONT 257 R47 AZ130	03-006	4/25/2012	480	1/12/1986	12/5/1989	1/12/2026
SI-H-0148	PSA-3	12543	CONT 253 R47 AZ130	03-003	4/25/2012	480	1/12/1986	5/4/2003	1/12/2026
SI-H-0149A	PSA-10	4954	CONT 253 R47 AZ130	03-005	4/25/2012	480	1/12/1986	5/4/2003	1/12/2026
SI-H-0149B	PSA-10	17063	CONT 253 R47 AZ130	03-005	4/25/2012	480	1/12/1986	11/4/2004	1/12/2026
SI-H-0151	PSA-3	17491	CONT 253 R47 AZ142	03-019	4/26/2012	480	1/12/1986	12/7/1989	1/12/2026
SI-H-0156	PSA-3	12478	CONT 253 R47 AZ195	04-004	11/16/2013	480	2/20/2009	4/29/2009	2/20/2049
SI-H-0162A	PSA-3	10664	CONT 247 R47 AZ345	05-020	11/20/2013	480	8/21/2013	11/21/2013	8/21/2053

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0162B	PSA-3	18603	CONT 247 R47 AZ345	05-020	11/20/2013	480	8/21/2013	11/21/2013	8/21/2053
SI-H-0164A	PSA-1	25202	CONT 247 R48 AZ352	05-017	11/20/2013	480	1/12/1986	12/9/1989	1/12/2026
SI-H-0164B	PSA-1	25203	CONT 247 R48 AZ352	05-017	11/20/2013	480	1/12/1986	12/9/1989	1/12/2026
SI-H-0167A	PSA-3	17533	CONT 247 R47 AZ022	02-020	4/24/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0167B	PSA-3	16402	CONT 247 R47 AZ022	02-020	4/24/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0168A	PSA-1	8730	CONT 247 R47 AZ033	02-007	4/22/2012	480	1/12/1986	4/6/1994	1/12/2026
SI-H-0168B	PSA-1	8762	CONT 247 R47 AZ033	02-007	4/22/2012	480	1/12/1986	4/6/1994	1/12/2026
SI-H-0169A	PSA-3	11930	CONT 248 R47 AZ029	02-008	4/22/2012	480	7/23/2010	10/5/2010	7/23/2050
SI-H-0169B	PSA-3	17517	CONT 248 R47 AZ029	02-008	4/22/2012	480	7/23/2010	10/5/2010	7/23/2050
SI-H-0171A	PSA-3	16372	CONT 250 R39 AZ037	07-004	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0171B	PSA-3	12537	CONT 250 R39 AZ037	07-004	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0172A	PSA-3	17581	CONT 250 R39 AZ037	07-005	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0172B	PSA-3	18620	CONT 250 R39 AZ037	07-005	4/26/2009	480	1/12/1986	4/26/2009	1/12/2026
SI-H-0174A	PSA-3	17540	CONT 256 R36 AZ039	07-002	4/26/2009	480	1/12/1986	12/1/1989	1/12/2026
SI-H-0174B	PSA-3	17576	CONT 256 R36 AZ039	07-002	4/26/2009	480	1/12/1986	12/1/1989	1/12/2026
SI-H-0175	PSA-3	17463	CONT 255 R36 AZ039	07-003	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0177A	PSA-3	17483	CONT 257 R31 AZ042	07-001	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0177B	PSA-3	17481	CONT 257 R31 AZ042	07-001	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0180	PSA-3	17509	CONT 247 R47 AZ324	05-032	11/16/2013	480	3/7/2012	5/1/2012	3/7/2052
SI-H-0181A	PSA-3	12480	CONT 247 R47 AZ317	05-039	11/16/2013	480	3/7/2012	5/1/2012	3/7/2052
SI-H-0181B	PSA-3	18618	CONT 247 R47 AZ317	05-039	11/16/2013	480	3/6/2012	5/1/2012	3/6/2052
SI-H-0185A	PSA-3	11955	CONT 247 R47 AZ292	05-057	11/16/2013	480	3/7/2012	5/2/2012	3/7/2052
SI-H-0185B	PSA-3	20385	CONT 247 R47 AZ292	05-057	11/16/2013	480	3/8/2012	5/2/2012	3/8/2052

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0187A	PSA-10	14846	CONT 255 R40 AZ282	08-018	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0187B	PSA-10	5947	CONT 255 R40 AZ282	08-018	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0188	PSA-3	17489	CONT 256 R40 AZ282	08-019	4/27/2009	480	1/12/1986	11/23/1989	1/12/2026
SI-H-0190	PSA-3	16376	CONT 257 R34 AZ282	08-017	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0192	PSA-10	17076	CONT 257 R20 AZ275	08-014	4/27/2009	480	1/12/1986	11/8/1989	1/12/2026
SI-H-0198	PSA-1/2	18438	CONT 248 R53 AZ305	05-048	11/16/2013	480	2/20/2009	10/5/2010	2/20/2049
SI-H-0199	PSA-1/2	8320	CONT 247 R53 AZ306	05-047	11/16/2013	480	2/29/2012	4/30/2012	2/29/2052
SI-H-0201A	PSA-3	18640	CONT 247 R48 AZ296	05-051	11/16/2013	480	3/8/2012	5/1/2012	3/8/2052
SI-H-0201B	PSA-3	12588	CONT 247 R48 AZ296	05-051	11/16/2013	480	3/6/2012	5/1/2012	3/6/2052
SI-H-0203A	PSA-1/2	8795	CONT 247 R48 AZ290	05-004	11/16/2013	480	3/2/2012	5/1/2012	3/2/2052
SI-H-0203B	PSA-1/2	8808	CONT 247 R48 AZ290	05-004	11/16/2013	480	3/1/2012	5/1/2012	3/1/2052
SI-H-0222	PSA-1	11001	CONT 247 R48 AZ018	02-012	4/24/2012	480	1/12/1986	9/25/2001	1/12/2026
SI-H-0224A	PSA-1	15583	CONT 247 R48 AZ023	02-023	11/21/2013	480	8/21/2013	11/21/2013	8/21/2053
SI-H-0224B	PSA-1	11027	CONT 247 R48 AZ023	02-023	11/21/2013	480	8/20/2013	11/21/2013	8/20/2053
SI-H-0230A	PSA-1	11068	CONT 258 R35 AZ005	07-023	4/26/2009	480	1/12/1986	4/5/1991	1/12/2026
SI-H-0230B	PSA-1	11056	CONT 258 R35 AZ005	07-023	4/26/2009	480	1/12/1986	4/5/1991	1/12/2026
SI-H-0233	PSA-3	18594	CONT 256 R47 AZ005	02-013	4/24/2012	480	1/12/1986	11/24/1989	1/12/2026
SI-H-0235	PSA-3	16368	CONT 254 R47 AZ359	05-014	11/20/2013	480	3/6/2012	5/3/2012	3/6/2052
SI-H-0236A	PSA-10	6429	CONT 253 R47 AZ355	05-015	4/24/2012	480	7/23/2010	10/14/2010	7/23/2050
SI-H-0236B	PSA-10	5763	CONT 253 R47 AZ355	05-015	4/24/2012	480	1/12/1986	10/14/2010	1/12/2026
SI-H-0237	PSA-1	15641	CONT 253 R47 AZ345	05-021	11/16/2013	480	1/12/1986	5/2/2003	1/12/2026
SI-H-0238	PSA-3	12531	CONT 253 R47 AZ345	05-024	11/16/2013	480	1/12/1986	12/2/1989	1/12/2026
SI-H-0251A	PSA-3	18649	CONT 253 R47 AZ239	04-019	10/10/2007	480	1/12/1986	12/6/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0251B	PSA-3	17586	CONT 253 R47 AZ239	04-019	10/10/2007	480	1/12/1986	12/6/1989	1/12/2026
SI-H-0254A	PSA-10	6523	CONT 253 R47 AZ248	04-021	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0254B	PSA-10	6442	CONT 253 R47 AZ248	04-021	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0256	PSA-10	5090	CONT 253 R48 AZ257	04-022	10/9/2007	480	1/12/1986	12/5/1989	1/12/2026
SI-H-0266A	PSA-3	12555	CONT 255 R47 AZ214	04-010	11/21/2013	480	8/22/2013	11/25/2013	8/22/2053
SI-H-0266B	PSA-3	12568	CONT 255 R47 AZ214	04-010	11/21/2013	480	8/21/2013	11/25/2013	8/21/2053
SI-H-0267A	PSA-3	12603	CONT 260 R47 AZ230	04-015	10/10/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0267B	PSA-3	12614	CONT 260 R47 AZ230	04-015	10/10/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0268	PSA-10	16346	CONT 255 R47 AZ229	04-014	10/10/2007	480	1/12/1986	4/1/1991	1/12/2026
SI-H-0270	PSA-10	16303	CONT 250 R49 AZ135	03-040	4/25/2012	480	1/12/1986	11/21/1989	1/12/2026
SI-H-0272A	PSA-10	6376	CONT 250 R49 AZ135	03-041	4/26/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0272B	PSA-10	13326	CONT 250 R49 AZ135	03-041	4/26/2012	480	1/12/1986	4/23/2000	1/12/2026
SI-H-0273A	PSA-10	5334	CONT 250 R47 AZ130	03-004	4/25/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0273B	PSA-10	13602	CONT 250 R47 AZ130	03-004	4/25/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0275	PSA-35	12582	CONT 250 R48 AZ121	03-011	4/25/2012	480	1/12/1986	12/2/1989	1/12/2026
SI-H-0279	PSA-35	12517	CONT 258 R39 AZ110	09-019	4/29/2009	480	1/12/1986	3/29/1991	1/12/2026
SI-H-0310	PSA-1	9869	CONT 239 R48 AZ161	03-036	5/9/2012	480	1/12/1986	9/6/1995	1/12/2026
SI-H-0312	PSA-1	8843	CONT 244 R48 AZ161	03-034	5/9/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0318	PSA-1	5143	CONT 246 R41 AZ161	09-037	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0321	PSA-1	15600	CONT 246 R35 AZ161	09-033	10/14/2010	480	7/23/2010	10/16/2010	7/23/2050
SI-H-0324	PSA-1	8799	CONT 246 R22 AZ161	09-031	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0326	PSA-1	14323	CONT 252 R21 AZ160	09-028	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0334	PSA-1	24883	RAB 230 32E N2 W15	20-004	4/27/2006	480	1/12/1986	4/28/2006	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0344	PSA-3	17496	RAB 243 22FV S7 W4	22-053	9/26/2013	480	1/12/1986	11/26/1989	1/12/2026
SI-H-0347	PSA-1	8740	CONT 230 R48 AZ229	01-040	5/16/2012	480	1/12/1986	10/27/1989	1/12/2026
SI-H-0349	PSA-1	8839	CONT 230 R47 AZ227	01-041	5/16/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0357	PSA-1	8727	CONT 231 R33 AZ223	01-039	5/16/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0359	PSA-1	11096	CONT 232 R29 AZ231	01-035	5/14/2012	480	4/6/2009	4/25/2009	4/6/2049
SI-H-0361	PSA-1	9866	CONT 232 R21 AZ224	01-034	5/14/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0373	PSA-3	16358	CONT 251 R17 AZ205	08-005	5/7/2012	480	3/8/2012	5/7/2012	3/8/2052
SI-H-0375	PSA-1/2	8792	CONT 254 R17 AZ215	08-004	5/7/2012	480	3/1/2012	5/7/2012	3/1/2052
SI-H-0376	PSA-1/2	18978	CONT 254 R17 AZ215	08-006	5/5/2012	480	3/1/2012	5/5/2012	3/1/2052
SI-H-0381	PSA-1	8726	RAB 248 32E N2 W2	22-054	9/25/2013	480	1/12/1986	11/16/1989	1/12/2026
SI-H-0385	PSA-3	12503	RAB 243 32E N7 W3	22-055	3/26/2012	480	3/1/2012	3/26/2012	3/1/2052
SI-H-0387	PSA-1/2	7319	RAB 231 32E N7 W2	20-005	9/26/2013	480	1/12/1986	4/3/1991	1/12/2026
SI-H-0389	PSA-1	8823	RAB 227 32E N7 W9	20-006	8/13/2013	480	1/12/1986	10/19/1989	1/12/2026
SI-H-0403	PSA-1/2	17336	RAB 227 25FZ N5 E12	20-007	9/13/2013	480	1/12/1986	10/1/1992	1/12/2026
SI-H-0407	PSA-1	25186	RAB 227 32E N7 W5	20-008	10/1/2013	480	1/12/1986	9/6/1995	1/12/2026
SI-H-0408	PSA-3	17477	RAB 217 32E N6 W5	20-009	9/10/2013	480	1/12/1986	8/12/1988	1/12/2026
SI-H-0419	PSA-3	7538	RAB 249 20E N3 W5	22-056	10/1/2013	480	1/12/1986	12/8/1989	1/12/2026
SI-H-0428	PSA-1	8757	CONT 258 R33 AZ005	07-049	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0430	PSA-1	14401	CONT 258 R41 AZ006	07-018	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0437	PSA-1	11029	CONT 234 R41 AZ005	01-005	5/10/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0440	PSA-1	15665	CONT 232 R43 AZ012	01-006	5/10/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0442	PSA-1	15655	CONT 232 R46 AZ009	01-010	5/10/2012	480	4/6/2009	4/24/2009	4/6/2049
SI-H-0444	PSA-1	15661	CONT 232 R46 AZ005	01-011	5/10/2012	480	1/12/1986	4/3/1991	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0455A	PSA-1	14247	CONT 232 R46 AZ315	01-017	5/10/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0455B	PSA-1	14371	CONT 232 R46 AZ315	01-017	5/10/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0470	PSA-3	16408	CONT 230 R46 AZ242	01-036	5/16/2012	480	1/12/1986	10/27/1989	1/12/2026
SI-H-0473	PSA-1	9876	CONT 230 R47 AZ235	01-037	11/20/2013	480	8/27/2013	11/21/2013	8/27/2053
SI-H-0475	PSA-1	8805	CONT 232 R46 AZ233	01-038	5/16/2012	480	1/12/1986	12/3/1989	1/12/2026
SI-H-0484A	PSA-1	11066	CONT 232 R46 AZ188	01-047	5/17/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0484B	PSA-1	24845	CONT 232 R46 AZ188	01-047	5/17/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0496	PSA-1	24901	CONT 232 R46 AZ131	01-001	5/10/2012	480	1/12/1986	12/7/1989	1/12/2026
SI-H-0498	PSA-1	24854	CONT 233 R41 AZ130	01-003	5/10/2012	480	1/12/1986	11/30/1989	1/12/2026
SI-H-0499	PSA-1	10994	CONT 234 R41 AZ130	01-004	5/10/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0500	PSA-1	11075	CONT 241 R41 AZ130	09-008	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0501	PSA-1	14365	CONT 241 R41 AZ130	09-007	4/29/2009	480	1/12/1986	11/28/1989	1/12/2026
SI-H-0502	PSA-1	9864	CONT 248 R41 AZ130	09-006	4/29/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0503	PSA-1	10924	CONT 252 R41 AZ130	09-005	4/19/2009	480	1/12/1986	10/30/2004	1/12/2026
SI-H-0504	PSA-1	5153	CONT 258 R41 AZ130	09-004	5/12/2012	480	2/28/2012	5/11/2012	2/28/2052
SI-H-0506	PSA-1	8735	CONT 258 R41 AZ130	09-003	5/5/2012	480	3/1/2012	5/5/2012	3/1/2052
SI-H-0507	PSA-1	14279	CONT 258 R35 AZ130	09-026	4/29/2009	480	1/12/1986	9/9/1995	1/12/2026
SI-H-0508	PSA-1	9224	CONT 258 R34 AZ130	09-025	4/29/2009	480	1/12/1986	10/27/1989	1/12/2026
SI-H-0511	PSA-1	8780	CONT 230 R51 AZ280	01-028	5/14/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0512	PSA-1	11108	CONT 230 R52 AZ285	01-026	5/14/2012	480	1/12/1986	11/8/1989	1/12/2026
SI-H-0513	PSA-1	9872	CONT 230 R51 AZ287	01-025	5/14/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0515	PSA-1/4	35138	CONT 230 R48 AZ292	01-022	5/17/2012	480	1/12/1986	5/21/2012	1/12/2026
SI-H-0516	PSA-1	10941	CONT 230 R50 AZ292	01-023	5/14/2012	480	1/12/1986	4/30/2006	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0519A	PSA-1/4	14658	CONT 233 R48 AZ301	01-021	5/14/2012	480	1/12/1986	4/9/1991	1/12/2026
SI-H-0519B	PSA-1/4	14869	CONT 233 R48 AZ301	01-021	5/14/2012	480	1/12/1986	4/9/1991	1/12/2026
SI-H-0520	PSA-1	14393	CONT 233 R48 AZ303	01-020	5/14/2012	480	1/12/1986	4/30/2000	1/12/2026
SI-H-0534A	PSA-1/4	37165	CONT 233 R47 AZ008	01-019	11/20/2013	480	1/12/1986	11/21/2013	1/12/2026
SI-H-0534B	PSA-1/4	37035	CONT 233 R47 AZ008	01-019	11/20/2013	480	8/14/2013	11/21/2013	8/14/2053
SI-H-0540	PSA-1	10973	CONT 234 R48 AZ029	01-007	5/2/2012	480	3/5/2012	4/30/2012	3/5/2052
SI-H-0541	PSA-1/4	35874	CONT 234 R48 AZ027	01-008	5/2/2012	480	3/7/2012	4/30/2012	3/7/2052
SI-H-0543	PSA-1/4	21341	CONT 233 R48 AZ288	01-024	5/14/2012	480	1/12/1986	11/8/1989	1/12/2026
SI-H-0544	PSA-1/2	7272	CONT 233 R48 AZ284	01-027	5/14/2012	480	1/12/1986	12/7/1989	1/12/2026
SI-H-0545	PSA-1	14302	CONT 243 R48 AZ284	05-075	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0546	PSA-1	25161	CONT 243 R48 AZ284	05-074	11/16/2013	480	1/12/1986	10/30/2007	1/12/2026
SI-H-0554	PSA-1/4	15054	CONT 257 R47 AZ165	03-033	5/9/2012	480	1/12/1986	11/20/1989	1/12/2026
SI-H-0560A	PSA-3	17484	CONT 257 R47 AZ135	03-039	4/26/2012	480	4/9/2009	4/18/2009	4/9/2049
SI-H-0560B	PSA-3	12612	CONT 257 R47 AZ135	03-039	4/26/2012	480	3/17/2009	4/18/2009	3/17/2049
SI-H-0562A	PSA-1	24921	CONT 257 R47 AZ131	03-044	5/13/2012	480	1/12/1986	11/19/1989	1/12/2026
SI-H-0562B	PSA-1	16091	CONT 257 R47 AZ131	03-044	5/13/2012	480	1/12/1986	11/19/1989	1/12/2026
SI-H-0565	PSA-1	25173	CONT 257 R47 AZ198	04-005	10/10/2007	480	1/12/1986	11/30/1989	1/12/2026
SI-H-0588	PSA-1	15586	CONT 257 R46 AZ318	05-013	11/16/2013	480	3/2/2012	5/1/2012	3/2/2052
SI-H-0591	PSA-1/4	35161	CONT 257 R47 AZ329	05-031	11/16/2013	480	3/5/2012	5/7/2012	3/5/2052
SI-H-0593	PSA-3	9927	CONT 257 R47 AZ340	05-027	11/14/2013	480	1/12/1986	11/8/1989	1/12/2026
SI-H-0595	PSA-1/4	37060	CONT 257 R47 AZ350	05-019	11/16/2013	480	3/7/2012	5/9/2012	3/7/2052
SI-H-0597A	PSA-1/4	17983	CONT 257 R47 AZ355	05-016	11/16/2013	480	1/12/1986	12/8/1989	1/12/2026
SI-H-0597B	PSA-1/4	19612	CONT 257 R47 AZ355	05-016	11/16/2013	480	1/12/1986	12/8/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0599A	PSA-1/2	7287	CONT 257 R47 AZ005	02-014	5/6/2012	480	1/12/1986	11/9/1989	1/12/2026
SI-H-0599B	PSA-1/2	8787	CONT 257 R47 AZ005	02-014	4/24/2012	480	1/12/1986	10/30/2001	1/12/2026
SI-H-0629	PSA-1/2	7291	CONT 246 R47 AZ168	03-028	5/9/2012	480	1/12/1986	9/6/1995	1/12/2026
SI-H-0669	PSA-1/2	8801	CONT 264 R56 AZ255	10-029	4/25/2009	480	1/12/1986	11/19/1989	1/12/2026
SI-H-0822	PSA-1	9200	CONT 254 R63 AZ261	04-036	10/9/2007	480	1/12/1986	10/31/1989	1/12/2026
SI-H-0823	PSA-1	7789	CONT 254 R62 AZ261	04-032	11/21/2013	480	8/20/2013	11/21/2013	8/20/2053
SI-H-0825	PSA-1/2	8791	CONT 255 R62 AZ263	04-035	4/26/2009	480	1/12/1986	12/2/1989	1/12/2026
SI-H-0827A	PSA-1	8824	CONT 255 R62 AZ263	04-033	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0827B	PSA-1	8769	CONT 255 R62 AZ263	04-033	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0828	PSA-1/4	37273	CONT 256 R62 AZ230	04-054	10/10/2007	480	1/12/1986	4/30/2006	1/12/2026
SI-H-0829	PSA-1/4	35097	CONT 257 R62 AZ230	04-053	10/10/2007	480	1/12/1986	11/25/1989	1/12/2026
SI-H-0869	PSA-1	14322	CONT 239 R48 AZ035	02-004	4/22/2012	480	1/12/1986	12/8/1989	1/12/2026
SI-H-0870	PSA-1	8812	CONT 245 R48 AZ035	02-005	5/12/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0871	PSA-1	8795	CONT 245 R48 AZ035	02-006	4/22/2012	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0910A	PSA-1	14273	CONT 232 R51 AZ179	01-048	5/17/2012	480	1/12/1986	12/6/1989	1/12/2026
SI-H-0910B	PSA-1	9213	CONT 232 R51 AZ179	01-048	5/17/2012	480	1/12/1986	12/6/1989	1/12/2026
SI-H-0940	PSA-1	11041	CONT 254 R47 AZ200	04-006	10/10/2007	480	1/12/1986	11/30/1989	1/12/2026
SI-H-0942	PSA-1	14361	CONT 254 R47 AZ210	04-009	10/10/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0959	PSA-3	16386	CONT 258 R30 AZ005	07-048	4/26/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0960A	PSA-10	6256	CONT 258 R29 AZ005	07-046	4/26/2009	480	1/12/1986	8/11/1988	1/12/2026
SI-H-0960B	PSA-10	6258	CONT 258 R29 AZ005	07-046	4/26/2009	480	1/12/1986	8/11/1988	1/12/2026
SI-H-0961A	PSA-3	12534	CONT 258 R30 AZ005	07-047	4/26/2009	480	1/12/1986	12/8/1989	1/12/2026
SI-H-0961B	PSA-3	17529	CONT 258 R30 AZ005	07-047	4/26/2009	480	1/12/1986	12/8/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-0981	PSA-10	6259	CONT 253 R47 AZ219	04-012	11/16/2013	480	3/1/2012	5/1/2012	3/1/2052
SI-H-0982A	PSA-3	12527	CONT 260 R29 AZ210	08-037	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0982B	PSA-3	17515	CONT 260 R29 AZ210	08-037	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0983	PSA-3	11932	CONT 260 R28 AZ210	08-036	4/27/2009	480	1/12/1986	11/19/1989	1/12/2026
SI-H-0989A	PSA-10	7131	CONT 258 R37 AZ227	08-032	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-0989B	PSA-10	14825	CONT 258 R37 AZ227	08-032	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1023A	PSA-10	5773	CONT 257 R24 AZ282	08-015	4/27/2009	480	1/12/1986	9/11/1995	1/12/2026
SI-H-1023B	PSA-10	5933	CONT 257 R24 AZ282	08-015	4/27/2009	480	1/12/1986	9/11/1995	1/12/2026
SI-H-1025A	PSA-3	12538	CONT 247 R47 AZ288	05-083	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1025B	PSA-3	12598	CONT 247 R47 AZ288	05-083	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1032	PSA-3	12504	CONT 253 R47 AZ207	04-007	10/10/2007	480	1/12/1986	4/1/1991	1/12/2026
SI-H-1035	PSA-10	16301	CONT 251 R54 AZ212	04-065	10/10/2007	480	1/12/1986	11/8/1989	1/12/2026
SI-H-1036	PSA-3	16404	CONT 260 R28 AZ210	08-038	4/27/2009	480	1/12/1986	11/8/1989	1/12/2026
SI-H-1056	PSA-1	11024	CONT 233 R48 AZ022	01-009	5/7/2012	480	2/28/2012	5/7/2012	2/28/2052
SI-H-1068	PSA-1/4	34984	CONT 252 R63 AZ231	04-052	10/10/2007	480	1/12/1986	11/22/1989	1/12/2026
SI-H-1076	PSA-1	14387	RAB 245 22FV S7 W6	22-057	10/1/2013	480	1/12/1986	4/8/1991	1/12/2026
SI-H-1079	PSA-3	12608	RAB 243 22FZ S10 W1	22-058	9/14/2010	480	7/23/2010	9/14/2010	7/23/2050
SI-H-1092	PSA-3	18643	CONT 232 R46 AZ128	01-002	11/28/2013	480	8/21/2013	11/28/2013	8/21/2053
SI-H-1104	PSA-3	12593	RAB 248 22E W5	22-059	8/27/2013	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1130	PSA-1	14394	RAB 256 32FV N3 W4	21-031	4/26/2006	480	1/12/1986	3/26/1991	1/12/2026
SI-H-1135A	PSA-1/2	7300	RAB 255 32FV N5 W2	21-032	4/12/2006	480	1/12/1986	4/30/2006	1/12/2026
SI-H-1135B	PSA-1/2	8780	RAB 255 32FV N5 W2	21-033	9/28/2007	480	1/12/1986	10/30/2007	1/12/2026
SI-H-1160A	PSA-1	7750	CONT 257 R47 AZ156	03-025	4/29/2013	480	1/12/1986	4/30/2003	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-1160B	PSA-1	10932	CONT 257 R47 AZ156	03-025	4/26/2012	480	1/12/1986	12/7/1989	1/12/2026
SI-H-1161A	PSA-1/4	37083	CONT 257 R47 AZ145	03-021	4/26/2012	480	1/12/1986	4/30/2003	1/12/2026
SI-H-1161B	PSA-1/4	18116	CONT 257 R47 AZ145	03-021	4/26/2012	480	1/12/1986	4/30/2003	1/12/2026
SI-H-1182	PSA-10	6521	RAB 251 29FZ S7 W5	21-034	3/29/2012	480	3/1/2012	3/29/2012	3/1/2052
SI-H-1184	PSA-3	12577	RAB 252 36G S2 W3	21-035	5/15/2012	480	1/12/1986	12/8/1989	1/12/2026
SI-H-1185	PSA-10	13348	RAB 252 36G W3	21-036	4/26/2006	480	1/12/1986	11/23/1989	1/12/2026
SI-H-1191	PSA-3	16361	CONT 251 R54 AZ260	04-030	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1192	PSA-10	4379	CONT 251 R53 AZ258	04-028	10/9/2007	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1193	PSA-10	16149	CONT 254 R41 AZ213	08-039	4/27/2009	480	1/12/1986	12/9/1989	1/12/2026
SI-H-1199	PSA-10	6226	CONT 253 R47 AZ158	03-026	5/11/2012	480	1/12/1986	4/27/2009	1/12/2026
SI-H-1236	PSA-1/2	7283	CONT 245 R47 AZ168	03-027	5/9/2012	480	1/12/1986	8/11/1988	1/12/2026
SI-H-1237	PSA-1	11110	CONT 245 R52 AZ319	05-041	11/16/2013	480	4/6/2009	4/21/2009	4/6/2049
SI-H-1257	PSA-1/4	35137	CONT 251 R46 AZ127	03-008	4/25/2012	480	1/12/1986	12/7/1989	1/12/2026
SI-H-1258	PSA-1/4	37112	CONT 255 R46 AZ128	03-007	5/13/2012	480	1/12/1986	9/6/1995	1/12/2026
SI-H-1269	PSA-1/4	6564	CONT 264 R47 AZ125	10-006	4/18/2009	480	1/12/1986	4/21/2000	1/12/2026
SI-H-1275	PSA-1/4	35079	CONT 251 R46 AZ122	03-012	5/13/2012	480	3/16/2009	4/27/2009	3/16/2049
SI-H-1277	PSA-1/2	8756	CONT 251 R47 AZ122	03-013	4/25/2012	480	1/12/1986	3/30/1994	1/12/2026
SI-H-1282	PSA-10	6387	RAB 193 34FX S10 W4	19N-035	9/19/2013	480	1/12/1986	4/1/1991	1/12/2026
SI-H-1304	PSA-1/4	9517	CONT 249 R46 AZ288	05-082	11/16/2013	480	1/12/1986	12/2/1989	1/12/2026
SI-H-1346A	PSA-1/4	28565	CONT 245 R61 AZ341	05-028	11/16/2013	480	1/12/1986	12/6/1989	1/12/2026
SI-H-1346B	PSA-1/4	15048	CONT 245 R61 AZ341	05-028	11/16/2013	480	1/12/1986	12/6/1989	1/12/2026
SI-H-1428	PSA-1/4	15206	CONT 245 R46 AZ287	05-080	11/16/2013	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1449	PSA-1/4	35141	CONT 256 R57 AZ261	04-034	10/1/2007	480	1/12/1986	10/30/2007	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SI-H-1519	PSA-1	15610	CONT 254 R63 AZ267	04-031	10/9/2007	480	1/12/1986	4/30/2006	1/12/2026
SI-H-1571	PSA-10	6337	RAB 193 34FZ S9 W2	19N-036	9/19/2013	480	1/12/1986	10/5/1992	1/12/2026
SI-H-1574A	PSA-10	6528	CONT 256 R40 AZ228	08-033	4/27/2009	480	1/12/1986	10/30/2007	1/12/2026
SI-H-1574B	PSA-10	9174	CONT 256 R40 AZ228	08-033	4/27/2009	480	1/12/1986	5/2/1987	1/12/2026
SI-H-1576	PSA-1/4	14795	CONT 255 R61 AZ230	04-051	10/10/2007	480	1/12/1986	11/26/1989	1/12/2026
SP-H-0323	PSA-1/2	6567	CONT 265 R36 AZ156	13-027	4/21/2009	480	1/12/1986	9/11/1995	1/12/2026
SP-H-0324A	PSA-1/4	37196	CONT 265 R36 AZ157	13-024	4/21/2009	480	1/12/1986	3/29/1991	1/12/2026
SP-H-0324B	PSA-1/4	21332	CONT 265 R36 AZ157	13-024	4/21/2009	480	1/12/1986	11/30/1989	1/12/2026
SP-H-0328	PSA-1/2	6578	CONT 263 R40 AZ150	13-003	4/21/2009	480	1/12/1986	11/9/1989	1/12/2026
SP-H-0330A	PSA-1/4	35121	CONT 265 R39 AZ152	13-031	10/7/2010	480	1/12/1986	10/11/2010	1/12/2026
SP-H-0330B	PSA-1/4	17952	CONT 265 R39 AZ152	13-031	10/7/2010	480	7/27/2010	10/11/2010	7/27/2050
SP-H-0346	PSA-1/2	6563	CONT 257 R46 AZ140	03-017	4/26/2012	480	1/12/1986	10/14/1992	1/12/2026
SP-H-0347A	PSA-1/4	15006	CONT 257 R46 AZ146	03-023	4/26/2012	480	1/12/1986	5/2/1987	1/12/2026
SP-H-0347B	PSA-1/4	14596	CONT 257 R46 AZ146	03-023	4/26/2012	480	1/12/1986	5/2/1987	1/12/2026
SP-H-0351	PSA-1/4	35156	CONT 257 R41 AZ150	09-040	4/29/2009	480	1/12/1986	8/25/1988	1/12/2026
SP-H-0353A	PSA-1/4	17996	CONT 257 R41 AZ150	09-042	11/15/2013	480	8/14/2013	11/15/2013	8/14/2053
SP-H-0353B	PSA-1/4	37173	CONT 257 R41 AZ150	09-042	11/19/2013	480	1/12/1986	11/20/2013	1/12/2026
SP-H-0386A	PSA-1/4	35877	CONT 263 R39 AZ033	07-006	11/20/2013	480	8/14/2013	11/20/2013	8/14/2053
SP-H-0386B	PSA-1/4	35129	CONT 263 R39 AZ033	07-006	10/6/2010	480	1/12/1986	11/19/1989	1/12/2026
SP-H-0394	PSA-1/4	35145	CONT 263 R47 AZ030	10-007	10/13/2007	480	1/12/1986	4/21/2000	1/12/2026
SP-H-0399	PSA-1/4	14848	CONT 257 R41 AZ030	07-010	4/21/2009	480	3/16/2009	4/26/2009	3/16/2049
SP-H-0403	PSA-1/4	35681	CONT 258 R46 AZ026	01-010	4/22/2012	480	1/12/1986	11/8/1989	1/12/2026
SP-H-0862	PSA-1/4	14873	CONT 257 R42 AZ270	08-027	4/27/2009	480	1/12/1986	11/20/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SP-H-0886	PSA-1/4	36197	CONT 255 R23 AZ155	09-032	4/29/2009	480	1/12/1986	11/23/1989	1/12/2026
SW-H-0217	PSA-10	6011	CONT 233 R57 AZ358	01-013	5/10/2012	480	1/12/1986	11/8/1989	1/12/2026
SW-H-0220	PSA-3	12496	CONT 233 R61 AZ346	01-012	5/10/2012	480	3/17/2009	4/30/2006	3/17/2049
SW-H-0222	PSA-3	17518	CONT 233 R61 AZ331	01-015	5/10/2012	480	1/12/1986	12/7/1989	1/12/2026
SW-H-0611A	PSA-3	17499	RAB 230 20FV S2	20-010	9/13/2013	480	1/12/1986	3/26/1991	1/12/2026
SW-H-0611B	PSA-3	17537	RAB 230 20FV S2	20-011	9/13/2013	480	1/12/1986	3/26/1991	1/12/2026
SW-H-0629	PSA-10	6378	RAB 230 34FV N2	20-012	9/13/2013	480	1/12/1986	4/10/1997	1/12/2026
SW-H-1264	PSA-3	18617	RAB 246 28B N10 W17	24-050	11/23/2013	480	1/12/1986	4/5/1991	1/12/2026
SW-H-1293	PSA-3	12584	RAB 248 39C S11 W3	24-051	11/16/2013	480	8/21/2013	11/17/2013	8/21/2053
SW-H-1467	PSA-1	11097	RAB 238 26D S9 W4	25-025	9/25/2013	480	1/12/1986	10/22/1989	1/12/2026
SW-H-1491	PSA-1	11107	RAB 238 27D W4	25-026	9/25/2013	480	1/12/1986	4/3/1991	1/12/2026
SW-H-1824	PSA-3	18628	RAB 228 22FV S4 W2	20-013	10/22/2013	480	1/12/1986	5/3/2003	1/12/2026
SW-H-1831	PSA-3	17556	RAB 226 32FV N5 W1	20-014	9/26/2013	480	1/12/1986	8/26/1988	1/12/2026
SW-H-1888	PSA-1	14321	CONT 250 R57 AZ130	03-001	4/25/2012	480	1/12/1986	11/15/1989	1/12/2026
SW-H-1897	PSA-1	15591	CONT 250 R61 AZ109	03-009	4/25/2012	480	1/12/1986	10/30/2004	1/12/2026
SW-H-1900	PSA-1	15612	CONT 252 R54 AZ110	03-010	4/25/2012	480	1/12/1986	10/14/1992	1/12/2026
SW-H-1921	PSA-10	5745	CONT 232 R61 AZ317	01-016	5/10/2012	480	1/12/1986	11/14/1989	1/12/2026
SW-H-2005	PSA-3	26487	CONT 248 R52 AZ050	01-003	4/22/2012	480	1/12/1986	10/27/1998	1/12/2026
SW-H-2022	PSA-3	17446	CONT 247 R48 AZ069	02-001	4/22/2012	480	1/12/1986	11/20/1989	1/12/2026
SW-H-2026A	PSA-1/2	17852	CONT 302 R49 AZ065	16-001	4/18/2009	480	1/12/1986	3/29/1991	1/12/2026
SW-H-2026B	PSA-1/2	18606	CONT 302 R49 AZ065	16-001	4/18/2009	480	1/12/1986	3/29/1991	1/12/2026
SW-H-2033	PSA-3	17445	CONT 300 R46 AZ044	16-002	4/24/2009	480	1/12/1986	4/5/1991	1/12/2026
SW-H-2073	PSA-3	17543	CONT 252 R49 AZ052	01-002	4/22/2012	480	1/12/1986	11/25/1989	1/12/2026

Safety Related/Safety Significant Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
SW-H-2352	PSA-1	11037	RAB 271 39C S7 E4	34-047	10/18/2013	480	1/12/1986	11/30/1989	1/12/2026
SW-H-2355	PSA-3	16356	RAB 271 39C S9 W5	34-048	9/10/2013	480	1/12/1986	10/24/1989	1/12/2026
SW-H-2597	PSA-35	5370	RAB 229 E73 S9 14E	38-003	10/18/2013	480	1/12/1986	8/23/1988	1/12/2026
SW-H-2643	PSA-1	10965	RAB 246 28B S7 W13	24-052	10/14/2013	480	1/12/1986	10/24/1989	1/12/2026
SW-H-2800A	PSA-1/2	18442	RAB 246 28B N8 W16	24-053	8/27/2013	480	1/12/1986	12/7/1989	1/12/2026
SW-H-2800B	PSA-1/2	17460	RAB 246 28B N8 W16	24-054	8/27/2013	480	1/12/1986	12/7/1989	1/12/2026
WG-H-1713	PSA-1/2	8785	WPB 243 6GX N16 W4	39-001	4/7/2006	480	1/12/1986	4/19/2000	1/12/2026
WG-H-1948	PSA-1	21772	RAB 257 27FZ N9 W6	21-037	3/21/2012	480	3/8/2012	3/21/2012	3/8/2052
WL-H-4680	PSA-1/2	7831	RAB 228 27FZ S7 W6	20-015	9/13/2013	480	1/12/1986	10/30/2001	1/12/2026
WL-H-4782	PSA-3	16413	CONT 239 R37 AZ127	09-022	10/3/2007	480	1/12/1986	10/30/2007	1/12/2026
WL-H-4783	PSA-3	12571	CONT 239 R38 AZ127	09-018	4/29/2009	480	1/12/1986	4/30/2006	1/12/2026
WL-H-4800	PSA-1	11044	CONT 230 R62 AZ272	01-030	5/14/2012	480	1/12/1986	4/30/2006	1/12/2026
WL-H-4801	PSA-1	16081	CONT 232 R62 AZ272	01-029	5/14/2012	480	1/12/1986	5/2/1987	1/12/2026

Non-Safety Related Snubber Listing

Mark No.	Model	Serial No.	Location	Map No.	Last Exam	Predicted Service Life			
						Expected Life	Date Rebuilt	Date Installed	Next Rebuild
MS-H-0223	PM-10	002-1546	TB 293 35AK W9	44-004	10/7/2010	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0242	PM-10	002-1547	TB 293 35AK E9	44-008	9/28/2007	480	1/12/1986	4/8/1994	1/12/2026
MS-H-0346	PM-5	001-1567	TB 295 35AK N7 W9	44-010	4/25/2006	480	1/12/1986	5/2/1987	1/12/2026
MS-H-0353	PM-5	002-1568	TB 295 35AK N8 E9	44-011	4/25/2006	480	1/12/1986	4/14/1997	1/12/2026
MS-H-0836	PSA-1	14282	TB 288 35AX S7 E5	44-012	10/18/2013	480	1/12/1986	12/1/1989	1/12/2026
MS-H-0848	PSA-1	15639	TB 299 30AF N7 E1	44-013	11/9/2013	480	1/12/1986	9/3/1995	1/12/2026
MS-H-0885	PSA-3	16425	TB 280 30AK N16 W17	43-005	10/24/2013	480	1/12/1986	9/1/1988	1/12/2026
MS-H-0886	PSA-3	7536	TB 280 30AK N16 W18	43-006	10/24/2013	480	1/12/1986	11/15/1989	1/12/2026