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**Attachment 1**

**1CAN050805**

**Snubber Test Plan for  
The Fourth Inspection Interval**

## **Snubber Test Plan for the Fourth Inspection Interval**

The Arkansas Nuclear One, Unit 1 (ANO-1) Snubber Test Plan for the fourth inspection interval has been prepared in accordance with the guidance provided in ASME OM Code-2002 Edition, Subsection ISTA-3110.

### INTRODUCTION

10 CFR 50.55a, "Codes and Standards," incorporates by reference the ASME Code for Operation and Maintenance of Nuclear Power Plants that includes rules for inservice examination and testing of snubbers at nuclear power plants. Paragraph 50.55a(f)(4)(ii) requires inservice testing to be conducted in accordance with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section 12 months before the start of the 120 month interval. For ANO-1, this would be the 2001 Edition and Addenda through 2003 of the ASME Code. Paragraph 50.55a(b)(3)(v) allows Subsection ISTD (Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants) to be used in place of the requirement for snubbers in ASME Section XI, IWF-5200(a) and (b) and IWF-5300(a) and (b), by making appropriate changes to their Technical Specifications (TS) or licensee-controlled documents. Inservice examinations must be performed using the VT-3 visual examination method described in ASME Section XI, Article IWA-2213.

The ANO-1 snubber inspection program is located in the ANO-1 Technical Requirements Manual (TRM) (Section 5.5.1). The TRM will be revised prior to the beginning of the fourth inspection interval relevant to the use of Subsection ISTD.

The third 10-year interval for inservice inspection of snubbers at ANO-1 ended May 31, 2007. Article IWA-2430 of ASME Section XI contains a provision to extend inservice inspection intervals by as much as one year. Therefore a one-year extension to May 31, 2008 has been applied under the rules of ASME Section XI. The fourth inspection interval for ANO-1 snubbers therefore will commence on June 1, 2008 and conclude on May 31, 2017.

### TEST PLAN

#### 1. Relationship with Technical Specifications

No conflicts between ASME OM ISTD requirements and the requirements of ANO-1 TS have been identified. ANO-1 intends to make changes to the ANO-1 TRM to reference the requirements of ASME OM ISTD in place of the current TRM requirements for visual examination, functional testing, and snubber seal replacement.

2. Quality Assurance

Subsection ISTA of the 2001 Edition including 2002 and 2003 Addenda provide General Requirements applicable to OM Code activities. These requirements shall be applied to snubber program activities. The 10 CFR Part 50, Appendix B Quality Assurance Program applicable to ANO-1 will be used in conjunction with the OM Code requirements.

Commitments contained in the ANO Quality Assurance Program that are more stringent than the quality assurance requirements referenced by ISTA-1500 shall govern OM Code activities.

Where the OM Code does not address the commitments contained in the Quality Assurance Program, the commitments will be applied to the OM Code activities.

3. ANO-1 Safety Class Piping

ANO-1 safety class piping was designed to ANSI B31.7 Class 1, 2, and 3 standards. In addition, certain systems important to safety that were designed to ANSI B31.1 are currently included within the scope of ASME Section XI and treated as Class 2 or 3. The snubbers classified as important to safety at ANO-1 are those attached directly to safety class 1, 2 or 3 piping (safety-related) and those attached to non safety-related portions of systems but included in the safety-related stress analysis (safety-significant).

4. Snubber Visual Examination

The snubbers listed in Table 1 are the snubbers at ANO-1 subject to periodic visual examination. The table includes all snubbers installed at ANO-1. The examination of snubbers will be performed by qualified examiners using ASME IWA-2213 VT-3 examination methods. The frequency of examination will be in accordance with the duration of an examination interval that meets ISTD.

5. Snubber Operational Readiness Testing (Functional Test)

The snubbers listed in Table 1 are the snubber population at ANO subject to operational readiness testing. The total population of snubbers installed at ANO-1 is included. Each refueling cycle a representative sample of snubbers will be tested using a random sample selection plan in accordance with ISTD-5260. In the event any unacceptable snubbers are found, additional snubbers will be selected for testing during the same refueling cycle to meet the requirements of ISTD-5320.

6. Service Life and Snubber Seal Replacement Program

A snubber service life program in accordance with ISTD-6000 has been established for ANO-1. This service life program includes the requirements of the snubber seal replacement program required by ISTD.

7. Proposed use of Code Case OMN-13

Code Case OMN-13 will be utilized in the snubber inspection this interval. OMN-13 allows an extension of the visual examination interval provided additional quality standards are met. Code Case OMN-13 is approved by the NRC in Regulatory Guide 1.192 (June 2003). A change to the ANO-1 TRM is required before OMN-13 can be implemented at ANO-1. This change will be made by the time the fourth inspection interval begins.

8. ANO-1 Snubbers Subject to Examination and Test

Table 1 identifies ANO-1 snubbers subject to test and examination. The table identifies each snubber by ANO examination number and piping support number (mark number); the snubber type, hydraulic (H) or mechanical (M) and model; classification regarding accessibility for examination during power operation; safety-related classification; and system classification.

**Table 1**  
**ANO-1 Snubbers Subject to Examination and Test**

<b>Exam No.</b>	<b>Mark No.</b>	<b>Type</b>	<b>Model</b>	<b>Accessible</b>	<b>Safety-Related</b>	<b>System</b>
1001	BS-79 (A)	H	LIS 3038RE1	No	Safety-Related	Reactor Building Spray
1003	CCA-13-H2	H	LIS 3018RC1	No	Safety-Related	Primary Sample
1004	CCA-13-H3	M	AD 71R	No	Safety-Related	Primary Sample
1005	CCA-13-H4	M	AD 71R	No	Safety-Related	Primary Sample
1006	CCB-1-H16	M	PSA 3	No	Safety-Related	Decay Heat Removal
1011	HS-3 (A)	M	PSA 35	No	Safety-Related	Main Steam
1012	HS-3 (B)	M	PSA 35	No	Safety-Related	Main Steam
1013	HS-4	M	PSA 35	No	Safety-Related	Main Steam
1014	HS-5	M	PSA 35	Yes	Safety-Related	Main Steam
1015	HS-6 (A)	M	PSA 35	Yes	Safety-Related	Main Steam
1016	HS-6 (B)	M	PSA 35	Yes	Safety-Related	Main Steam
1017	HS-7	M	PSA 35	Yes	Safety-Related	Main Steam
1018	HS-10	M	AD 503	No	Safety-Related	Pressurizer Relief Valve Discharge
1019	HS-15	M	PSA 35	No	Safety-Related	Main Steam
1020	HS-16 (A)	M	PSA 35	No	Safety-Related	Main Steam
1021	HS-16 (B)	M	PSA 35	No	Safety-Related	Main Steam
1022	HS-17 (A)	H	LIS 3082RC1	No	Safety-Related	Main Steam
1023	HS-17 (B)	H	LIS 3082RC1	No	Safety-Related	Main Steam
1024	HS-18	M	PSA 35	No	Safety-Related	Main Steam
1025	HS-19	M	PSA 35	No	Safety-Related	Main Steam
1026	HS-20	M	PSA 35	No	Safety-Related	Main Steam
1029	HS-68	M	AD 503	No	Safety-Related	Pressurizer Relief Valve Discharge
1030	HS-71	M	AD 503	No	Safety-Related	Pressurizer Relief Valve Discharge
1031	HS-72	M	PSA 3	No	Safety-Related	Pressurizer Relief Valve Discharge
1032	HS-89	M	AD 1601	No	Safety-Related	Pressurizer Relief Valve Discharge
1033	HS-91	M	AD 501	No	Safety-Related	Pressurizer Relief Valve Discharge
1034	HS-93	M	AD 73	No	Safety-Related	Pressurizer Relief Valve Discharge

**Table 1**  
**ANO-1 Snubbers Subject to Examination and Test (continued)**

<b>Exam No.</b>	<b>Mark No.</b>	<b>Type</b>	<b>Model</b>	<b>Accessible</b>	<b>Safety-Related</b>	<b>System</b>
1035	HS-100	H	LIS 305253RM1	No	Safety-Related	Pressurizer Surge Line
1039	1-MS-118-H4	M	AD 153	Yes	Safety-Related	Main Steam to EFW Turbine
1041	1-MS-118-H20(A)	M	AD 73	Yes	Safety-Related	Main Steam to EFW Turbine
1042	1-MS-118-H20(B)	M	AD 73	Yes	Safety-Related	Main Steam to EFW Turbine
1045	LW-223-H1 (A)	M	PSA 3	No	Safety-Related	RCS High Point Vent
1046	LW-223-H1 (B)	M	PSA 3	No	Safety-Related	RCS High Point Vent
1053	LW-223-H15	M	AD 71	No	Safety-Related	RCS High Point Vent
1065	LW-224-H7	M	AD 71R	No	Safety-Related	Pressurizer High Point Vent
1067	LW-224-H13 (A)	M	PSA 3	No	Safety-Related	Pressurizer High Point Vent
1068	LW-224-H13 (B)	M	PSA 3	No	Safety-Related	Pressurizer High Point Vent
1069	LW-224-H14	M	AD 71R	No	Safety-Related	Pressurizer High Point Vent
1074	LW-227-H10	M	AD 71	No	Safety-Related	RCS High Point Vent
1085	MU-210B	H	LIS 301856	No	Safety-Related	High Pressure Safety Injection
1086	RC-214-H1 (A)	H	LIS 3038RC1	No	Safety-Related	Reactor Vessel High Point Vent
1087	RC-214-H1 (B)	H	LIS 3038RC1	No	Safety-Related	Reactor Vessel High Point Vent
1100	HS-49	H	ITT 2.5x5	Yes	Safety-Related	Decay Heat Removal
1101	HS-50	H	ITT 2.5x5	Yes	Safety-Related	Decay Heat Removal
1102	HS-8	H	ITT 2.5x5	No	Safety-Related	Pressurizer Spray
1106	HS-53	H	ITT 1.5x5	No	Safety-Related	Pressurizer Spray
1111	HS-58	H	ITT 2.5x5	No	Safety-Related	Pressurizer Spray
1114	HS-61	H	ITT 1.5x5	No	Safety-Related	Pressurizer Spray
1115	HS-62	H	ITT 2.5x5	No	Safety-Related	Pressurizer Spray
1116	HS-63	H	ITT 1.5x5	No	Safety-Related	Pressurizer Spray
1117	HS-11	H	ITT 2.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1118	HS-12	H	ITT 2.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1119	HS-13	H	ITT 1.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1120	HS-14	H	ITT 2.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1121	HS-66	H	ITT 1.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge



**Table 1**  
**ANO-1 Snubbers Subject to Examination and Test (continued)**

<b>Exam No.</b>	<b>Mark No.</b>	<b>Type</b>	<b>Model</b>	<b>Accessible</b>	<b>Safety-Related</b>	<b>System</b>
1122	HS-67	H	ITT 1.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1123	HS-69	H	ITT 1.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1124	HS-70	H	ITT 1.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1125	HS-88	H	ITT 2.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1126	HA-1	H	ITT 2.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1127	HA-2	H	ITT 3.25x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1128	HB-1	H	ITT 2.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1129	HB-2	H	ITT 1.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1130	HC-1	H	ITT 2.5x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1131	HC-2	H	ITT 3.25x5	No	Safety-Related	Pressurizer Relief Valve Discharge
1132	HS-22	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1133	HS-23	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1134	HS-24	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1135	HS-25	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1136	HS-26	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1137	HS-27	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1138	HS-28	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1139	HS-29	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1140	HS-30	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1141	HS-31	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1142	HS-32	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1143	HS-33	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1144	HS-34	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1145	HS-35	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1146	HS-36	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1147	HS-37	H	ITT 2.5x5	No	Safety-Related	Main Feedwater
1148	HS-38	H	ITT 2.5x5	No	Safety-Related	Main Feedwater

**Table 1**  
**ANO-1 Snubbers Subject to Examination and Test (continued)**

<b>Exam No.</b>	<b>Mark No.</b>	<b>Type</b>	<b>Model</b>	<b>Accessible</b>	<b>Safety-Related</b>	<b>System</b>
1150	HS-101	H	LIS 305253	No	Safety-Related	Pressurizer Surge Line
1151	HS-102	H	ITT 2.5x5	No	Safety-Related	Pressurizer Surge Line
1152	RCP-1A	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1153	RCP-2A	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1154	RCP-1B	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1155	RCP-2B	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1156	RCP-1C	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1157	RCP-2C	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1158	RCP-1D	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1159	RCP-2D	H	LIS 31985001	No	Safety-Significant	Reactor Coolant Pump Motor
1161	HS-40	H	ITT 3.25x5	Yes	Safety-Significant	Main Feedwater
1163	HS-42	H	ITT 3.25x5	Yes	Safety-Significant	Main Feedwater
1169	HS-1	H	ITT 2.5x5	Yes	Safety-Related	Decay Heat Removal
1170	HS-77 (A)	H	ITT 5x10	Yes	Safety-Significant	Main Steam
1171	HS-77 (B)	H	ITT 5x10	Yes	Safety-Significant	Main Steam
1172	HS-78 (A)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1173	HS-78 (B)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1174	HS-78 (C)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1175	HS-78 (D)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1176	HS-83 (A)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1177	HS-83 (B)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1178	HS-84 (A)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1179	HS-84 (B)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1180	HS-84 (C)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1181	HS-84 (D)	H	ITT 6x10	Yes	Safety-Significant	Main Steam
1182	HS-76	H	ITT 4x5	Yes	Safety-Significant	Main Steam
1183	HS-79(A)	H	ITT 5x10	Yes	Safety-Significant	Main Steam

**Table 1**  
**ANO-1 Snubbers Subject to Examination and Test (continued)**

<b>Exam No.</b>	<b>Mark No.</b>	<b>Type</b>	<b>Model</b>	<b>Accessible</b>	<b>Safety-Related</b>	<b>System</b>
1184	HS-79(B)	H	ITT 5x10	Yes	Safety-Significant	Main Steam
1185	HS-80	H	ITT 6x5	Yes	Safety-Significant	Main Steam
1186	HS-81	H	ITT 6x5	Yes	Safety-Significant	Main Steam
1187	HS-82	H	ITT 5x5	Yes	Safety-Significant	Main Steam
1188	HS-85(A)	H	ITT 5x10	Yes	Safety-Significant	Main Steam
1189	HS-85(B)	H	ITT 5x10	Yes	Safety-Significant	Main Steam
1190	HS-86	H	ITT 6x5	Yes	Safety-Significant	Main Steam
1191	HS-87(A)	H	ITT 5x5	Yes	Safety-Significant	Main Steam
1192	HS-87(B)	H	ITT 5x5	Yes	Safety-Significant	Main Steam
1194	2-MFW-2-H39	M	AD 1601	No	Safety-Related	Main Feedwater
1196	GCB-1-DH-302	H	LIS 3042RE1	Yes	Safety-Related	Decay Heat Removal
1197	SA-230-H004	M	PSA 1/2	Yes	Safety-Related	Primary Sample
1198	MS-242-H007	H	LIS 3018RF2	Yes	Safety-Related	Main Steam to EFW Turbine
1199	CCA-9-H15	H	LIS 301856	No	Safety-Related	Pressurizer Auxiliary Spray
1200	1-MS-118-H29	H	LIS 304256	Yes	Safety-Related	Main Steam to EFW Turbine
1201	1-MS-118-H31	H	LIS 303856	Yes	Safety-Related	Main Steam to EFW Turbine
1202	1-MS-118-H33	H	LIS 303856	Yes	Safety-Related	Main Steam to EFW Turbine
1203	1-MS-118-H35	H	LIS 301856	Yes	Safety-Related	Main Steam to EFW Turbine
1204	MS-255-H1	H	LIS 301856	Yes	Safety-Related	Main Steam to EFW Turbine

**Attachment 2**

**1CAN050805**

**List of Regulatory Commitments**

**List of Regulatory Commitments**

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check one)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
Revise the ANO-1 TRM Section 5.5.1 relevant to the use of ASME Section XI, Subsection ISTD.	<b>X</b>		<b>June 1, 2008</b>
Revise the ANO-1 TRM relevant to the use of Code Case OMN-13	<b>X</b>		<b>June 1, 2008</b>