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ATTACHMENT 2 NRC DOOKET 50-321 OPERATING LICENSE DPR-57 EDWIN I. HATCH NUCLEAR PLANT UNIT 1 PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

The proposed change to Technical Specifications (Appendix A to Operating License DPR-57) would be incorporated as follows:

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LIMITING CONDITION FOR OPERATION

3.6.L All snubbers listed in Tables 3.6-la and 3.6-lb shall be OPERABLE.

APPLICABILITY: Conditions 1, 2, and 3.

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.6.L.3 on the supported component or declare the supported system inoperable and follow the appropriate limiting condition of operation statement(s) for that system.

SURVEILLANCE REQUIREMENTS

4.6.L Each snubber shall be demonstrated OPERABLE by performance of the following inservice inspection program.

1. Visual Inspections

All safety-related snubbers listed in Tables 3.6-la and 3.6-lb shall be visually examined to verify snubber operability. Visual inspections shall be performed in accordance with the following schedule:

No. Inoperable Snubbers per Inspection Period	Subsequent Visual Inspection Period
0	18 months + 25%
1	12 months + 25%
2	6 months + 25%
3, 4	124 days + 25%
5, 6, 7	62 days + 25%
8 or more	31 days + 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

2. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or supporting structure are secure, and (3) for mechanical snubbers where snubber movement can be manually induced, the snubbers shall be inspected as follows: (a) At each refueling.

*The inspection interval shall not be lengthened more than one step at a time.

SURVEILLANCE REQUIREMENTS (Continued)

safety-related systems associated with the shubbers listed in Table 3.6-1b shall be inspected to determine if there has been a severe dynamic event. (b) In the event of a severe dynamic event, snubbers in that system which experienced the event shall be inspected during the refueling outage to assure the snubbers have freedom of movement and are not frozen up. The inspection shall consist of verifying freedom of motion using one of the following: (i) Manually induced snubber movement; (ii) stroking the mechanical snubber through its full range of travel. If one or more mechanical snubbers are found to be frozen up during this inspection, those snubbers shall be replaced (or overhauled) before returning to power. Re-inspection shall subsequently be performed according to the schedule of 4.6.L.1, but the scope of the examination shall be limited to the safety-related systems associated with the snubbers listed in Table 3.6-lb. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the "as found" condition and determined OPERABLE per Specification 4.6.L.4 or 4.6.L.5, as applicable. However, if a hydraulic snubber is found to contain less than the required minimum volume of reserve fluid or if visible signs of leakage are present, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

3. Functional Tests

At least once per 18 months during shutdown*, a representative sample of 10% of the total of each type (hydraulic or mechanical) safety-related snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of Specification 4.6.L.4 or 4.6.L.5, an additional sample of at least 1/2 the size of the initial lot of that type of snubber shall be functionally tested.

Functional testing shall continue until no additional inoperable snubbers of a particular type are found within a sample or until all snubbers listed in Table 3.6-la or 3.6-lb, as applicable, have been functionally tested.

^{*}The requirements of this section for functionally testing mechanical snubbers may be waived pending acquisition of a conversion module for existing snubber test equipment or new test equipment by the next refueling outage.

SUP / EILLANCE REQUIREMENTS (Continued)

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. The representative sample shall be selected randomly from the total population identified in Tables 3.6-la and 3.6-lb.

Snubbers identified in Tables 3.6-la and 3.6-lb as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative sample*. Tables 3.6-la and 3.6-lb may be used jointly or separately as the basis for the sampling plan.

In addition to the regular sample, snubbers placed in the same location as snubbers which failed the previous functional test snall be retested during the next test period. Test results of these snubbers shall not be included in the sampling plan.

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

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

4. Hydraulic Snubbers Functional Test Acceptance Criteria

The hydraulic snubber functional test shall verify that:

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

^{*}Permanent or other exemptions from functional testing for individual snubbers in those categories may be granted by the Commission only if a justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

SURVEILLANCE REQUIREMENTS (Continued)

5. Mechanical Snubbers Functional Test Acceptance Criteria

The mechanical snubber functional test shall verify that:

- 1. The snubber operates freely over the stroke in both tension and compression.
- 2. The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force. Specified maximum drag force is nominally five (5) pounds or one percent (1%) of rated snubber load, whichever is greater.

6. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the inservice visual inspection performed at the end of the 4th refueling cycle and at least once per 18 months thereafter, the installation and maintenance records for each snubber listed in Tables 3.6-la and 3.6-lb shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded by more than 10% prior to the next scheduled snubber service life review. If the indicated service life will be exceeded by more than 10% prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. The results of the reevaluation may be used to justify a change to the service life of the snubber. This reevaluation replacement or reconditioning shall be indicated in the records.

TABLE 3.6-1a

SAFETY RELATED HYDRAULIC SNUBBERS*

		HIGH RADIATION	
SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR ZONE INACCESSIBLE DURING SHUTDOWN*	ESPECIALLY DIFFICULT * TO REMOVE
	Reactor Building	(A or I) (Yes or No)	(Yes or No)
	Nuclear Boiler System		
SS-1 (1)	Az. 72 ⁰ , El. 150'	I No	No
SS-2 (1)	Az. 72 ⁰ , El. 150'	I No	No
SS-3 (1)	Az. 0 ⁰ , El. 140	I No	No
SS-4 (1)	Az. 5 ⁰ , El. 128'	I No	No
SS-5 (1)	Az. 0 ⁰ , El. 140'	I NO	No
SS-6 (1)	Az. 1080, El. 150'	I No	No
SS-7 (1)	Az. 90 ⁰ , El. 150 [•]	I No	No
SS-8 (1)	Az. 160 ⁰ , El. 151	I No	No
SS-9 (1)	Az. 950, El. 144'	I No	No
SS-10 (1)	Az. 900, El. 142'	I No	Yes
SS-11 (1)	Az. 100 ⁰ , El. 138'	I No	Yes
SS-12 (1)	Az. 850, El. 144'	I No	Yes
SS-13 (1)	Az. 820, El. 143'	I No	No
SS-14 (1)	Az. 3150, El. 150'	I No	No
SS-15 (1)	Az. 900, El. 145'	I No	No
SS-16 (1)	Az. 90 ⁰ , El. 144'	I No	No
SS-17 (1)	Az. 170°, El. 145'	I No	Yes
SS-18 (1)	Az. 1600, El. 145'	I No	Yes
SS-19 (1)	Az. 1600, El. 134'	I No	No
55-20 (1)	Az. 1600, El. 145'	I No	Yes

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-1a

SAFETY RELATED HYDRAULIC SNUBBERS*

		HIGH RADIATION	
SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR ZONE INACCESSIBLE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
	Reactor Building	(A or I) (Yes or No)	(Yes or No)
	Nuclear Bailer System (Cont	tinued)	
SS-21 (1)	Az. 135 ⁰ , El. 158'	I No	No
SS-22 (1)	Az. 160 ⁰ , El. 152'	I No	No
SS-23 (1)	Az. 2780, El. 150'	I No	No
SS-24 (1)	Az. 270 ⁰ , El. 150 ¹	I No	No
SS-26 (1)	Az. 275 ⁰ , El. 145 ¹	I No	No
SS-27 (1)	Az. 270 ⁰ , El. 138 ¹	I No	No
SS-28 (1)	Az. 270 ⁰ , El. 142'	I No	Yes
SS-29 (1)	Az. 270 ⁰ , El. 140 [•]	I No	No
SS-31 (1)	Az. 2700, El. 139'	I No	No
SS-32 (1)	Az. 2750, El. 125'	I No	No
SS-33A (1)	Az. 2850, El. 123'	I No	No
SS-338 (1)	Az. 2850, El. 123'	I No	No
SS-34 (1)	Az. 280°, El. 120	I No	No
SS-35 (1)	Az. 2920, El. 120'	I No	No
SS-36 (1)	Az. 3070, El. 148'	I No	No
SS-37 (1)	Az. 3150, El. 150'	I No	No
SS-38 (1)	Az. 90, El. 128'	I No	No
SS-39 (1)	Az. 90, El. 128'	I No	No
SS-40 (1)	Az. 00, El. 123'	I No	No
SS-41 (1)	Az. 3450, El. 155'	I No	No

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TABLE 3.6-la

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qt)	<u>y.)</u>	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
		Nuclear Boiler System (Cont	inued)		
SS-42	(1)	Az. 3470, El. 151'	I	No	No
SS-43 ((1)	Az. 3400, El. 155'	I	No	No
SS-44	(1)	Az. 3430, El. 155'	I	No	No
SS-45 ((1)	Az. 670, El. 118'	I	No	No
SS-46 ((1)	Az. 670, El. 120'	I	No	No
MV/H-23	(1)	Az. 2700, El. 144'	I	No	Yes
MVVH-24	(1)	Az. 2700, El. 144'	I	No	Yes
MVVH-25	(1)	Az. 2700, El. 144'	I	No	Yes
MVVH-27	(1)	Az. 2250, El. 124'	I	No	No
MVVH-28	(1)	Az. 2500, El. 128'	Ι	No	No
MVVH-29	(1)	Az. 250°, El. 128'	I	No	No
MVVH-31	(1)	Az. 1400, El. 149'	I	No	No
MVVH-32	(1)	Az. 140°, El. 148'	I	No	No
MVVH-33	(1)	Az. 140°, El. 145'	I	No	No
MVVH-35 ((1)	Az. 90°, El. 126'	I	No	No
MVVH-36	(1)	Az. 90°, El. 126'	I	No	No
MVVH-37 ((1)	Az. 90 [°] , El, 126 [°]	I	No	No
FDH-11 ((2)	Az. 16°, E1, 147'	I	No	No
FDH-12 (2	2)	Az. 00, El. 147'	I	No	No
FDH-13 ()	()	Az. 400, El. 148'	I	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-1a

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building Nuclear Boiler System (Cont	ACCESSIBLE OR INACCESSIBLE DUR (A or I)	GH RADIATION ZONE <u>ING SHUTDOWN</u> ** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
FDH-14 (1)	Az. 75 ⁰ , El. 148'	I	No	No
FDH-15 (1)	Az. 530, El. 148'	I	No	No
FDH-16 (1)	Az. 790, El. 146'	I	No	No
FDH-17 (1)	Az. 280 ⁰ , El. 148'	I	No	No
FDH-18 (1)	Az. 2810, El. 146'	I	No	No
FDH-19 (1)	Az. 98°, El. 150'	I	No	No
FDH-21 (2)	Az. 150°, El. 165' & 210°,	I	No	No
FDH-22 (2)	Az. 120°, El. 165° & 240°,	I	No	No
FDH-23 (1)	Az. 600, El. 166'	I	No	No
FDH-24 (1)	Az. 300, El. 167'	I	No	No
FDH-25 (1)	Az. 3300, El. 164'	I	No	No
FDH-26 (1)	Az. 3100, El. 167'	I	No	No
DFDH-28 (1)	4'S47-8'ERA, E1. 132'	I	No	No
DFDH-30 (1)	4'NR7-8'ERA, E1. 132'	I	No	No
DFDH-32 (1)	Az. 140, El. 132'	I	NG	No
DFDH-36 (1)	Az. 0°, El. 132'	I	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-1a

SAFETY RELATED HYDRAULIC SNUBBERS*

				HIGH RADIATION	
SNUBBE	ER (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE	ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
		Reactor Building	(A or I)	(Yes or No)	(Yes or No)
		RHR System			
S-1	(1)	Az. 2700, El. 141'	I	No	No
S-2	(1)	Az. 2700, El. 141'	I	No	No
S-4	(1)	Az. 2100, El. 141'	I	No	No
S-5	(1)	Az. 2400, El. 141'	I	No	No
S-15	(1)	Az. 1850, El. 139'	I	No	Yes
SM-1	(1)	Az. 1800, El. 134'	I	No	No
SM-2	(1)	Az. 180 ⁰ , El. 140'	I	No	Yes
SM-3	(1)	Az. 2250, El. 146'	I	No	Yes
SM-4	(1)	Az. 2250, El. 146'	•	No	Yes
SM-8	(1)	Az. 90 ⁰ , El. 146'		No	No
		Recirc System			
SS-A1	(1)	Az. 3150, El. 123'	I	No	No
SS-A2	(1)	Az. 3150, El. 123'	I	No	No
SS-A3	(1)	Az. 3150, El. 123'	I	No	No
SS-A4	(1)	Az. 3100, El. 131'	I	No	No
SS-A5	(1)	Az. 3200, El. 131'	Ι	No	No
SS-A6	(1)	Az. 3150, El. 134'	I	No	No
SS-A7	(1)	Az. 150, El. 134'	I	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-la

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER	SYSTEM SNUBBED INSTALLED		HIGH RADIATION	COCCIALLY DICCION T
NO (Oty)	ON LOCATION AND ELEVATION	TNACCESSIBLE UN	LUNE	ESPECIALLY DIFFICULT
10. (QUY.)	Reactor Building	(A or I)	(Yes or No)	(Yes or No)
	Recirc System (Continued)			
SS-A8 (1)	Az. 10 ⁰ , El. 134'	I	No	No
SS-A12 (1)	Az. 2700, El. 145'	I	No	No
SS-A13 (1)	Az. 2700, El. 145'	I	No	No
SS-A14 (1)	Az. 270°, El. 122°	I	No	No
SS-B1 (1)	Az. 140 ⁰ , El. 120 [•]	I	No	No
SS-B2 (1)	Az. 1350, El. 123'	I	No	No
SS-B3 (1)	Az. 135 ⁰ , El. 123'	I	No	No
SS-B4 (1)	Az. 145°, El. 131'	I	No	No
SS-B5 (1)	Az. 135 ⁰ , El. 131 ¹	I	No	No
SS-B6 (1)	Az. 1350, El. 137'	I	No	Yes
SS-B7 (1)	Az. 185 ⁰ , El. 140'	I	No	No
SSB8 (1)	Az. 180 ⁰ , El. 140'	I	No	No
SS-B12 (1)	Az. 90 ⁰ , El. 145 ¹	I	No	No
SS-B13 (1)	Az. 90°, El. 145'	I	No	No
SS-B14 (1)	Az. 90 ⁰ , El. 116'	I	No	No
	Core Spray System			
CSH-75 (1)	10'NR 3- 7'WRL, E1. 125'	A	No	No
CSH-71 (1)	7'NR13-10'WRL, E1. 121'	A	No	No
CSH-79 (1)	2'NR 9- 7'WRH, E1. 172'	A	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.C-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-la

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER ON, LOCATION AN Reactor Bu	INSTALLED D ELEVATION ilding	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	HPCI System				
HPCIH- 9 (1)	13'SR1- 6'ERC,	El. 88'	А	No	No
HPCIH-13 (1)	7'SR1- 2'WRL,	El. 94'	А	No	No
HPSEH- 2 (1)	12'NR2-10'WRL,	E1. 92'	A	No	No
HPSEH- 8 (2)	6'NR2- 4'NRC,	El. 112'	A	No	No
HPSEH-12 (1)	5'NR3- 3'ERF,	El. 123'-8"	A	No	No
HPSEH-13 (2)	4'NR3- 3'ERF,	E1. 123'-6"	A	No	No
HPSEH-17 (1)	5'NR3-14'ERF,	E1. 123'-6"	A	No	No
HPSEH-55 (1)	8'SR1-25'WRL,	El. 98'	A	No	No
HPSEH-57 (1)	1'SR1-18'WRL,	E1. 99'-6"	A	No	No
HPSEH-58 (1)	4'SR1-18'WRL,	El. 99'	A	No	No
HPSEH-60 (2)	4'NR2- 4'NRC,	El. 120'	A	No	No
HPSEH-61 (1)	3'NR5-11'ERH,	El. 123'	A	No	No
HPSEH-62 (1)	3'NR5-11'ERH,	El. 123'	A	No	· No
HPSEH-63 (1)	8'NR7-13'ERH,	E1. 123'	A	No	No
HPSEH-66 (1)	13'SR9- 2'ERH,	El. 122'	A	No	No
HPSEH-67 (1)	8'SR11-6'ERH,	El. 123'	A	No	No
HPSEH-72 (1)	11'SR 2-6'ERH,	E1. 124'	A	No	No
HPSEH-73 (1)	11'SR 2-5'ERH,	El. 124'	A	No	No
HPSEH-74 (1)	7'SR3-11'ERH,	E1. 122'	А	No	No
HPSEH-76 (1)	1'NR3- 7'WRF,	El. 123'	A	No	No

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TAB'.E 3.6-1a

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER	SYSTEM SNUBBER I	NSTALLED	ACCESSIBLE OR	HIGH RADIATION ZONE	ESPECIALLY DIFFICULT
NO. (Qty.)	ON, LOCATION AND	ELEVATION	INACCESSIBLE	DURING SHUTDOWN**	TO REMOVE
	Reactor Bui	lding	(A or ĭ)	(Yes or No)	(Yes or No)
	HPCI System (Con	tinued)			
HPSEH-77 (1)	8'NR3-13'WRF,	El. 123'	А	No	No
HPSEH-80 (1)	11'NR13-6'ERH,	El. 126'	A	No	No
HPSEH-81 (1)	12'NR13-5'ERL,	E1. 126'	A	No	No
HPSEH82 (1)	3'SR11-5'WRH,	El. 123'	A	No	No
HPSEH-83 (1)	6'NR11-1'ERF,	El. 123'	A	No	No
HPSEH-84 (1)	8'NR11-13'WRF,	E1. 123'	A	No	No
HPSEH-85 (1)	7'NR11-11'WRF,	El. 122'	A	No	No
HPSEH-87 (1)	1'SR11- 7'WRF,	E1. 125'	A	No	No
HPSEH-88 (1)	12'NR2-12' WRL,	E1. 120'	A	No	No
HPSEH-89 (2)	11'SR2- 3' ERG,	E1. 123'	Ŕ	No	No
HPSEH-90 (1)	5'NR3-13' RF,	El. 125'	A	No	No
HPSEH-91 (2)	5'SR3- 8' ERF,	E1. 123'-6"	' A	No	No
HPSEH-92 (1)	8'NR3- 3' ERH,	El. 123'	A	No	No
HPSEH-93 (1)	8'NR3- 3' ERH,	E1. 123'	A	No	No
	RCIC System				
RCSEH-2 (1)	2'SR11-15'ERA,	El. 101'	А	No	No
RCSEH-20 (1)	1'NR11-14'ERA,	E1. 98'	A	No	No
RCSEH-21 (1)	7'SR 9- 5'ERA,	E1. 120'	A	No	Yes
RCSEH-23 (2)	14'SR 7- 9'ERA,	E1. 122'	A	No	Yes

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-la

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qty.	<u>)</u>	SYSTEM SNUBBER ON, LOCATION AN Reactor Bu	INST D ELL ildi	ALLED EVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
		RHR System					
RHRH-184 (1)	3'SR3-17'ERH,	E1.	90'	A	No	No
RHRH-185 (1)	3'SR3-17'ERH,	E1.	91'	A	No	No
RHRH-186 (2)	0'SR3-12'ERH,	E1.	88'	A	No	No
RHRH-187 ((2)	4'NR3- 8'ERH,	E1.	89'	A	No	No
RHRH-188 (1)	5'SR5- 5'WRL,	E1.	90'	A	No	No
RHRH-189 (1)	2'NR5- 8'WRL,	E1.	90'	F.	No	No
RHRH-192 (1)	9'NR3-18'ERH,	E1.	123'	A	No	No
RHRH-193 (1)	9'NR3-17'ERH,	E1.	123'	A	No	No
RHRH-195 (1)	6'SR3-18'VRL,	E1.	125'	A	No	No
RHRH-196 (1)	6'SR3-18'WRL,	E1.	120'	A	No	No
RHRH-199 (1)	10'SR3- 3'WRL,	E1.	123'	A	No	No
RHRH-202 (1)	6'SR7- 7'ERH,	E1.	110'	A	No	No
RHRH-207 (2)	10'SR7-15'ERH,	E1.	151'	A	No	No
RHRH-209 (2)	6'NR3-16'WRL,	E1.	105'	A	No	No
RHRH-210 (1)	9'NR3-16'WRL,	E1.	108'	A	No	No
RHRH-211 (2)	7'NR3-10'WRL,	E1.	100'	A	No	No
RHRH-212 (1)	6'NR3-12'WRL,	E1.	104'	A	No	No
RHRH-213 (1)	3'SR2-12'WRL,	E1.	124'	A	No	No
RHRH-214 (1)	3'SR2- 2'WRL,	E1.	119'	A	No	No
RHRH-215 (2)	3'SR2-12'WRL,	E1.	118'	A	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

**Modifications to this column due to changes in high radiation areas may be made without prior License Amendment provided that the revision to Table 3.6-la is included with the next License Amendment request.

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TABLE 3.6-la

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qty.) <u>O</u>	YSTEM SNUBBER N, LOCATION AN Reactor Bu HR System (Con	INST D ELL ildi	ALLED EVATION ng ed)	ACCE INAC (A	SSIBLE OR CESSIBLE or I)	HIGH RADIATION ZONE <u>DURING SHUTDOWN</u> ** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
RHRH-216 ()	1) 1	1'NR3-16'WRL,	El.	122'		А	No	No
RHRH-217 ()	1) 1	1'NR3-19'WRL,	E1.	121'		A	No	No
RHRH-218 ()	1)	9'SR2-13'ERH,	E1.	116'		A	No	No
RHRH-220 (.	1)	4'SR7-12'WRL,	E1.	126'		A	No	No
RHRH-221 ()	1)	2'SR7-10'WRL,	E1.	122'		A	No	No
RHRH-222 (:	2)	2'SR7-10'WRL,	E1.	120' 8	£ 122'	A	No	No
RHRH-223 ()	1) 1.	/2'NR11-4'ERH,	E1.	125'		A	No	No
RHRH-224 ()	1)	3'SR11-7'ERH,	E1.	123'		A	No	No
RHRH-225 ()	1)	9'NR13-13'ERH,	E1.	117'		A	No	No
RHRH-226 ()	1) 1:	2'SR11-19'WRL,	E1.	121'		A	No	No
RHRH-227 ()	1) 12	2'SR11-17'WRL,	E1.	122'		A	No	No
RHRH-228 (1)	3'NR13-12'WRL,	E1.	124'		A	No	No
RHRH-229 ()	1)	3'NR13-12'WRL,	El.	120'		A	No	No
RHRH-230 (2	2)	3'NR13-12'WRL,	E1.	116' 8	119'	A	No	No
RHRH-231 (:	2)	9'SR11-17'WRL,	E1.	104'		A	No	No
RHRH-232 ()	1)	9'SR11-17'WRL,	E1.	107'		A	No	No
RHRH-233 ()	1)	7'SR11-10'WRL,	E1.	97'		A	No	No
RHRH-234 (1) (6'SR11-12'WRL,	E1.	104'		A	No	No
RHRH-237 (:	2)	2'NR 9- 3'ERH,	E1.	155'		A	No	No
RHRH-238 (2	2) :	2'NR 9- 4'WRH,	E1.	159'		A	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-1a

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	RHR System (Continued)			
RHRH-239 (1)	2'NR 9- 4'WRH, E1. 160'	A	No	No
RHRH-240 (2)	6'NR 5-25'WRL, E1. 147'	A	No	No
RHRH-242 (1)	3'SR 4- 4'WRH, E1. 150'	A	No	No
RHRH-244 (2)	10'SR11- 4'ERF, E1. 121'	A	No	No
RHRH-245 (1)	10'SR11- 3'ERF, E1. 121'	A	No	No
RHRH-246 (1)	10'SR11- 3'ERF, E1. 122'	A	No	No
RHRH-249 (1)	11'SR11-10'ERF, E1. 118'	A	No	No
RHRH-250 (2)	10'NR 3- 4'ERF, E1. 121'	A	No	No
RHRH-251 (1)	10'NR 3- 3'ERF, E1. 119'	A	No	No
RHRH-252 (1)	10'NR 3- 3'ERF, E1. 121'	A	No	No
RHRH-254 (1)	11'NR 3-10'ERF, E1. 118'	A	No	No
RHRH-279 (2)	3'SR 5- 3'WRL, E1. 116'	A	No	No
RHRH-282 (1)	1/2'SR4- 7'ERG, E1. 121'	A	No	No
RHRH-286 (2)	3'SR 2-17'WRL, E1. 116'	A	No	No
RHRH-288 (2)	3'NR 9- 3'WRL, E1. 116'	A	No	No
RHRH-292 (1)	4'SR 2- 6'ERH, E1. 124'	A	No	No
RHRH-299 (1)	4'SR13- 6'ERH, E1. 122'	A	No	No
RHRH-305 (1)	5'NR 3- 4'ERH, E1. 123'	A	No	No
RHRH-306 (2)	3'NR 3- 7'ERH, E1. 121'	A	No	No
RHRH-307 (1)	10'SR 5-17°ERH, E1. 132'	A	No	No
RHRH-309 (1)	9'SR11-18'ERH, E1. 115'	A	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-_a

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qt)	y.)	SYSTEM SNUBBER I ON, LOCATION AND	NSTALLED ELEVATION	ACCESSIBLE OR INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
		Reactor Bui	lding	(A or I)	(Yes or No)	(Yes or No)
		RHR System (Cont	inued)			
RHRH-310	(1)	9'SR11-18'ERH,	El. 124'	А	No	No
RHRH-312	(1)	6'NR11-18'WRL,	E1. 124'	A	No	No
RHRH-313	(1)	6'NR11-18'WRL,	El. 125'	A	No	No
RHRH-316	(1)	10'NR11- 4'WRL,	E1. 123'	A	No	No
RHRH-319	(2)	9'NR 9-17'ERH,	El. 136'	A	No	No
RHRH-320	(1)	4'NR11-17'ERH,	E1. 90'	A	No	No
RHRH-321	(1)	3'NR11-15'ERH,	El. 91'	A	No	No
RHRH-322	(2)	3'SR11-12'ERH,	E1. 89'	A	No	No
RHRH-323	(2)	5'SR11- 9'ERH,	E1. 89'	A	No	No
RHRH-324	(1)	5'NR 9- 5'WRL,	El. 91'	A	No	No
RHRH-325	(1)	2'SR 9- 9'WRL,	El. 90'	A	No	No
RHRH-332	(1)	2'SR 6- 2'WRH,	El. 190'	A	No	No
RHRH-344	(1)	1/2'NR10-1'WRH,	E1. 122'	A	No	No
RHRH-348	(2)	3'NR13-17'WRL,	El. 117'	A	No	No
RHRH-399	(1)	6'NR 5- 6'ERH,	El. 148'	A	No	No
RHRH-400	(1)	6'NR 5- 1'ERH,	E1. 148'	A	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-la provided that a revision to Table 3.6-la is included with the next License Amendment request.

TABLE 3.6-1b

SAFETY RELATED MECHANICAL SNUBBERS*

			HIGH RADIATION	
SNUBBER	SYSTEM SNUBBER INSTALLED	ACCESSIBLE OR	ZONE	ESPECIALLY DIFFICULT
NO. (Qty.)	ON, LOCATION AND ELEVATION	INACCESSIBLE	DURING SHUTDOWN**	TO REMOVE
	Reactor Building	(A or I)	(Yes or No)	(Yes or No)

The list of Safety Related Mechanical Snubbers will be incorporated into these Technical Specifications pending completion of I&E Bulletin 79-14 walkdown and plant modifications (INC mechanical snubber replacement) during the 1981 maintenance/refueling outage.

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.6-lb provided that a revision to Table 3.6-lb is included with the next License Amendment request.

BASES

All snubbers are required OPERABLE to ensure that the structural integrity of the reactor coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety-related system.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule.

When the cause of the rejection of a snubber is clearly established and remedied for that snubber and for any other snubbers that may be generically susceptible, and verified by inservice functional testing, that snubber may be exempted from being counted as inoperable. Generically susceptible snubbers are those which are of a specific make or model and have the same design features directly related to rejection of the snubber by visual inspection, or are similarly located or exposed to the same environmental conditions such as temperature, radiation, and vibration.

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

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at 18 month intervals. Observed failures of sample snubbers shall require functional testing of additional units.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

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BASES

3/4.6.L SNUBBERS (Continued)

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

ADMINISTRATIVE CONTROL

RECORD RETENTION (Continued)

- c. Records of radiation exposure for all individuals entering radiation control areas.
- d. Records of gaseous and liquid radioactive material released to the environs.
- e. Records of transient or operational cycles for those unit components identified in Table 5.7.1-1.
- f. Records of reactor tests and experiments.
- g. Records of training and qualification for current members for the unit staff.
- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the QA Manual.
- J. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the PRB and SRB.
- Records of the service lives of all hydraulic and mechanical snubbers listed on Tables 3.6-la and 3.6-lb including the date at which the service life commences and associated installation and maintenance records.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit*. Any individual or group of individuals permitted

*Health Physics personnel, or personnel escorted by Health Physics personnel in accordance with approved emergency procedures, shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

ATTACHMENT 3 NRC DOCKET 50-366 OPERATING LICENSE NPF-5 EDWIN I. HATCH NUCLEAR PLANT UNIT 2 PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

The proposed change to Technical Specifications (Appendix A to Operating License NPF-5) would be incorporated as follows:

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3/4.7.4 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.4 All snubbers listed in Tables 3.7.4-la and 3.7.4-lb shall be OPERABLE.

APPLICABILITY: Conditions 1, 2, and 3.

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.4.c on the supported component of declare the supported system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.4 Each snubber shall be demonstrated OPERABLE by performance of the following inservice inspection program and the requirements of Specification 4.0.5.

a. Visual Inspections

All safety-related snubbers listed in Tables 3.7.4-la and 3.7.4-lb shall be visually examined to verify snubber operability. Visual inspections shall be performed in accordance with the following schedule:

lo. Inoperable Snubbers per Inspection Period	Subsequent Visual Inspection Period*
0	18 months + 25%
1	12 months + 25%
2	6 months + 25%
3, 4	124 days + 25%
5, 6, 7	62 days + 25%
8 or more	31 days + 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

*The inspection interval shall not be lengthened more than one step at a time.

#The provisions of Specification 4.0.2 are not applicable.

SURVEILLANCE REQUIREMENTS (Continued)

b. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or supporting structure are secure, and (3) for mechanical snubbers where snubber movement can be manually induced, the snubbers shall be inspected as follows: (a) At each refueling, safety-related systems associated with the snubbers listed in Table 3.7.4-1b shall be inspected to determine if there has been a severe dynamic event. (b) In the event of a severe dynamic event, snubbers in that system which experienced the event shall be inspected during the refueling outage to assure the snubbers have freedom of movement and are not frozen up. The inspection shall consist of verifying freedom of motion using one of the following: (i) Manually induced snubber movement; (ii) stroking the mechanical snubber through its full range of travel. If one or more mechanical snubbers are found to be frozen up during this inspection, those snubbers shall be replaced (or overhauled) before returning to power. Re-inspection shall subsequently be performed according to the schedule of 4.7.4.a, but the scope of the examination shall be limited to the safety-related systems associated with the snubbers listed in Table 3.7.4-1b. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the "as found" condition and determined OPERABLE per Specification 4.7.4.d or 4.7.4.e, as applicable. However, if a hydraulic snubber is found to contain less than the required minimum volume of reserve fluid or if visible signs of leakage are present, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservior shall be counted as inoperable snubbers.

c. Functional Tests

At least once per 18 months during shutdown*, a representative sample of 10% of the total of each type (hydraulic or mechanical) safety-related snubber in use in the plant shall be

HATCH-UNIT 2

^{*}The requirements of this section for functionally testing mechanical snubbers may be waived pending acquisition of a conversion module for existing snubber test equipment or new test equipment by the next refueling outage.

SURVEILLANCE REQUIREMENTS (Continued)

functionally tested either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of Specification 4.7.4.d or 4.7.4.e, an additional sample of at least 1/2 the size of the initial lot of that type of snubber shall be functionally tested.

Functional testing shall continue until no additional inoperable snubbers of a particular type are found within a sample or until all snubbers listed in Table 3.7.4-la or 3.7.4-lb, as applicable, have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. The representative sample shall be selected randomly from the total population identified in Tables 3.7.4-1a and 3.7.4-1b.

Snubbers identified in Tables 3.7.4-la and 3.7.4-lb as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative sample*. Tables 3.7.4-la and 3.7.4-lb may be used jointly or separately as the basis for the sampling plan.

In addition to the regular sample, snubbers placed in the same location as snubbers which failed the previous functional test shall be retested during the next test period. Test results of these snubbers shall not be included in the sampling plan.

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

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

^{*}Permanent or other exemptions from functional testing for individual snubbers in those categories may be granted by the Commission only if a justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

SURVEILLANCE REQUIREMENTS (Continued)

d. Hydraulic Snubbers Functional Test Acceptance Criteria

The hydraulic snubber functional test shall verify that:

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

e. Mechanical Snubbers Functional Test Acceptance Criteria

The mechanical snubber functional test shall verify that:

- 1. The snubber operates freely over the stroke in both tension and compression.
- The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force. Specified maximum drag force is nominally five (5) pounds or one percent (1%) of rated snubber load, whichever is greater.

f. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the inservice visual inspection performed at the end of the end of the lst refueling cycle and at least once per 18 months thereafter, the installation and maintenance records for each snubber listed in Tables 3.7.4-1a and 3.7.4-1b shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded by more than 10% prior to the next scheduled snubber service life review. If the indicated service life will be exceeded by more than 10% prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. The results of the reevaluation may be used to justify a change to the service life of the snubber. This reevaluation, replacement or reconditioning shall be indicated in the records.

HATCH-UNIT 2

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON. LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION 70NE <u>DURING SHUTDOWN</u> ** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	2E11-RHR SYSTEM			
R86 (1)	8' NR19 - 1' ERJ, E1. 212'	A	No	No
R88 (1)	10' NR17 - 3' WRJ, E1. 119'	А	No	No
R90 (1)	R15 - 3' ERH, E1. 119'	А	No	No
R93 (2)	8' SR14 - 11' ERF, E1. 118'	А	No	No
R94 (1)	8' SR14 - 10' ERF, E1. 118'	A	No	No
R98 (2)	10' SR19 - 1' ERJ, E1. 121'	А	No	No
R100 (1)	10' SR21 - 3' WRJ, E1 119'	A	No	No
R101 (1)	12' SR21 - 5' WRJ, E1. 119'	А	No	No
R102 (1)	R23 - 3' ERH, E1. 119'	A	No	No
R128 (1)	6' NR23 - 16' ERF, E1. 123'	A	No	No
R129 (2)	18' SR21 - 16' ERF, E1. 123'	А	No	No
R146 (2)	5' SR21 - 8' WRL, E1. 120'	А	No	Yes
R221 (1)	18' NR19 - 12' WRL, E1. 90'	A	No	No
R222 (1)	18' SR19 - 12' WRL, E1. 90'	A	No	No
R223 (1)	18' SR14 - 23' WRL, E1. 90'	А	No	No
R227 (1)	18' NR24 - 23' WRL, E1. 90'	A	No	No
R231 (2)	3' SR19 - 9' WRL, E1. 102'	А	No	No
R238 (2)	12' SR15 - 3' WRL, E1. 107'	A	No	Yes
R241 (2)	3' NR23 - 9' WRL, E1. 102'	A	No	No
R245 (2)	12' NR23 - 3' WRL, E1. 107'	Α	No	Yes

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-la provided that a revision to Table 3.7.4-la is included with the next License Amendment request.

SAFETY RELATED HYDRAULIC SNUBBERS*

2E11-RHR SYSTEM (Continued) R250 (1) 11' SR14 - 15' WRL, E1. 119' A No R251 (2) 11' SR14 - 15' WRL, E1. 120' A No R252 (1) 15' SR14 - 15' WRL, E1. 112' A No R253 (1) 15' SR14 - 15' WRL, E1. 112' A No R253 (1) 15' SR14 - 17' WRL, E1. 112' A No R254 (1) 17' SR14 - 17' WRL, E1. 112' A No R258 (1) 22' SR14 - 13' WRL, E1. 102' A No R258 (1) 22' SR14 - 3' WRL, E1. 102' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 112' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No	ON ESPECIALLY DIFFICULT OWN** TO REMOVE (Yes or No)
R250 (1) 11' SR14 - 15' WRL, E1. 119' A No R251 (2) 11' SR14 - 15' WRL, E1. 120' A No R252 (1) 15' SR14 - 15' WRL, E1. 112' A No R253 (1) 15' SR14 - 15' WRL, E1. 112' A No R253 (1) 15' SR14 - 17' WRL, E1. 112' A No R254 (1) 17' SR14 - 17' WRL, E1. 112' A No R256 (1) 17' SR14 - 17' WRL, E1. 112' A No R258 (1) 22' SR14 - 13' WRL, E1. 102' A No R258 (1) 22' SR14 - 13' WRL, E1. 104' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 112' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 17' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R272 (1) 17' NR24 - 13' WRL, E1. 102'	
R251 (2) 11' SR14 - 15' WRL, E1. 120' A No R252 (1) 15' SR14 - 15' WRL, E1. 112' A No R253 (1) 15' SR14 - 15' WRL, E1. 120' A No R253 (1) 15' SR14 - 15' WRL, E1. 120' A No R254 (1) 17' SR14 - 17' WRL, E1. 112' A No R256 (1) 17' SR14 - 17' WRL, E1. 112' A No R258 (1) 22' SR14 - 13' WRL, E1. 99' A No R258 (1) 22' SR14 - 3' WRL, E1. 104' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 112' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 104' <t< th=""><th>No</th></t<>	No
R252 (1) 15' SR14 - 15' WRL, E1. 112' A No R253 (1) 15' SR14 - 15' WRL, E1. 120' A No R254 (1) 17' SR14 - 17' WRL, E1. 112' A No R256 (1) 17' SR14 - 17' WRL, E1. 112' A No R258 (1) 22' SR14 - 13' WRL, E1. 99' A No R258 (1) 22' SR14 - 3' WRL, E1. 104' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 112' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R276 (1) 22' NR24 - 13' WRL, E1. 104' A No R282 (1) 21' NR24 - 3' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102'	No
R253 (1) 15' SR14 - 15' WRL, E1. 120' A No R254 (1) 17' SR14 - 17' WRL, E1. 112' A No R256 (1) 17' SR14 - 17' WRL, E1. 112' A No R256 (1) 17' SR14 - 17' WRL, E1. 112' A No R258 (1) 22' SR14 - 13' WRL, E1. 99' A No R258 (1) 22' SR14 - 3' WRL, E1. 104' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 120' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A<	No
R254 (1) 17' SR14 - 17' WRL, E1. 112' A No R256 (1) 17' SR14 - 17' WRL, E1. 112' A No R258 (1) 22' SR14 - 13' WRL, E1. 99' A No R258 (1) 22' SR14 - 3' WRL, E1. 104' A No R267 (2) 15' SR14 - 9' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 102' A No R269 (2) 11' NR24 - 15' WRL, E1. 120' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 120' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 112' A No R276 (1) 22' NR24 - 3' WRL, E1. 104' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A </td <td>No</td>	No
R256 (1) 17' SR14 - 17' WRL, E1. 112' A No R258 (1) 22' SR14 - 13' WRL, E1. 99' A No R54 (1) 21' SR14 - 9' WRL, E1. 104' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 102' A No R269 (2) 11' NR24 - 15' WRL, E1. 120' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 102' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A <td>No</td>	No
R258 (1) 22' SR14 - 13' WRL, E1. 99' A No R 54 (1) 21' SR14 - 9' WRL, E1. 104' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 120' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 120' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 112' A No R282 (1) 21' NR24 - 13' WRL, E1. 102' A No R282 (1) 21' NR24 - 3' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	Yes
R 54 (1) 21' SR14 - 9' WRL, E1. 104' A No R267 (2) 15' SR14 - 3' WRL, E1. 102' A No R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 120' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 120' A No R271 1) 15' NR24 - 15' WRL, E1. 120' A No R272 (1) 17' NR24 - 17' WRL, E1. 120' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R3	No
R267 (2) $15'$ $SR14 - 3'$ WRL , $E1$. $102'$ A NoR268 (1) $11'$ $NR24 - 15'$ WRL , $E1$. $119'$ A No R269 (2) $11'$ $NR24 - 15'$ WRL , $E1$. $120'$ A No R270 (1) $15'$ $NR24 - 15'$ WRL , $E1$. $112'$ A No R271 (1) $15'$ $NR24 - 15'$ WRL , $E1$. $120'$ A No R271 (1) $15'$ $NR24 - 15'$ WRL , $E1$. $112'$ A No R272 (1) $17'$ $NR24 - 17'$ WRL , $E1$. $112'$ A No R274 (1) $17'$ $NR24 - 17'$ WRL , $E1$. $112'$ A No R276 (1) $22'$ $NR24 - 13'$ WRL , $E1$. $104'$ A No R282 (1) $21'$ $NR24 - 3'$ WRL , $E1$. $102'$ A No R285 (2) $15'$ $NR24 - 3'$ WRL , $E1$. $102'$ A No R315 (2) $10'$ $NR19 - 6'$ $ER1$ $E1$ $123'$ A	Yes
R268 (1) 11' NR24 - 15' WRL, E1. 119' A No R269 (2) 11' NR24 - 15' WRL, E1. 120' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 120' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 E1 123' A No	No
R269 (2) 11' NR24 - 15' WRL, E1. 120' A No R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 120' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	No
R270 (1) 15' NR24 - 15' WRL, E1. 112' A No R271 (1) 15' NR24 - 15' WRL, E1. 120' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	No
R271 (1) 15' NR24 - 15' WRL, E1. 120' A No R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	No
R272 (1) 17' NR24 - 17' WRL, E1. 112' A No R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	No
R274 (1) 17' NR24 - 17' WRL, E1. 112' A No R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	No
R276 (1) 22' NR24 - 13' WRL, E1. 99' A No R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	No
R282 (1) 21' NR24 - 9' WRL, E1. 104' A No R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	No
R285 (2) 15' NR24 - 3' WRL, E1. 102' A No R315 (2) 10' NR19 - 6' FR1 F1 123' A No	Yes
$R_{315}(2) = 10' NR_{19} - 6' FR_{1} F_{1} + 123' A$	No
	No
R374 (2) 23' SR14 - 15' WRL, E1. 106' A No	Yes

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-1a provided that a revision to Table 3.7.4-1a is included with the next License Amendment request.

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE <u>DURING SHUTDOWN</u> ** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	2E11-RHR SYSTEM (Continued)			
R375 (2)	23' SR14 - 12' WRL, E1. 108'	A	No	No
R376 (1)	23' SR14 - 12' WRL, E1. 109'	A	No	No
R377 (2)	23' NR24 - 15' WRL, E1. 106'	А	No	Yes
R378 (2)	23' NR24 - 12' WRL, E1. 108'	Α	No	No
R379 (1)	23' NR24 - 12' WRL, E1. 109'	A	No	No
	2E11-RHR SERVICE WATER SYSTEM			
R 15 (2)	7' SR14 - 11' ERH, E1. 115'	A	No	No
R 23 (2)	7' NR24 - 11' ERH, E1. 115'	Α	No	No
	2E21-CORE SPRAY SYSTEM			
R 35 (1)	8' SR14 - 6' WRL, E1, 95'	A	No	No
R 40 (1)	7' SR14 - 31' WRL, E1. 95'	A	No	No
R 53 (2)	10' SR14 - 6' WRL, E1. 106'	A	No	No
R 72 (2)	10' NR24 - 6' WRL, E1. 102'	A	No	No
R 80 (1)	8' NR24 - 6' WRL, E1. 95'	A	No	No
R 87 (1)	7' NR24 - 6' WRL, E1. 90'	A	No	No
R107 (2)	39' NR24 - 15' WRL, E1. 123'	Α	No	No

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-1a provided that a revision to Table 3.7.4-1a is included with the next License Amendment request.

SAFETY RELATED HYDRAULIC SNUBBERS*

$\frac{\text{Reacturbulling}}{2\text{T46-SGTS SYSTEM}}$ R 65 (2) 6' NR24 - 9' WRB, El. 198' A No Yes R 66 (1) 2' NR24 - 9' WRB, El. 186' A No Yes R 67 (1) 2' NR24 - 9' WRB, El. 180' A No Yes R 68 (2) 6' NR24 - 9' ERA, El. 198' A No Yes R 69 (1) 2' NR24 - 9' ERA, El. 198' A No No R 70 (2) 2' NR24 - 9' ERA, El. 186' A No No R 70 (2) 2' NR24 - 9' ERA, El. 196' A No Yes $\frac{2B31-REACTOR RECIRCULATION SYSTEM}{2B31-REACTOR RECIRCULATION SYSTEM}$ SSA1 (1) Az 315 ⁰ , El. 117' I No No Yes SSA3 (1) Az 328 ⁰ , El. 125' I No Yes SSA4 (1) Az 328 ⁰ , El. 125' I No Yes SSA4 (1) Az 328 ⁰ , El. 131' I No Yes SSA5 (1) Az 301 ⁰ , El. 131' I No Yes SSA6 (1) Az 315 ⁰ , El. 131' I No Yes SSA7 (1) Az 018 ⁰ , El. 124' I No Yes SSA7 (1) Az 255 ⁰ , El. 123' I No Yes SSA1 (1) Az 265 ⁰ , El. 124' I No Yes SSA1 (1) Az 265 ⁰ , El. 124' I No Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 265 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes SSA1 (1) Az 270 ⁰ , El. 124' I NO Yes	SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
$\frac{2T46-SGTS SYSTEM}{R 65 (2) 6' NR24 - 9' WRB, El. 198' A No Yes} \\ R 65 (1) 2' NR24 - 9' WRB, El. 186' A No Yes} \\ R 67 (1) 2' NR24 - 9' ERA, El. 198' A No Yes} \\ R 68 (2) 6' NR24 - 9' ERA, El. 198' A No Yes} \\ R 69 (1) 2' NR24 - 9' ERB, El. 186' A No Yes} \\ R 69 (1) 2' NR24 - 9' ERA, El. 179' A No Yes} \\ \frac{2B31-REACTOR RECIRCULATION SYSTEM}{2B31-REACTOR RECIRCULATION SYSTEM} \\ \hline \\ SSA1 (1) Az 315^0, El. 117' I No No Yes} \\ SSA3 (1) Az 328^0, El. 125' I No Yes} \\ \frac{SSA3 (1) Az 328^0, El. 125' I NO Yes} \\ SSA3 (1) Az 328^0, El. 131' I No Yes} \\ SSA5 (1) Az 328^0, El. 131' I No Yes} \\ SSA5 (1) Az 315^0, El. 131' I No Yes} \\ SSA5 (1) Az 315^0, El. 131' I No Yes} \\ SSA5 (1) Az 315^0, El. 131' I No Yes} \\ SSA6 (1) Az 315^0, El. 131' I NO Yes} \\ SSA7 (1) Az 342^0, El. 125' I NO Yes} \\ SSA7 (1) Az 342^0, El. 123' I NO Yes} \\ SSA7 (1) Az 342^0, El. 124' I NO Yes} \\ SSA7 (1) Az 2455, El. 129' I NO Yes} \\ SSA12 (1) Az 2455, El. 129' I NO Yes} \\ SSA14 (1) Az 2455, El. 129' I NO Yes} \\ SSA14 (1) Az 2450, El. 129' I NO Yes} \\ SSA14 (1) Az 2450, El. 129' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I YES} \\ SSA14 (1) Az 2450, El. 124' I YES} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2450, El. 124' I NO Yes} \\ SSA14 (1) Az 2470, El. 124' I NO Yes} \\ SSA14 (1) Az 2470, El. 124' I NO Yes \\ SSA14 (1) Az 2470, El. 124' I NO Yes \\ SSA16 (1) Az 2470, El. 124' I NO Yes \\ SSA16 (1) Az 2470, El. 124' I NO Yes \\ SSA16 (1) Az 2470, El. 124' I NO YES \\ SSA16 (1) Az 2470, El. 124' I NO YES \\ SSA16 (1) Az 2470, El. 124$		Reactor building	(A OF I)	(res or no)	(res or no)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2T46-SGTS SYSTEM			
R 66 (1) 2' NR24 - 9' WRB, El. 186' A No No R 67 (1) 2' NR24 - 9' WRB, El. 180' A No Yes R 68 (2) 6' NR24 - 9' ERA, El. 198' A No Yes R 68 (2) 6' NR24 - 9' ERA, El. 198' A No Yes R 69 (1) 2' NR24 - 9' ERA, El. 198' A No No R 70 (2) 2' NR24 - 9' ERA, El. 179' A No No ZB31-REACTOR RECIRCULATION SYSTEM SSA1 (1) Az 315 ⁰ , El. 117' I No No SSA1 (1) Az 328 ⁰ , El. 125' I No Yes SSA3 (1) Az 328 ⁰ , El. 125' I No Yes SSA4 (1) Az 328 ⁰ , El. 131' I No Yes SSA5 (1) Az 315 ⁰ , El. 131' I No Yes SSA6 (1) Az 315 ⁰ , El. 137' I No Yes SSA8 (1) Az 342 ⁰ , El. 124' I No Yes SSA1 (1) Az 245 ⁰ , El. 129' I No	R 65 (2)	6' NR24 - 9' WRB, E1. 198'	A	No	Yes
R 67 (1)2' NR24 - 9' WRB, E1. 180'ANoYesR 68 (2)6' NR24 - 9' ERA, E1. 198'ANoYesR 69 (1)2' NR24 - 9' ERB, E1. 186'ANoNoR 70 (2)2' NR24 - 9' ERA, E1. 179'ANoYesZB31-REACTOR RECIRCULATION SYSTEMSSA1 (1)Az 3150, E1. 117'INoNoSSA1 (1)Az 3150, E1. 117'INoNoSSA1 (1)Az 3280, E1. 125'INoYesSSA3 (1)Az 3200, E1. 125'INoYesSSA3 (1)Az 3280, E1. 131'INoYesSSA4 (1)Az 3100, E1. 131'INoYesSSA5 (1)Az 3010, E1. 131'INoYesSSA5 (1)Az 3150, E1. 124'INoYesSSA6 (1)Az 3420, E1. 123'INoYesSSA8 (1)Az 3420, E1. 123'INoYesSSA8 (1)Az 3420, E1. 123'INoNoSSA12 (1)Az 2850, E1. 129'INoNoSSA14 (1)Az 2850, E1. 129'INoNoSSA14 (1)Az 2700, E1. 121'INoNoSSA14 (1)Az 2700, E1. 121'INoNoSSA15 (1)Az 2170, E1. 144'INoYes	R 66 (1)	2' NR24 - 9' WRB, E1. 186'	A	No	No
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	R 67 (1)	2' NR24 - 9' WRB, E1. 180'	Α	No	Yes
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	R 68 (2)	6' NR24 - 9' ERA, E1. 198'	A	No	Yes
R 70 (2)2' NR24 - 9' ERA, E1. 179'ANoYes $2B31-REACTOR RECIRCULATION SYSTEMSSA1 (1)Az 315°, E1. 117'INoNoSSA1 (1)Az 315°, E1. 117'INoYesSSA2 (1)Az 328°, E1. 125'INoYesSSA3 (1)Az 302°, E1. 125'INoYesSSA4 (1)Az 328°, E1. 131'INoYesSSA4 (1)Az 301°, E1. 131'INoNoSSA5 (1)Az 301°, E1. 131'INoYesSSA5 (1)Az 315°, E1. 137'INoYesSSA6 (1)Az 315°, E1. 124'INoYesSSA7 (1)Az 018°, E1. 124'INoYesSSA8 (1)Az 342°, E1. 123'INoYesSSA12 (1)Az 255°, E1. 129'INoNoSSA13 (1)Az 255°, E1. 129'INoNoSSA13 (1)Az 270°, E1. 121'INoNoSSA15 (1)Az 323°, E1. 144'INoYesSSA16 (1)Az 217°, E1. 144'INoYes$	R 69 (1)	2' NR24 - 9' ERB, E1. 186'	A	No	No
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	R 70 (2)	2' NR24 - 9' ERA, E1. 179'	А	No	Yes
SSA1 (1) Az 315 ⁰ , El. 117' I No No SSA2 (1) Az 328 ⁰ , El. 125' I No Yes SSA3 (1) Az 302 ⁰ , El. 125' I No Yes SSA4 (1) Az 328 ⁰ , El. 131' I No Yes SSA4 (1) Az 328 ⁰ , El. 131' I No Yes SSA5 (1) Az 301 ⁰ , El. 131' I No Yes SSA5 (1) Az 301 ⁰ , El. 131' I No Yes SSA5 (1) Az 315 ⁰ , El. 137' I No Yes SSA7 (1) Az 018 ⁰ , El. 124' I No Yes SSA8 (1) Az 342 ⁰ , El. 123' I No Yes SSA12 (1) Az 255 ⁰ , El. 129' I No No SSA13 (1) Az 285 ⁰ , El. 129' I No No SSA14 (1) Az 323 ⁰ , El. 121' I No No SSA15 (1) Az 232 ³⁰ , El. 144' I No Yes SSA16 (1) Az 217 ⁰ , El. 144' I No Yes		2B31-REACTOR RECIRCULATION SYSTE	EM .		
SSA2 (1) Az 328°, El. 125' I No Yes SSA3 (1) Az 302°, El. 125' I No Yes SSA4 (1) Az 328°, El. 131' I No Yes SSA5 (1) Az 301°, El. 131' I No No SSA6 (1) Az 315°, El. 137' I No No SSA6 (1) Az 018°, El. 124' I No Yes SSA7 (1) Az 018°, El. 124' I No Yes SSA8 (1) Az 342°, El. 123' I No Yes SSA12 (1) Az 255°, El. 129' I No No SSA13 (1) Az 285°, El. 129' I No No SSA13 (1) Az 285°, El. 129' I No No SSA14 (1) Az 270°, El. 121' I No No SSA15 (1) Az 217°, El. 144' I No Yes SSA16 (1) Az 217°, El. 144' I No Yes	SSA1 (1)	Az 315 ⁰ , El. 117'	I	No	No
SSA3 (1) Az 302°, El. 125' I No Yes SSA4 (1) Az 328°, El. 131' I No Yes SSA5 (1) Az 301°, El. 131' I No No SSA6 (1) Az 315°, El. 137' I No Yes SSA7 (1) Az 018°, El. 124' I No Yes SSA8 (1) Az 342°, El. 123' I No Yes SSA12 (1) Az 255°, El. 129' I No No SSA13 (1) Az 285°, El. 129' I No No SSA14 (1) Az 270°, El. 121' I No No SSA15 (1) Az 323°, El. 144' I No Yes SSA15 (1) Az 217°, El. 144' I No Yes	SSA2 (1)	Az 328 ⁰ , E1. 125'	Ι	No	Yes
SSA4 (1) Az 328°, El. 131' I No Yes SSA5 (1) Az 301°, El. 131' I No No SSA6 (1) Az 315°, El. 137' I No Yes SSA6 (1) Az 315°, El. 137' I No Yes SSA7 (1) Az 018°, El. 124' I No Yes SSA8 (1) Az 342°, El. 123' I No Yes SSA12 (1) Az 255°, El. 129' I No No SSA13 (1) Az 285°, El. 129' I No No SSA14 (1) Az 270°, El. 121' I No No SSA15 (1) Az 323°, El. 144' I No Yes SSA16 (1) Az 217°, El. 144' I No Yes	SSA3 (1)	Az 3020, E1. 125'	I	No	Yes
SSA5 (1) Az 301°, El. 131' I No No SSA6 (1) Az 315°, El. 137' I No Yes SSA7 (1) Az 018°, El. 124' I No Yes SSA7 (1) Az 018°, El. 124' I No Yes SSA8 (1) Az 342°, El. 123' I No Yes SSA12 (1) Az 255°, El. 129' I No No SSA13 (1) Az 285°, El. 129' I No No SSA14 (1) Az 323°, El. 144' I No No SSA15 (1) Az 217°, El. 144' I No Yes	SSA4 (1)	Az 3280, E1. 131'	I	No	Yes
SSA6 (1) Az 315°, El. 137' I No Yes SSA7 (1) Az 018°, El. 124' I No Yes SSA8 (1) Az 342°, El. 123' I No Yes SSA12 (1) Az 255°, El. 129' I No No SSA13 (1) Az 285°, El. 129' I No No SSA14 (1) Az 323°, El. 121' I No No SSA15 (1) Az 217°, El. 144' I No Yes	SSA5 (1)	Az 3010, E1. 131'	I	No	No
SSA7 (1) Az 018°, E1. 124' I No Yes SSA8 (1) Az 342°, E1. 123' I No Yes SSA12 (1) Az 255°, E1. 129' I No No SSA13 (1) Az 285°, E1. 129' I No No SSA14 (1) Az 270°, E1. 121' I No No SSA15 (1) Az 323°, E1. 144' I No Yes SSA16 (1) Az 217°, E1. 144' I No Yes	SSA6 (1)	Az 315°, El. 137'	I	No	Yes
SSA8 (1) Az 342°, El. 123' I No Yes SSA12 (1) Az 255°, El. 129' I No No SSA13 (1) Az 285°, El. 129' I No No SSA14 (1) Az 270°, El. 121' I No No SSA15 (1) Az 323°, El. 144' I No Yes SSA16 (1) Az 217°, El. 144' I No Yes	SSA7 (1)	Az 018°, E1. 124'	I	No	Yes
SSA12 (1) Az 255°, E1. 129' I No No SSA13 (1) Az 285°, E1. 129' I No No SSA14 (1) Az 270°, E1. 121' I No No SSA15 (1) Az 323°, E1. 144' I No Yes SSA16 (1) Az 217°, E1. 144' I No Yes	SSA8 (1)	Az 342°, El. 123'	I	No	Yes
SSA13 (1) Az 285°, E1. 129' I No No SSA14 (1) Az 270°, E1. 121' I No No SSA15 (1) Az 323°, E1. 144' I No Yes SSA16 (1) Az 217°, E1. 144' I No Yes	SSA12 (1)	Az 255°, E1. 129'	I	No	No
SSA14 (1) Az 270°, E1. 121' I No No SSA15 (1) Az 323°, E1. 144' I No Yes SSA16 (1) Az 217°, E1. 144' I No Yes	SSA13 (1)	Az 285°, E1. 129'	I	No	No
SSA15 (1) Az 323°, E1. 144' I No Yes SSA16 (1) Az 217°, E1. 144' I No Yes	SSA14 (1)	Az 270°, E1. 121'	I	No	No
SSA16 (1) Az 217°, E1. 144' I No Yes	SSA15 (1)	Az 323°, El. 144'	I	No	Yes
	SSA16 (1)	Az 2170, E1. 144'	I	No	Yes

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-la provided that a revision to Table 3.7.4-la is included with the next License Amendment request.

SAFETY RELATED HYDE MILIC SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE <u>DURING SHUTDOWN</u> ** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	2B31-REACTOR RECIRCULATION SYSTE	EM (Continued)		
SSA17 (1)	Az 270 ⁰ , El. 125'	I	No	Vac
SSA19 (1)	Az 270 ⁰ , E1. 138'	Ĩ	No	Ves
SSA20 (1)	Az 2700, El. 138'	I	No	Yes
SSA21 (1)	Az 0°, E1. 140'	I	No	Yes
SSA22 (1)	Az 0°, E1. 140'	I	No	Yes
SSB1 (1)	Az 135°, El. 117'	I	No	No
SSB2 (1)	Az 148°, E1. 125'	I	No	Yes
SSB3 (1)	Az 1220, E1. 125'	I	No	Yes
SSB4 (1)	Az 148°, E1. 131'	I	No	Yes
SSB5 (1)	Az 122°, E1. 131'	I	Nc	No
SSE6 (1)	Az 1350, E1. 137'	I	No	Yes
SSB7 (1)	Az 198°, El. 124'	I	No	Yes
SSB8 (1)	Az 1620, E1. 123'	I	No	Yes
SSB12 (1)	Az 075°, E1. 129'	I	No	No
SSB13 (1)	Az 105°, E1. 129'	I	No	No
SSB14 (1)	Az 090°, E1. 121'	I	No	No
SSB15 (1)	Az 1430, El. 144'	I	No	Yes
SSB16 (1)	Az 037°, E1. 144'	I	No	Yes
SSB17 (1)	Az 900, E1. 126'	I	No	Yes
SSB19 (1)	Az 90°, E1. 138'	I	No	Yes
SSB20 (1)	Az 900, E1. 138'	I	No	Yes
SSB21 (1)	Az 180°, E1. 140'	Ι	No	Yes
S2B22 (1)	Az 180°, E1. 140'	I	No	Yes

* Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-la provided that a revision to Table 3.7.4-la is included with the next License Amendment request.

TABLE 3.7.4-1b

SAFETY RELATED MECHANICAL SNUBBERS*

<u>2B21-Nuclear Boiler System</u> MS-R34 (1) Az. 110° El. 155' I MS-R35 (1) Az. 145° El. 150' I	GH RADIATION ZONE ESPECIALLY DIFFICUL RING SHUTDOWN** (Yes or No) (Yes or No)	. T
MS-R34 (1) Az. 110 ^o El. 155' I MS-R35 (1) Az. 145 ^o El. 150' I		
MS-R34 (1) Az. 1100 E1. 155' I MS-R35 (1) Az. 1450 E1. 150' I		
MS-R35 (1) AZ. 1450 EL. 150' I	No Yes	
11 1177 711 0 1/2/3 /// 1/2/3 /// ///	No Yes	
MS-R36 (1) AZ, 1450 E1, 150' I	No Yes	
MS-R37 (2) Az. 1450 El. 150' I	No Yes	
MS-R38 (2) Az. 720 El. 167' I	No Yes	
MS-R39 (2) Az. 950 El. 150' I	No Yes	
MS-R41 (1) Az. 100° El. 150' I	No Yes	
MS-R42 (1) Az. 140 ^o El. 150 [•] I	No Yes	
MS-R43 (1) Az. 130° El. 150' I	No Yes	
MS-R44 (2) Az. 140° El. 150' I	No Yes	
MS-R45 (1) Az. 250° El. 156' I	No Yes	
MS-R46 (1) Az. 250° El. 156' I	No Yes	
MS-R47 (1) Az. 220 ^o El. 150 [•] I	No Yes	
MS-R48 (1) Az. 220° El. 150' I	No Yes	
MS-R49 (2) Az. 288 ^o El. 167 [•] I	No Yes	
MS-R50 (2) Az. 270° El. 150' I	No Yes	
MS-R52 (1) Az. 265 ^o El. 150 [•] I	No Yes	
MS-R53 (2) Az. 2350 El. 150' I	No Yes	
MS-R54 (1) Az. 235 ^o El. 150 [•] I	No Yes	
MS-R55 (1) Az. 235 ^o El. 150' I	No Yes	

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-1b provided that a revision to Table 3.7.4-1b is included with the next License Amendment request.

TABLE 3.7.4-1b

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.) <u>ON</u>	YSTEM S LOCAT	SNUBBER INST IION AND ELE ctor Buildin	ALLED ACCESSIBLE OR VATION INACCESSIBLE 9 (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	282	21-Nucl	lear Boiler	System (Continued)		
MSRV-R36 ()	1) Az	2300	El. 137'	I	No	Yes
MSRV-R37 ()	1) Az.	. 2300	El. 133'	I	No	Yes
MSRV-R38 ()	1) Az.	. 2300	El. 133'	I	No	Yes
MSRV-R40 ()	1) Az.	2300	El. 125'	I	No	Yes
MSRV-R41 ()	1) Az.	2250	E1. 122'	I	No	Yes
MSRV-R45 (2	2) Az.	. 1650	E1. 119'	I	No	Yes
MSRV-R46 (2	2) Az.	. 2500	E1. 155'	I	No	Yes
MSRV-R50 ()	1) Az.	. 2700	E1. 150'	I	No	Yes
MSRV-R52 (2	2) Az.	. 1050	El. 150'	I	No	Yes
MSRV-R53 (]	1) Az.	1050	E1. 149'	I	No	Yes
MSRV-R54 ()	1) Az.	. 800	E1. 137'	I	No	Yes
MSRV-R56 ()	1) Az.	, 700	El. 131'	I	No	Yes
MSRV-R57 (]	1) Az.	. 700	El. 135'	I	No	Yes
MSRV-R58 (]	1) Az.	, 700	El. 125'	I	No	Yes
MSRV-R59 (2	2) Az.	1250	E1. 154'	I	No	Yes
MSRV-R60 (2	2) Az.	. 1200	E1. 152'	I	No	Yes
MSRV-R62 (]	L) Az.	900	El. 131'	I	No	Yes
MSRV-R63 (]	1) Az.	900	El. 132'	I	No	Yes
MSRV-R64 (]	l) Az.	900	E1. 125'	I	No	Yes
MSRV-R65 ()	() Az.	1000	E1. 120'	I	No	Yes

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-1b provided that a revision to Table 3.7.4-1b is included with the next License Amendment request.

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.) <u>ON</u>	STEM S LOCAT Read	SNUBBER INSTALLED TION AND ELEVATION Etor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	<u>282</u>	l-Nucl	ear Boiler System	(Continued)		
MSRV-R67 (2) Az.	2350	El. 146'	I	No	Yes
MSRV-R68 (1) Az.	2350	El. 146'	I	No	Yes
MSRV-R69 (1) Az.	2350	El. 141'	I	No	Yes
MSRV-R70 (1) Az.	2350	El. 137'	I	No	Yes
MSRV-R71 (1) Az.	2450	El. 133'	I	No	Yes
MSRV-R72 (1) Az.	2450	El. 133'	I	No	Yes .
MSRV-R73 (1) Az.	2450	El. 130'	I	No	Yes
MSRV-R75 (1) Az.	2550	El. 154'	I	No	Yes
MSRV-R76 (1) Az.	2500	El. 146'	I	No	Yes
MSRV-R77 (1) Az.	2500	El. 137'	I	No	Yes
MSRV-R78 (1) Az.	2500	El. 136'	I	No	Yes
MSRV-R79 (1) Az.	2500	E1. 133'	I	No	Yes
MSRV-R80 (1) Az.	2500	El. 132'	I	No	Yes
MSRV-R82 (1) Az.	950	El. 148'	I	No	Yes
MSRV-R83 (2) Az.	950	E1. 145'	I	No	Yes
MSRV-R84 (1) Az.	900	El. 137'	I	No	Yes
MSRV-R87 (1) Az.	650	El. 132'	I	No	Yes
MSRV-R88 (1) Az.	650	E1. 127'	I	No	Yes
MSRV-R89 (1) Az.	650	El. 125'	I	No	Yes
MSRV-R90 (1) Az.	1150	El. 145'	I	No	Yes

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-lb provided that a revision to Table 3.7.4-lb is included with the next License Amendment request.

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM S ON, LOCAT Read	NUBBER INST ION AND ELE tor Buildin	ALLED ACCESSIBLE OR VATION INACCESSIBLE g (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	2821-Nuc1	ear Boiler	System (Continued)		
MSRV-R91 (1)	Az. 1100	El. 137'	I	Ne	Yes
MSRV-R92 (1)	Az. 1100	El. 132'	I	No	Yes
MSRV-R93 (1)	Az. 1100	El. 125'	I	No	Yes
MSRV-R94 (1)	Az. 950	E1. 120'	I	No	Yes
MSRV-R96 (2)	Az. 2850	El. 152'	I	No	Yes
MSRV-R97 (1)	Az. 2850	E1. 152'	I	No	Yes
MSRV-R98 (1)	Az. 2900	El. 150'	I	No	Yes
MSRV-R99 (2)	Az. 3200	E1. 150'	I	No	Yes
MSRV-R100 (1)	Az. 3300	El. 146'	I	No	Yes
MSRV-R101 (1)	Az. 3300	El. 140'	I	No	Yes
MSRV-R103 (1)	Az. 3400	El. 129'	I	No	Yes
MSRV-R104 (2)	Az. 3400	El. 126'	I	No	Yes
MSRV-R105 (1)	Az. 750	El. 152'	I	No	Yes
MSRV-R106 (1)	Az. 750	E1. 152'	I	No	Yes
MSRV-R107 (1)	Az. 600	El. 150'	I	No	Yes
MSRV-R108 (2)	Az. 300	El. 150'	I	No	Yes
MSRV-R109 (1)	Az. 300	El. 150'	I	No	Yes
MSRV-R110 (1)	Az. 250	El. 137'	I	No	Yes
MSRV-R111 (1)	Az. 220	El. 132'	I	No	Yes
MSRV-R113 (1)	Az. 2700	E1. 154'	I	No	Yes

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-1b provided that a revision to Table 3.7.4-1b is included with the next License Amendment request.

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER _NO. (Qty.)	SYSTEM SN ON, LOCATIO Reacto	UBBER INSTALLED ON AND ELEVATION or Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	2821-Nuclea	ar Boiler System	(Continued)		
MSRV-R114 (1)	Az. 2700 E	El. 146'	I	No	Yes
MSRV-R115 (1)	Az. 2700 E	El. 137'	I	No	Yes
MSRV-R116 (1)	Az. 2700 E	El. 133'	I	No	Yes
MSRV-R118 (1)	Az. 2700 E	El. 125'	I	No	Yes
MSRV-R119 (1)	Az. 2700 E	El. 120'	I	No	Yes
MSRV-R121 (2)	Az. 2300 E	El. 141'	I	No	Yes
RFW-20 (2)	Az. 1000 E	El. 150'	I	No	Yes
RFW-31 (2)	Az. 2600 E	El. 150'	I	No	Yes
S67-H10 (1)	Az. 1670 E	E1. 134'	I	No	Yes
S67-H11 (1)	Az. 1140 E	E1. 135'	I	No	Yes
S67-H12 (1)	Az. 450 E	E1. 136'	I	No	Yes
S67-H13 (1)	Az. 320 E	El. 136'	I	No	Yes
S67-H14 (1)	Az. 220 E	E1. 136'	I	No	Yes
S128-H4 (1)	Az. 2400 E	E1. 192'	I	No	Yes
S143-H1 (1)	Az. 400 E	El. 195'	I	No	Yes
S143-H2 (2)	Az. 300 E	El. 189'	I	No	Yes
S143-H3 (2)	Az. 300 E	El. 184'	I	No	Yes
S143-H4 (2)	Az. 300 E	El. 179'	I	No	Yes
S143-H5 (1)	Az. 300 E	1. 196'	I	No	Yes
5146-H6 (1)	Az. 150 E	1. 191'	I	No	Yes

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-lb provided that a revision to Table 3.7.4-lb is included with the next License Amendment request.

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	ZBZI-NUCIEAR BOILER System	(Continued)		
S148-H1 (1)	Az. 2120 El. 195'	I	No	Vec
S148-H2 (2)	Az. 2100 El. 189'	Ī	No	Ves
S148-HB (2)	Az. 2100 El. 184'	Ĩ	No	Yes
S148-H4 (2)	Az. 2100 E1. 179'	Ī	No	Yes
S158-H5 (2)	Az. 2120 El. 194' & 196'	Ĩ	No	Yes
	2B31-Reactor Recirculation	System		
S14-H1 (1)	Az. 170 El. 125'	I	No	Yes
S17-H1 (1)	Az. 1980 El. 126'	I	No	Yes
S18-H1 (1)	Az. 650 El. 126'	I	No	Yes
S24-H1 (1)	Az. 3090 El. 123'	I	No	Yes
S40-H1 (1)	Az. 1100 El. 120'	I	No	Yes
S43-H1 (1)	Az. 1550 El. 187'	I	No	Yes
	2E11-RHR System			
R338 (1)	Az. 0º E1. 146'	I	No	Yes
R339 (1)	Az. 3550 El. 155'	1	No	Yes

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-lb provided that a revision to Table 3.7.4-lb is included with the next License Amendment request.

TABLE 3.7.4-1b

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
	Reactor Building	(A or I)	(Yes or No)	(Yes or No)
	Jan System (conternated)			
R340 (1)	Az. 3420 El. 155'	I	No	Yes
R342 (1)	Az. 3370 El. 140'	I	No	Yes
R350 (1)	Az. 80° El. 150'	I	No	Yes
R351 (2)	Az. 3050 El. 150'	I	No	Yes
R352 (2)	Az. 3250 El. 150'	I	No	Yes
R353 (1)	Az. 3280 El. 146'	I	No	Yes
R354 (1)	Az. 3280 El. 146'	I	No	Yes
R355 (1)	Az. 2850 El. 150'	I	No	Yes
R356 (2)	Az. 550 El. 150'	I	No	Yes
R357 (2)	Az. 370 El. 150'	I	No	Yes
R358 (1)	Az. 330 El. 146'	I	No	Yes
R359 (1)	Az. 380 El. 146'	I	No	Yes
R368 (1)	Az. 200 El. 206'	I	No	Yes
	2E21-Core Spray System			
R59 (2)	Az. 900 El. 178'	I	No	Yes
R98 (2)	Az. 2670 El. 178'	I	No	Yes

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-lb provided that a revision to Table 3.7.4-lb is included with the next License Amendment request.

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
	2E41-HPCI System			
R110 (1)	Az. 180 El. 145'	I	No	Yes
R111 (1)	Az. 190 El. 145'	I	No	Yes
R112 (1)	Az. 120 El. 145'	I	No	Yes
R113 (2)	Az. 110 El. 145'	I	No	Yes
R114 (1)	Az. 460 El. 145'	I	No	Yes
R115 (2)	Az. 56° El. 145'	I	No	Yes
	2E51-RCIC System			
R114 (1)	Az. 2130 El. 146'	Ι	No	Yes
R116 (1)	Az. 1860 El. 142'	I	No	Yes
R, * (1)	Az. 186 ⁰ El. 142'	I	No	Yes
	2G31-RWCU System			
R166 (1)	Az. 130 El. 149'	I	No	Yes
R167 (2)	Az. 170 El. 156'	I	No	Yes
R168 (1)	Az. 170 El. 162'	I	No	Yes

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-lb provided that a revision to Table 3.7.4-lb is included with the next License Amendment request.

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION Reactor Building	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE DURING SHUTDOWN** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE
	2E11-RHR System			
R91 (2)	38'SR14-23'WRI F1 119'	٥	No	No
R92 (2)	14'SR14-22'WRE, F1, 119'	Δ	No	No
R103 (2)	35'SR14-26'WRL, F1, 119'	Â	No	No
R105 (2)	9'NR24-11'WRF, F1, 118'	A	No	No
R106 (1)	9'NR24-11'WRF, E1, 118'	A	No	No
R123 (1)	1'SR22-13'WRH, E1, 169'	A	No	No
R125 (1)	6'SR22-12'WRF, E1, 167'	A	No	No
R224 (1)	24'SR14-29'WRL, E1, 90'	A	No	No
R225 (1)	29'SR14-29'WRL, E1, 90'	A	No	No
R226 (2)	23'SR14-27'WRL, E1. 90'	A	No	No
R228 (1)	18'SR14-23'WRL, E1. 90'	A	No	No
R229 (1)	28'NR24-29'WRL, E1. 90'	A	No	No
R230 (1)	25'SR14-30'WRL, E1. 90'	A	No	No
R233 (2)	23'NR24-28'WRL, E1. 90'	A	No	No
R235 (1)	13'SR14-13'WRL, E1. 121'	A	No	No
R240 (1)	24'NR24-28'WRL, E1. 90'	A	No	No
R289 (1)	13'NR24-13'WRL, E1. 121'	A	No	No
R290 (2)	25'SR14-28'WRL, E1. 120'	A	No	No
R292 (2)	36'SR14- 1'WRL, E1. 118'	A	No	No
R295 (2)	25'NR24-28'WRL, E1. 120'	A	No	No
R297 (2)	36'SR14-21'WRL, E1. 118'	A	No	No

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-lb provided that a revision to Table 3.7.4-lb is included with the next License Amendment request.

SAFETY RELATED MECHANICAL SNUBBERS*

SNUBBER NO. (Qty.)	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
	Reactor Building	(A or I)	(Yes or No)	(Yes or No)
	2Ell-RHR System (Continued)			
R326 (1)	18'SR19-17'ERH, E1. 136'	A	No	No
R327 (1)	18'SR19-17'ERH, E1. 136'	A	No	No
R328 (1)	18'SR19-10'WRH, E1. 139'	A	No	No
R329 (1)	18'SR19-10'WRH, E1. 139'	A	No	No
S4-H1 (1)	19'SR19-25'WRL, E1. 123'	A	No	No
	2E32-MSIV Leakage Control S	System		
S11-H1 (1)	21'NR21- 5'WRB, E1. 118'	А	No	No
S17-H1 (1)	20'NR21-21'WRB, E1. 118'	A	No	No
S18-H1 (1)	21'NR21- 4'WRB, E1. 119'	A	No	No
S19-H1 (1)	21'NR21- 5'WRB, E1. 117'	A	No	No
	2E41-HPCI System			
R45 (2)	23'NR25-5'WRL, E1. 117'	A	No	No
R50 (2)	10'NR25-4'ERG, E1. 110'	A	No	No
R55 (2)	10'NR25-24'WRL, E1. 96'	А	No	No
	2E51-RCIC System			
\$6-H1 (1)	5'NR19-22'ERA, E1. 129'	A	No	No

*Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.4-1b provided that a revision to Table 3.7.4-1b is included with the next License Amendment request.

**Modifications to this column due to changes in high radiation areas may be made without prior License Amendment provided that the revision to Table 3.7.4-lb is included with the next License Amendment request.

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BASES

3/4.7.4 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the reactor coolant system and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on non-safety related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safetyrelated system.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elasped may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule.

When the cause of the rejection of a snubber is clearly established and remedied for that snubber and for any other snubbers that may be generically susceptible, and verified by inservice functional testing, that snubber may be exempted from being counted as inoperable. Generically susceptible snubbers are those which are of a specific make or model and have the same design features directly related to rejection of the snubber by visual inspection or are similarly located or exposed to the same environmental conditions, such as temperature, radiation, and vibration.

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

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdown at 18-month intervals. Observed failures of sample snubbers shall require functional testing of additional units.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

HATCH-UNIT 2

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BASES

3/4.7.4 SNUBBERS (Continued)

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

3/4.7.5 SEALED SOURCE CONTAMINATION

The limitations on sealed source removable contamination ensure that the total body or individual organ irradiation does not exceed allowable limits in the event of ingestion or inhalation of the source material. The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. Quantities of interest to this specification which are exempt from the leakage testing are consistent with the criteria of 10 CFR Part 30.11-20 and 70.19. Leakage from sources excluded from the requirements of this specification is no. likely to represent more than one maximum permissible body burden for total body irradiation if the source material is inhaled or ingested.

3/4.7.6 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, CO_2 , and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

ADMINISTRATIVE CONTROL

RECORD RETENTION (Continued)

- c. Records of radiation exposure for all individuals entering radiation control areas.
- d. Records of gaseous and liquid radioactive material released to the environs.
- e. Records of transient or operational cycles for those unit components identified in Table 5.7.1-1.
- f. Records of reactor tests and experiments.
- g. Records of training and qualification for current members of the unit staff.
- Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the QA Manual.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the PRB and the SRB.
- Records of the service lives of all hydraulic and mechanical snubbers listed on Tables 3.7.4-la and 3.7.4-lb, including the date at which the service life commences and associated installation and maintenance records.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit*. Any individual or groups of individuals permitted

*Health Physics personnel, or personnel escorted by Health Physics personnel in accordance with approved emergency procedures, shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.