Attachment 1

Dresden Station Unit 2, DPR-19
Proposed Technical Specification Changes

Revised Pages: 91b
91c
99a
99b

New Pages: 91c-1
91d-1, Table 3.6.1a
91d-2, Table 3.6.1a
91e-1, Table 3.6.1b
91e-2, Table 3.6.1b

.6 LIMITING CONDITION FOR OPERATION

. Snubbers (Shock Suppressors)

1. During all modes of operation except cold shutdown and refuel, all safety related snubbers listed in Table 3.6.1a and 3.6.1b shall be operable except as noted in Specification 3.6.I.2 through 3.6.I.4.

2. From and after the time a snubber is determined to be inoperable, continued reactor operation is permissible only during the succeeding 72 hours unless the snubber is sooner made operable or replaced.

3. If the requirements of 3.6.I.1 and 3.6.I.2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in cold shutdown or refuel condition within 36 hours.

4. If a snubber is determined to be inoperable while the reactor is in the cold shutdown or refuel mode, the snubber shall be made operable or replaced prior to reactor startup.

5. Snubbers may be added to safety related systems without prior license amendment to Tables 3.6.1a and/or 3.6.1b provided that a revision to Tables 3.6.1a and/or 3.6.1b is included with the next license amendment request.

4.6 SURVEILLANCE REQUIREMENT

I. Snubbers (Shock Suppressors)

The following surveillance requirements apply to all safety related snubbers listed in Tables 3.6.1a and 3.6.1b.

1. Visual Inspection

An independent visual inspection shall be performed on the safety related hydraulic and mechanical snubbers contained in Tables 3.6.1a and 3.6.1b in accordance with the below schedule.

a. All hydraulic snubbers whose seal material has been demonstrated by operating experience, lab testing or analysis to be compatible with the operating environment shall be visually inspected. This inspection shall include, but not necessarily be limited to, inspection of the hydraulic fluid reservoir, fluid connections, and linkage connection to the piping and anchor to verify snubber operability.

b. All mechanical snubbers shall be visually inspected. This inspection shall consist of, but not necessarily be limited to, inspection of the snubber and attachments to the piping and anchor for indications of damage or impaired operability.

No. of Snubbers Found Inoperable During Inspection Interval	Next Required Inspection Interval
0	18 months ± 25%
1	12 months ± 25%
2	6 months ± 25%
3, 4	124 days ± 25%
5, 6, 7	62 days ± 25%
≥8	31 days ± 25%

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

Snubbers may be categorized in two groups, "accessible" or "inaccessible," based on their accessibility for inspection during reactor operation. These two groups may be inspected independently according to the above schedule.

2. Functional Testing

   a. Once each refueling cycle, a representative sample of approximately 10% of the hydraulic snubbers contained in Table 3.6.1a shall be functionally tested for operability, including verification of proper piston movement, lock-up and bleed. For each unit and subsequent unit found inoperable, an additional 10% of the hydraulic snubbers shall be tested until no more failures are found or all units have been tested.

   b. Once each refueling cycle, a representative sample of approximately 10% of the mechanical snubbers contained in Table 3.6.1b shall be functionally tested for operability. The test shall verify that the force that initiates free movement of the snubber in either tension or compression is less than the specified maximum breakaway/friction force. For each unit and subsequent unit found inoperable, an additional 10% of the mechanical snubbers shall be sc tested until no more failures are found or all units have been tested.

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d. In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and installed in another position) and the spare snubber shall be retested. Test results of these snubbers may not be included for the resampling.

e. Snubbers of rated capacity greater than 50,000 lbs. need not be functionally tested.

3. When a snubber is deemed inoperable, a review of all pertinent facts shall be conducted to determine the snubber mode of failure and to decide if an engineering evaluation should be performed on the supported system or components. If said evaluation is deemed necessary, it will determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

H. Recirculation Pump Flow Mismatch

The LPCI loop selection logic has been described in the Dresden Nuclear Power Station Units 2 and 3 FSAR, Amendments 7 and 8. For some limited low probability accidents with the recirculation loop operating with large speed differences, it is possible for the logic to select the wrong loop for injection. For these limited conditions, the core spray itself is adequate to prevent fuel temperatures from exceeding allowable limits. However, to limit the probability even further, a procedural limitation has been placed on the allowable variation in speed between the recirculation pumps.

The licensee's analyses indicate that above 80% power the loop select logic could not be expected to function at a speed differential of 15%. Below 80% power, the loop select logic would not be expected to function at a speed differential of 20%. This specification provides a margin of 5% in pump speed differential before a problem could arise. If the reactor is operating on one pump, the loop select logic trips that pump before making the loop selection.

In addition, during the start-up of Dresden Unit 2, it was found that a flow mismatch between the two sets of jet pumps caused by a difference in recirculation loops could set up a vibration until a mismatch in speed of 27% occurred. The 10% and 15% speed mismatch restrictions provide additional margin before a pump vibration problem will occur.

ECCS performance during reactor operation with one recirculation loop out of service has not been analyzed. Therefore, sustained reactor operation under such conditions is not permitted.

I. Snubbers (Shock Suppressors)

Snubbers are designed to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient while allowing normal thermal motion during startup and shutdown. The consequence of an inoperable snubber is an increase in the probability of structural damage to piping as a result of a seismic or other event initiating dynamic loads. It is therefore required that all snubbers required to protect the primary coolant system or any other safety system or component be operable during reactor operation.

Because the snubber protection is required only during low probability events, a period of 72 hours is allowed for repairs or replacements. In case a shutdown is required, the allowance of 36 hours to reach a cold shutdown condition will permit an orderly shutdown consistent with standard operating procedures. Since plant startup should not commence with knowingly defective safety related equipment, Specification 3.6.I.4 prohibits startup with inoperable snubbers.

When a snubber is found inoperable, a review shall be performed to determine the snubber mode of failure. Results of the review shall be used to determine if an engineering evaluation of the safety-related system or component is necessary. The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the support component or system.

All safety related hydraulic snubbers are visually inspected for overall integrity and operability. The inspection will include verification of proper orientation, adequate hydraulic fluid level and proper attachment of snubber to piping and structures.

All safety related mechanical snubbers are visually inspected for overall integrity and operability. The inspection will include verification of proper orientation and attachments to the piping and anchor for indications of damage or impaired operability.

The inspection frequency is based upon maintaining a constant level of snubber protection. Thus, the required inspection interval varies inversely with the observed snubber failures. The number of inoperable snubbers found during a required inspection determines the time interval for the next required 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 rejection of the 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.

To further increase the assurance of snubber reliability, functional tests will be performed once each refueling cycle. A representative sample of 10% of the safety-related snubbers will be functionally tested. Observed failures on these samples will require testing of additional units. Those snubbers designated in Tables 3.6.1a and 3.6.1b as being in high radiation areas need not be selected for functional tests provided operability was previously verified. Snubbers of rated capacity greater than 50,000 lbs. are exempt from the functional testing requirements because of the impracticability of testing such large units.

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

Hydrualic snubber testing will include stroking of the snubbers to verify proper piston movement, lock-up and bleed. Mechanical snubber testing will include that the force that initiates free movement of the snubber in either tension or compression is less than the specified maximum breakaway/friction force.

TABLE 3.6.1a

SAFETY RELATED HYDRAULIC SNUBBERS

SNUBBER NO.	LOCATION	ELEVATION	AZIMUTH	SNUBBER IN HIGH RADIATION AREA DURING SHUTDOWN	SNUBBERS INACCESSIBLE DURING NORMAL OPERATION	SNUBBERS ACCESSIBLE DURING NORMAL OPERATION
2	Torus Ring Header 1501-24"	483'	83°			X
3	Torus Ring Header 1501-24"	483'	74°			X
4	Torus Ring Header 1501-24"	483'	38°			X
5	Torus Ring Header 1501-24"	483'	29°			X
7	Torus Ring Header 1501-24"	483'	331°			X
8	Torus Ring Header 1501-24"	483'	322°			X
9	Torus Ring Header 1501-24"	483'	286°			X
10	Torus Ring Header 1501-24"	483'	277°			X
12	Torus Ring Header 1501-24"	483'	218°			X
13	Torus Ring Header 1501-24"	483'	209°			X
15	Torus Ring Header 1501-24"	483'	151°			X
16	Torus Ring Header 1501-24"	483'	142°			X

*Modifications to this table due to changes in high radiation should be submitted to the NRC as part of the next license amendment request.

TABLE 3.6.1a (Continued)

SAFETY RELATED HYDRAULIC SNUBBERS

SNUBBER NO.	LOCATION	ELEVATION	AZIMUTH	SNUBBER IN HIGH RADIATION AREA DURING SHUTDOWN	SNUBBERS INACCESSIBLE DURING NORMAL OPERATION	SNUBBERS ACCESSIBLE DURING NORMAL OPERATION
	Isolation Condenser Pipeway Room:					
1	Isolation Condenser Line 1303-12"	558'	180°	X		X
2	Isolation Condenser Line 1303-12"	568'	180°	X		X
3	Isolation Condenser Line 1302-14"	580'	195°	X		X

*Modifications to this table due to changes in high radiation should be submitted to the NRC as part of the next license amendment request.

TABLE 3.6.1b

SAFETY RELATED MECHANICAL SNUBBERS

SNUBBER NO.	LOCATION	ELEVATION	AZIMUTH	SNUBBER IN HIGH RADIATION AREA DURING SHUTDOWN	SNUBBERS INACCESSIBLE DURING NORMAL OPERATION	SNUBBERS ACCESSIBLE DURING NORMAL OPERATION
1	Drywell Recirc. Motor 2B-202	524'	328°	X	X	
2	Drywell Recirc. Motor 2B-202	524'	302°	X	^	
3	Drywell Recirc. Motor 2B-202	524'	315°	X	X	
4	Drywell Recirc. Motor 2A-202	524'	148°	X	X	
5	Drywell Recirc. Motor 2A-202	524'	122°	X	X	
6	Drywell Recirc. Motor 2A-202	524'	135°	X	X	
7	Drywell Recirc. Pump 2B-202	512'	326°	X	X	
8	Drywell Recirc. Pump 2B-202	512'	304°	X	X	
9	Drywell Recirc. Pump 2B-202	517'	315°	X	X	
10	Drywell Recirc. Pump 2A-202	512'	124°	X	X	
11	Drywell Recirc. Pump 2A-202	512'	146°	X	X	
12	Drywell Recirc. Pump 2A-202	507'	135°	X	X	
13-16	Removed					
17	Drywell Recirc. Header 201B-22"	533'6"	195°	X	X	
18-20	Removed					
21	Drywell Recirc. Header 201A-22"	533'6"	22°	X	X	
22-23	Removed					
24	Drywell Feedwater Line 3204D-12"	538'	108°	X	X	
25-29	Removed					
30	Drywell Core Spray Line 1403-10"	575'	336°	X	X	
31	Drywell Core Spray Line 1404-10"	562'	231°	X	X	
32	Drywell Target Rock Valve 203-3A	542'6"	16°	X	X	
33	Drywell Target Rock Valve 203-3A	542'4"	31°	X	X	
34	Drywell Target Rock Valve 203-3A	540'0"	19°	X	X	
35	Drywell Target Rock Valve 203-3A	540'3"	34°	X	X	
36	Drywell Recirc. Line 201B-28"	518'	270°	X	X	

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TABLE 3.6.1b (Continued)

SAFETY RELATED MECHANICAL SNUBBERS

SNUBBER NO.	LOCATION	ELEVATION	AZIMUTH	SNUBBER IN HIGH RADIATION AREA DURING SHUTDOWN	SNUBBERS INACCESSIBLE DURING NORMAL OPERATION	SNUBBERS ACCESSIBLE DURING NORMAL OPERATION
37	Drywell Recirc. Line 201A-28"	518'	90°	X	X	
38	Drywell Shutdown Cooling Line 1001A-16"	523'	0°	X	X	
39	Drywell Rx Water Cleanup Line 1201-8"	533'	316°	X	X	
40	Drywell Rx Water Cleanup Line 1201-8"	533'	301°	X	X	

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