

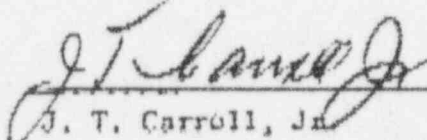
To: James P. O'Reilly
Directorate of Regulatory Operations
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

From: Jersey Central Power & Light Company
Oyster Creek Nuclear Generating Station Docket #50-219
Forked River, New Jersey 08731

Subject: Abnormal Occurrence Report No. 50-219/74/ 11

The following is a preliminary report being submitted
in compliance with the Technical Specifications
paragraph 6.6.2.

Preliminary Approval:


J. T. Carroll, Jr. 2/19/74
Date

cc: Mr. A. Giambusso

1 B/626

OYSTER CREEK NUCLEAR GENERATING STATION
PORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. SO-219/74/11

IDENTIFICATION
OF OCCURRENCE:

Violation of the Technical Specifications, paragraph N/A,
Failure of four torus to drywell vacuum breakers to demon-
strate operability during weekly surveillance testing.

This event is considered to be an abnormal occurrence as de-
fined in the Technical Specifications, paragraph 1.15B.

CONDITIONS PRIOR
TO OCCURRENCE:

<input checked="" type="checkbox"/>	Steady State Power	<input type="checkbox"/>	Routine Shutdown
<input type="checkbox"/>	Hot Standby	<input type="checkbox"/>	Operation
<input type="checkbox"/>	Cold Shutdown	<input type="checkbox"/>	Load Changes During
<input type="checkbox"/>	Refueling Shutdown	<input type="checkbox"/>	Routine Power Operation
<input type="checkbox"/>	Routine Startup	<input type="checkbox"/>	Other (Specify)
<input type="checkbox"/>	Operation		

The major plant parameters at the time of the event were as
follows:

Power: Core, 1904 MWt
Elec., 670 MWe
Flow: Recirc., 15.5×10^4 gpm
Feed., 7.23×10^6 lb/hr
Stack Gas: 29,000 μ Ci/sec

DESCRIPTION
OF OCCURRENCE:

On Friday, February 15, 1974 at approximately 1500, while per-
forming weekly surveillance testing on the fourteen torus to
drywell vacuum breakers, it was found that four of the vacuum
breakers (V-26-5, 6, 9, and 11) failed to demonstrate operability.
This surveillance testing was being performed to satisfy the
requirements of AEC letter (D. J. Skovholt to R. H. Sims, dated
January 30, 1974). This operability testing basically consisted
of manually opening each valve to the fully open position and

then allowing it to close without assistance. Any hanging up in the opening or closing motions was interpreted as non-operability. Valve V-26-5 was made operable immediately with the application of several successive opening and closing movements. Plant operation continued on the basis of the requirements of paragraph B.5 of the referenced letter, which allows continued operation if not more than 25% of these vacuum breakers are inoperable. Maintenance on the remaining three inoperable vacuum breakers (V-26-6, 9, and 11) was complete at approximately 0100 on February 16, 1974.

APPARENT CAUSE
OF OCCURRENCE:

- | | |
|--|---|
| <input type="checkbox"/> Design | <input type="checkbox"/> Procedure |
| <input type="checkbox"/> Manufacture | <input checked="" type="checkbox"/> Unusual Service Condition |
| <input type="checkbox"/> Installation/
Construction | <input type="checkbox"/> Inc. Environmental |
| <input type="checkbox"/> Operator | <input type="checkbox"/> Component Failure |
| | <input type="checkbox"/> Other (Specify) |

It is believed that these failures were the result of valve packing glands being adjusted too tightly. This condition may have been caused or aggravated by the low pressure, high humidity environment in which the valves operate. A similar failure was reported as Abnormal Occurrence Report No. 73-2, dated January 6, 1973.

ANALYSIS OF
OCCURRENCE:

The drywell-torus vacuum breaker system is required to prevent water oscillation in the downcomers due to low steam flow rates in the downcomers and to provide protection against negative pressure conditions in the containment vessel. The significance

of this event is that for a period of time plant operation continued with four vacuum breakers inoperable. Plant operation may continue with a maximum of three inoperable vacuum breakers, as per paragraph B.5 of AEC letter (D. J. Skovholt to R. H. Sims, dated January 30, 1974). Additionally, the bases of the Technical Specifications state that this condition has no deleterious effect on negative pressure protection since only about 25% of the available vacuum relief capacity is required for this protection.

CORRECTIVE
ACTION:

Valves V-26-5, 6, and 11 were freed with repetitive opening and closing movements. Valve V-26-9 required packing adjustment.

The results of future weekly surveillance testing on these valves will be closely monitored. Further corrective action will be dictated by the results of this testing.

FAILURE DATA:

Basic valve data are as follows:

Manufacturer - Atwood & Morrill

Type - Butterfly

Vent Area - 1.75 square feet per valve

Prepared by:



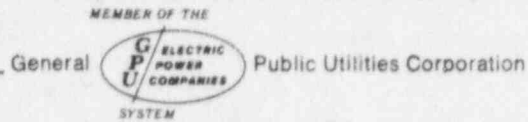
Date:

2/19/74

Jersey Central Power & Light Company



MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 201-539-6111



February 19, 1974

Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Hydraulic Shock and Sway Arrestor Inspection - January 1974

The purpose of this letter is to forward to you a report of an inspection conducted on the hydraulic shock and sway arrestors (snubbers) located in the drywell at the Oyster Creek Station during the January 1974 shutdown. The report is responsive to the inspection and reporting requirements of Directorate of Licensing letter (Donald J. Skovholt to Jersey Central Power & Light Company) dated October 1, 1973.

During the plant shutdown which began on January 12, 1974, a total of 90 (65 Bergen Patterson and 25 Grinnel) snubbers were inspected. Thirty units were replaced for the various reasons given in the attached report. Replacements were made with snubbers rebuilt with complete ethylene propylene seal kits.

The surveillance program outlined in my letter of December 7, 1973 will be continued until a satisfactory solution to the snubber problem has been found.

Enclosed are forty copies of this submittal.

Very truly yours,

Donald A. Ross
Manager, Nuclear Generating Stations

8305100069 (p)
pk
Enclosures

cc: Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region 1

Mr. D. J. Skovholt
Assistant Director for Operating Reactors

2001

JERSEY CENTRAL POWER & LIGHT COMPANY
OYSTER CREEK NUCLEAR GENERATING STATION

DRYWELL SNUBBER ACTIVITIES

JANUARY 1974

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On January 12, 1974, after achieving the 40-hour stay time access requirement, an inspection of the hydraulic shock and sway arrestors in the drywell was initiated. All units, which included 65 Bergen-Paterson and 25 Grinnell snubbers, were inspected thoroughly and those units unable to meet the rod freedom, fluid level or no visible leakage requirements were tagged for removal. Replacements were made with snubbers rebuilt with the complete ethylene propylene seal kits. Alemite fittings with EP inserts were used on all the rebuilt units which insures that all sealing material is of the recommended type.

The inspection of the Bergen-Paterson snubbers located five failed units and one leaking unit which, though still operable, had a low oil level. These snubbers were tagged for removal as "failed" to segregate them from other units to be removed. Five leaking snubbers with sufficient fluid levels were also tagged for removal. Of the units tagged "failed," a visual inspection of the seals revealed that some of the seals did deteriorate to a point of failure while others looked in excellent condition. There seemed to be several types of material used in each unit, and to determine which material failed and the degree of the deterioration of the remaining seals, an analysis using infrared scans and microscopic examination is being conducted by the GPU Laboratory. A supplementary report of the test results will be generated upon their receipt.

During the inspection of the seals, it was determined that two of the failed units had no rebuilding documentation available. Further investigation revealed a total of nine undocumented snubbers from the September rebuilding activities. To insure an accurate record of the material used in the drywell, these nine snubbers were also replaced with rebuilt units.

A review of the information obtained from the inspection showed that four of the failed units were located above the biological shield. There were also two undocumented units at that elevation and it was decided at that time to replace all the hydraulic snubbers in that area as a preventive measure to insure units containing all ethylene propylene seal material in the area of the drywell having the worst environmental conditions.

In addition to the above requirements for removal, twelve old series snubbers had been designated for replacement prior to the inspection. These units were of the type which could not be fully rebuilt with the full EP kits. These snubbers were tagged regardless of their condition; however, their condition was recorded on the as found sheets.

A total of 30 Bergen-Paterson hydraulic shock and sway arrestors have been replaced in the drywell during the shutdown. Of the 30 units, some fell into more than one category. Table I of this report lists all the snubbers that were replaced and the reason(s) for removal. Table II lists the installed units and corresponds with Table I.

Inspection of the Grinnell snubbers, located on the recirculation pumps, yielded two units which had very little oil in their accumulator and seven with reservoirs less than one-third filled. The remaining sixteen were in satisfactory condition. The nine units with low fluid levels had their accumulators refilled and one of the two relatively empty units had the coupling between the accumulator and piston housing tightened. The as found and as left conditions are listed at the end of the report.

TABLE I

SNUBBERS REPLACED DURING JANUARY 1974 OUTAGE

487574	North Main Steam	23'	No documentation
487557	North Main Steam	51'	No documentation
487395	North Main Steam	51'	No documentation
487538	North Main Steam	60'	Leaking S-Tube
487499	North Feedwater	23'	No documentation
487491	North Feedwater	51'	No documentation
487561	South Main Steam	23'	No documentation
469862	South Main Steam	60'	Old series snubber
487573	South Feedwater	23'	Failed (leaking) No documentation
477177	South Feedwater	51'	Old series snubber
487517	North Emergency Cond. Condensate Return	75'	Failed
470924	North Emergency Cond. Condensate Return	95'	Failed Old series snubber
487492	North Emergency Cond. Condensate Return	95'	Preventive Action
487510	North Emergency Cond. Steam Line	95'	Preventive Action
487487	North Emergency Cond. Condensate Return	95'	Failed
487447	South Emergency Cond. Condensate Return	95'	Leaking
487502	South Emergency Cond. Condensate Return	95'	No documentation Preventive Action
487494	South Emergency Cond. Steam Line	95'	Preventive Action
469962	South Emergency Cond. Steam Line	95'	Failed Old series snubber
487549	North Core Spray	75'	Leaking
487552	South Core Spray	95'	No documentation Preventive Action
487356	South Core Spray	95'	Preventive Action
477376	South Core Spray	95'	Failed Old series snubber Preventive Action
469860	South Electromatic Relief	51'	Old series snubber
477288	Cleanup System	55'	Old series snubber
469852	Cleanup System	65'	Old series snubber
469902	Shutdown Cooling	48'	Old series snubber
469900	Shutdown Cooling	48'	Old series snubber
469901	Shutdown Cooling	51'	Old series snubber
469939	Containment Spray	65'	Old series snubber

TABLE II

SNUBBERS INSTALLED DURING JANUARY 1974 OUTAGE

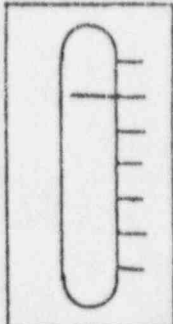
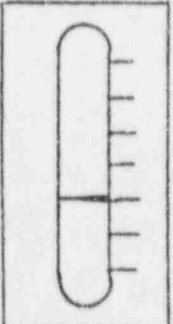
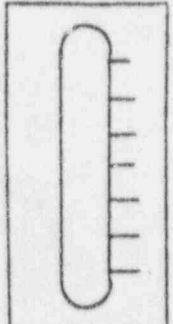
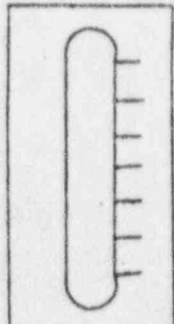
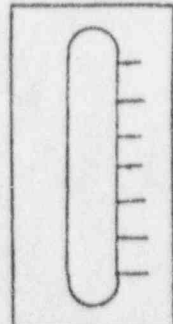
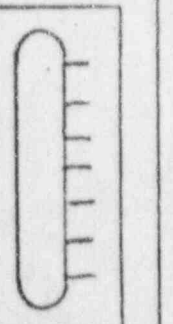
487521	North Main Steam	23'
F93501 #5	North Main Steam	51'
F93501 #4	North Main Steam	51'
487487	North Main Steam	60'
487576	North Feedwater	23'
487517	North Feedwater	51'
F84806-3	South Main Steam	23'
F93501 #2	South Main Steam	60'
487399	South Feedwater	23'
487549	South Feedwater	51'
F93502 #2	N. Condensate Ret.	75'
487561	N. Condensate Ret.	95'
487531	N. Condensate Ret.	95'
F93501 #3	N. Condensate Ret.	95'
487499	N. Emergency Cond. Steam Line	95'
487574	S. Condensate Ret.	95'
487502	S. Condensate Ret.	95'
487494	S. Emergency Cond. Steam Line	95'
F95222-2	S. Emergency Cond. Steam Line	95'
4874--	North Core Spray	75'
487552	South Core Spray	90'
487557	South Core Spray	95'
F93502 #1	South Core Spray	95'
487446	S. Electromatic Relief	51'
487495	Cleanup System	55'
487516	Cleanup System	65'
487404	Shutdown Cooling	48'
487528	Shutdown Cooling	48'
487573	Shutdown Cooling	51'
F93501 #1	Containment Spray	65'

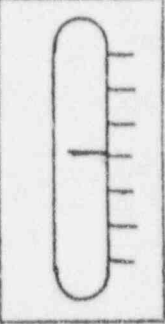
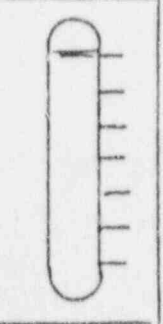
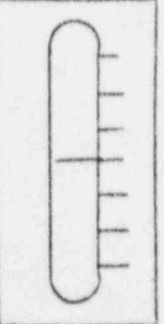
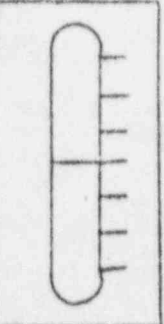
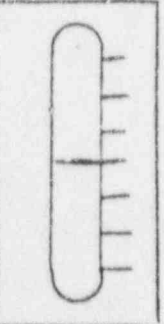
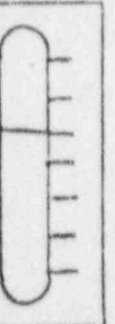
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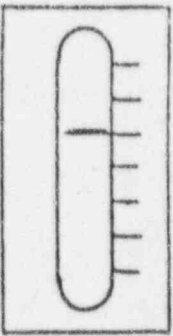
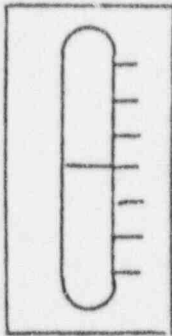
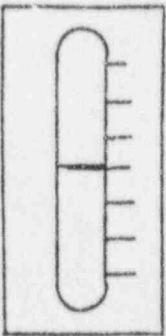
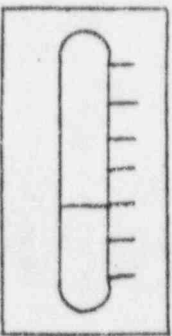
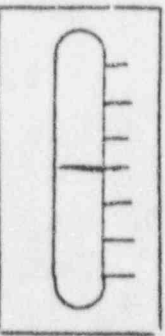
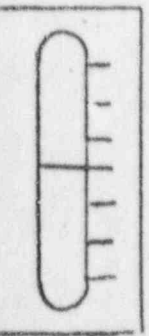
DRYWELL SNUBBERS

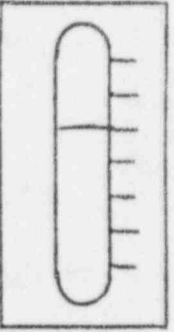
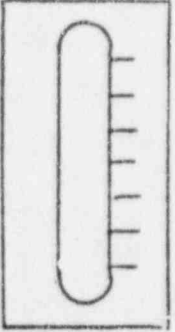
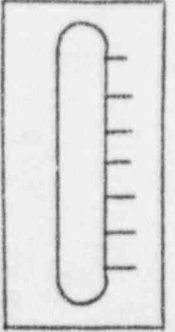
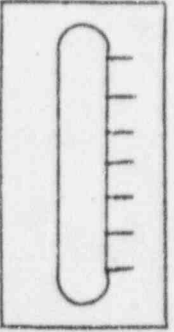
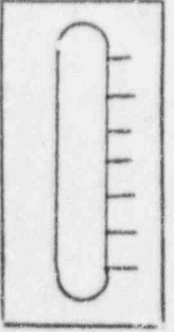
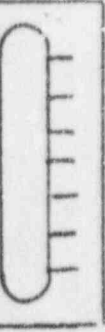
AS FOUND

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487513	N-2-1 23'		North Feedwater		OK 3-7/8"		
487499	N-2-2 23'		North Feedwater		OK 4-5/8"		Replace No documentat
487535	N-2-3 51'		North Feedwater		OK 3-3/4"		
487563	N-2-4 51'		North Feedwater		OK 3-7/8"		
487520	N-2-5 51'		North Feedwater		OK 3-7/8"		
487569	N-2-6 51'		North Feedwater		OK 3-3/4"		

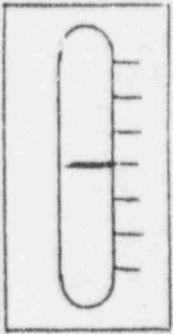
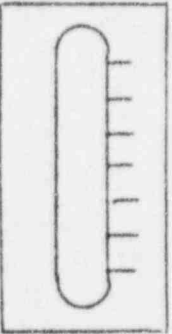
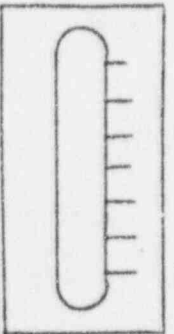

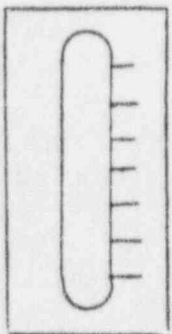
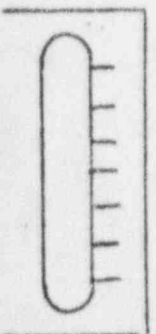
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487491	N-2-7 51'		North Feedwater		OK 2-1/2"		Replace No documentati
487564	N-2-8 51'		North Feedwater		OK 3-3/4"		
							
							
							
							

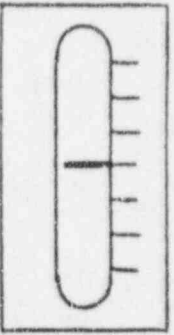
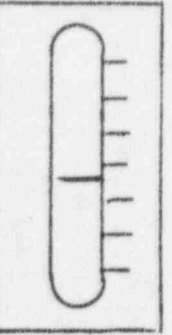
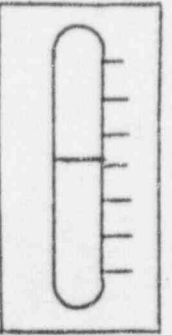
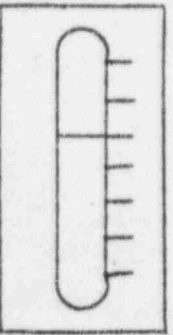
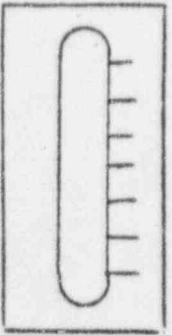
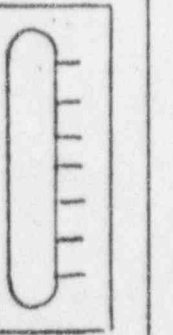
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487568	S-2-1 23'		South Feedwater		OK 3-3/4"		
487573	S-2-2 23'		South Feedwater		OK 3-7/8"		Replace Leaking-F aile and No document at
487488	S-2-3 51'		South Feedwater		OK 3-5/8"		
487519	S-2-4 51'		South Feedwater		OK 3-3/4"		
477177	S-2-5 51'		South Feedwater		OK 3-3/4"		Replace Old series
487518	S-2-6 51'		South Feedwater		OK 4"		

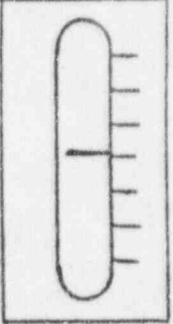
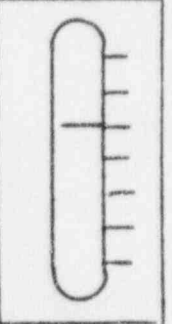
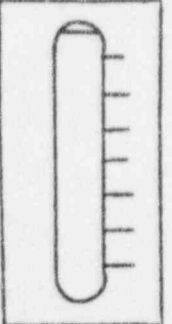
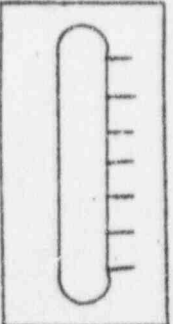
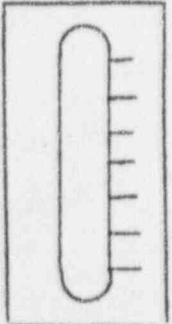
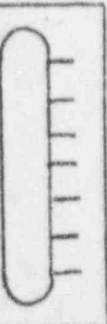
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
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487532	N-1-2 23'		North Main Steam		scratched 3-1/8"		
487566	N-1-3 51'		North Main Steam		OK 3-5/8"		
487567	N-1-4 51'		North Main Steam		OK 3-1/2"		Replace No documentati
487395	N-1-5 51'		North Main Steam		OK 4"		Replace No documentat
487527	N-1-6 51'		North Main Steam		OK 3-1/2"		

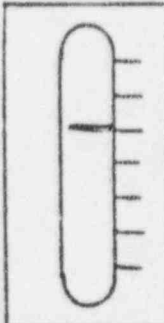
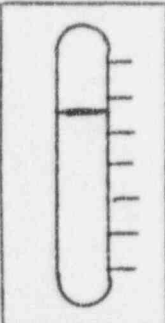
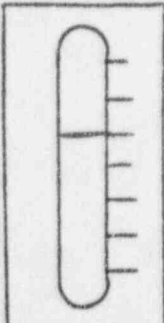
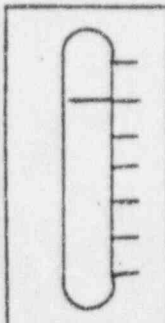
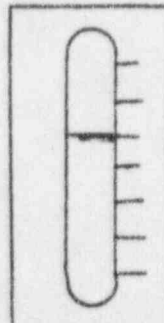

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487538	N-1-7 50'		North Main Steam		OK 4"		Replace S-Tube Leak in
					/		
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					/		
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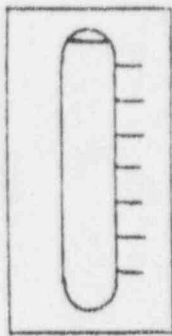
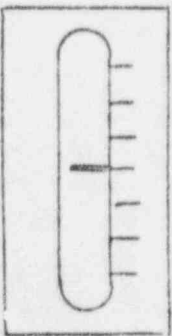
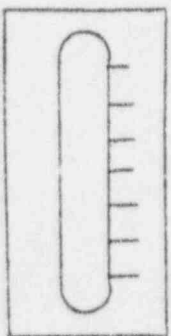
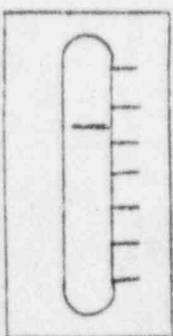
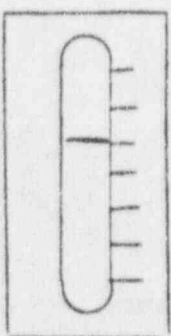
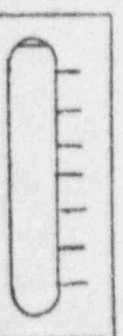
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487530	S-1-1 23'		South Main Steam		OK 3-7/8"		
487561	S-2-1 23'		South Main Steam		OK 3-3/8"		Replace No documentati
487501	S-1-3 51'		South Main Steam		Scratched 3-5/8"		
487512	S-1-4 51'		South Main Steam		OK 3-3/8"		
487529	S-1-5 51'		South Main Steam		OK 3-3/8"		
487504	S-1-6 51'		South Main Steam		OK 3-7/8"		

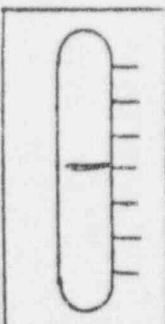

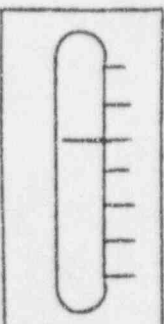
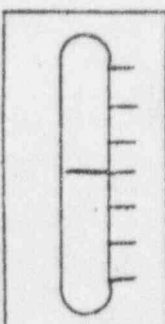
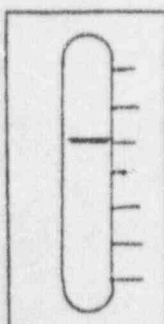
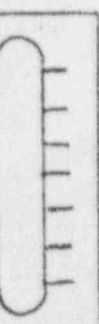
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
469862	S-1-7 60'		South Main Steam		OK 3-1/2"		Replace Old series
							
							
							
							
							

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487546	N-20-1 51'		North Core Spray		OK 1-1/2"		
487523	N-20-2 51'		North Core Spray		OK 3"		
487537	N-20-3 75'		North Core Spray		OK 4-3/4"		
487521	N-20-4 75'		North Core Spray		OK 4-7/8"		Replace Slight Leak
							
							

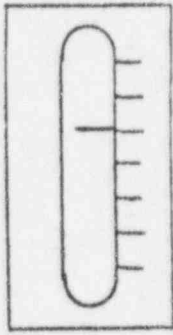
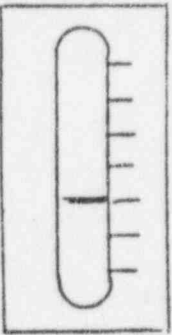
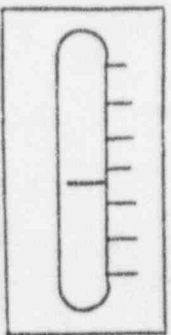
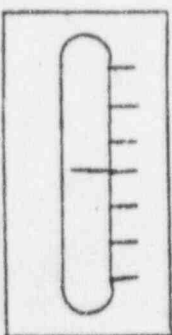
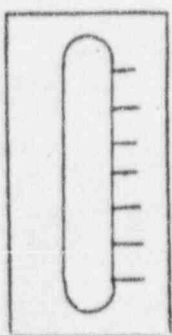
Snubber Serial Number	Position	Insp Date	System	Seal Material	Rod Condition Rod Extension	Indicator	Remarks
487552	S-20-1 90'		South Core Spray		OK 2-7/8"		Replace No documentati
487356	S-20-2 95'		South Core Spray		OK 4-1/4"		Replace Preventive Action
477376	S-20-3 95'		South Core Spray		OK 3-3/8"		Replace Failed Old series
							
							
							

Snubber Serial Number	Position	Insp Date	System	Seal Material	Rod Condition Extension	Indicator	Remarks
487526	N-E-1 51'		N. Electromatic Relief		OK 4"		
487489	N-E-2 51'		N. Electromatic Relief		OK 4"		
469860	S-E-1 51'		S. Electromatic Relief		OK 3-5/8"		Replace Old series
487506	S-E-2 51'		S. Electromatic Relief		OK 3-3/4"		
487536	S-E-3 51'		S. Electromatic Relief		OK 3-3/4"		
469939	21-1' 65'		Containment Spray		OK 2-1/2"		Replace Old series

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487517	N-14-1 95'		Emergency Condenser Condensate Return		OK 4-1/2"		Replace Failed
487551	75'		Emergency Condenser Condensate Return		OK 3-1/2"		Replace Failed - Old Series
470924	N-14-3 95'		Emergency Condenser Condensate Return		OK 4-3/8"		Replace Failed - Old Series
487492	N-14-4 95'		Emergency Condenser Condensate Return		OK 3-3/8"		Replace Preventive Action
487510	N-14-5 95'		Emergency Condenser Steam line		OK 3-7/8"		Replace Preventive Action
487487	N-14-6 95'		Emergency Condenser Condensate Return		OK 4"		Replace Failed

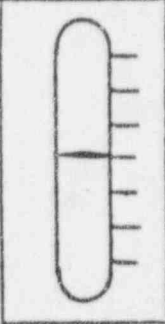
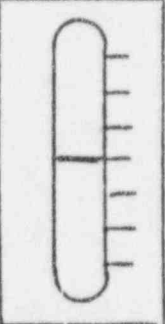
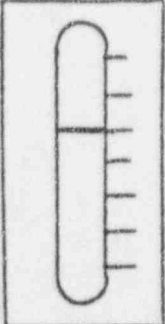
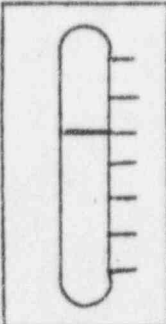
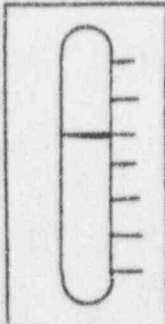
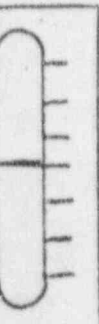
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487525	S-14-1 60'		Emergency Condenser Condensate Return		OK 3"		
487507	S-14-2 60'		Emergency Condenser Condensate Return		OK 4"		
487447	S-14-3 95'		Emergency Condenser Condensate		OK 4-1/4"		Replace Leaking
487502	S-14-4 95'		Emergency Condenser Condensate Return		OK1 3-5/8"		Replace No documentat
487494	S-14-5 95'		Emergency Condenser Steam Line		OK 3-1/2"		Replace Preventive Action
469962	S-14-6 95'		Emergency Condenser Steam Line		OK 3-7/8"		Replace Failed - Old Series

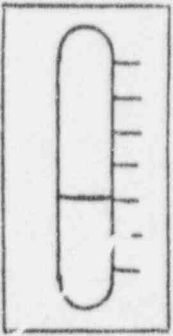
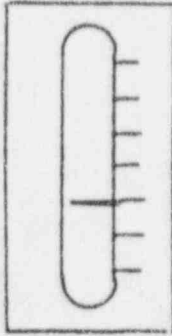
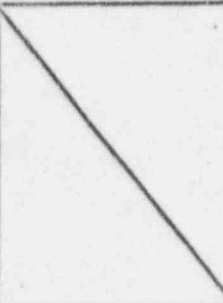
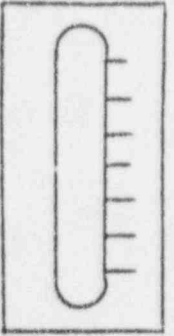

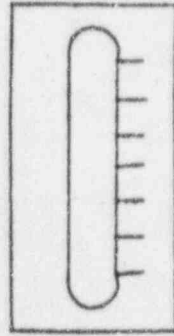

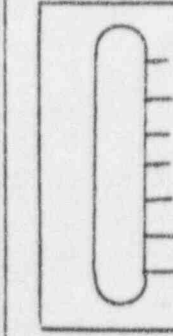

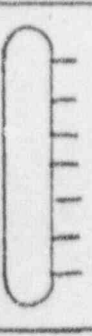
Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
469902	17-1 48'		Shutdown Cooling		OK 3"		Replace Old series
469900	17-2 48'		Shutdown Cooling		OK 2-1/2"		Replace Old series
487554	17-3 51'		Shutdown Cooling		OK 5"		
487496	17-4 51'		Shutdown Cooling		OK 4-1/2"		
487497	17-5 51'		Shutdown Cooling		OK 3-3/4"		
469901	17-6 51'		Shutdown Cooling		OK 3"		Replace Old series

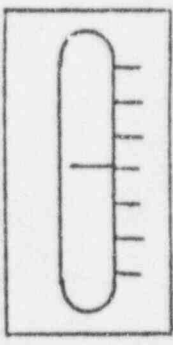
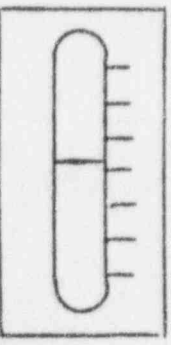
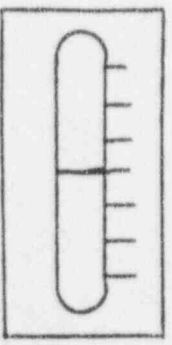
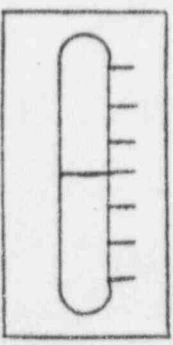

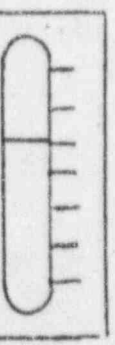
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487542	16-1 60'		Cleanup		OK 3"		
487438	16-2 51'		Cleanup		OK 2-7/8"		
477288	16-3 55'		Cleanup		scratched 3"		Replace Old series Slight leak
469852	16-4 65'		Cleanup		OK 3-1/2"		Replace Old series
							


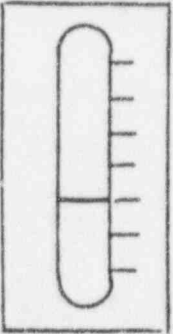

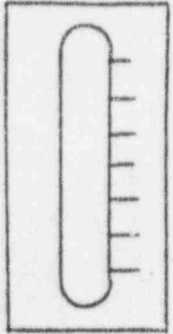

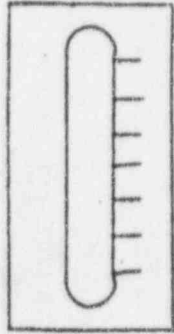

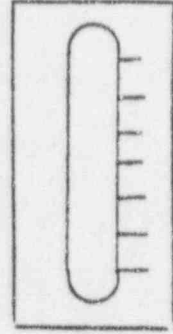

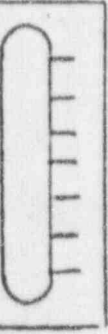
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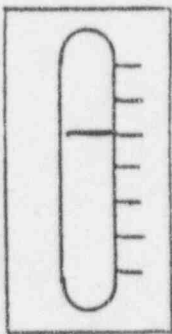
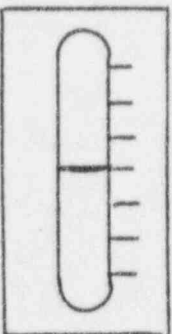
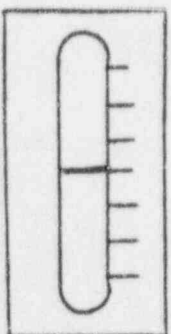
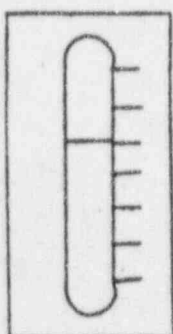
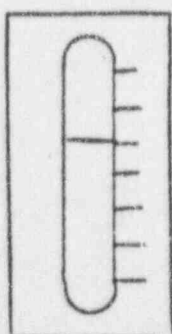
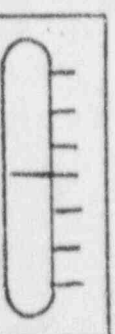
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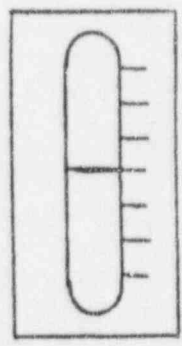
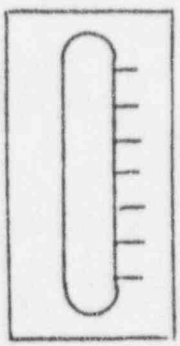
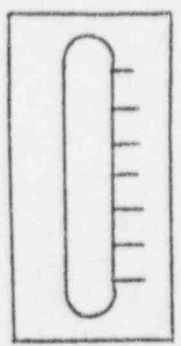

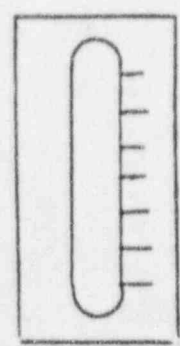
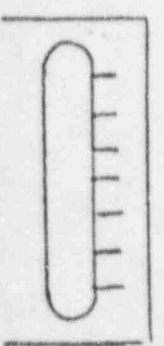
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487513	N-2-1 23'		North Feedwater		OK 3-7/8"		
487576	N-2-2 23'		North Feedwater	EP	OK 3"		
487535	N-2-3 51'		North Feedwater		OK 3-3/4"		
487563	N-2-4 51'		North Feedwater		OK 3-7/8"		
487528	N-2-5 51'		North Feedwater		OK 3-7/8"		
487569	N-2-6 51'		North Feedwater		OK 3-3/4"		

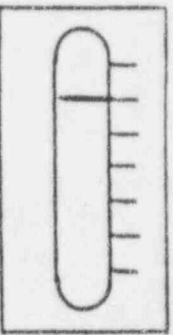
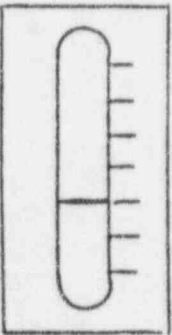

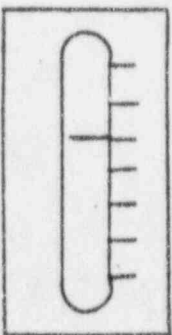
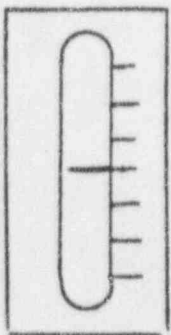

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487517	N-2-7 51'		North Feedwater	EP	OK 2-3/8"		
487564	N-2-8 51'		North Feedwater		OK 3-3/4"		
							
							
							
							

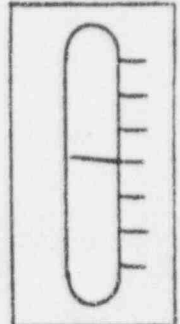
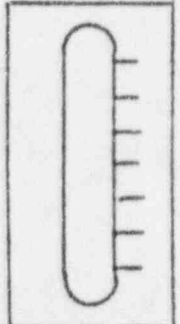
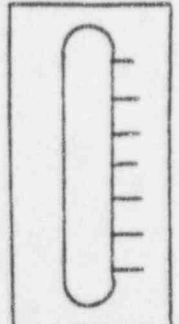
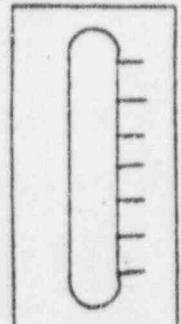
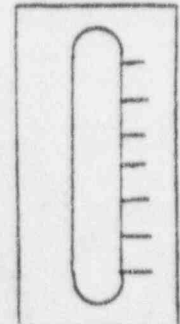

Number Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487568	S-2-1 23'		South Feedwater		OK 3-3/4"		
487399	S-2-2 23'		South Feedwater	EP	OK 4-1/2"		
487488	S-2-3 51'		South Feedwater		OK 3-5/8"		
487519	S-2-4 51'		South Feedwater		OK 3-3/4"		
487549	S-2-5 51'		South Feedwater	EP	OK 4"		
487518	S-2-6 51'		South Feedwater		OK 4"		

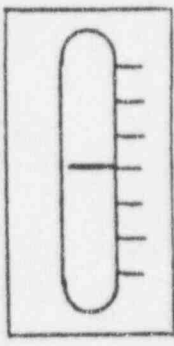
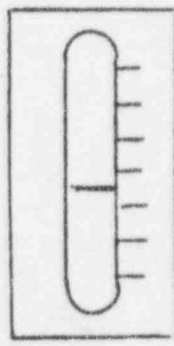
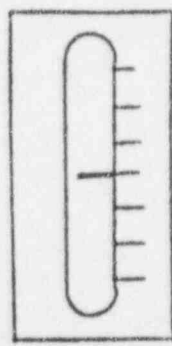
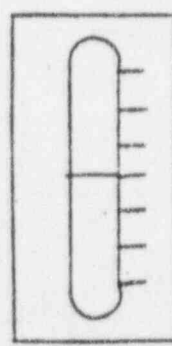
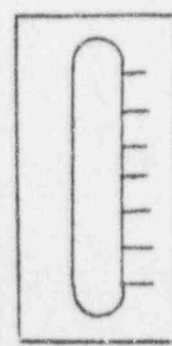
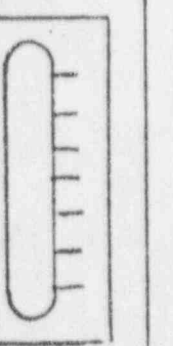
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487509	S-2-7 51'		South Feedwater		OK 3-1/2"		
487571	S-2-8 51'		South Feedwater		OK 2"		
							
							
							
							

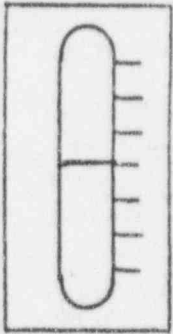
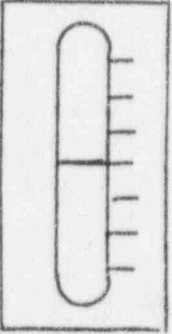
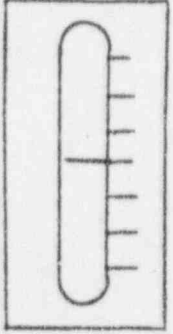
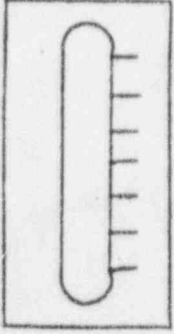
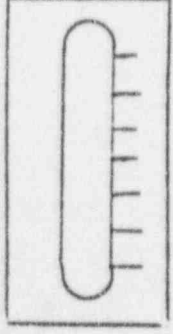
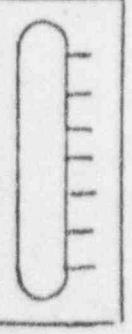
Snubber Serial Number	Position	Insp Date	System	Seal Material	Rod Condition Rod Extension	Indicator	Remarks
487521	N-1-1 23'		North Main Steam	EP	OK 4-1/2"		
487532	N-1-2 23'		North Main Steam		scratched 3-1/8"		
487556	N-1-3 51'		North Main Steam		OK 3-5/8"		
F93501 #5	N-1-4 51'		North Main Steam	EP	OK 3-3/4"		
F93501 #4	N-1-5 51'		North Main Steam	EP	OK 4-1/2"		
487527	N-1-6 51'		North Main Steam	EP	OK 3-1/2"		

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487487	N-1-7 60'		North Main Steam	EP	OK 3-5/8"		
							
							
							
							
							

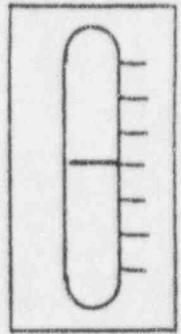
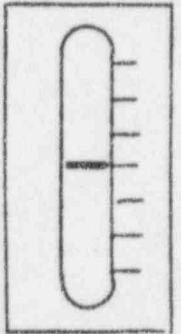
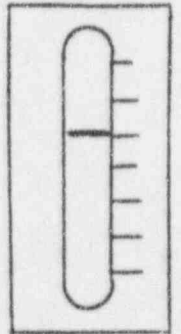
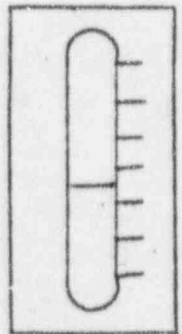
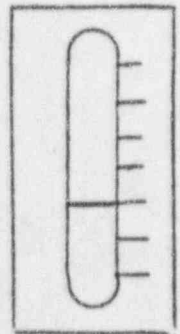
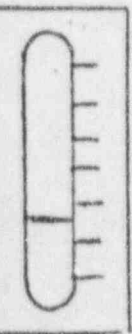
Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487530	S-1-1 23'		South Main Steam		OK 3-7/8"		
F84806-3	S-1-2 23'		South Main Steam	EP	OK 3-3/8"		
487501	S-1-3 51'		South Main Steam		scratched 3-5/8"		
487512	S-1-4 51'		South Main Steam		OK 3-3/8"		
487529	S-1-5 51'		South Main Steam		OK 3-3/8"		
487504	S-1-6 51'		South Main Steam		OK 3-7/8"		

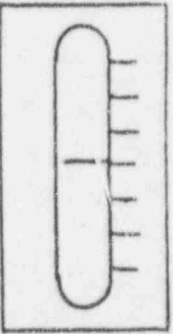
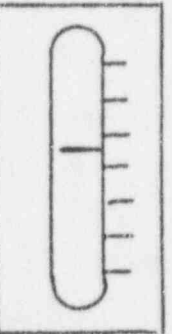
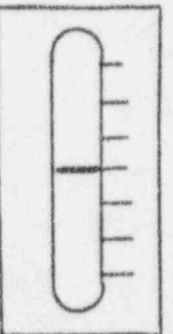
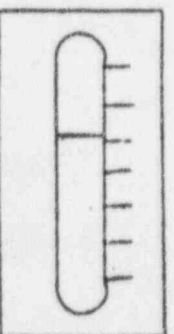
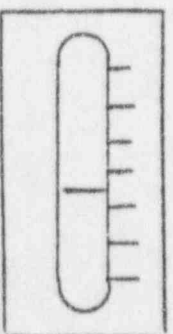
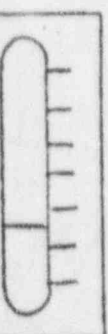
Gnubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
F93501 #2	S-1-7 60'		South Main Steam	EP	OK 5-1/2"		
							
							
							
							
							

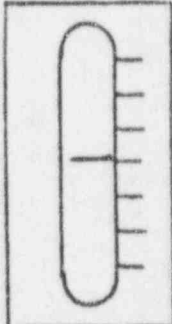
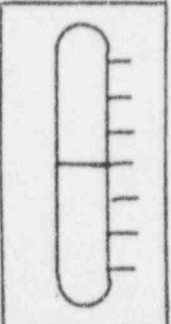
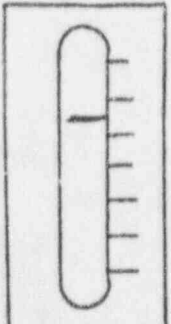
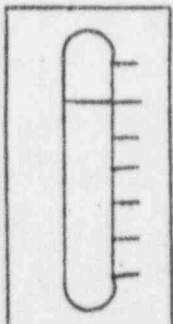
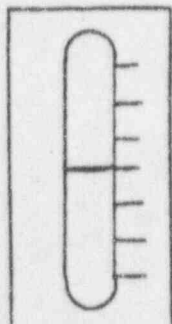
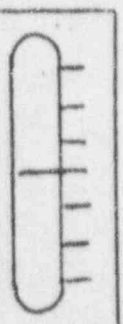
Rubber Material Number	Position	Insp Date	System	Seal Material	Rod Condition Rod Extension	Indicator	Remarks
87546	N-20-1 51'		North Core Spray		OK 1-1/2"		
87523	N-20-2 51'		North Core Spray		OK 3"		
87537	N-20-3 75'		North Core Spray		OK 4-3/4"		
874--	N-20-4 75'		North Core Spray	EP	OK 3"		
							
							

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487552	S-20-1 90'		South Core Spray	EP	OK 3-1/2"		
487557	S-20-2 95'		South Core Spray	EP	OK 4"		
F93502 #1	S-20-3 95'		South Core Spray	EP	OK 3-1/2"		
							
							
							

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487526	N-E-1 S1'		N. Electromatic Relief		OK 4"		
487489	N-E-2 S1'		N. Electromatic Relief		OK 4"		
487446	S-E-1 S1'		S. Electromatic Relief	EP	OK 5"		
487506	S-E-2 S1'		S. Electromatic Relief		OK 3-3/4"		
487536	S-E-3 S1'		S. Electromatic Relief		OK 3-3/4"		
P93501 #1	21-1'		Containment Spray	EP	OK 2-1/2"		

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
F93502 #2	N-14-1 75'		Emergency Condenser Condensate Return	EP	OK 4-1/2"		
487551	N-14-2 75'		Emergency Condenser Condensate Return	EP	OK 3-1/2"		
F93501 #3	N-14-3 95'		Emergency Condenser Condensate Return	EP	OK 4"		
487561	N-14-4 95'		Emergency Condenser Condensate Return	EP	OK 3-1/2"		
487499	N-14-5 95'		Emergency Condenser Steam Line	EP	OK 4"		
487531	N-14-6 95'		Emergency Condenser Condensate Return	EP	OK 3-1/2"		

Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
87525	S-14-1 60'		Emergency Condenser Condensate Return	EP	OK 3"		
87507	S-14-2 60'		Emergency Condenser Condensate Return	EP	OK 4"		
87574	S-14-3 95'		Emergency Condenser Condensate Return	EP	OK 4-1/2"		
87502	S-14-4 95'		Emergency Condenser Condensate Return	EP	OK 4"		
487494	S-14-5 95'		Emergency Condenser Steam Line	EP	OK 3-3/4"		
F95222-2	S-14-6 95'		Emergency Condenser Steam Line	EP	OK 3-1/2"		

Snubber Serial Number	Position	Insp Date	System	Seal Material	Condition Rod Extension	Indicator	Remarks
487404	17-1 48'		Shutdown Cooling	EP	OK 3-5/8"		
487528	17-2 48'		Shutdown Cooling	EP	OK 2-3/4"		
487554	17-3 51'		Shutdown Cooling		OK 5"		
487496	17-4 51'		Shutdown Cooling		OK 4-1/2"		
487497	17-5 51'		Shutdown Cooling		OK 3-3/4"		
487573	17-6 51'		Shutdown Cooling	EP	OK 3"		

Snubber Serial Number	Position /	Insp Date	System	Seal Material	Condition / Rod Extension	Indicator	Remarks
487542	16-1 60'		Cleanup		OK 3"		
487438	16-2 51'		Cleanup		OK 2-7/8"		
487495	16-3 55'		Cleanup	EP	OK 3"		
487516	16-4 65'		Cleanup		OK 3"		

GRINNEL SNUBBERS - CONDITION AS FOUND

A - Recirculation Pump

A - 1/4
B - 1
C - 1/8
D - 1/3
E - 1

B - Recirculation Pump

A - 3/4
B - 1/2
C - 0 oil on floor
D - 1
E - 1/8

C - Recirculation Pump

A - 1
B - 1/4
C - 0 oil on floor
D - 3/4
E - 1/4

D - Recirculation Pump

A - 1/2
B - 1/4
C - 1
D - 1
E - 3/4

E - Recirculation Pump

A - 1/2
B - 1
C - 1
D - 1
E - 1

0 = Empty Accumulator
1 = Full Accumulator

GRINNEL SNUBBERS - CONDITION AS LEFT

A - Recirculation Pump

A - 1
B - 1
C - 1
D - 1
E - 1

B - Recirculation Pump

A - 3/4
B - 1/2
C - 1 (tightened acc coupling)
D - 1
E - 1

C - Recirculation Pump

A - 1
B - 1
C - 1
D - 3/4
E - 1

D - Recirculation Pump

A - 1/2
B - 1
C - 1
D - 1
E - 3/4

E - Recirculation Pump

A - 1/2
B - 1
C - 1
D - 1
E - 1

O = Empty Accumulator
1 = Full Accumulator