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AUG 17 1982

Docket Nos. 50-280
and 50-281

Mr. R. H. Leasburg
Vice President - Nuclear Operations
Virginia Electric and Power Company
Post Office Box 26666
Richmond, Virginia 23261

Dear Mr. Leasburg:

The Commission has issued the enclosed Amendment No. 79 to Facility Operating License No. DPR-32 and Amendment No. 80 to Facility Operating License No. DPR-37 for the Surry Power Station, Unit Nos. 1 and 2, respectively. The amendments consistsof changes to the Technical Specifications in response to your application transmitted by letter dated September 20, 1978, as supplemented April 28, 1981, May 24, 1982 and July 7, 1982.

These amendments revise the Technical Specifications to incorporate revised inservice surveillance requirements for snubbers, both mechanical and hydraulic.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

ORIGINAL SIGNED

Joseph D. Neighbors, Project Manager
Operating Reactors Branch #1
Division of Licensing

Enclosures:
1. Amendment No. 79 to DPR-32
2. Amendment No. 80 to DPR-37
3. Safety Evaluation
4. Notice of Issuance

No legal objections to issuance of amendment w/ notice; SER however not requested.

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USGPO: 1981—335-960

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Virginia Electric and Power Company

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-280

SURRY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.79
License No. DPR-32

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Virginia Electric and Power Company (the licensee) dated September 20, 1978, as supplemented April 28, 1981, May 24, 1982 and July 7, 1982, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-32 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 79 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 17, 1982

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-281

SURRY POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 80
License No. DPR-37

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Virginia Electric and Power Company (the licensee) dated September 20, 1978, as supplemented April 28, 1981, May 24, 1982 and July 7, 1982, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-37 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 80 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 17, 1982

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 80 TO FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

Remove Pages	Insert Pages
4.17-1 thru 4.17-14	4.17-1 thru 4.17-52
---	6.5-3

4.17 SHOCK SUPPRESSORS (SNUBBERS)

Applicability

Applies to all hydraulic and mechanical shock suppressors (snubbers) which are required to protect the reactor coolant system and safety related systems.

Objective

To specify the minimum frequency and type of surveillance to be applied to the hydraulic and mechanical snubbers in Tables 4.17-1 (Unit 1) and 4.17-2 (Unit 2).

Specification

Each snubber shall be demonstrated operable by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.

A. Visual Inspections

1. The first inservice visual inspection of snubbers shall be performed after four months but within 10 months of commencing power operation and shall include all snubbers listed in Tables 4.17-1 and 4.17-2. If less than two (2) snubbers are found inoperable during the first inservice visual inspection, the second inservice visual inspection shall be performed 12 months ± 25% from the date of the first inspection. Otherwise, subquent 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%

2. 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.

B. Visual Inspection Acceptance Criteria

1. Visual inspections shall verify:

   a. That there are no visible indications of damage or impaired operablity,

   b. Attachments to the foundation or supporting structure are secure, and

   c. In those locations where snubber movement can be manually induced without disconnecting the snubber, that the snubber has freedom of movement and is not frozen up.

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

2. 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 the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible and the affected snubber is functionally tested in the as found condition and determined operable per Specification 4.17-D or 4.17-E, as applicable.
3. When the fluid port of a hydraulic snubber is found to be uncovered, 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

1. At least once per 18 months during shutdown, a representative sample of 10% of the total of each type of snubber used in the plant shall be functionally tested either in place or in a bench test.
2. For each snubber that does not meet the functional acceptance criteria of Specifications 4.17-D or 4.17-E, an additional 10% of that type of snubber shall be functionally tested.
3. The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers.

4. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

   a. The first snubber away from each reactor vessel nozzle

   b. Snubbers within 5 feet of heavy equipment (valve, pump, turbine, motor, etc.)

   c. Snubbers within 10 feet of the discharge from a safety relief valve.

5. Snubbers identified in Tables 4.17-1 and 4.17-2 as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative sample.*

6. 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 re-sampling.

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*Permanent or other exemptions from functional testing for individual snubbers in these 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 subsequent date.

7. 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 acceptance criteria.

8. For the snubber(s) found inoperable, an engineering evaluation shall be performed on the components which are supported by 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.

D. Hydraulic Snubbers Functional Test Acceptance Criteria

1. The hydraulic snubber functional test shall verify that:

   a. Activity (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 and 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

1. The mechanical snubbers functional test shall verify that:

   a. The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force. Drag force shall not have increased more than 50% since the last functional test.

   b. Activity (restraining action) is achieved within the specified range of velocity in both tension and compression.

   c. Snubber release rate, where required, is within the specified range in compression and tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

F. Snubber Service Life Monitoring

1. 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 6.5.B.9.

2. Concurrent with the first inservice visual inspection and at least once per 18 months thereafter, the installation and maintenance records for each snubber listed in Tables 4.17-1 and 4.17-2 shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be

exceeded 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. This reevaluation, replacement or reconditioning shall be indicated in the records.

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 significant effect or degradation on the supported component or system.

To provide assurance of snubber functional relaibility, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at 18 month intervals. Functional testing is to be in accordance with ASME Section XI 1980ed. Subsection IWF. Observed failures of these 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.

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.

LEGEND

Accessibility Category

A = Accessible

I = Inaccessible

Radiation Category

H = High radiation area only during periods of reactor operation. In acceptable radiation work area during period of reactor shutdown.

N = Acceptable radiation work area during periods of reactor operation and shutdown.

Removal Category

D = Expecially difficult to remove

R = Can be removed

*Snubbers may be added to and deleted from safety related systems without prior License Amendment to Tables 4.17-1 and 4.17-2 provided that a revision to Tables 4.17-1 and 4.17-2 included in the next License Amendment request.

**Modifications to the "Radiation Category" column due to changes in high radiation areas may be made without prior License Amendment provided that a revision to Tables 4.17-1, 4.17-2, is included with the next License Amendment request.

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Steam System	1-SHP-HSS-27	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-28	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-29	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-30	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-31	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-32	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-33A	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-33B	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-34A	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-34B	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-35A	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-35B	6"	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-36	1 1/2"	Safeguards	A	N	R
Main Steam System	1-SHP-HSS-37	1 1/2"	Safeguards	A	N	R
Main Steam System	1-SHP-HSS-38	1 1/2"	Safeguards	A	N	R
Main Steam System	1-SHP-HSS-39	1 1/2"	Safeguards	A	N	R
Main Steam System	1-SHP-MSS-50	PSA-1	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-51A	PSA-35	Safeguards	A	N	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Steam System	1-SHP-MSS-51B	PSA-35	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-52A	PSA-35	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-52B	PSA-35	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-53A	PSA-35	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-53B	PSA-35	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-54A	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-54B	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-55A	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-55B	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-56A	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-56B	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-57	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-58	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-59A	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-59B	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-60A	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-60B	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-MSS-61A	PSA-3	Safeguards	A	N	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Steam System	1-SHP-MSS-61B	PSA-3	Safeguards	A	N	D
Main Steam System	1-SHP-HSS-1A	5"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-1B	5"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-14A	5"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-14B	5"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-21	4"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-22	4"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-23	4"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-24	4"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-25	4"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-26	4"	Machinery Room #1	A	N	D
Main Steam System	1-SHP-HSS-2A	5"	Containment-67' level	I	H	D
Main Steam System	1-SHP-HSS-2B	5"	Containment-67' level	I	H	D
Main Steam System	1-SHP-HSS-3A	3 1/4"	Containment-67' level	I	H	R
Main Steam System	1-SHP-HSS-3B	3 1/4"	Containment-67' level	I	H	R
Main Steam System	1-SHP-HSS-4A	3 1/4"	Containment-67' level	I	H	R
Main Steam System	1-SHP-HSS-4B	3 1/4"	Containment-67' level	I	H	R
Main Steam System	1-SHP-HSS-5A	2 1/2"	Containment-67' level	I	H	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Steam System	1-SHP-HSS-5B	2 1/2"	Containment-67' level	I	H	R
Main Steam System	1-SHP-HSS-6A	2 1/2"	Containment-67' level	I	H	R
Main Steam System	1-SHP-HSS-6B	2 1/2"	Containment-67' leve	I	H	R
Main Steam System	1-SHP-HSS-7	8"	Containment Operating level	I	H	D
Main Steam System	1-SHP-HSS-8	8"	Containment Operating level	I	H	D
Main Steam System	1-SHP-HSS-9	10"	Containment Operating level	I	H	D
Main Steam System	1-SHP-HSS-10	10"	Containment Operating level	I	H	D
Main Steam System	1-SHP-HSS-11	8"	Containment Operating level	I	H	D
Main Steam System	1-SHP-HSS-12	8"	Containment Operating level	I	H	D
Main Steam System	1-SHP-HSS-13A	4"	Containment Operating level	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Feed System	1-WFPD-HSS-18	1 1/2"	Safeguards	A	N	R
Main Feed System	1-WFPD-HSS-20	3 1/4"	Safeguards	A	N	R
Main Feed System	1-WFPD-HSS-21A	2 1/2"	Safeguards	A	N	R
Main Feed System	1-WFPD-HSS-21B	2 1/2"	Safeguards	A	N	R
Main Feed System	1-WFPD-HSS-22	3 1/4"	Safeguards	A	N	R
Main Feed System	1-WFPD-HSS-1	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-2	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-3	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-4	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-6	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-8	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-9	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-10	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-11	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-12	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-13	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-14	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-15	2 1/2"	Containment Operating Level	I	H	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Feed System	1-WFPD-HSS-16	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	1-WFPD-HSS-17	2 1/2"	Containment Operating Level	I	H	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Aux. Feed System	1-WAPD-HSS-140	1 1/2"	Containment Operating Level	I	H	R
Aux. Feed System	1-WAPD-HSS-141A	1 1/2"	Containment Operating Level	I	H	R
Aux. Feed System	1-WAPD-HSS-141B	1 1/2"	Containment Operating Level	I	H	R
Aux. Feed System	1-WAPD-HSS-142	1 1/2"	Containment Operating Level	I	H	R
Aux. Feed System	1-WAPD-HSS-143A	1 1/2"	Containment Operating Level	I	H	R
Aux. Feed System	1-WAPD-HSS-143B	1 1/2"	Containment Operating Level	I	H	R
Aux. Feed System	1-WAPD-HSS-145	1 1/2"	Safeguards	A	N	R
Aux. Feed System	1-WAPD-HSS-146	1 1/2"	Safeguards	A	N	R
Aux. Feed System	1-WAPD-HSS-147	1 1/2"	Safeguards	A	N	R
Aux. Feed System	1-WAPD-HSS-148	1 1/2"	Safeguards	A	N	R
Aux. Feed System	1-WAPD-HSS-149	1 1/2"	Safeguards	A	N	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Component Cooling System	1-CC-HSS-60A	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-65	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-330	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-331	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-332A	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-332B	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-340A	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-340B	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	1-CC-HSS-341	2 1/2"	Aux. Basement	A	N	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Lo-head Safety Injection	1-S1-HSS-19A	5"	Containment basement-A Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-19B	5"	Containment basement-A Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-20	8"	Containment basement-A Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-22A	5"	Containment basement-B Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-22B	5"	Containment basement-B Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-23	8"	Containment basement-B Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-25	8"	Containment basement-C Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-26	8"	Containment basement-C Accumulator	I	H	D
Lo-head Safety Injection	1-S1-HSS-84	1 1/2"	Safeguards basement	A	N	R
Lo-head Safety Injection	1-S1-HSS-85	1 1/2"	Safeguards basement	A	N	R
Lo-head Safety Injection	1-S1-HSS-100	1 1/2"	Safeguards Valve Pit	A	N	R
Lo-head Safety Injection	1-S1-HSS-101	1 1/2"	Safeguards Valve Pit	A	N	R
Lo-head Safety Injection	1-S1-HSS-21A	4"	Containment basement	I	H	D
Lo-head Safety Injection	1-S1-HSS-21B	4"	Containment basement	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Lo-head Safety Injection	1-S1-HSS-24A	4"	Containment Basement	I	H	D
Lo-head Safety Injection	1-S1-HSS-24B	4"	Containment Basement	I	H	D
Lo-head Safety Injection	1-S1-HSS-27A	4"	Containment Basement	I	H	D
Lo-head Safety Injection	1-S1-HSS-27B	4"	Containment Basement	I	H	D
Lo-head Safety Injection	1-S1-HSS-28	1 1/2"	Containment Basement	I	H	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	CATEGORY	CATEGORY
Recir. Spray System	1-RS-HSS-107	3 1/4"	Safeguards Valve Pit	A	N	R
Recir. Spray System	1-RS-HSS-106	1 1/2"	Containment 90' elevation	I	H	D
Recir. Spray System	1-RS-HSS-105	1 1/2"	Containment 3' level	I	H	R
Recir. Spray System	1-RS-MSS-115A	PSA-3	Containment 10' level	I	H	D
Recirc. Spray System	1-RS-MSS-115B	PSA-3	Containment 10' level	I	H	D
Recirc. Spray System	1-RS-MSS-116A	PSA-3	Containment 10' level	I	H	D
Recirc. Spray System	1-RS-MSS-116B	PSA-3	Containment 10' level	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Chemical Volume & Control System	1-CH-HSS-301	1 1/2"	Aux. Building	A	N	R
Chemical Volume & Control System	1-CH-HSS-302	1 1/2"	Aux. Building	A	N	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	1-RC-HSS-110	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	1-RC-HSS-111	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	1-RC-HSS-112	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	1-RC-HSS-113	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	1-RC-HSS-114	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	1-RC-HSS-115	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	1-RC-HSS-122	6"	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-HSS-123	6"	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-HSS-124	6"	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-HSS-125	6"	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-HSS-138	12"	A S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-139	12"	A S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-140	12"	A S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-141	12"	A S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-142	12"	B S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-143	12"	B S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-144	12"	B S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-145	12"	B S/G Upper restraint casting	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	1-RC-HSS-146	12"	C S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-147	12"	C S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-148	12"	C S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-149	12"	C S/G Upper restraint casting	I	H	D
Reactor Coolant System	1-RC-HSS-172	4 1/2"	A S/G	I	H	D
Reactor Coolant System	1-RC-HSS-173	4 1/2"	A S/G	I	H	D
Reactor Coolant System	1-RC-HSS-174	4 1/2"	A S/G	I	H	D
Reactor Coolant System	1-RC-HSS-175	4 1/2"	A S/G	I	H	D
Reactor Coolant System	1-RC-HSS-176	4 1/2"	B S/G	I	H	D
Reactor Coolant System	1-RC-HSS-177	4 1/2"	B S/G	I	H	D
Reactor Coolant System	1-RC-HSS-178	4 1/2"	B S/G	I	H	D
Reactor Coolant System	1-RC-HSS-179	4 1/2"	B S/G	I	H	D
Reactor Coolant System	1-RC-HSS-180	4 1/2"	C S/G	I	H	D
Reactor Coolant System	1-RC-HSS-181	4 1/2"	C S/G	I	H	D
Reactor Coolant System	1-RC-HSS-182	4 1/2"	C S/G	I	H	D
Reactor Coolant System	1-RC-HSS-183	4 1/2"	C S/G	I	H	D
Reactor Coolant System	1-RC-MSS-115A	PSA-10	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-115B	PSA-10	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-116A	PSA-10	Pressurizer Cubicle	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	1-RC-MSS-116B	PSA-10	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-117A	PSA-10	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-117B	PSA-10	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-218	PSA-1	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-219	PSA-1/2	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-220	PSA-1/2	Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-221	PSA-3	Outside Pressurizer Cubicle	I	H	D
Reactor Coolant System	1-RC-MSS-222	PSA-3	Outside B S/G Cubicle	I	H	D
Reactor Coolant System	1-RC-HSS-126	4"	A RCP	I	H	D
Reactor Coolant System	1-RC-HSS-127	4"	A RCP	I	H	D
Reactor Coolant System	1-RC-HSS-128	4"	A RCP	I	H	D
Reactor Coolant System	1-RC-HSS-129	4"	A RCP	I	H	D
Reactor Coolant System	1-RC-HSS-130	4"	B RCP	I	H	D
Reactor Coolant System	1-RC-HSS-131	4"	B RCP	I	H	D
Reactor Coolant System	1-RC-HSS-132	4"	B RCP	I	H	D
Reactor Coolant System	1-RC-HSS-133	4"	B RCP	I	H	D
Reactor Coolant System	1-RC-HSS-134	4"	C RCP	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	1-RC-HSS-135	4"	C RCP	I	H	D
Reactor Coolant System	1-RC-HSS-136	4"	C RCP	I	H	D
Reactor Coolant System	1-RC-HSS-137	4"	C RCP	I	H	D
Reactor Coolant System	1-RC-HSS-150	12"	A S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-151	12"	A S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-152	12"	A S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-153	12"	A S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-154	12"	B S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-155	12"	B S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-156	12"	B S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-157	12"	B S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-158	12"	C S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-159	12"	C S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-160	12"	C S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-161	12"	C S/G Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-162	12"	A RCP Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-163	12"	A RCP Lower Support ring	I	H	D
Reactor Coolant System	1-RC-HSS-166	12"	B RCP Lower Support ring	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	1-RC-HSS-167	12"	B RCP Lower Support beam	I	H	D
Reactor Coolant System	1-RC-HSS-170	12"	C RCP Lower Support beam	I	H	D
Reactor Coolant System	1-RC-HSS-171	12"	C RCP Lower Support beam	I	H	D
Reactor Coolant System	1-PS-MSS-1A	PSA 1	A S/G elevation 55'	I	H	D
Reactor Coolant System	1-PS-MSS-2A	PSA-1/4	A S/G elevation 55'	I	H	D
Reactor Coolant System	1-PS-MSS-1B	PSA-1	B S/G elevation 55'	I	H	D
Reactor Coolant System	1-PS-MSS-2B	PSA-1/4	B S/G elevation 55'	I	H	D
Reactor Coolant System	1-PS-MSS-1C	PSA-1	C S/G elevation 55'	I	H	D
Reactor Coolant System	1-PS-MSS-2C	PSA=1/4	C S/G elevation 55'	I	H	D
Reactor Coolant System	1-RC-HSS-164	1 1/2"	A Loop room-Elevation 20'	I	H	R
Reactor Coolant System	1-RC-HSS-165	1 1/2"	A Loop room-Elevation 20'	I	H	R
Reactor Coolant System	1-RC-HSS-168	1 1/2"	B Loop room-Elevation 20'	I	H	R
Reactor Coolant System	1-RC-HSS-169	1 1/2"	B Loop room-Elevation 20'	I	H	R
Reactor Coolant System	1-RC-HSS-116	1 1/2"	C Loop room-Elevation 20'	I	H	R
Reactor Coolant System	1-RC-HSS-117	1 1/2"	C Loop room-Elevation 20'	I	H	R
Reactor Coolant System	1-PS-MSS-11A	PSA-10	A Loop room	I	H	D
Reactor Coolant System	1-PS-MSS-23B	PSA-1/4	B Loop room-Elevation 12'	I	H	D
Reactor Coolant System	1-PS-MSS-10C	PSA-1/4	C Loop room Elevation 12'	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	1-PS-MSS-12C	PSA-1/4	C Loop room El-13'	I	H	D
Reactor Coolant System	1-PS-MSS-14C	PSA-1/4	C Loop room El-13'	I	H	D
Reactor Coolant System	1-RC-HSS-102	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	1-RC-HSS-103	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	1-RC-HSS-104	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	1-RC-HSS-105	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	1-RC-HSS-106	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	1-RC-HSS-107	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	1-RC-HSS-108	1 1/2"	Containment Basement	I	H	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Make-up System	1-WCMU-HSS-100	1 1/2"	Safeguards	A	N	R
Containment Spray System	1-CS-HSS-01	1 1/2"	Safeguards Basement	A	N	R
Service Water System	1-SW-HSS-2	PSA-1/4	Machinery Room #3	A	N	D
Emergency Diesel	1-EE-HSS-01	1 1/2"	#1 EDG Exhaust	A	N	R
Emergency Diesel	1-EE-HSS-03	1 1/2"	#3 EDG Exhaust	A	N	R
S/G Blowdown	1-WGCB-HSS-10	1 1/2"	Aux. Basement	A	N	R
S/G Blowdown	1-WGCB-MSS-23	PSA-3	Aux. Basement	A	N	D
S/G Blowdown	1-WGCB-MSS-11	PSA-1/2	A Loop room-El. 13/6"	I	H	D
S/G Blowdown	1-WGCB-MSS-12	PSA-1/2	A loop room-El. 7'8"	I	H	D
S/G Blowdown	1-WGCB-MSS-13	PSA-1/2	A loop room-El. 8'3"	I	H	D
S/G Blowdown	1-WGCB-MSS-14A	PSA-1/2	A loop room-El. 6'	I	H	D
S/G Blowdown	1-WGCB-MSS-14B	PSA-1/2	A loop room-El. 6'	I	H	D
S/G Blowdown	1-WGCB-MSS-15A	PSA-1/2	A S/G Cubicle	I	H	D
S/G Blowdown	1-WGCB-MSS-15B	PSA-1/2	A S/G Cubicle	I	H	D
S/G Blowdown	1-WGCB-MSS-16	PSA-1/2	A S/G Cubicle	I	H	D
S/G Blowdown	1-WGCB-MSS-17A	PSA-1/2	B loop room-El. 13'	I	H	D
S/G Blowdown	1-WGCB-MSS-17B	PSA-1/2	B loop room-El. 13'	I	H	D
S/G Blowdown	1-WGCB-MSS-18A	PSA-1/2	B loop room-El. 7'	I	H	D
S/G Blowdown	1-WGCB-MSS-18B	PSA-1/2	B loop room-El. 7'	I	H	D

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
S/G Blowdown	1-WGCB-MSS-19	PSA-1/2	B loop room-El. 10'	I	H	D
S/G Blowdown	1-WGCB-MSS-100	PSA-1/2	B loop room-El. 15'	I	H	D
S/G Blowdown	1-WGCB-MSS-10	PSA-1/2	C loop room-El. 12'	I	H	D
S/G Blowdown	1-WGCB-MSS-20A	PSA-1/2	C loop room El. 6'	I	H	D
S/G Blowdown	1-WGCB-MSS-20B	PSA-1/2	C loop room-El. 6'	I	H	D
S/G Blowdown	1-WGCB-MSS-21	PSA-1/2	C loop room-El. 12'	I	H	D
S/G Blowdown	1-WGCB-HSS-02	2 1/2	C loop room	I	H	R
S/G Blowdown	1-WGCB-HSS-03	2 1/2	C loop room	I	H	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Residual Heat Removal Sys.	1-RH-HSS-103	2 1/2"	A loop room-El. 3'	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-104	2 1/2"	A loop room-El. 3'	I	H	R
Residual Heat Removal Sys.	1-RH-MSS-120A	PSA-3	A loop room	I	H	D
Residual Heat Removal Sys.	1-RH-MSS-120B	PSA-3	A loop room	I	H	D
Residual Heat Removal Sys.	1-RH-HSS-1	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-2	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-3	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-4	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-5	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-6	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-7	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-8	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-9	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-10	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-11	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-12	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-13	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-14	1 1/2"	RHR Flat	I	H	R

TABLE 4.17-1

UNIT NO. 1 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Residual Heat Removal Sys.	1-RH-HSS-15	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-19	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-20	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-105	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-21	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-22	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-23	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-24	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-25	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-100	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-101A	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-101B	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-102	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-26	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-27	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	1-RH-HSS-28	1 1/2"	RHR Flat	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Steam System	2-SHP-HSS-1A	5"	Machinery Room #2	A	N	D
Main Steam System	2-SHP-HSS-1B	5"	Machinery Room #2	A	N	D
Main Steam System	2-SHP-HSS-14A	5"	Machinery Room #2	A	N	D
Main Steam System	2-SHP-HSS-14B	5"	Machinery Room #2	A	N	D
Main Steam System	2-SHP-HSS-15	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-16	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-17	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-18	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-19	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-20	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-21	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-22	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-23	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-24	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-25	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-26	4"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-27	6"	Safeguards	A	N	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Steam System	2-SHP-HSS-28	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-29	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-30	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-31	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-32	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-33A	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-33B	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-34A	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-34B	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-35A	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-35B	6"	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-36A	1 1/2"	Safeguards	A	N	R
Main Steam System	2-SHP-HSS-36B	1 1/2"	Safeguards	A	N	R
Main Steam System	2-SHP-HSS-40	2 1/2"	Safeguards	A	N	R
Main Steam System	2-SHP-HSS-41	2 1/2"	Safeguards	A	N	R
Main Steam System	2-SHP-HSS-42	2 1/2"	Safeguards	A	N	R
Main Steam System	2-SHP-HSS-51	1 1/2"	Safeguards	A	N	R
Main Steam System	2-SHP-MSS-1	PSA-3	Safeguards	A	N	D
Main Steam System	2-SHP-MSS-2	PSA-3	Safeguards	A	N	D
Main Steam System	2-SHP-MSS-3	PSA-3	Safeguards	A	N	D
Main Steam System	2-SHP-MSS-4	PSA-3	Safeguards	A	N	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Steam System	2-SHP-MSS-5	PSA-3	Safeguards	A	N	D
Main Steam System	2-SHP-MSS-6	PSA-4	Safeguards	A	N	D
Main Steam System	2-SHP-HSS-2A	5"	Containment 67' leve	I	H	D
Main Steam System	2-SHP-HSS-2B	5"	Containment 67' level	I	H	D
Main Steam System	2-SHP-HSS-3A	3 1/2"	Containment 55' level	I	H	R
Main Steam System	2-SHP-HSS-3B	3 1/2"	Containment 55' level	I	H	R
Main Steam System	2-SHP-HSS-4A	3 1/2"	Containment 55' level	I	H	R
Main Steam System	2-SHP-HSS-4B	3 1/2"	Containment 55' level	I	H	R
Main Steam System	2-SHP-HSS-5A	2 1/2"	Containment Operating level	I	H	R
Main Steam System	2-SHP-HSS-5B	2 1/2"	Containment Operating level	I	H	R
Main Steam System	2-SHP-HSS-6A	2 1/2"	Containment Operating level	I	H	R
Main Steam System	2-SHP-HSS-6B	2 1/2"	Containment Operating level	I	H	R
Main Steam System	2-SHP-HSS-7	6"	Containment Operating level	I	H	D
Main Steam System	2-SHP-HSS-8	6"	Containment Operating level	I	H	D
Main Steam System	2-SHP-HSS-9	10"	Containment Operating level	I	H	D
Main Steam System	2-SHP-HSS-10	10"	Containment Operating level	I	H	D
Main Steam System	2-SHP-HSS-11	8"	Containment Operating level	I	H	D
Main Steam System	2-SHP-HSS-12	8"	Containment Operating level	I	H	D
Main Steam System	2-SHP-HSS-13A	4"	Containment Operating level	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Main Feed System	2-WFPF-HSS-14	2 1/2"	Safeguards	A	N	R
Main Feed System	2-WFPD-HSS-15	3 1/4"	Safeguards	A	N	R
Main Feed System	2-WFPD-HSS-16	3 1/4"	Safeguards	A	N	R
Main Feed System	2-WFPD-HSS-17	3 1/4"	Safeguards	A	N	R
Main Feed System	2-WFPD-HSS-18	2 1/2"	Safeguards	A	N	D
Main Feed System	2-WFPD-HSS-1	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-2	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-3	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-4	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-5	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-6	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-7	4"	Containment Operating Level	I	H	D
Main Feed System	2-WFPD-HSS-8	4"	Containment Operating Level	I	H	D
Main Feed System	2-WFPD-HSS-9	4"	Containment Operating Level	I	H	D
Main Feed System	2-WFPD-HSS-10	4"	Containment Operating Level	I	H	D
Main Feed System	2-WFPD-HSS-11	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-12	2 1/2"	Containment Operating Level	I	H	R
Main Feed System	2-WFPD-HSS-13	2 1/2"	Containment Operating Level	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Aux. Feed System	2-WAPD-HSS-140	1 1/2"	Containment Operating Level	I	H	D
Aux. Feed System	2-WAPD-HSS-141	1 1/2"	Containment Operating Level	I	H	D
Aux. Feed System	2-WAPD-HSS-142	1 1/2"	Containment Operating Level	I	H	D
Aux. Feed System	2-WAPD-HSS-143	1 1/2"	Containment Operating Level	I	H	D
Aux. Feed System	2-WAPD-HSS-144	1 1/2"	Safeguards	A	N	R
Aux. Feed System	2-WAPD-HSS-145A	1 1/2"	Safeguards	A	N	R
Aux. Feed System	2-WAPD-HSS-145B	1 1/2"	Safeguards	A	N	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Component Cooling System	2-CC-HSS-356A	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	2-CC-HSS-356B	2 1/2"	Aux. Basement	A	N	R
Component Cooling System	2-CC-HSS-357	1 1/2"	RHR Flat	I	H	R
Component Cooling System	2-CC-HSS-358	1 1/2"	RHR Flat	I	H	R
Component Cooling System	2-CC-HSS-359	1 1/2"	RHR Flat	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Recirc. Spray System	2-RS-HSS-101	1 1/2"	Containment Basement	I	H	R
Recirc. Spray System	2-RS-HSS-102	1 1/2"	Containment Basement	I	H	R
Recirc. Spray System	2-RS-HSS-103	1 1/2"	Containment Basement	I	H	R
Recirc. Spray System	2-RS-HSS-104	1 1/2"	Containment Basement	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
S/G Blowdown System	2-WGCB-HSS-4A	1 1/2"	Aux. Building	A	N	R
S/G Blowdown System	2-WGCB-HSS-4B	1 1/2"	Aux. Building	A	N	R
S/G Blowdown System	2-WGCB-HSS-7A	1 1/2"	Aux. Building	A	N	R
S/G Blowdown System	2-WGCB-HSS-7B	1 1/2"	Aux. Building	A	N	R
S/G Blowdown System	2-WGCB-HSS-8A	1 1/2"	Aux. Building	A	N	R
S/G Blowdown System	2-WGCB-HSS-8B	1 1/2"	Aux. Building	A	N	R
S/G Blowdown System	2-WGCB-HSS-01	1 1/2"	Containment 3rd level	I	H	R
S/G Blowdown System	2-WGCB-HSS-02	2 1/2"	B loop room	I	H	R
S/G Blowdown System	2-WGCB-HSS-03	2 1/2"	C loop room	I	H	R
S/G Blowdown System	2-WGCB-HSS-5	1 1/2"	A Cubicle	I	H	R
S/G Blowdown System	2-WGCB-HSS-6A	1 1/2"	A Cubicle	I	H	R
S/G Blowdown System	2-WGCB-HSS-6B	1 1/2"	A Cubicle	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Charging System	2-CH-HSS-303	1 1/2"	Aux. Building	A	N	R
Charging System	2-CH-HSS-304	1 1/2"	Aux. Building	A	N	R
Charging System	2-CH-HSS-305	1 1/2"	Containment Basement	I	H	R
Charging System	2-CH-HSS-306A	1 1/2"	Containment Basement	I	H	R
Charging System	2-CH-HSS-306B	1 1/2"	Containment Basement	I	H	R
Charging System	2-CH-HSS-307	1 1/2"	Containment Basement	I	H	R
Charging System	2-CH-MSS-1	PSA-3	Containment Basement	I	H	D
Charging System	2-CH-MSS-2	PSA-3	Containment Basement	I	H	D
Emergency Diesel	2-EE-HSS-01	1 1/2"	#2 EDG Exhaust	A	N	R
Emergency Diesel	2-EE-HSS-02	1 1/2"	#2 EDG Exhaust	A	N	R
Emergency Diesel	2-EE-HSS-03	1 1/2"	#2 EDG Exhaust	A	N	R
Service Water System	2-SW-MSS-1	PSA-3	Containment Basement	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Containment Spray System	2-CS-HSS-01A	2 1/2"	Safeguards Valve Pit	A	N	R
Containment Spray System	2-CS-HSS-01B	2 1/2"	Safeguards Valve Pit	A	N	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Safety Injection System	2-S1-HSS-100	2 1/2"	Safeguard-Valve Pit	A	N	R
Safety Injection System	2-S1-HSS-101	2 1/2"	Safeguard-Valve Pit	A	N	R
Safety Injection System	2-S1-HSS-103	1 1/2"	Safeguard-Valve Pit	A	N	R
Safety Injection System	2-S1-HSS-104A	2 1/2"	Safeguard-Valve Pit	A	N	R
Safety Injection System	2-S1-HSS-104B	2 1/2"	Safeguard-Valve Pit	A	N	R
Safety Injection System	2-S1-HSS-19A	5"	C Accumulator	I	H	D
Safety Injection System	2-S1-HSS-19B	5"	C Accumulator	I	H	D
Safety Injection System	2- S1-HSS-20	8"	C Accumulator	I	H	D
Safety Injection System	2-S1-HSS-21	6"	C Accumulator	I	H	D
Safety Injection System	2-S1-HSS-22A	5"	B Accumulator	I	H	D
Safety Injection System	2-S1-HSS-22B	5"	B Accumulator	I	H	D
Safety Injection System	2-S1-HSS-23	8"	B Accumulator	I	H	D
Safety Injection System	2-S1-HSS-25	8"	A Accumulator	I	H	D
Safety Injection System	2-S1-HSS-26	8"	A Accumulator	I	H	D
Safety Injection System	2-S1-HSS-24	6"	B Accumulator	I	H	D
Safety Injection System	2-S1-HSS-27	6"	A. Accumulator	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	2-RC-HSS-100	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-101	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-102	1 1/2"	Pressurizer Relief Tank Room	I	H	R
Reactor Coolant System	2-RC-HSS-103	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-104	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-105	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-106	1 1/2	Pressurizer Relief Tank Room	I	H	R
Reactor Coolant System	2-RC-HSS-107	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-108	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-110	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-112	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-113	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-114	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-115	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-116	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-117	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-118	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-119	1 1/2"	Pressurizer Cubicle	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	2-RC-HSS-122	6"	Pressurizer Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-123	6"	Pressurizer Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-124	6"	Pressurizer Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-125	6"	Pressurizer Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-126	4"	A RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-127	4"	A RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-128	4"	A RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-129	4"	A RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-130	4"	B RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-131	4"	B RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-132	4"	B RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-133	4"	B RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-134	4"	C RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-135	4"	C RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-136	4"	C RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-137	4"	C RCP Upper Holding Assembly	I	H	D
Reactor Coolant System	2-RC-HSS-138	12"	A S/G Upper restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-139	12"	A S/G Upper restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-140	12"	A S/G Upper restraint Casting	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	2-RC-HSS-141	12"	A S/G Upper restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-142	12"	B S/G Upper restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-143	12"	B S/G Upper restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-144	12"	B S/G Upper restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-145	12"	B S/G Upper restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-146	12"	C S/G Upper Restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-147	12"	C S/G Upper Restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-148	12"	C S/G Upper Restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-149	12"	C S/G Upper Restraint Casting	I	H	D
Reactor Coolant System	2-RC-HSS-150	12"	A S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-151	12"	A S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-152	12"	A S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-153	12"	A S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-154	12"	B S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-155	12"	B S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-156	12"	B S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-157	12"	B S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-158	12"	C S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-159	12"	C S/G Lower Support Ring	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	2-RC-HSS-160	12"	C S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-161	12"	C S/G Lower Support Ring	I	H	D
Reactor Coolant System	2-RC-HSS-162	12"	A RCP Lower Support Beam	I	H	D
Reactor Coolant System	2-RC-HSS-163	12"	A RCP Lower Support Beam	I	H	D
Reactor Coolant System	2-RC-HSS-166	12"	B RCP Lower Support Beam	I	H	D
Reactor Coolant System	2-RC-HSS-167	12"	B RCP Lower Support Beam	I	H	D
Reactor Coolant System	2-RC-HSS-170	12"	C RCP Lower Support Beam	I	H	D
Reactor Coolant System	2-RC-HSS-171	12"	C RCP Lower Support Beam	I	H	D
Reactor Coolant System	2-RC-HSS-172	4 1/2"	A S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-173	4 1/2"	A S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-174	4 1/2"	A S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-175	4 1/2"	A S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-176	4 1/2"	B S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-177	4 1/2"	B S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-178	4 1/2"	B S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-179	4 1/2"	B S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-180	4 1/2"	C S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-181	4 1/2"	C S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-182	4 1/2"	C S/G Upper Support	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	2-RC-HSS-183	4 1/2"	C S/G Upper Support	I	H	D
Reactor Coolant System	2-RC-HSS-184	1 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-185	2 1/2"	Containment Basement	I	H	R
Reactor Coolant System	2-RC-HSS-186	1 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-187	1 1/2"	Pressurizer relief tank room	I	H	R
Reactor Coolant System	2-RC-HSS-188A	2 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-188B	2 1/2"	Pressurizer Cubicle	I	H	R
Reactor Coolant System	2-RC-HSS-189A	4"	Pressurizer Cubicle	I	H	D
Reactor Coolant System	2-RC-HSS-189B	4"	Pressurizer Cubicle	I	H	D
Reactor Coolant System	2-RC-HSS-190	1 1/2"	C Loop Room	I	H	R
Reactor Coolant System	2-RC-MSS-1A	PSA-1	A S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-2A	PSA-1/4	A S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-14A	PSA-1/4	A S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-1B	PSA-1	B S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-2B	PSA-1/4	B S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-15B	PSA-1/4	B S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-16B	PSA-1/4	Containment 3rd level	I	H	D
Reactor Coolant System	2-RC-MSS-1C	PSA-1	C S/G Cubicle	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Reactor Coolant System	2-RC-MSS-2C	PSA-1	C S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-15C	PSA-1/4	C S/G Cubicle	I	H	D
Reactor Coolant System	2-RC-MSS-1	PSA-3	Containment 2nd level	I	H	D
Reactor Coolant System	2-RC-MSS-2	PSA-3	Containment 2nd level	I	H	D
Reactor Coolant System	2-RC-MSS-3	PSA-1/2	A Loop Room	I	H	D
Reactor Coolant System	2-RC-MSS-4	PSA-1/2	B Loop Room	I	H	D
Reactor Coolant System	2-RC-MSS-5	PSA-1	Containment Operating level	I	H	D
Reactor Coolant System	2-RC-MSS-6	PSA-1	Containment Operating level	I	H	D
Reactor Coolant System	2-RC-MSS-7	PSA-1	Containment Operating level	I	H	D

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Residual Heat Removal Sys.	2-RH-HSS-1	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-2	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-3	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-4	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-5	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-6	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-7	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-8	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-9	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-10	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-11	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-12	1 1/2"	Below RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-13	1 1/2"	Below RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-14	1 1/2"	Below RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-15	1 1/2"	Below RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-17	2 1/2"	A Loop Room	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-18	2 1/2"	A Loop Room	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-19	2 1/2"	A Loop Room	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Residual Heat Removal Sys.	2-RH-HSS-20	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-21	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-22	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-25	1 1/2"	Below RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-26	1 1/2"	Below RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-27	1 1/2"	Below RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-28	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-29	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-30	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-31	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-32	2 1/2"	A Loop Room	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-33A	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-33B	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-34	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-35	2 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-36A	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-36B	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-37	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-38	1 1/2"	RHR Flat	I	H	R

TABLE 4.17-2

UNIT NO. 2 SUPPRESSOR DATA

SYSTEM	DESIGNATION	SIZE	LOCATION	ACCESSIBILITY	RADIATION CATEGORY	REMOVAL CATEGORY
Residual Heat Removal Sys.	2-RH-HSS-39	1 1/2"	RHR Flat	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-40	2 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-101	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-HSS-102	1 1/2"	Containment Basement	I	H	R
Residual Heat Removal Sys.	2-RH-MSS-1	PSA-1/4	Containment Basement	I	H	D
Residual Heat Removal Sys.	2-RH-MSS-2	PSA-3	Containment Basement	I	H	D

9. Records of the service lives of all hydraulic and mechanical snubbers listed on Tables 4.17-1 and 4.17-2 including the date at which the service life commences and associated installation and maintenance records.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. DPR-32

AND AMENDMENT NO. 80 TO FACILITY OPERATING LICENSE NO. DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-280 AND 50-281

Introduction

To reflect accumulated experience obtained from operating plants in the past several years, NRC issued Revision 1 of the Standard Technical Specifications on the surveillance requirements for safety-related snubbers. On November 20, 1980, this document was transmitted to operating plants excluding those under SEP along with a request for submittal of appropriate license amendments to incorporate the requirements of this revision within 120 days. The same request was extended to SEP plants on March 23, 1981. Virginia Electric and Power Company (the licensee) responded to our request with submittals dated April 28, 1981, May 24, 1982, and July 7, 1982, which supplemented an application dated September 20, 1978. These amendments revise the Technical Specifications for Surry Power Station, Unit Nos. 1 and 2.

Description and Discussion

Numerous discoveries of inoperative snubbers in the period of 1973 to 1975 resulted in their surveillance requirements in the Technical Specifications for operating reactor plants. However, several deficiencies were identified after the original requirements were in force for several years. These deficiencies are:

1. Mechanical snubbers were not included in these requirements.
2. The rated capacity of snubbers was used as a limit to the inservice test requirement.
3. NRC approval was necessary for the acceptance of seal materials.
4. Inservice test requirements were not clearly defined.
5. In-place inservice testing was not permitted.

Since mechanical snubbers were not subject to any surveillance requirements, some licensees and permit holders believed that mechanical snubbers were preferred by NRC. Many plants used mechanical snubbers as original equipment and many others requested to replace their hydraulic snubbers with mechanical ones to simplify or avoid a inservice surveillance program. This is directly contradictory to NRC's intention, where for an unsurveyed mechanical snubber, the most likely failure is permanent lock-up. This failure mode can be harmful to the system during normal plant operations.

During the period of 1973-1975, when the first hydraulic snubber surveillance requirements in the Technical Specifications were drafted, a compromise was made to limit the testing of snubbers to those with rated capacity of not more than 50,000 lbs. This is because of the available capacity of the test equipment and the requirement to test some parameters at the snubber rated load. Since then, greater equipment capacity and better understanding of parametric correlation both developed. To maintain this arbitrary 50,000 lb. limit could mean an unnecessary compromise on plant safety.

The original hydraulic snubber problem started from leaking seals. Most seal materials of the 1973 vintage could not withstand the temperature and irradiation environments. Ethylene propylene was the first material that could offer a reasonable service life for those seals. In order to discourage the use of unproven material for those seals, the words "NRC approved material" were used in the Technical Specifications. Staff members were asked to approve different seal materials on many occasions. Consequently, since the basis for the approval was not defined, the development of better seal materials by the industry was actually discouraged.

The not-well-defined acceptance criteria in the earlier version of the testing requirements resulted in non-uniform interpretations and implementation. Acceptance Criteria were set individually at widely different ranges. Since the rationale of adopting a specific acceptance criteria was not clear, I&E inspectors found it impossible to make any necessary corrections. In some cases, snubbers were tested without reference to acceptance criteria.

Testing of snubbers was usually accomplished by removing snubbers from their installed positions, mounting them on a testing rig, conducting the test, removing them from rig, and reinstalling them to the working position. Many snubbers were damaged in the removing and reinstallation process. This defeated the purpose for conducting tests. Since methods and equipment have been developed to conduct in-place tests on snubbers, taking advantage of these developments could result in minimizing the damage to snubbers caused by removal and reinstallation plus time and cost savings to the plants.

From these short-comings it was concluded that the snubber surveillance requirements for the Technical Specifications should be revised.

The revised surveillance requirements correct these deficiencies in the following manner:

1. Mechanical snubbers are now included in the surveillance program.
2. No arbitrary snubber capacity is used as a limit to the inservice test requirements.
3. Seal material no longer requires NRC approval. A monitoring program shall be implemented to assure that snubbers are functioning within their service life.
4. Clearly defined inservice test requirements for snubbers shall be implemented.
5. In-place inservice testing shall be permitted.

The licensee has responded in the following manner:

1. Mechanical snubbers have been included in the surveillance program.
2. The arbitrary 50 KIP limit has been removed from inservice test requirements.
3. A service record will be kept for all snubbers.
4. Quantitive testing procedures will be used.
5. The use of in-place testing as an alternative method to bench test for the surveillance of snubbers has been proposed.

The proposed license amendment submitted by the licensee for operating license DPR-32 and DPR-37 for Surry Nuclear Plant Units 1 and 2 has incorporated the necessary requirements in Revision 1 of the Standard Technical Specifications for the surveillance of safety-related snubbers and is therefore, acceptable. Some changes were made to the proposed Technical Specifications with the licensee's concurrence,

Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: August 17, 1982

Principal Contributors:
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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-280 AND 50-281

VIRGINIA ELECTRIC AND POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 79 to Facility Operating License No. DPR-32 and Amendment No. 80 to Facility Operating License No. DPR-37 issued to Virginia Electric and Power Company (the licensee), which revised Technical Specification for operation of the Surry Power Station, Unit Nos. 1 and 2, respectively, (the facilities), located in Surry County, Virgina. The amendments are effective as of the date of issuance.

The amendments revise the Technical Specifications to incorporate revised inservice surveillance requirements for snubbers, both mechanical and hydraulic.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since these amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated September 20, 1978, as supplemented April 28, 1981, May 24, 1982, and July 7, 1982, (2) Amendment Nos. 79 and 80 to License Nos. DPR-32 and DPR-37, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Swem Library, College of William and Mary, Williamsburg, Virginia 23185. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 17th day of August, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga

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Operating Reactors Branch #1
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